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FINAL REPORT

Multiple Pathway Health Risk Assessment Report for Explosive Destruction Technology Alternatives at the Pueblo Chemical Depot

Prepared by:
Kelley Hand
Michael Rectanus
Brian Boczek
Kenneth Cowen

Battelle Memorial Institute
505 King Avenue
Columbus, Ohio 43201

Prepared for:

United States Army Element Assembled Chemical Weapons Alternatives

March 15, 2012

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EXECUTIVE SUMMARY

This report presents the results of a screening-level Multiple Pathway Health Risk Assessment (MPHRA) conducted to support additional technology, referred to as Explosive Destruction Technology (EDT), being considered for inclusion at the Pueblo Chemical Agent-Destruction Pilot Plant (PCAPP) located at the Pueblo Chemical Deport (PCD) east of Pueblo, Colorado. A screening-level MPHRA was performed in 2008 to evaluate the health risks associated with then-proposed operations at the PCAPP facility in support of the Colorado Department of Public Health and Environment (CDPHE) hazardous waste permitting process and pursuant to Pueblo County Hazardous Waste Incinerator or Processor Site Certificate of Designation Regulations for the PCAPP. Implementation of that MPHRA was conducted in accordance with a CDPHE-approved protocol that was developed specifically for PCAPP.

This MPHRA supports development of an Environmental Assessment (EA), which is a requirement under the National Environmental Policy Act (NEPA) prior to initiating a major government action. The EDT operations were not included in the PCAPP MPHRA performed in 2008, and; therefore EDT impacts were evaluated in a separate MPHRA for input into the EA being prepared pursuant to NEPA.

Four different EDT options were considered in this MPHRA, and each was assessed independently. The objectives of the EDT MPHRA were to (1) evaluate how chemicals reasonably expected to be present in EDT air emissions can be transported through the environment and into the food chain, (2) assess how different people (human receptors) can directly or indirectly come into contact with these substances (exposure pathways), and (3) calculate the cumulative risks (carcinogenic effects) and hazards (noncarcinogenic effects) for each exposure scenario.

The methodology employed in conducting this MPHRA was based on CDPHE and United States Environmental Protection Agency (USEPA) guidance and generally follows the fundamental process adapted by USEPA from well-established chemical risk assessment principles and procedures. The methodology used to perform the EDT MPHRA was identical to that used for the PCAPP MPHRA. Some additional analyses were required to accommodate differences between EDT and PCAPP operations or other desired assessments, for example, the chemicals released by the EDTs differed from those by PCAPP and a farmland impact analysis was included. For this screening-level EDT MPHRA, emissions from each of the four EDT options were characterized, air concentrations and deposition rates resulting from EDT emissions were modeled, and the proper exposure scenarios were selected for evaluation in order to obtain a conservative (i.e., reasonable worst-case) estimate of the potential risk. This was necessary to determine whether a more detailed site-specific assessment was warranted. This screening-level MPHRA, which combined conservative exposure assumptions with maximum media concentrations, resulted in an estimate of risk that exceeds the possible risk that any individual would actually experience. The following is a summary of the method used to perform this MPHRA.

- An estimated emission rate was determined for each chemical of potential concern (COPC) for which data were available to base the estimate. Most emission rates were obtained from EDT vendors. These emission rates were used in combination with the required and desired munitions feed plan to obtain a maximum design emission rate for each COPC emitted by each EDT.
- An air pollutant dispersion model (American Meteorological Society/Environmental Protection Agency Regulatory Model [AERMOD]) was then used to quantify atmospheric concentrations and deposition rates of the emitted COPCs in the areas in and around

the facility. Impacts to on-site and off-site locations were used to evaluate exposure to human receptors under different exposure scenarios. As a conservative approach, the maximum total COPC-specific air concentrations and deposition rates were used to calculate exposure, even though they vary by location for each COPC.

- A conceptual site model was developed to identify the various pathways by which human receptors would be potentially exposed to the emitted COPCs. This included evaluation of chronic (long-term) exposure to off-site receptors (residents, subsistence farmers, subsistence fishers) and acute (short-term) exposure to on-site receptors (PCD workers). The COPC concentrations in the various exposure media (e.g., air, soil, water, food) were then calculated to quantify exposure to each COPC for the identified human receptor under each exposure pathway.
- Direct exposure to COPCs via inhalation was evaluated for all of the off-site receptors for the 5 years of EDT operation. Indirect exposure as a result of continued exposure to contaminated soil, surface water, and food was evaluated for the off-site receptors for durations up to 40 years. Acute exposure to an on-site PCD worker was evaluated under the assumption that the worker is located at the point of maximum calculated on-site impacts over the entire acute exposure event.
- The toxicity assessment weighs the available evidence regarding the potential for particular chemicals to cause adverse effects (both carcinogenic and noncarcinogenic) in an exposed individual. Toxicity values were selected for each COPC using the hierarchical approaches recommended by USEPA. These toxicity values were used in conjunction with the direct and indirect exposure estimates to calculate cumulative risk and hazard.
- To derive a conservative estimate of total PCAPP risk, results obtained from this EDT MPHRA were added to the results obtained from the PACPP MPHRA performed in 2008.

The results of this MPHRA demonstrate that EDT operations at PCAPP meet all acceptable risk and hazard thresholds defined by CDPHE when assessed individually as well as when added to previously-determined PCAPP risks and hazards. A summary of the MPHRA results are as follows:

- A total of 83 COPCs was identified by the four EDT vendors, published literature, or reaction kinetics models. Of the 83 COPCs, 36 have carcinogenic toxicity factors, 74 have chronic noncarcinogenic toxicity factors, and 80 have acute toxicity factors.
- The maximum lifetime cancer risk to any human receptor presented by the worst-case EDT option is only 6.1% of the CDPHE acceptable risk level of 1 in a million (i.e., 1.0 E-06). When added to the risk calculated in 2008 for PCAPP operations, the maximum lifetime cancer risk is only 11% of the CDPHE acceptable risk level. The subsistence farmer represents the receptor with the greatest lifetime cancer risk for all four EDT options.
- For noncarcinogenic effects, the maximum combined Hazard Index (HI) to any human receptor presented by the worst-case EDT option is only 17% of the CDPHE acceptable level of 0.25. When added to the HI calculated in 2008 for PCAPP operations, the maximum lifetime HI is only 20% of the CDPHE acceptable risk level. The subsistence farmer represents the receptor with the greatest lifetime noncancer hazard.
- The total acute HI (i.e., the hazards associated with short-term emission release events for each COPC that has both a quantified short-term emission rate and an available

acute toxicity value) presented by the worst-case EDT option is 37 times lower than the CDPHE acceptable level of 1.0. When combined with the PCAPP acute HI, the worst-case option is 17 times lower than the CDPHE acceptable level.

- An analysis was performed at organic and other farmlands in the vicinity of PCD to quantify the air concentrations and deposition rates as a percentage of the maximum calculated off-site impacts. This analysis demonstrated that the worst-case EDT produced an air concentration at the worst-case farmland receptor that was only 1/4 of the concentration at the maximum impact location and a deposition rate that was only 1/25 of the deposition at the maximum impact location, indicating that impacts on nearby organic farmlands will be insignificant.

The results presented in this MPHRA report demonstrate that EDT emissions will produce exposures that are below all CDPHE specified risk and hazard threshold values, even when added to previously-acquired risk and hazard estimates for other PCAPP operations and accounting for quantifiable uncertainty parameters. This screening-level MPHRA employs very conservative assumptions and represents a reasonable worst-case estimate of potential impacts. As the screening-level results are acceptable, no further refinement of the conservative screening assumptions is deemed necessary.

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Acronyms and Abbreviations

Acronym/ Abbreviation	Definition
° C	degrees Centigrade
° F	degrees Fahrenheit
ACWA	Assembled Chemical Weapons Alternatives
AEGL	Acute Exposure Guideline
AERMAP	AERMOD terrain data preprocessor program
AERMET	AERMOD meteorological data preprocessor program
AERMOD	American Meteorological Society/Environmental Protection Agency Regulatory Model
AIEC	Acute Inhalation Exposure Criteria
AIHA	American Industrial Hygiene Association
ANCDF	Anniston Chemical Agent Disposal Facility
ASCII	American Standard Code for Information Interchange
ATSDR	Agency for Toxic Substances and Disease Registry
BEHP	bis(2-ethylhexyl)phthalate
BPIPPRM	Building Profile Input Program for PRIME
BPT	Bechtel Pueblo Team
CAS	Chemical Abstracts Service
CCR	Code of Colorado Regulations
CDPHE	Colorado Department of Public Health and Environment
CEFH	Child-specific Exposure Factors Handbook
CFR	Code of Federal Regulations
CHWRs	Colorado Hazardous Waste Regulations
COPC	chemical of potential concern
CMA	Chemical Materials Agency
cm^2/s	square centimeters per second
CSF	cancer slope factor
D_a	diffusivity in air
D_W	diffusivity in water
DAVINCH	detonation of ammunition in a vacuum integrated chamber system
DEM	digital elevation model
DOE	Department of Energy
EA	Environmental Assessment
EDS	Explosive Destruction System
EDT	Explosive Destruction Technology
EPA	Environmental Protection Agency
ERPG	Emergency Response Planning Guideline
ft	feet
ft/s	feet per second
g/m^2-yr	grams per square meter per year
g/s	grams per second
GEP	Good Engineering Practice
GPL	General Population Air Exposure Limit
H	Henry's Law constant
HD	sulfur mustard or bis-(2-chloroethyl) sulfide or $C_4H_8Cl_2S$
HEPA	high-efficiency particulate air
HHRAP	Human Health Risk Assessment Protocol
HI	hazard index

Acronym/ Abbreviation	Definition
HI_A	acute hazard index
HQ	hazard quotient
HQ_A	acute hazard quotient
ID	identification
IRIS	Integrated Risk Information System
K	Kelvin
km	kilometer
lb/hr	pounds per hour
LOAEL	Lowest observed adverse effect level
$\mu g/m^3$	microgram(s) per cubic meter
m	meter
µm	micrometers (microns)
m/s	meter(s) per second
mg /kg-day	milligram(s) per kilogram of body weight per day
mg/m^3	milligram(s) per cubic meter
mm	millimeter
mph	mile(s) per hour
MPHRA	Multiple Pathway Health Risk Assessment
MRL	minimal risk level
NCEA	National Center for Environmental Assessment
NEPA	National Environmental Policy Act
NWS	National Weather Service
OEHHA	Office of Environmental Health Hazard Assessment
OSWER	Office of Solid Waste and Emergency Response
OTS	off-gas treatment system
$Pa\text{-}m^3/mol$	Pascal-cubic meter(s) per mole
Pb	Lead
PCAPP	Pueblo Chemical Agent-Destruction Pilot Plant
PCB	polychlorinated biphenyl
PCD	Pueblo Chemical Depot
PCDD	polychlorinated dibenzo(p)dioxin
PCDF	polychlorinated dibenzofuran
pdr	pounder
PRG	preliminary remediation goal
rcl	cuticular resistance
RCRA	Resource Conservation and Recovery Act
RD&D	Research, Development, and Demonstration
REL	Reference Exposure Level
RfD	reference dose
RfD_i	inhalation RfD
RFP	request for proposal
RME	reasonably maximally exposed
RSL	Regional Screening Levels
s/cm	second(s) per centimeter
SCRAM	Support Center for Regulatory Atmospheric Modeling
SDC	Static Detonation Chamber
TEEL	Temporary Emergency Exposure Limit
TEF	toxic equivalency factors
TEQ	toxic equivalent

Acronym/ Abbreviation	Definition
TDC	Transportable Detonation Chamber
UF	uncertainty factor
US	United States
USDA	US Department of Agriculture
USAE	US Army Element
USEPA	US Environmental Protection Agency
USGS	US Geological Survey
UTM	Universal Transverse Mercator
WHO	World Health Organization
WOE	weight of evidence
WTS	Waste Transfer Sub-system

1 INTRODUCTION

1.1 WHAT DOES THIS REPORT PRESENT?

This report presents the results of a screening-level Multiple Pathway Health Risk Assessment (MPHRA) conducted to support additional technology, referred to as Explosive Destruction Technology (EDT), being considered for inclusion at the Pueblo Chemical Agent-Destruction Pilot Plant (PCAPP) located at the Pueblo Chemical Deport (PCD) east of Pueblo, Colorado. A screening-level MPHRA employs conservative assumptions to acquire a reasonable worst-case estimate of potential impacts on human health, which in this case may be produced by each of four EDT systems being considered for construction/operation at the PCAPP. If the screening-level results are acceptable, then no further refinement of the assumptions is deemed necessary. The objectives of this screening-level MPHRA are to (1) evaluate how chemicals reasonably expected to be present in EDT air emissions can be transported through the environment and into the food chain, (2) assess how different people (human receptors) can directly or indirectly come into contact with these substances (exposure pathways), and (3) calculate the cumulative risks (cancer effects) and hazards (noncancer effects) for each exposure scenario. The screening-level MPHRA was performed to obtain a reasonable maximum estimate of potential risks and hazards in order to determine whether a more detailed site-specific assessment is warranted.

The results of this MPHRA represent the incremental risk to human health presented by operation of EDT processes. As such, risks presented by other environmental conditions that may exist in the area (e.g., ambient levels of persistent pesticides in soil caused by human activity and non-PCAPP air emission sources) are not included in the assessment. As part of the current MPHRA, potential impacts calculated for each EDT operation are added to those impacts previously calculated for the PCAPP to derive an EDT plus PCAPP impact.

1.2 HOW DOES THE EDT RELATE TO THE PCAPP?

The PCAPP is currently being constructed under the oversight of the US Army Element (USAE) Assembled Chemical Weapons Alternatives (ACWA). The US Department of Defense, through its USAE ACWA, has been assigned the responsibility for the safe destruction of the chemical weapons stockpile at the PCD in Colorado. The PCAPP will employ chemical neutralization processes to destroy mustard agents after they have been drained from the munitions; however, it is anticipated that the severely aged and deteriorated conditions of some of the munitions in storage at the PCD will prevent them from being safely disassembled and drained of mustard agent for subsequent treatment and processing in the PCAPP. The EDT systems are being evaluated for their potential to provide the operational flexibility needed to complete the destruction of the problematic chemical munitions and explosive components currently being stored at the PCD by augmenting the planned chemical agent destruction capabilities of the PCAPP. The selected EDT will be constructed and operated in the same general location as the PCAPP and will process munitions that were not included in the original PCAPP MPHRA. Thus, the EDT has the potential to increase risk to surrounding populations due to processing of munitions not previously considered.

1.3 WHAT ARE THE GENERAL CHARACTERISTICS OF THE AREA AROUND THE PCD?

Characteristics of the area around PCD were discussed in the draft and final MPHRA Reports. (Bechtel Pueblo Team [BPT], 2007 and 2008) As discussed in those reports, the PCD is located in southern Colorado, approximately 160 kilometers (km) (100 miles) south-southeast of Denver. Figures 1-1 and 1-2 show the location of the PCD. Figure 1-3 presents a topographical map for the PCD and the surrounding area. The depot lies near three small

communities, all of which are within 8 km (5 miles) of the installation. The closest, North Avondale, is less than 1 mile south of the installation. The other nearby communities, Avondale and Boone, are shown in Figure 1-2.

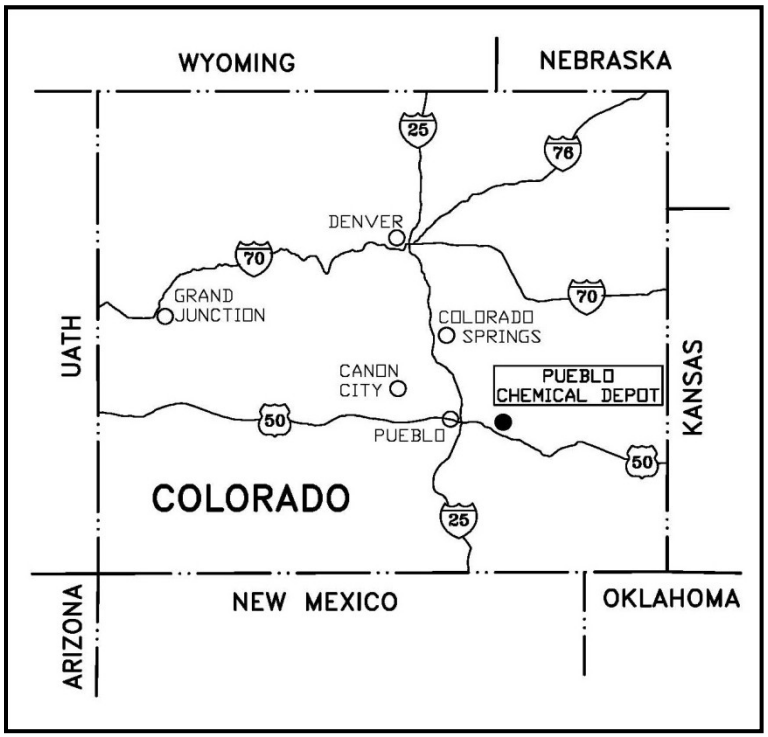

Figure 1-1. Location of Pueblo Chemical Depot (regional setting).

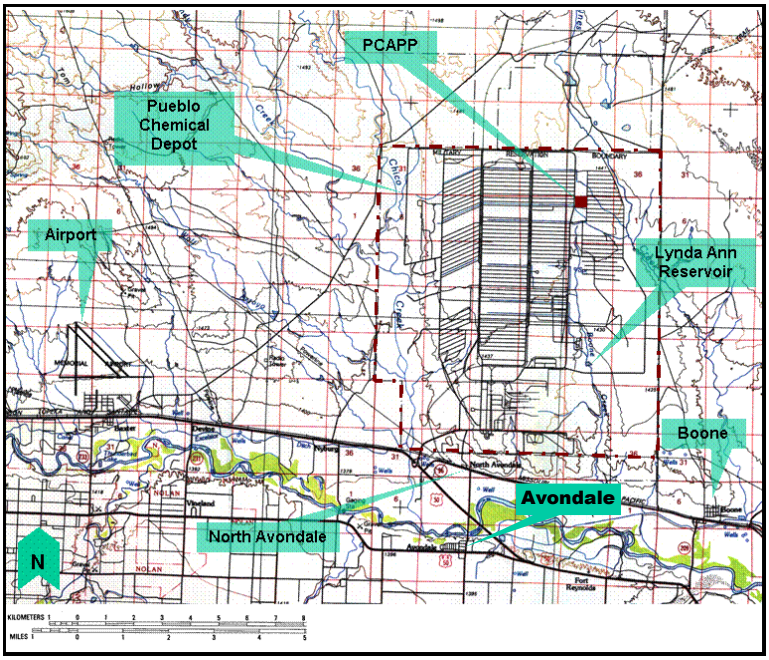

Figure 1-2. Location of Pueblo Chemical Depot (local setting).

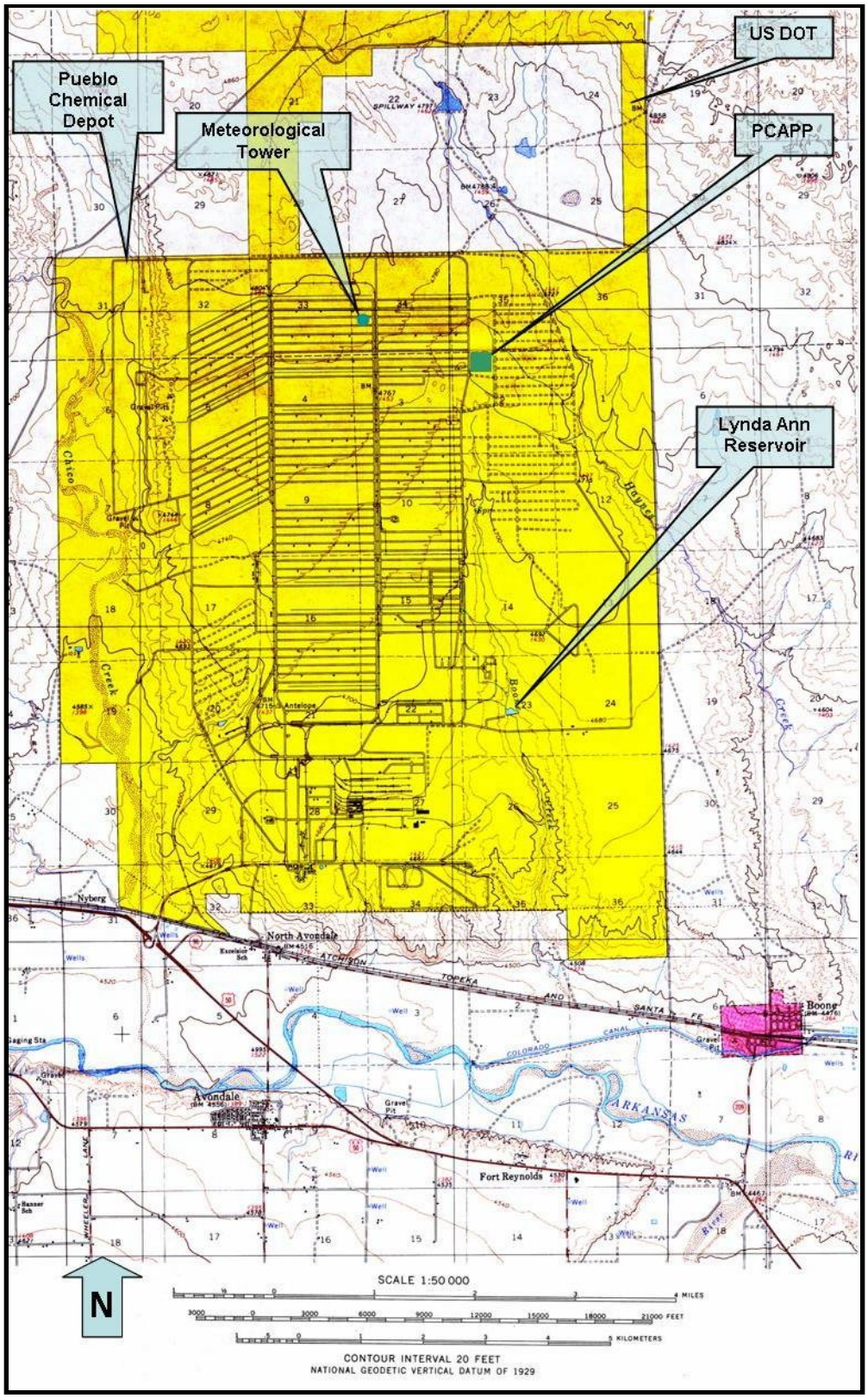

Figure 1-3. USGS topographical map of the PCD and surrounding area.

The Arkansas River lies 2 km (1.2 miles) to the south of the PCD (see Figure 1-3). The river is a source of industrial and agricultural water in the area. High flows generally occur in the early summer months, and low flows occur in the winter. The City of Avondale groundwater well for the public water supply is located directly south of the PCD. From the PCD, the next downstream municipal water supply on the Arkansas River is Rocky Ford, approximately 32 km (20 miles) east of the PCD.

The prevailing wind generally blows up valley from the southeast during the day and down valley from the northwest at night. Average wind speed ranges from 3.1 meters per second (m/s) (7 miles per hour [mph]) in the fall and early winter to 4.9 m/s (11 mph) in the spring. Stronger winds generally originate from the mountains.

Land surrounding the PCD is sparsely populated and is used primarily for agricultural purposes (open pastures for cattle and irrigated fields for raising crops). Ranches and farms exist sporadically around the PCD, with the closest ranch located less than 1.6 km (less than 1 mile) north of the depot. Farming areas are also located to the south along the Arkansas River. About 3.2 km (2 miles) south of the PCD is the Avondale Elementary School for children from kindergarten through grade 5. The areas east and west of the PCD are sparsely inhabited along Highway 50/96.

A more detailed discussion of these and other aspects of the area around PCD can be found in the 2007 or 2008 PCAPP MPHRA Reports.

1.4 WHY MUST A MPHRA BE PERFORMED FOR THE EDT?

The original PCAPP MPHRA was completed pursuant to a condition of approval imposed on the PCAPP by the Colorado Department of Public Health and Environment (CDPHE) in a July 1, 2004, permit which required an evaluation of PCAPP process emissions. The required evaluation was to assess the potential cumulative impacts of PCAPP emissions and demonstrate adequate protection of human health using acceptable risk criteria for hazardous waste emissions established under the Colorado Hazardous Waste Regulations (CHWRs). At that time, EDT was not included as part of the PCAPP process.

Pursuant to the National Environmental Policy Act (NEPA), an Environmental Assessment (EA) must be prepared for federal actions, and an EA is currently under development to evaluate the environmental impacts of four alternative EDTs for destroying the problematic munitions and additional energetic components recovered from PCAPP operations. The subject EDT MPHRA will evaluate the transport pathways and health risks of the emissions from the four alternative EDTs being evaluated. The EDT MPHRA results will then be used to provide input into the EA. As a future requirement, prior to proceeding with an EDT option, a PCAPP permit modification must be requested and received from CDPHE. As before, a condition of that approval will include a condition to conduct a MPHRA that includes the cumulative impacts of the PCAPP and the selected EDT.

1.5 WHO OVERSAW THE PLANNING AND CONDUCT OF THIS MPHRA?

The planning and conduct of the EDT MPHRA was performed by Battelle, overseen by the US Army, with input provided at various stages by CDPHE. A similar process was employed during preparation of the PCAPP MPHRA. SAIC provided emission calculations for one EDT and reviewed Battelle emission calculations for the other three EDTs.

1.6 WHAT IS THE PROCESS FOR PERFORMING AN MPHRA?

Figure 1-4 presents an overview of the MPHRA process. This figure defines the process used for the PCAPP MPHRA as well as the EDT MPHRA and consists of five major components adopted by the US Environmental Protection Agency (USEPA) to provide a consistent process for evaluating and documenting health risks. The major components are as follows:

- *Data Collection and Evaluation*, which consists of collecting pertinent information needed to characterize the facility. This includes facility operational parameters, lists of chemicals that may impact human health, and estimates of emissions. This also includes determining where site-specific information should be used, such as location and size of surface water bodies, or where conservative default data should be used, such as the location and magnitude of land use types.
- *Exposure Assessment*, which includes defining the study area; identifying the theoretical reasonably maximally exposed (RME) individual; identifying how the RME individual contacts a chemical (exposure pathway); determining the concentration of each chemical in each medium; and estimating the amount of chemical to which the RME individual is exposed (intake or dose). The theoretical RME individual represents the theoretical individual who receives the maximum amount of exposure for each exposure pathway scenario (for example, the subsistence farmer).
- *Toxicity Assessment*, which involves determining the health effects of chemicals and quantifying those effects.
- *Risk Characterization*, which involves combining exposure information with toxicity information to quantify risks.
- *Uncertainty Analysis*, which summarizes how variability and uncertainty may affect the results generated in the risk assessment and the conclusions drawn.

1.7 SHOULD THE RESULTS OF THE EDT MPHRA BE COMPARED WITH THE PCAPP MPHRA?

This EDT MPHRA is a screening-level risk assessment conducted using the same general approach as had been employed for the 2008 screening-level PCAPP MPHRA. (BPT, 2004) The results of the PCAPP MPHRA demonstrated that exposures to PCAPP emissions would all be below CDPHE acceptable values for risks and hazards. Because the facility had not yet been built, PCAPP emissions data were estimated using design information, data acquired from sampling during bench-scale and pilot-scale process testing, and existing data from other similar facilities. Now that additional processing units (EDTs) are being contemplated, additional emissions must be assessed. An estimate of the combined risk due to the two processes can be obtained by simply adding the estimates obtained from the two independent MPHRAs. This summation will produce a conservative assessment of risk and hazard because two different locations for the RME individual will be identified. A more accurate estimate is obtained when both processes are included in the same MPHRA and a single composite RME location is identified. For the purpose of the EA, however, adding the two independent RME impacts is acceptable provided that the resulting impacts are below CDPHE acceptable levels. If the summation of the RME impacts is above the acceptable levels, then the PCAPP and EDT emissions would need to be evaluated in a single MPHRA to determine the actual RME individual location, and this effort will produce a reduced estimate of combined risk and hazard.

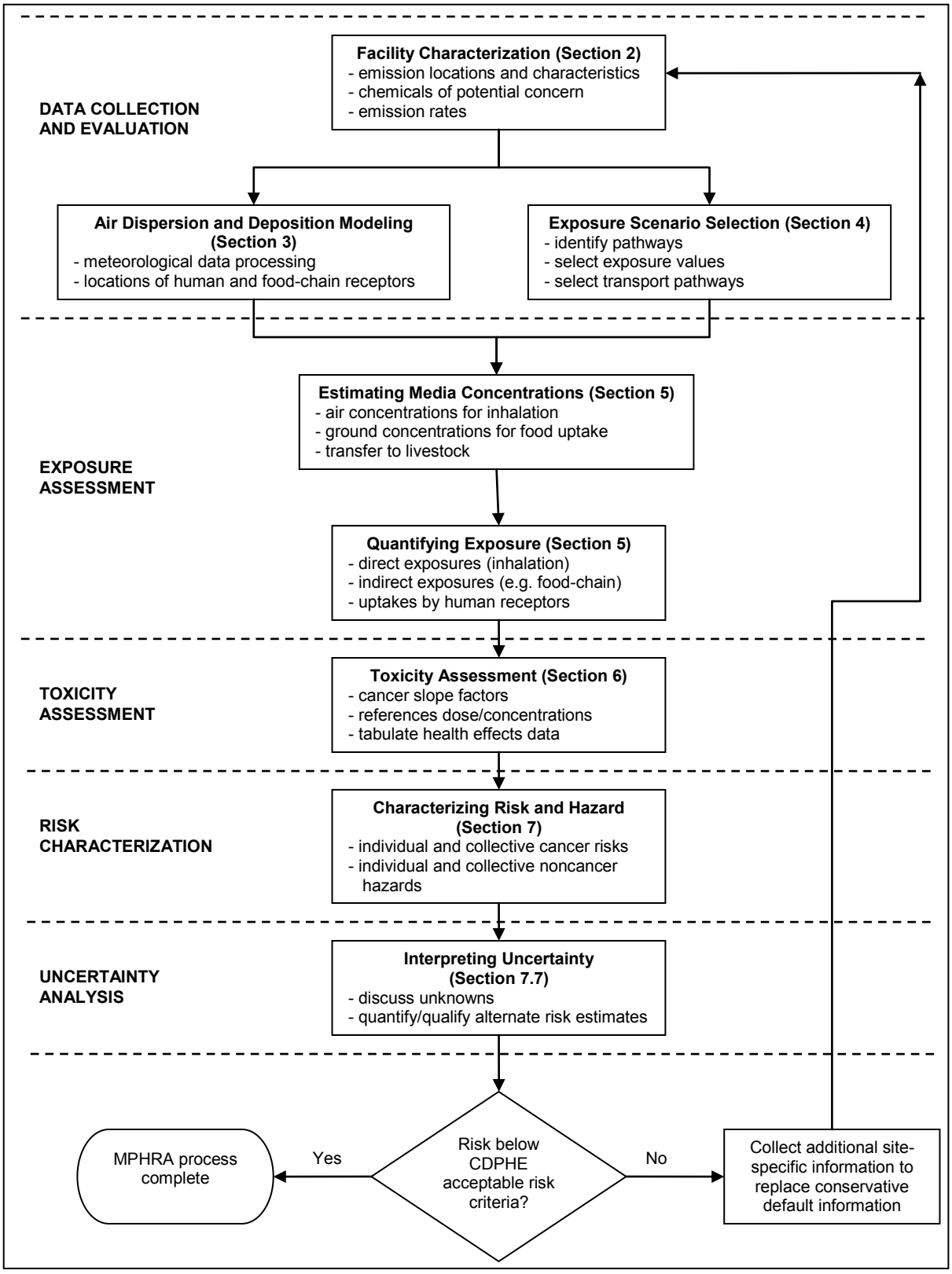

Figure 1-4. Overview of the MPHRA process.

1.8 WHAT ARE THE DIFFERENCES BETWEEN THE METHODS USED TO CONDUCT THIS EDT MPHRA AND THE METHODS USED TO CONDUCT THE ORIGINAL PCAPP MPHRA?

In most cases, the methods used to conduct this EDT MPHRA are the same as those used to conduct the PCAPP MPHRA. Some differences exist between the two MPHRAs, however, prompted primarily by the emission characteristics of the EDT and the inclusion of chemicals of potential concern (COPCs) that were not present in PCAPP emissions. Some changes in data values have also occurred since the time that the PCAPP MPHRA was completed. Table 1-1 presents a comparison between the methods used to conduct EDT and PCAPP MPHRAs for the MPHRA components previously identified in Figure 1-4. Components that are noted as having changed are discussed in the remaining sections and/or an appendix of this report. Components that are noted as not having changed are discussed only briefly herein, but a full discussion of the component is available in the draft and final PCAPP MPHRA Reports.

1.9 HOW IS THIS REPORT ORGANIZED?

The remaining sections of this report provide an overview of data used to develop and conduct the EDT MPHRA. Figure 1-4 maps each section of this report to one of the major components of the MPHRA process.

- *Data Collection and Evaluation*: Section 2 presents an overview of the EDT facilities and operation. Section 3 describes the processes for determining ambient air concentrations and deposition rates by air dispersion modeling, as the results from this effort are needed to conduct the EDT MPHRA. Section 4 discusses the exposure scenarios and data on human activity rates as well as important information about human uptakes of contaminated media.
- *Exposure Assessment*: Section 5 discusses the exposure and dose calculations and summarizes the results.
- *Toxicity Assessment*: Section 6 presents the methods for identifying chemical toxicity data and summarizes the toxicity data used in this MPRHA.
- *Risk Characterization*: Section 7 presents the methodologies used and results obtained for the risk and hazard characterizations and includes discussions of uncertainty.

A number of appendixes are also provided. Appendix A provides details on the methods used to estimate emissions from each of the four EDTs. Appendix B provides details on exposure assessment methods and factors employed in the EDT MPHRA. Appendixes C, D, E, and F present detailed tables of the calculated media concentrations, exposure estimates, and risks from the exposure and risk calculator spreadsheets for each of the four EDTs (one appendix for each EDT). Appendix G presents detailed output tables obtained from the acute hazard calculator spreadsheets for all four EDTs. Data in these five aforementioned appendixes were summarized to provide the information in Sections 5 through 7 of this report. Other information that is largely unchanged from the original PCAPP MPHRA was not reproduced herein, but can be found, if desired, using the information presented in the next section.

Table 1-1. Comparison of EDT and PCAPP MPHRA Protocols

MPHRA Component	Differences Between the EDT and PCAPP MPHRAs
Introduction (Purpose)	The EDT MPHRA provides input into the EDT EA, whereas the PCAPP MPHRA was to satisfy a condition of PCAPP Resource Conservation and Recovery Act (RCRA) permit approval.
Facility Characterization	No change to area or PCD characteristics.
• emission locations and characteristics	Four individual EDTs were evaluated, and emission units were placed near the PCAPP units employing vendor equipment orientations.
• chemicals of potential concern (COPCs)	A COPC list was generated for each EDT option. The COPCs included metals and polychlorinated dibenzo(p)dioxins (PCDDs) polychlorinated dibenzofurans (PCDFs), among other COPCs that were not included in the PCAPP MPHRA.
• emission rates	COPC-specific emission rates were derived for each EDT option using best available information.
Air Dispersion and Deposition Modeling	The most recent version of the American Meteorological Society/Environmental Protection Agency Regulatory Model (AERMOD) was used for the EDT MPHRA, and this version is different than the version used for the PCAPP MPHRA.
• meteorological data processing	No change from PCAPP MPHRA.
• locations of human and food-chain receptors	The EDT MPHRA used the PCAPP MPHRA receptor grid plus additional receptors over cultivated farmlands.
• cultivated farm land dispersion analysis	The EDT MPHRA included a comparison of unit response concentrations and deposition rates at cultivated farm receptors to those at the maximum impact receptor. This analysis was not needed for the PCAPP MPHRA.
Exposure Scenario Selection	
• identify pathways	Same as PCAPP MPHRA.
• select exposure values	Same as PCAPP MPHRA
• select transport pathways	The EDT units released particle-phase COPCs; only vapor phase COPCs were included in the PCAPP MPHRA.
Estimating Media Concentrations • air concentrations for inhalation • ground concentrations for food uptake • transfer to livestock	No changes from PCAPP MPHRA except some of the EDT COPCs require different transformation algorithms in the model (e.g., mercury and PCDDs/PCDFs).
Quantifying Exposure • direct exposures (inhalation) • indirect exposures (e.g., food-chain) • uptakes by human receptors	No changes from PCAPP MPHRA except exposures to some of the EDT COPCs were combined (e.g., PCDDs/PCDFs) and separated for other EDT COPCs (e.g., mercury) prior to calculating toxic effects. The EDT COPCs were evaluated using the same process as conducted in the PCAPP MPHRA to determine those that should be included in breast milk pathway.
Toxicity Assessment • cancer slope factors • references dose/concentrations • tabulate health effects data	Current toxicity data were used for all new EDT COPCs, including the use of USEPA's Regional Screening Level (RSL) table. COPCs common to both EDT and PCAPP use the same toxicity data as was used in the 2008 PCAPP MPHRA.
Characterizing Risk and Hazard • individual and collective cancer risks • individual and collective noncancer hazards	No changes from PCAPP MPHRA except for new EDT COPCs. PCDD/PCDF risk and hazard were established using the new World Health Organization (WHO) Toxic Equivalency Factors (TEF), USEPA's Regional Screening Levels cancer slope factors and inhalation reference dose, and the Agency for Toxic Substances and Disease Registry's (ATSDR) oral reference dose.
Interpreting Uncertainty • discuss unknowns • quantify alternate risk estimates	A qualitative/quantitative uncertainty analysis was performed for the EDT MPHRA. The items quantified are those that have the largest potential impact on risk and hazard (i.e., mustard and PCDD/PCDF toxicity factors). A conservative estimate of the additive risk and hazard was developed by adding the baseline EDT and baseline PCAPP MPHRA results to the total quantified uncertainty estimates.

1.10 WHAT OTHER INFORMATION SHOULD BE REVIEWED WHEN EVALUATING THIS REPORT?

To minimize the material in this report that readers must review, information for the EDT MPHRA that is the same as presented in the PCAPP MPHRA Report is not reproduced in this EDT MPHRA Report. Therefore, a review of the PCAPP MPHRA Report will be necessary for those unfamiliar with risk assessment processes and those wanting certain details about the process used to produce the EDT MPHRA or to assist in understanding the issues associated with this report. A good place to find other information is the CDPHE PCAPP website currently located at the following link:

- http://www.cdphe.state.co.us/hm/pcd/index.htm

This website provides access to "Selected Documents from the Administrative Record" including:

- "RCRA Research, Development, and Demonstration (RD&D) Permit Modification Requests"
- "Draft Multiple Pathway Health Risk Assessment (MPHRA) Report"
- "Letter of Approval of the Draft Multi-pathway Health Risk Assessment Report for Pueblo Chemical Agent-destruction Pilot Plant Site" (June 2008)
- a description of the Information Repositories located throughout Pueblo County

Note that the CDPHE PCAPP website link contains the draft PCAPP MPHRA Report but not the final PCAPP MPHRA Report. (BPT, 2007 and 2008) Very few differences exist between the draft and final reports, so reviewers may find it easier to access the draft version of the PCAPP MPHRA Report by going to the CDPHE website as opposed to trying to find the final report in one of the local Information Repositories. Those interested in seeing the final report can locate an Information Repository by visiting the CDPHE website at the link provided above.

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2 FACILITY CHARACTERIZATION

The EDT facility characterization was performed in the same manner as the PCAPP facility characterization. The PCAPP MPHRA Report presents details of the facility characterization process used in PCAPP MPHRA. As detailed in the PCAPP MPHRA Report, procedures were developed to identify COPCs for inclusion in the assessment, determine control efficiencies of air pollutant control systems, and establish operating conditions. These same general procedures were used for the EDT MPHRA. The only differences are those related to technology-specific parameters such as COPCs emitted, stack orientation, processing rates, and similar items. The remainder of this section defines these parameters for the EDTs being considered.

2.1 EDT ALTERNATIVES

Four EDTs were considered for this MPHRA: the Dynasafe Static Detonation Chamber (SDC), the CH2M Hill Transportable Detonation Chamber (TDC), the Kobe Steel, Ltd system for detonation of ammunition in a vacuum integrated chamber, a.k.a. DAVINCH, and the US Army's Explosive Destruction System (EDS). Each EDT includes one or more individual treatment units as described in the following subsections.

Support facilities include, but are not limited to, electrical equipment, generators, air compressors, and other utility supplies; buildings that will be used for storage and maintenance; buildings for access control; and buildings for other support functions. None of these support facilities will be significant emission sources of COPCs, and, therefore, they are not included in the MPHRA.

2.1.1 SDC

The SDC uses thermal methods to destroy munitions. Chemical munitions are placed in a carrier, conveyed to the top of the SDC vessel, and fed into the electrically-heated detonation chamber, which operates at a temperature of approximately 1,022 °F (550 °C). The destruction of the munitions is achieved by heating the item above the auto initiation temperature for the energetic materials, which results in their detonation or deflagration. Agent released from the detonation or deflagration event is pyrolized by the detonation/deflagration and the temperatures existing within the detonation chamber. Gases generated as a result of the detonation are treated by an off-gas system that includes a flameless thermal oxidizer to convert carbon monoxide and hydrogen into carbon dioxide and water. (ACWA, 2009a)

The SDC detonation chamber and off-gas treatment system (OTS) are enclosed in an environmental enclosure. Exhaust from the SDC process OTS is sent to a filter system for final clean-up. This filter system is located in a separate building, and its stack has a chemical agent monitor. Air from the environmental enclosure is exhausted through a separate filter system and stack. This enclosure air filter system is located in another building and also has an agent monitor.

2.1.2 TDC

The TDC consists of a detonation chamber, an expansion chamber, and an emission control system. The TDC is considered a "cold" detonation technology because the detonation chamber is not heated. Instead, munitions are wrapped in explosive and placed in the detonation chamber and detonated to destroy the chemical agent and energetics. The chamber’s floor is covered in pea gravel, which absorbs some of the blast energy. Bags of water within the chamber also absorb blast energy and produce steam, which reacts with and destroys agent vapors. (ACWA, 2009b)

Each TDC unit is enclosed in an environmental enclosure. Gases produced by the detonation are vented to the expansion chamber and then to the emissions control system. A catalytic oxidation unit oxidizes hydrogen, carbon monoxide, and organic vapors before the gas stream is vented through a carbon absorption bed and released within the environmental enclosure. All air within the environmental enclosure is then discharged through a pair of identical building air filtration systems and stacks, each equipped with a chemical agent monitor.

2.1.3 DAVINCH

The DAVINCH comprises a steel vacuum detonation chamber and an OTS. The DAVINCH system is also considered a "cold" detonation technology. Chemical munitions are placed in the DAVINCH detonation chamber where they are surrounded by donor explosives. The detonation of these donor explosives shatters the munitions, and the shock and heat of the explosion destroys the chemical agent and energetics. Off gases produced by the detonation are treated by a cold plasma oxidizer which converts carbon monoxide into carbon dioxide. (ACWA, 2009c)

The DAVINCH process is enclosed in an environmental enclosure. Exhaust from the DAVINCH process OTS is combined with building ventilation air from the environmental enclosure, vented through an air filtration unit, and discharged through a single stack equipped with a chemical agent monitor.

2.1.4 EDS

The EDS uses explosive charges to explosively access chemical munitions, eliminating their explosive capacity before the chemical agent is neutralized. The system's main component, a sealed, stainless steel vessel, contains all the blast, vapor, and fragments from the process. Agent treatment is confirmed by sampling residual liquid and air from the vessel prior to reopening the EDS. (Chemical Materials Agency [CMA], 2009)

Each EDS has a Waste Transfer Sub-system (WTS) that receives liquid and gaseous wastes from the EDS vessel. The WTS has a canister filter that contains silica gel and activated carbon. The canister filter is changed after each batch of munitions treated in the EDS. Potential fugitive emissions associated with canister filter changeout are assumed to be negligible. Each EDS unit is enclosed in an environmental enclosure. Emissions from the WTS canister filter are combined with enclosure air prior to passing through an air filtration unit and exiting the stack, which is equipped with a chemical agent monitor.

2.2 EDT OPERATIONS

2.2.1 Feed Material Assumptions

Table 2-1 presents the quantity of feed materials proposed to be processed by the EDTs.

Table 2-1. EDT Feed Materials

Item	155-mm Projectiles	105-mm Projectiles	4.2-inch Mortars	Comment
Required Feeds				
Overpacks	400	400	200	
Rejects	4,600	5,990	1,420	
Downloaded energetic material	299,554			bursters
		28,376		fuzes/boosters
			97,106	fuze/burster combination
Desired Feeds				
Balance of downloaded energetic material		383,418		bursters
		78,031 lb		propelling charges
			60,011 lb	propelling charges

2.2.2 Duration of EDT Operations

The EDT specification (for SDC, TDC, and DAVINCH) provides for operation 12 hours per day, 7 days per week during the same 5 years that PCAPP operates. EDS will operate 24 hours per day when processing overpacks and rejects and 12 hours per day when processing energetics and only 6 days per week during the same 5 years that PCAPP operates. During this 5-year period, each EDT must be capable of processing the required feeds presented in Table 2-1. These feed specifications yielded the following determinations on the number of each type of EDT that would be required: one SDC unit; two TDC units; one DAVINCH unit; or nine EDS units. If sufficient equipment capacity exists, some or all of the desired feeds also will be processed. Because processing rates vary by EDT, the quantity of desired feed processed also will vary by EDT. Table 2-2 presents a summary of the percentage of feed to be processed by each EDT option within the 5-year PCAPP operating period. Appendix A of the EDT MPHRA report (Tables A-1-4 [SDC], A-1-8 [TDC], A-1-11 [DAVINCH], and A3-3 [EDS], presents the processing rates for each EDT.

Table 2-2. EDT Feed Processing Summary

Feed Type		Item	Amount Processed in 5 Years							
			SDC (1 Unit)		TDC (2 Units)		DAVINCH (1 Unit)		EDS (9 Units)	
			% of Feed	Years	% of Feed	Years	% of Feed	Years	% of Feed	Years
Required	Overpacks/ Rejects	155-mm projectile reject	100%	1.4	100%	1.5	100%	2.1	100%	2.4
		105-mm projectile reject								
		4.2-inch mortar reject								
		155-mm projectile overpack								
		105-mm projectile overpack								
		4.2-inch mortar overpack								
Required	Energetics	155-mm projectiles bursters		2.1		1.2		1.0		2.3
		4.2-inch mortar bursters								
		105-mm projectile fuze/booster								
Desired	Energetics	105-mm projectile burster	75%	1.5	100%	1.6	100%	1.6	19%	0.3
		105-mm projectile propellant							0%	0
		4.2-inch mortar propellant							0%	0
			Total	**5.0**		**4.3**		**4.7**		**5.0**

Emissions are based on contributions from both the required and desired feeds and operating scenarios for each EDT considered.

2.3 EDT LOCATION

The selected EDT will be located in the current parking area on the northern portion of the PCAPP. Figure 2-1 presents the EDT site location at the PCAPP. Additional information on EDT stack locations and orientations is presented in Section 3 and Appendix A.

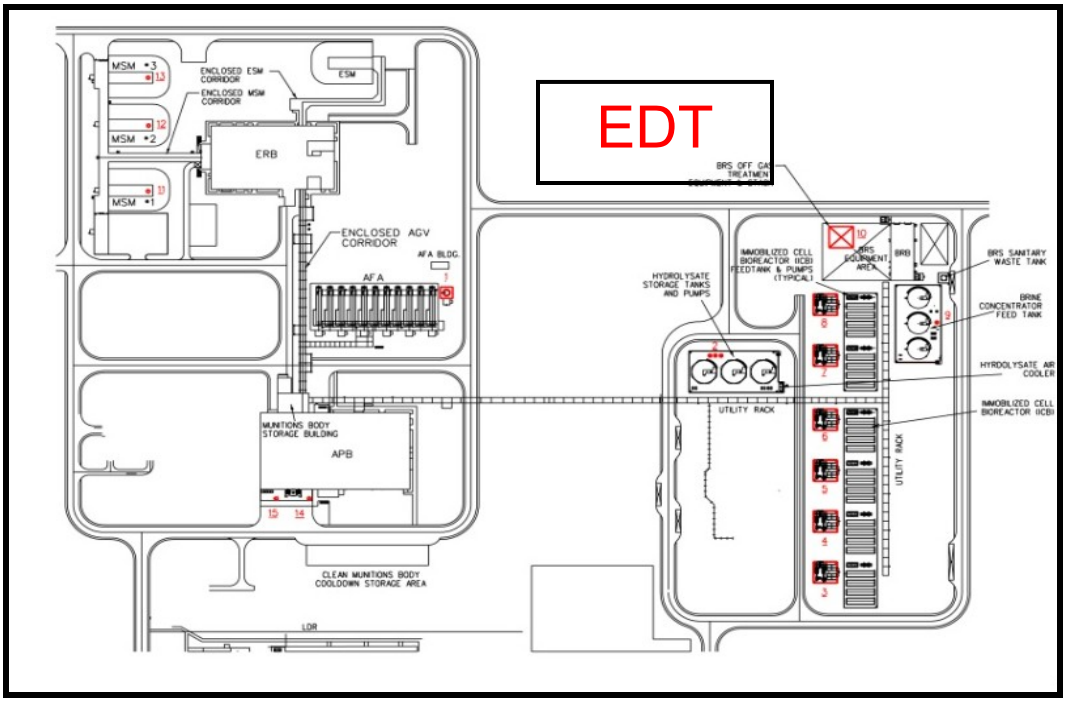

Figure 2-1. EDT site location at the PCAPP.

2.4 COPC IDENTIFICATION

COPCs are those chemicals that have been identified as potentially being emitted from one or more of the EDTs. In July 2010, interested vendors responded to a request for proposal (RFP) to construct an EDT system at PCAPP. As part of the RFP, vendors were requested to provide short-term emission rates for all pollutants known to be emitted from the system. In late 2010, vendors were subsequently requested to provide separate emission rates for processing of overpacks and rejects versus processing of energetic materials. After overpack/reject and energetic COPC emission rates were obtained from each vendor, the COPC list was further refined as necessary for each EDT. The various COPCs emitted differ by EDT for several reasons, including:

- Type of technology
- Type of process materials used (donor charges, neutralization agent, purge gases)
- Process conditions (temperature, pressure, residence time)
- Munitions feed rate
- OTS employed
- Other test conditions under which the COPCs were identified, for example:
    - The testing for TDC was conducted using mustard-filled British 25-pounder (pdr) munitions; however, this munition type will not be processed in the EDT at PCAPP.
    - The energetic materials contained within the mines tested for SDC are different than the energetic materials in the explosive tested for TDC. Therefore, the COPCs identified as being emitted from SDC versus TDC when processing energetics may differ.

Appendix A-1 presents the emissions calculations and MPHRA input documentation for the SDC, TDC, and DAVINCH, as well as the emission rate data provided by the respective vendors. Appendix A-2 presents estimated emission rates and corresponding calculation methodologies for the Army's EDS, as prepared by SAIC, as well as the MPHRA input documentation. This emissions calculation effort resulted in a total of 83 COPCs for the four EDTs, as presented in Table 2-3. Several sources of verifiable toxicity values (described in detail in Section 6) were searched to identify available toxicity data for the chemicals in Table 2-3. Of the 83 COPCs, 36 have carcinogenic toxicity factors, 74 have chronic noncarcinogenic toxicity factors, and 80 have acute toxicity factors. If no toxicity factor is available for a COPC, then no quantitative risk assessment can be performed for that COPC.

2.5 EMISSION RATE DETERMINATIONS

As described previously, the EDT vendors supplied short-term emission rates for all COPCs known to be emitted from the technology. These emission rates are based on test and model data for each EDT. The maximum rate between the overpacks/rejects and energetics short-term emission rates for each EDT was selected and modeled as the emission rate from the process stack for the acute risk scenario. The short-term emission rates were then used in conjunction with the EDT-specific processing rates to develop long-term average emission rates for each COPC and EDT. (Susman, S., personal communication, April 18, 2011a, b, and c) (Travis, R., personal communication, October 3, 2011) Because the DAVINCH vendor did not have emissions data while charging energetics, the maximum COPC emission rate data from charging energetic for either the SDC or TDC were substituted as an estimate of worst-case potential emissions for DAVINCH.

Table 2-4 summarizes the long-term emission rates used in the MPHRA (presented in terms of pounds per hour [lb/hr]). Table 2-5 summarizes the short-term emission rates used in the MPHRA (presented in terms of lb/hr).

Appendix A presents the Emissions and Model Input Documentation prepared for each EDT. Appendix A-1 presents the documentation for the SDC, TDC, and DAVINCH, and Appendix A-2 presents the documentation for the EDS.

Table 2-3. Chemicals of Potential Concern and Data Availability

COPC	CAS	Chemical Grouping	Emission Source		COPC				Toxicity Data		
									Chronic		Acute
			EDT Only	Both EDT and PCAPP	SDC	TDC	DAVINCH	EDS	Cancer	Noncancer	Inhalation
1,1,1-trichloroethane	71-55-6	Organic	✓		✓					✓	✓
1,1-dichloroethane	75-34-3	Organic		✓	✓				✓	✓	✓
1,1-dichloroethene	75-35-4	Organic	✓		✓			✓		✓	✓
1,2-dichloroethane	107-06-2	Organic		✓	✓			✓	✓	✓	✓
1,2-dichloropropane	78-87-5	Organic		✓	✓				✓	✓	✓
1,3-butadiene	106-99-0	Organic	✓		✓				✓	✓	✓
1,4-dichlorobenzene	106-46-7	Organic	✓					✓	✓	✓	✓
1,4-dioxane	123-91-1	Organic		✓		✓			✓	✓	✓
1,4-dithiane	505-29-3	Organic		✓				✓		✓	
1,4-oxathiane	15980-15-1	Organic		✓				✓			✓
2,4-dinitrotoluene	121-14-2	Organic	✓					✓	✓	✓	✓
2-butanone	78-93-3	Organic		✓	✓	✓	✓	✓		✓	✓
2-ethyl 1,3-butadiene	3404-63-5	Organic		✓		✓	✓				
acetone	67-64-1	Organic		✓	✓	✓	✓			✓	✓
acetylene	74-86-2	Organic	✓					✓			✓
benzene	71-43-2	Organic		✓	✓	✓	✓	✓	✓	✓	✓
benzoic acid	65-85-0	Organic	✓		✓					✓	✓
benzyl alcohol	100-51-6	Organic	✓		✓		✓			✓	✓
bis(2-ethylhexyl)-phthalate	117-81-7	Organic	✓		✓	✓	✓		✓	✓	✓
bromodichloromethane	75-27-4	Organic	✓		✓		✓		✓	✓	✓
bromomethane	74-83-9	Organic	✓		✓					✓	✓
carbon disulfide	75-15-0	Organic		✓	✓		✓			✓	✓
carbon tetrachloride	56-23-5	Organic	✓		✓		✓		✓	✓	✓
chlorobenzene	108-90-7	Organic	✓		✓		✓	✓		✓	✓
chloroform	67-66-3	Organic		✓	✓		✓	✓	✓	✓	✓
chloromethane	74-87-3	Organic		✓	✓	✓	✓			✓	✓
cis-1,3-dichloropropene	10061-01-5	Organic	✓		✓				✓	✓	✓
dibromochloromethane	124-48-1	Organic	✓		✓		✓		✓	✓	✓
dichlorodifluoromethane	75-71-8	Organic	✓		✓	✓				✓	✓
dimethyl phthalate	131-11-3	Organic	✓		✓		✓				✓
di-n-butyl phthalate	84-74-2	Organic	✓		✓	✓	✓			✓	✓
di-n-octyl phthalate	117-84-0	Organic	✓			✓					✓
ethane	74-84-0	Organic		✓		✓	✓	✓			✓
ethylbenzene	100-41-4	Organic		✓	✓		✓		✓	✓	✓
Freon 113	76-13-1	Organic	✓		✓					✓	✓
HD	505-60-2	Organic		✓	✓	✓	✓	✓	✓	✓	✓
hexane	110-54-3	Organic		✓	✓		✓			✓	✓
methane	74-82-8	Organic		✓		✓	✓	✓			✓
methylene chloride	75-09-2	Organic		✓	✓		✓		✓	✓	✓
monoethanolamine	141-43-5	Organic	✓					✓			✓
naphthalene	91-20-3	Organic		✓		✓			✓	✓	✓
nitrobenzene	98-95-3	Organic	✓					✓	✓	✓	✓

✓ = Indicates this COPC is emitted from the specific EDT and/or toxicity data are available for this COPC/pathway.

Table 2-3. Chemicals of Potential Concern and Data Availability (continued)

COPC	CAS	Chemical Grouping	Emission Source		COPC				Toxicity Data		
									Chronic		Acute
			EDT Only	Both EDT and PCAPP	SDC	TDC	DAVINCH	EDS	Cancer	Noncancer	Inhalation
propene	115-07-1	Organic		✓		✓	✓			✓	✓
styrene	100-42-5	Organic	✓		✓		✓			✓	✓
tetrachloroethene	127-18-4	Organic		✓	✓		✓	✓	✓	✓	✓
toluene	108-88-3	Organic		✓	✓	✓	✓			✓	✓
trans-1,3-dichloropropene	10061-02-6	Organic	✓		✓				✓	✓	✓
trichloroethene	79-01-6	Organic		✓	✓		✓	✓	✓	✓	✓
trichlorofluoromethane	75-69-4	Organic	✓		✓	✓				✓	✓
vinyl chloride	75-01-4	Organic		✓	✓		✓	✓	✓	✓	✓
xylenes	1330-20-7	Organic		✓	✓	✓	✓			✓	✓
1,2,3,4,6,7,8-HpCDD	35822-46-9	PCDDs, PCDFs, PCBs	✓			✓					✓
1,2,3,4,6,7,8,9-OCDD	3268-87-9	PCDDs, PCDFs, PCBs	✓			✓					✓
2,3,7,8-TCDF	51207-31-9	PCDDs, PCDFs, PCBs	✓		✓					✓[a]	✓
1,2,3,4,6,7,8-HpCDF	67562-39-4	PCDDs, PCDFs, PCBs	✓			✓			✓[a]		✓
1,2,3,4,6,7,8,9-OCDF	39001-02-0	PCDDs, PCDFs, PCBs	✓			✓					✓
3,3',4,4'-TCB (PCB 77)	32598-13-3	PCDDs, PCDFs, PCBs	✓				✓			✓	✓
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	PCDDs, PCDFs, PCBs	✓				✓			✓	✓
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	PCDDs, PCDFs, PCBs	✓				✓			✓	✓
ammonia	7664-41-7	Inorganic		✓		✓	✓	✓		✓	✓
aluminum	91728-14-2	Inorganic	✓			✓	✓			✓	✓
antimony	7440-36-0	Inorganic	✓		✓	✓				✓	✓
barium	7440-39-3	Inorganic	✓			✓				✓	✓
beryllium	7440-41-7	Inorganic	✓			✓			✓	✓	✓
cadmium	7440-43-9	Inorganic	✓		✓	✓	✓		✓	✓	✓
chlorine	7782-50-5	Inorganic	✓			✓	✓			✓	✓
chromium (3+)	16065-83-1	Inorganic	✓		✓	✓	✓			✓	✓
chromium (6+)	18540-29-9	Inorganic	✓		✓	✓	✓		✓	✓	
cobalt	7440-48-4	Inorganic	✓			✓				✓	✓
copper	7440-50-8	Inorganic	✓		✓	✓	✓			✓	✓
hydrogen chloride	7647-01-0	Inorganic	✓			✓	✓			✓	✓
hydrogen cyanide	74-90-8	Inorganic	✓					✓		✓	✓
iron	7439-89-6	Inorganic	✓			✓	✓			✓	✓
lead	7439-92-1	Inorganic	✓		✓	✓	✓		✓		✓
manganese	7439-96-5	Inorganic	✓			✓	✓			✓	✓
mercuric chloride	7487-94-7	Inorganic	✓							✓	✓
methyl mercury	22967-92-6	Inorganic	✓			✓[b]	✓[b]	✓[b]		✓	✓
elemental mercury	7439-97-6	Inorganic	✓							✓	✓
nickel	7440-02-0	Inorganic	✓		✓	✓	✓		✓	✓	✓
selenium	7782-49-2	Inorganic	✓			✓				✓	✓
silver	7440-22-4	Inorganic	✓			✓				✓	✓
vanadium	7440-62-2	Inorganic	✓			✓	✓			✓	✓
zinc	7440-66-6	Inorganic	✓		✓	✓	✓			✓	✓

✓ = Indicates this COPC is emitted from the specific EDT and/or toxicity data are available for this COPC/pathway.
a. Congener toxicity is evaluated on the basis of toxic equivalence to 2,3,7,8-TCDD.
b. Speciated mercury emissions were reported as total mercury.

Table 2-4. EDT Long-term Emission Rates

COPC	Long-term Emission Rates After Controls (lb/hr)					
	SDC	TDC		DAVINCH	EDS	
	Process Stack	Per Stack	Total for 2 Units (4 Stacks)		Per Stack	Total for 9 Units (9 Stacks)
1,1,1-trichloroethane	1.70E-06					
1,1-dichloroethane	8.08E-07					
1,1-dichloroethene	7.41E-07				1.19E-08	1.07E-07
1,2-dichloroethane	8.19E-07				3.62E-12	3.25E-11
1,2-dichloropropane	9.86E-07					
1,3-butadiene	7.09E-07					
1,4-dichlorobenzene					2.94E-11	2.65E-10
1,4-dioxane		1.79E-04	7.17E-04			
1,4-dithiane					3.34E-09	3.00E-08
1,4-oxathiane					7.05E-09	6.34E-08
2,4-dinitrotoluene					4.31E-13	3.88E-12
2-butanone	1.21E-05	3.44E-04	1.37E-03	2.64E-06	6.13E-09	5.52E-08
2-ethyl 1,3-butadiene		3.38E-05	1.35E-04	1.25E-04		
acetone	1.92E-05	4.93E-03	1.97E-02	4.72E-06		
acetylene					3.57E-03	3.22E-02
benzene	1.40E-05	3.81E-03	1.52E-02	1.35E-02	3.56E-11	3.20E-10
benzoic acid	4.17E-05					
benzyl alcohol	1.77E-05			9.89E-06		
bis(2-ethylhexyl)-phthalate	6.32E-06	8.83E-05	3.53E-04	8.31E-05		
bromodichloromethane	3.50E-06			9.19E-07		
bromomethane	4.12E-06					
carbon disulfide	9.68E-06			5.78E-06		
carbon tetrachloride	4.76E-06			2.36E-07		
chlorobenzene	1.11E-06			2.08E-07	4.96E-11	4.46E-10
chloroform	1.37E-05			6.10E-07	4.64E-09	4.18E-08
chloromethane	1.22E-05	3.73E-05	1.49E-04	5.54E-06		
cis-1,3-dichloropropene	9.90E-07					
dibromochloromethane	3.20E-06			1.13E-06		
dichlorodifluoromethane	2.10E-06	4.33E-05	1.73E-04			
dimethyl phthalate	1.37E-05			9.80E-06		
di-n-butyl phthalate	2.10E-05	1.10E-05	4.39E-05	2.29E-05		
di-n-octyl phthalate		6.57E-05	2.63E-04			
ethane		7.17E-02	2.87E-01	5.51E-02	1.59E-04	1.43E-03
ethylbenzene	1.30E-06			1.83E-07		
Freon 113	2.17E-06					
HD	1.67E-06	1.17E-05	4.70E-05	5.72E-05	2.24E-05	2.01E-04
hexane	2.55E-06			5.14E-07		
methane		3.62E-01	1.45E+00	1.25E+00	1.74E-03	1.57E-02
methylene chloride	1.15E-05			7.96E-07		
monoethanolamine					1.41E-05	1.27E-04
naphthalene		6.57E-05	2.63E-04			
nitrobenzene					8.43E-13	7.59E-12
propene		3.67E-03	1.47E-02	1.35E-02		
styrene	3.58E-06			2.03E-06		
tetrachloroethene	1.25E-06			2.15E-07	1.15E-09	1.04E-08
toluene	1.60E-06	1.44E-03	5.77E-03	2.29E-03		

Table 2-4. EDT Long-term Emission Rates (continued)

COPC	Long-term Emission Rates After Controls (lb/hr)					
	SDC	TDC		DAVINCH	EDS	
	Process Stack	Per Stack	Total for 2 Units (4 Stacks)		Per Stack	Total for 9 Units (9 Stacks)
trans-1,3-dichloropropene	1.05E-06					
trichloroethene	1.33E-06			2.73E-07	1.42E-08	1.28E-07
trichlorofluoromethane	1.09E-06	1.94E-05	7.77E-05			
vinyl chloride	1.22E-06			4.08E-05	1.16E-05	1.04E-04
xylenes	3.22E-06	2.26E-05	9.02E-05	8.31E-05		
1,2,3,4,6,7,8-HpCDD		2.20E-11	8.79E-11			
1,2,3,4,6,7,8,9-OCDD		1.34E-10	5.38E-10			
2,3,7,8-TCDF	2.70E-12					
1,2,3,4,6,7,8-HpCDF		1.28E-11	5.13E-11			
1,2,3,4,6,7,8,9-OCDF		4.36E-11	1.74E-10			
3,3',4,4'-TCB (PCB 77)				2.26E-13		
2,3',4,4',5-PeCB (PCB 118)				5.66E-13		
2,3,3',4,4'-PeCB (PCB 105)				2.26E-13		
ammonia		4.31E-05	1.73E-04	1.04E-04	1.51E-03	1.36E-02
aluminum		1.07E-04	4.29E-04	3.95E-04		
antimony	1.39E-08	5.08E-06	2.03E-05			
barium		1.02E-06	4.06E-06			
beryllium		4.78E-07	1.91E-06			
cadmium	7.30E-08	5.15E-06	2.06E-05	3.01E-06		
chlorine		5.18E-04	2.07E-03	1.25E-03		
chromium (3+)	6.71E-07	7.93E-06	3.17E-05	8.31E-06		
chromium (6+)	6.71E-07	7.93E-06	3.17E-05	8.31E-06		
cobalt		1.79E-06	7.17E-06			
copper	9.98E-07	8.82E-05	3.53E-04	3.12E-04		
hydrogen chloride		1.73E-03	6.90E-03	7.93E-03		
hydrogen cyanide					1.08E-03	9.69E-03
iron		7.78E-03	3.11E-02	1.14E-03		
lead	3.34E-07	5.33E-06	2.13E-05	1.25E-05		
manganese		3.95E-04	1.58E-03	1.45E-03		
total mercury		1.94E-06	7.77E-06	2.83E-09	2.15E-18	1.94E-17
nickel	1.39E-06	3.57E-06	1.43E-05	4.88E-06		
selenium		1.40E-05	5.62E-05			
silver		1.24E-06	4.96E-06			
vanadium		1.38E-05	5.52E-05	1.56E-05		
zinc	1.35E-05	2.25E-04	8.99E-04	5.19E-04		

Table 2-5. EDT Short-term Emission Rates

COPC	Short-term Emission Rates After Controls (lb/hr)						
	SDC		TDC		DAVINCH	EDS	
	Process Stack	Building Ventilation Stack	Per Stack	Total for 2 Units (4 Stacks)		Per Stack	Total for 9 Units (9 Stacks)
1,1,1-trichloroethane	6.29E-06						
1,1-dichloroethane	2.98E-06						
1,1-dichloroethene	2.74E-06					2.04E-06	1.84E-05
1,2-dichloroethane	3.02E-06					6.08E-09	5.47E-08
1,2-dichloropropane	3.64E-06						
1,3-butadiene	2.62E-06						
1,4-dichlorobenzene						5.05E-09	4.55E-08
1,4-dioxane			6.00E-04	2.40E-03			
1,4-dithiane						5.73E-07	5.16E-06
1,4-oxathiane						1.21E-06	1.09E-05
2,4-dinitrotoluene						7.41E-11	6.67E-10
2-butanone	3.12E-05		1.15E-03	4.60E-03	5.08E-06	1.05E-06	9.45E-06
2-ethyl 1,3-butadiene			6.00E-05	2.40E-04	2.40E-04		
acetone	4.64E-05		1.65E-02	6.60E-02	9.08E-06		
acetylene						9.86E-02	8.87E-01
benzene	1.77E-05		6.50E-03	2.60E-02	2.60E-02	6.10E-09	5.49E-08
benzoic acid	1.54E-04						
benzyl alcohol	1.90E-05				1.90E-05		
bis(2-ethylhexyl)-phthalate	2.33E-05		2.20E-04	8.80E-04	1.60E-04		
bromodichloromethane	8.17E-06				1.77E-06		
bromomethane	1.52E-05						
carbon disulfide	1.11E-05				1.11E-05		
carbon tetrachloride	1.63E-05				4.54E-07		
chlorobenzene	3.03E-06				4.00E-07	8.51E-09	7.66E-08
chloroform	4.76E-05				1.18E-06	7.80E-07	7.02E-06
chloromethane	1.63E-05		1.25E-04	5.00E-04	1.07E-05		
cis-1,3-dichloropropene	3.66E-06						
dibromochloromethane	5.97E-06				2.18E-06		
dichlorodifluoromethane	7.74E-06		1.45E-04	5.80E-04			
dimethyl phthalate	1.89E-05				1.89E-05		
di-n-butyl phthalate	2.28E-05		1.60E-05	6.40E-05	4.40E-05		
di-n-octyl phthalate			2.20E-04	8.80E-04			
ethane			1.90E-01	7.60E-01	1.06E-01	4.37E-03	3.93E-02
ethylbenzene	3.86E-06				3.52E-07		
Freon 113	8.01E-06						
HD	6.18E-06	1.26E-04	3.93E-05	1.57E-04	1.34E-04	4.69E-05	4.22E-04
hexane	6.76E-06				9.90E-07		
methane			6.00E-01	2.40E+00	2.40E+00	4.81E-02	4.33E-01
methylene chloride	3.84E-05				1.53E-06		
monoethanolamine						2.74E-03	2.47E-02
naphthalene			2.20E-04	8.80E-04			
nitrobenzene						1.45E-10	1.31E-09
propene			6.50E-03	2.60E-02	2.60E-02		
styrene	3.90E-06				3.90E-06		
tetrachloroethene	3.52E-06				4.14E-07	1.98E-07	1.78E-06
toluene	2.30E-06		2.75E-03	1.10E-02	4.40E-03		

Table 2-5. EDT Short-term Emission Rates (continued)

COPC	Short-term Emission Rates After Controls (lb/hr)						
	SDC		TDC		DAVINCH	EDS	
	Process Stack	Building Ventilation Stack	Per Stack	Total for 2 Units (4 Stacks)		Per Stack	Total for 9 Units (9 Stacks)
trans-1,3-dichloropropene	3.88E-06						
trichloroethene	3.50E-06				5.26E-07	2.44E-06	2.20E-05
trichlorofluoromethane	4.04E-06		6.50E-05	2.60E-04			
vinyl chloride	4.51E-06				9.52E-05	1.98E-03	1.78E-02
xylenes	9.28E-06		4.00E-05	1.60E-04	1.60E-04		
1,2,3,4,6,7,8-HpCDD			7.36E-11	2.94E-10			
1,2,3,4,6,7,8,9-OCDD			4.50E-10	1.80E-09			
2,3,7,8-TCDF	9.95E-12						
1,2,3,4,6,7,8-HpCDF			4.29E-11	1.72E-10			
1,2,3,4,6,7,8,9-OCDF			1.46E-10	5.84E-10			
3,3',4,4'-TCB (PCB 77)					5.29E-13		
2,3',4,4',5-PeCB (PCB 118)					1.32E-12		
2,3,3',4,4'-PeCB (PCB 105)					5.29E-13		
ammonia			5.00E-05	2.00E-04	2.00E-04	6.55E-02	5.90E-01
aluminum			1.90E-04	7.60E-04	7.60E-04		
antimony	5.15E-08		1.70E-05	6.80E-05			
barium			3.40E-06	1.36E-05			
beryllium			1.60E-06	6.40E-06			
cadmium	7.39E-08		1.45E-05	5.80E-05	5.80E-06		
chlorine			6.00E-04	2.40E-03	2.40E-03		
chromium (3+)	7.41E-07		1.90E-05	7.60E-05	1.60E-05		
chromium (6+)	7.41E-07		1.90E-05	7.60E-05	1.60E-05		
cobalt			6.00E-06	2.40E-05			
copper	1.05E-06		1.50E-04	6.00E-04	6.00E-04		
hydrogen chloride			2.00E-03	8.00E-03	8.80E-03		
hydrogen cyanide						2.97E-02	2.67E-01
iron			2.50E-02	1.00E-01	2.20E-03		
lead	4.32E-07		6.50E-06	2.60E-05	2.40E-05		
manganese			7.00E-04	2.80E-03	2.80E-03		
total mercury			6.50E-06	2.60E-05	6.60E-09	3.59E-16	3.23E-15
nickel	1.69E-06		7.50E-06	3.00E-05	9.40E-06		
selenium			4.70E-05	1.88E-04			
silver			4.15E-06	1.66E-05			
vanadium			3.20E-05	1.28E-04	3.00E-05		
zinc	1.76E-05		2.80E-04	1.12E-03	1.00E-03		

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3 AIR DISPERSION AND DEPOSITION MODELING

The first step in assessing potential human health risks associated with releases of COPCs to the environment is calculating the dispersion of emitted COPCs to quantify atmospheric concentrations and deposition rates in the areas around the facility. Air concentrations and deposition rates are calculated using air dispersion models. Air dispersion models are mathematical computer programs that attempt to describe the effects of physical processes that occur in the atmosphere on rates of dispersion of emissions from a source.

The following subsections summarize the air dispersion modeling conducted for the EDT MPHRA. The model input data and post-processing procedures used to conduct the air dispersion modeling for the EDT MPHRA are the same as those used to conduct the PCAPP MPHRA. The primary differences between the modeling conducted for the two MPHRAs are related to the source input data for the EDT options and inclusion of particle-phase COPCs that were not present in PCAPP emissions. In addition, the EDT MPHRA included an analysis of COPC concentrations at cultivated farmlands located south of the PCD along the Arkansas River. Table 3-1 presents a comparison between the model input data used and post-processing procedures employed for the dispersion modeling of the EDT and PCAPP MPHRAs. Inputs that are noted as having changed are discussed throughout the remainder of this section. Inputs that are noted as not having changed are discussed only briefly herein, but a full discussion of the inputs is available in the draft and final PCAPP MPHRA Reports.

3.1 MODELING OVERVIEW

The USEPA maintains a Guideline on Air Quality Models, which is published as Appendix W to Title 40 of the Code of Federal Regulations (CFR) Part 51. (USEPA, 2005a) The Guideline on Air Quality Models identify the AERMOD dispersion model as the recommended model for a wide range of regulatory applications in all types of terrain. AERMOD (Julian date 07026) was used to conduct the air dispersion and deposition modeling for the PCAPP MPHRA, and the latest version (Julian date 11103) of the AERMOD model was used for the EDT MPHRA. Detailed information on the changes to AERMOD from the 07026 version to the 11103 version is available in Model Change Bulletins on USEPA's Support Center for Regulatory Atmospheric Modeling (SCRAM) website. (USEPA, 2011a)

AERMOD is a multi-source model that simulates dispersion of vapor and particulate matter. The model uses emission source characteristic data, meteorological data, and receptor locations (i.e., calculation points) to determine air concentrations and wet and dry deposition rates, while conserving mass through plume depletion. The model is applicable for use in all types of terrain, including the terrain associated with the PCD.

3.1.1 Averaging Times

AERMOD was used to calculate the maximum COPC air concentrations and dry and wet deposition rates at an array of receptors. The AERMOD results used in this MPHRA included the maximum annual COPC air concentrations and maximum annual dry and wet deposition rates for the chronic risk assessment and maximum 1-hour COPC air concentrations for the acute risk assessment.

Table 3-1. Comparison of EDT and PCAPP MPHRA Model Inputs

Modeling Requirement	Differences Between the EDT MPHRA and PCAPP MPHRA	Subsection with Discussion
Averaging times	Same as PCAPP MPHRA.	3.1.1
Unit Response emission rate	Same as PCAPP MPHRA.	3.1.2
Control options	Same as PCAPP MPHRA.	3.2.1
Source information	Specific to EDT technologies, including source characteristics/locations, building downwash information, deposition parameters, and source groups. Land use type (rural or urban coefficients) same as PCAPP MPHRA.	3.2.2
Receptor grid	Same receptor grids as PCAPP MPHRA used for chronic and acute assessments; the EDT MPHRA also included a receptor grid to evaluate cultivated farm receptors in comparison to the maximum impact receptor.	3.2.3
Meteorological data	Same as PCAPP MPHRA.	3.2.4
Output Options	Same as PCAPP MPHRA.	3.2.5
Post-Processing AERMOD Results	Same as PCAPP MPHRA.	3.3
Cultivated Farm Comparative Results	Not conducted in PCAPP MPHRA.	3.4

The annual COPC air concentrations were calculated as an average over the 3 years of on-site meteorological data used in the model. The 1-hour COPC concentrations were calculated as the highest 1-hour average concentration from the entire 3-year meteorological data set. The annual COPC deposition rates were calculated as the highest total deposition rate for each COPC occurring over one of the 3 years of meteorological data (i.e., the calendar year producing the highest total deposition rate).

3.1.2 Unit Response

A linear relationship exists between emission rate and modeled air parameter values. Specifically, the air concentration and deposition rates calculated by AERMOD for each receptor are directly proportional to the emission rate (i.e., when one doubles the emission rate, the calculated atmospheric concentration and depositions rates also double). Therefore, a unit emission rate (i.e., 1 gram per second [g/s]) can be input to the model for each modeled source, and the resulting concentration and deposition rates calculated by the model (referred to as a unit response) can be adjusted using chemical-specific emission rates to obtain chemical-specific concentrations and deposition rates. This precludes the need to run the model for each individual COPC for each EDT in this MPHRA.

For this MPHRA, AERMOD provided a unit response for each modeled source. The long-term and short-term COPC-specific emission rates for each modeled source presented, in Tables 2-4 and 2-5, respectively, were used to adjust the AERMOD unit response. The resulting COPC-specific adjusted air concentrations and deposition rates were then used to estimate media concentrations, as described in Section 5.

3.1.3 Overview of Model Inputs

One of the inputs to AERMOD is the run-stream setup file that contains the selected modeling options, source location and parameter data, receptor locations, meteorological data file specifications, and output options. Another AERMOD data requirement is two types of meteorological data files, both of which are provided by the AERMOD meteorological preprocessor program (AERMET). One file consists of surface scalar parameters, and the other consists of vertical profiles of meteorological data. The meteorological data files used in this MPHRA are discussed in Section 3.2.4. For applications involving elevated terrain effects, the AERMOD terrain data preprocessor program (AERMAP) provides the required receptor terrain data for input to the AERMOD model. AERMAP requires a terrain data input file, as described in Subsection 3.2.3.4.

3.2 DETAILED AERMOD INPUT DATA

AERMOD requires an array of data to characterize the emission sources, terrain features, receptor locations, and meteorology. The AERMOD run-stream file contains the identification of the required data in the following input categories:

- control options
- source information
- receptor information
- meteorology data file specifications
- output options

The following subsections summarize the data included in each of the five input categories for the EDT MPHRA. Except for the source information, the input data for this evaluation are identical to that used for the PCAPP MPHRA.

3.2.1 Control Options

The input requirements for the Control Option category include identification of the dispersion options, averaging times, and gas dry deposition inputs. Table 3-2 lists the Control Option specifications used in this MPHRA.

3.2.2 Source Information

The Source Information category contains information that defines the emission sources for a particular model run. The Source Information category requires the identification of the following information:

- source types, locations, and release parameters
- building downwash information
- land use type (rural or urban coefficients)
- deposition parameters
- source groups

The following subsections describe the information that was identified in this input category.

Table 3-2. Control Option Specifications

Control Option	Specification	Basis
Stack-tip downwash (except for Schulman-Scire downwash)	Use	Regulatory default
Elevated terrain	Incorporate	Regulatory default
Calms processing routines	Use	Regulatory default
Missing data processing routine	Use	Regulatory default
Air concentration	Calculate and output	MPHRA calculation input requirements
Dry deposition	Calculate and output	MPHRA calculation input requirements
Wet deposition	Calculate and output	MPHRA calculation input requirements
Averaging times	Annual and 1-hr	For lifetime and acute assessments
Dispersion coefficient	Rural	Land use analysis
Dry gas deposition parameters		
pollutant reactivity factor	0	AERMOD default
fraction of maximum green leaf area index during autumn	0.5	AERMOD default
fraction of maximum green leaf area index during transitional spring	0.25	AERMOD default
land use categories	Barren land, mostly desert for all 36 wind sectors	Surrounding land use
seasonal categories		
midsummer	June through August	Temperature and growing season
autumn	September through October	Temperature and growing season
late autumn	November through December	Temperature and growing season
winter	January through February	Temperature and growing season
transitional spring	March through May	Temperature and growing season

3.2.2.1 Source Types, Locations, and Release Parameters

The input parameters that define the emission source information for a particular model run vary depending on the source type. All of the emission points used in this MPHRA are considered "point" sources. For point sources, which include releases from stacks and isolated vents, the following input parameters must be identified:

- source identification (ID)
- source type
- source location in Universal Transverse Mercator (UTM) coordinates
- emission rate (g/s)
- release height above ground (m)
- stack gas exit temperature (Kelvin [K])
- stack gas exit velocity (m/s)
- stack inside diameter (m)

These source input parameters were defined for each EDT based on information obtained from the technology vendors or SAIC (for EDS). Table 3-3 summarizes the source locations and stack design parameters of the emission sources for each EDT. As seen in Table 3-3, the SDC, TDC, and EDS have more than one emission point. The SDC system includes a stack for the process OTS (SDC1) and a stack for the environmental enclosure ventilation system (SDC2). Each of the two TDC systems (TDC1 and TDC2) exhausts through a pair of identical stacks (Stacks A and B). Each of the nine EDS systems exhausts through a single stack (EDS1 through EDS9).

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Table 3-3. Summary of Source Parameters for EDT Emission Sources

Source ID	Source Description	Location, UTM		Base Elevation		Stack Height		Stack Temperature		Stack Velocity		Stack Diameter	
		East	North										
		(m)	(m)	(m)	(ft)	(m)	(ft)	(K)	(°F)	(m/s)	(ft/s)	(m)	(ft)
SDC Source Parameters													
SDC1	Process Stack	560,614.8	4,244,575	1448.9	4753.6	15.9	52.2	324	124	5.08	16.7	0.3	1.0
SDC2	Ventilation Stack	560,637.9	4,244,575	1448.7	4753.0	4.9	16.0	ambient[a]	ambient	11.5	37.7	0.91	3.0
TDC Source Parameters													
TDC1A	Process Stack 1A	560,641.2	4,244,561	1448.7	4752.9	3.1	10.0	amb.+5.5[b]	amb.+10	18.2	59.7	0.41	1.4
TDC1B	Process Stack 1B	560,641.2	4,244,557	1448.7	4752.9	3.1	10.0	amb.+5.5	amb.+10	18.2	60.0	0.41	1.4
TDC2A	Process Stack 2A	560,641.2	4,244,600	1448.7	4752.9	3.1	10.0	amb.+5.5	amb.+10	18.2	60.0	0.41	1.4
TDC2B	Process Stack 2B	560,641.2	4,244,597	1448.7	4752.9	3.1	10.0	amb.+5.5	amb.+10	18.2	60.0	0.41	1.4
DAVINCH Source Parameters													
DVNCH	DAVINCH Process	560,633.8	4,244,545	1448.7	4752.8	15.9	52.0	0	0	32.8	108	0.56	1.8
EDS Source Parameters													
EDS1	EDS Unit 1 Stack	560,597.7	4,244,518	1447.5	4749.0	4.6	15.0	300	81	9.7	31.7	0.61	2.0
EDS2	EDS Unit 2 Stack	560,597.7	4,244,549	1447.5	4749.0	4.6	15.0	300	81	9.7	31.7	0.61	2.0
EDS3	EDS Unit 3 Stack	560,597.7	4,244,579	1447.5	4749.0	4.6	15.0	300	81	9.7	31.7	0.61	2.0
EDS4	EDS Unit 4 Stack	560,645.0	4,244,518	1447.5	4749.0	4.6	15.0	300	81	9.7	31.7	0.61	2.0
EDS5	EDS Unit 5 Stack	560,645.0	4,244,549	1447.5	4749.0	4.6	15.0	300	81	9.7	31.7	0.61	2.0
EDS6	EDS Unit 6 Stack	560,645.0	4,244,579	1447.5	4749.0	4.6	15.0	300	81	9.7	31.7	0.61	2.0
EDS7	EDS Unit 7 Stack	560,692.2	4,244,518	1447.5	4749.0	4.6	15.0	300	81	9.7	31.7	0.61	2.0
EDS8	EDS Unit 8 Stack	560,692.2	4,244,549	1447.5	4749.0	4.6	15.0	300	81	9.7	31.7	0.61	2.0
EDS9	EDS Unit 9 Stack	560,692.2	4,244,579	1447.5	4749.0	4.6	15.0	300	81	9.7	31.7	0.61	2.0

a. A temperature input of “ambient” is used to indicate the stack temperature is equal to the ambient temperature.
b. A temperature input of “amb.+” is used to indicate the stack temperature is equal to that increment above the ambient temperature.

As described in Section 2, the EDT vendors supplied short-term emission rates for all COPCs known to be emitted from each technology based on test and model data. These short-term emission rates were used in conjunction with EDT-specific processing rates to develop long-term average hourly emission rates for each COPC and EDT. That is, the total mass emissions calculated for the entire 5-year processing schedule for each EDT were divided by the total hours of operation. For the SDC, TDC, and DAVINCH systems, emissions were assumed to occur continuously during the 12-hour daily operational periods. Therefore, the long-term average hourly emission rates for these EDTs were estimated for each COPC by dividing the total 5-year mass emissions by 5 years and 4,380 hours per year (12 hours per day and 7 days per week).

Each EDS unit operates 12 hours per day when processing energetics and 24 hours per day when processing overpacks/rejects. However, emissions from the EDS units only occur during specific phases of the operation, such as vessel draining, rinsing, and purging. Because these specific operations will only occur during the 12-hour work day, emissions from the nine EDS units were assumed to occur continuously over the 12-hour work day while processing both overpacks/rejects and energetics. In addition, the EDS units operate 6 days per week, with the seventh day used for maintenance. Therefore, the long-term average emission rates from the EDS units were estimated for each COPC by dividing the total 5-year mass emissions by 5 years and 3,744 hours per year (12 hours per day and 6 days per week).

Additional information on the EDTs and their emissions is provided in Section 2 and Appendix A. Table 2-4 summarizes the long-term emission rates used in the chronic assessments of the MPHRA. Table 2-5 summarizes the short-term emission rates used in the acute assessment of the MPHRA.

Because the emissions for each EDT only occur during the 12-hour work day, variable emission rate factors were employed in the AERMOD run-stream file in order to appropriately model the emissions. Variable emission rate factors are multipliers of the emission rates specified for the source. A factor of 0.0 is used when the source is not emitting during a specific hour and a factor of 1.0 is used when the source is operating at 100 percent of the specified emission rate. As such, an emission rate factor of 1.0 was entered for the work day hours (7 am to 7 pm) and a factor of 0.0 was entered for the non-work day hours (7 pm to 7 am). As a conservative approach, no additional adjustment of emissions was employed for the EDS to account for only six days per week operations, even though the EDS long-term emission rates were based on six days per week of operation.

3.2.2.2 Building Downwash Information

The Source Information inputs must include direction-specific information for each source affected by structure-induced downwash influences from nearby or adjacent structures. Plume dispersion can be affected by nearby structures when a stack is short enough to allow the plume to be significantly influenced by surrounding building turbulence. This phenomenon, known as structure-induced downwash, generally results in a higher ground-level concentration in the vicinity of a stack and influencing structure. The height needed to avoid this phenomenon is referred to as the Good Engineering Practice (GEP) stack height; a stack constructed at or above this height will not be impacted by building turbulence and need not be subjected to a downwash analysis.

All structures associated with the EDTs, as identified by the technology vendors, were analyzed to determine their potential to influence the dispersion of stack emissions. USEPA's Guideline for Determination of Good Engineering Practice Stack Height was followed in this evaluation. (USEPA, 1985) All EDT stacks were determined to be less than GEP. When physical stack heights are found to be less than GEP, AERMOD incorporates downwash effects into the

modeling using USEPA's Building Profile Input Program for PRIME. (BPIPPRM dated 04274) Structures located closer than five times the lesser of the structure height or projected building width to an emission point are included in the downwash analysis. Figures 3-1 through 3-4 graphically show the structures (blue figures) and emission points (red figures) included in the BPIPPRM analysis for SDC, TDC, DAVINCH, and EDS, respectively. Downwash structures for PCAPP operations, as modeled in the PCAPP MPHRA, also are shown in these figures. BPIPPRM-generated downwash parameters were included in the AERMOD run-stream file for each EDT emission source. AERMOD then applied a downwash algorithm as needed.

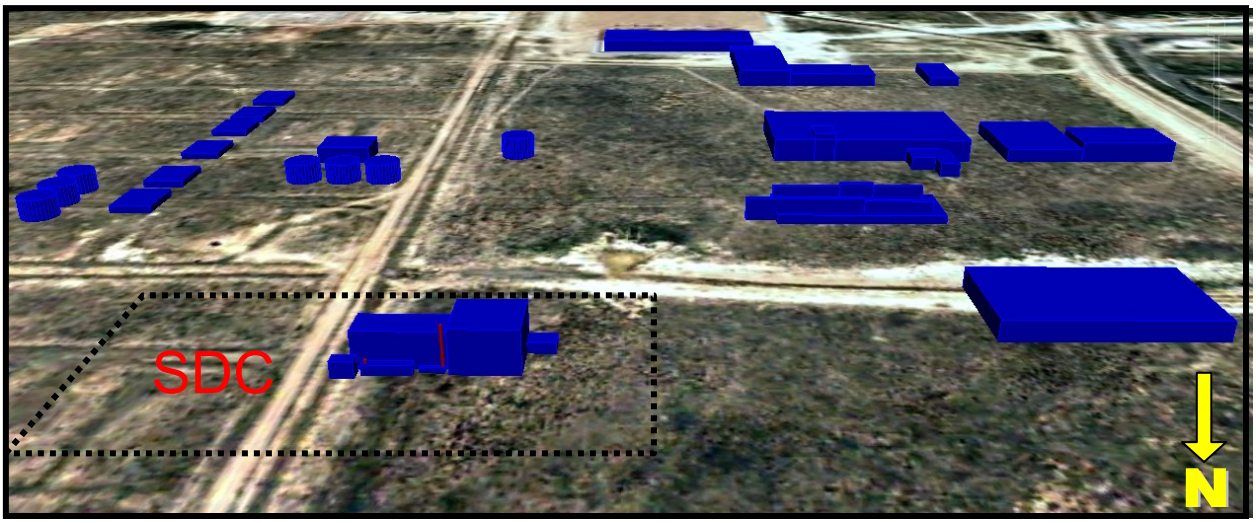

Figure 3-1. Location of the downwash analysis structures and emission points for SDC.

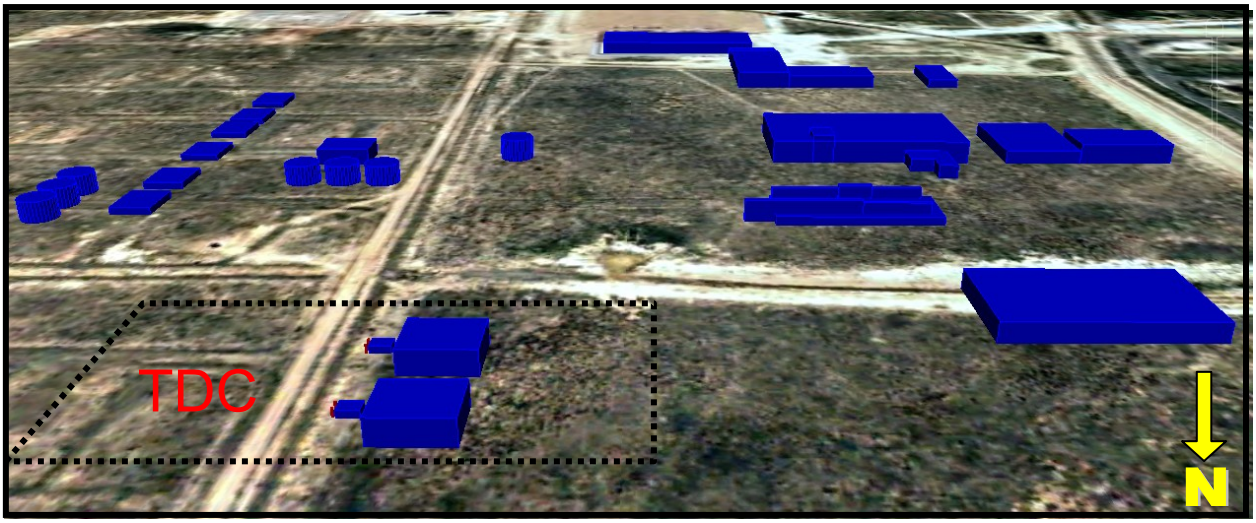

Figure 3-2. Location of the downwash analysis structures and emission points for TDC.

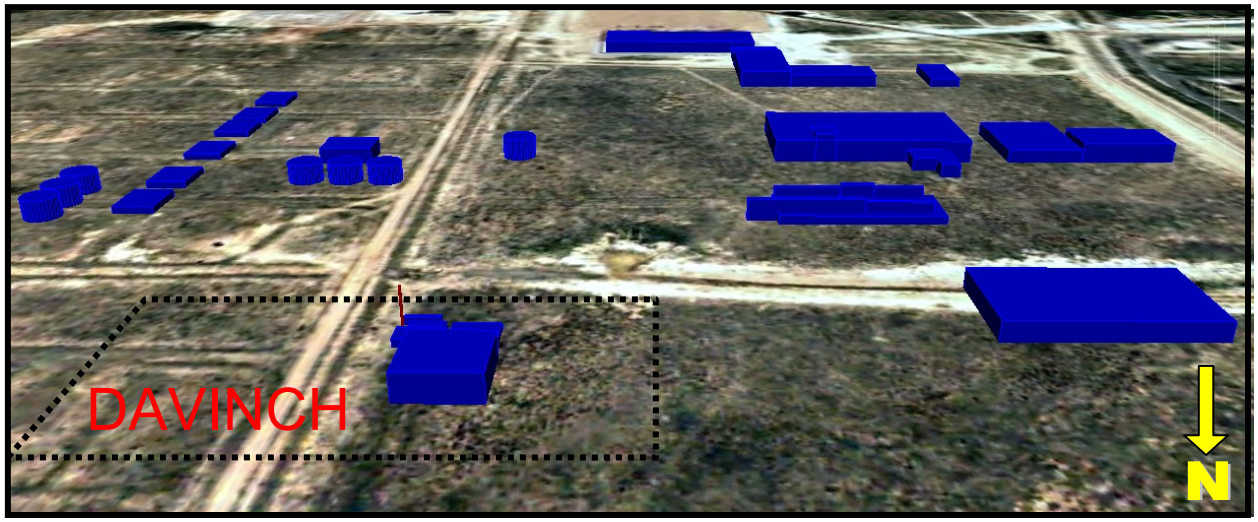

Figure 3-3. Location of the downwash analysis structures and emission points for DAVINCH.

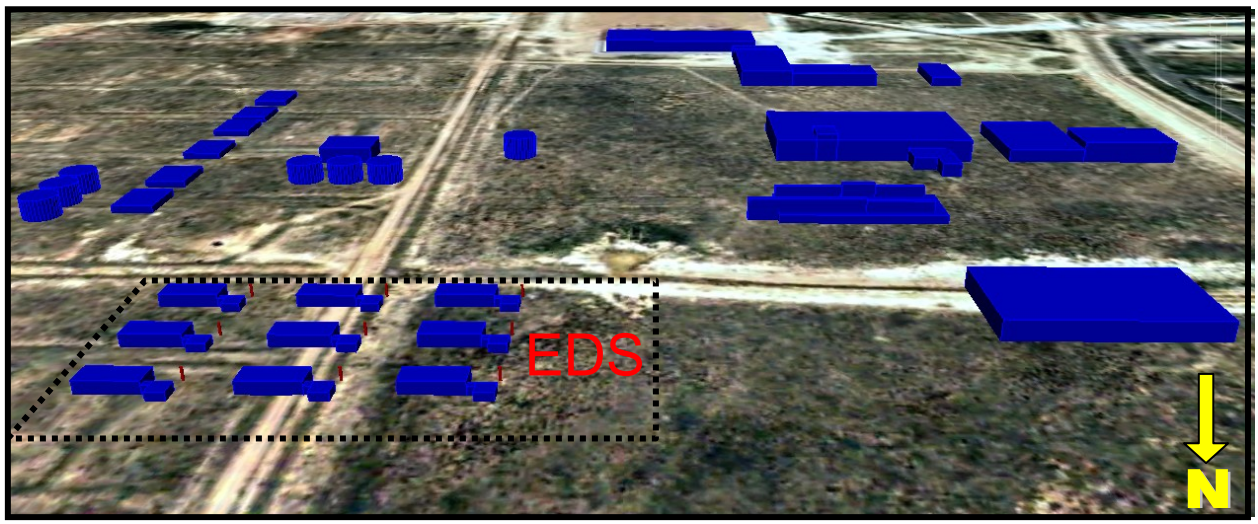

Figure 3-4. Location of the downwash analysis structures and emission points for EDS.

3.2.2.3 Land Use Type

The rural or urban coefficient is selected as input to the model based on the methodology recommended in the Guideline on Air Quality Models. (USEPA, 2005a) In this procedure, land circumscribed within a 3-km (1.9-mile) radius of the site is classified as rural or urban using the Auer land use classification method. Based on a visual inspection of the US Geological Survey (USGS) 7.5-minute topographical map of the EDT site location, the entire area within 3 km (1.9 miles) of the site is rural. Therefore, the rural land use coefficient was selected for use in the Source Information input pathway.

3.2.2.4 Deposition Parameters

To effectively model the emissions from the EDTs, each emitted chemical must be characterized as occurring either in the vapor or particle phase. In general, most chemicals with very low volatility are modeled in the particle phase. Organic chemicals occur as either vapor or as vapor condensed onto the surface of particles (i.e., particle-bound). The COPCs identified as potentially being emitted from the EDTs include chemicals that would occur in the vapor phase, particle phase, or particle-bound phase. Therefore, separate model runs were conducted for each EDT to determine the air concentrations and deposition rates for each COPC depending on whether it would occur in the vapor phase or particle phase.

Particle Phase Deposition Parameters - AERMOD includes two methods for handling dry and/or wet deposition of particulate emissions. Method 1 is used when a significant fraction (greater than about 10 percent) of the total particle mass has a diameter of 10 micrometers (microns, µm) or larger and when the particle size distribution is known. Method 2 is used when the particle size distribution is not well known and when a small fraction (less than 10 percent of the mass) is in particles with a diameter of 10 µm or larger. Each of the EDTs includes air filtration units specified to control particulate emissions with diameters greater than 0.3 µm. Because the air filtration units for each of the EDTs would control particulate emissions such that less than 10 percent of the particles would be 10 µm in diameter or larger, Method 2 was employed for the dry and wet deposition algorithms for particulate emissions. The required input parameters for each source for Method 2 include the fine mass fraction (i.e., the fraction of particle mass emitted in the fine mode, less than 2.5 µm) and mass mean particle diameter (µm). Based on the expected air filtration performance for each EDT emission point, 100 percent of the particle mass was conservatively assumed to be emitted in the fine mode with a mass mean particle diameter of 0.3 µm.

Vapor-phase Deposition Parameters - The deposition algorithms for dry and wet deposition of gaseous pollutants require the following inputs for each chemical included in the model:

- diffusivity in air (square centimeters per second [cm^2/s])
- diffusivity in water (cm^2/s)
- cuticular resistance to uptake by lipids for individual leaves (seconds per centimeter [s/cm])
- Henry's Law constant (Pascal-cubic meter per mole [$Pa\text{-}m^3/mol$])

The PCAPP MPHRA evaluated these deposition parameters for the COPCs to determine which chemical-specific gas deposition parameters resulted in an identifiable worst-case concentration and deposition rates. To be consistent with the PCAPP MPHRA process, the parameter values for the COPCs resulting in the highest air concentration, dry deposition rate, and wet deposition rate were used as surrogates for all other chemicals included in the MPHRA. The analysis conducted for the PCAPP MPHRA to determine worst-case deposition parameter values resulted in the highest air concentration being attributed to hexane, the highest dry deposition rate being attributed to 1,4-dioxane, and the highest wet deposition rate being attributed to 4-methyl phenol. Therefore, these parameter values were used as surrogates for all other chemicals included in this MPHRA, thus yielding highly conservative media concentrations from the resulting air concentrations and deposition rates. Table 3-4 presents the deposition parameter values for hexane, 1,4-dioxane, and 4-methyl phenol that were input to the model for the air concentration, dry deposition, and wet deposition model runs, respectively. Three separate model runs were conducted for each EDT to determine the air concentration, dry deposition, and wet deposition using the vapor-phase deposition parameter values for hexane, 1,4-dioxane, and 4-methyl phenol, respectively.

Table 3-4. Summary of Gas Deposition Parameter Values

Chemical	CAS Number	Model Run	Diffusivity in Air	Diffusivity in Water	Cuticular Resistance	Henry's Law Constant
			(cm^2/s)	(cm^2/s)	(s/cm)	($Pa\text{-}m^3/mol$)
			D_a	D_w	*rcl*	*H*
1,4-dioxane	123-91-1	dry deposition	0.229	1.02E-05	6.52E+07	4.86E-01
4-methyl phenol	106-44-5	wet deposition	0.074	1.00E-05	4.03E+01	8.00E-02
hexane	110-54-3	concentration	0.097	1.13E-05	1.75E+04	1.82E+05

3.2.2.5 Source Groups

AERMOD allows the user to add together contributions from particular sources by identifying source groups. Several source groups may be set up in a single model run, and the combined contributions for the emission sources within a source group are provided in the model output. For the TDC and EDS units that include multiple stacks with identical emission and pollutant characteristics, a single source group was employed for each EDT. For the SDC system that includes two stacks with different emission and pollutant characteristics, a specific source group was assigned to each SDC stack. The DAVINCH system includes a single stack, so it was assigned to one source group.

3.2.3 Receptor Information

This MPHRA is based on three distinct areas of concern: (1) off-site impact locations, (2) on-site impact locations, and (3) cultivated farmland locations. The off-site impact locations were used to determine the RME individual location, while the on-site impact locations were used to evaluate the acute PCD worker exposure scenario. The cultivated farmland locations were used to evaluate the magnitude of potential impacts specific to organic farmers located along the Arkansas River, as described in Section 3.4 below.

3.2.3.1 Off-site Receptor Locations

Off-site receptor locations were established at appropriate distances to ensure sufficient density and areal extent to adequately characterize the pattern of impacts in the area. The off-site receptor locations are identical to those used in the PCAPP MPHRA, and included a nested rectangular grid that extended a sufficient distance from the center of the PCAPP facility. This tiered full receptor grid included the following array of receptors:

- 100 m (328 feet [ft]) spacing out to a distance of 3 km (1.9 miles), which encompasses the local water body locations
- 500 m (1,640 ft) spacing out to a distance of 5 km (3.1 miles)
- 1 km (0.6 mile) spacing out to a distance of 10 km (6.2 miles)
- 100 m (328 ft) spacing along the PCD fence line

Figure 3-5 presents the layout of the tiered full receptor grid.

Initial model runs of the EDT sources resulted in maximum ambient impacts located at the PCD fence line north and west of the EDT footprint. Because the maximum modeled impacts occurred at the PCD fence line, a tiered refined receptor grid was developed for subsequent detailed model runs. The tiered refined receptor grid included the following array of receptors:

- 100 m (328 ft) spacing out to a distance of 3 km (1.9 miles), which encompasses the local water body locations
- 200 m (1,640 ft) spacing out to a distance of 4 km (3.1 miles)
- 100 m (328 ft) spacing along the PCD fence line

The refined receptor grid allowed for calculation of air concentration and deposition rates at the point of maximum impacts but reduced the overall model run time by removing the receptors located far from the points of maximum impact. Figure 3-6 presents the layout of the tiered refined receptor grid. The PCAPP MPHRA employed the same refined receptor grid.

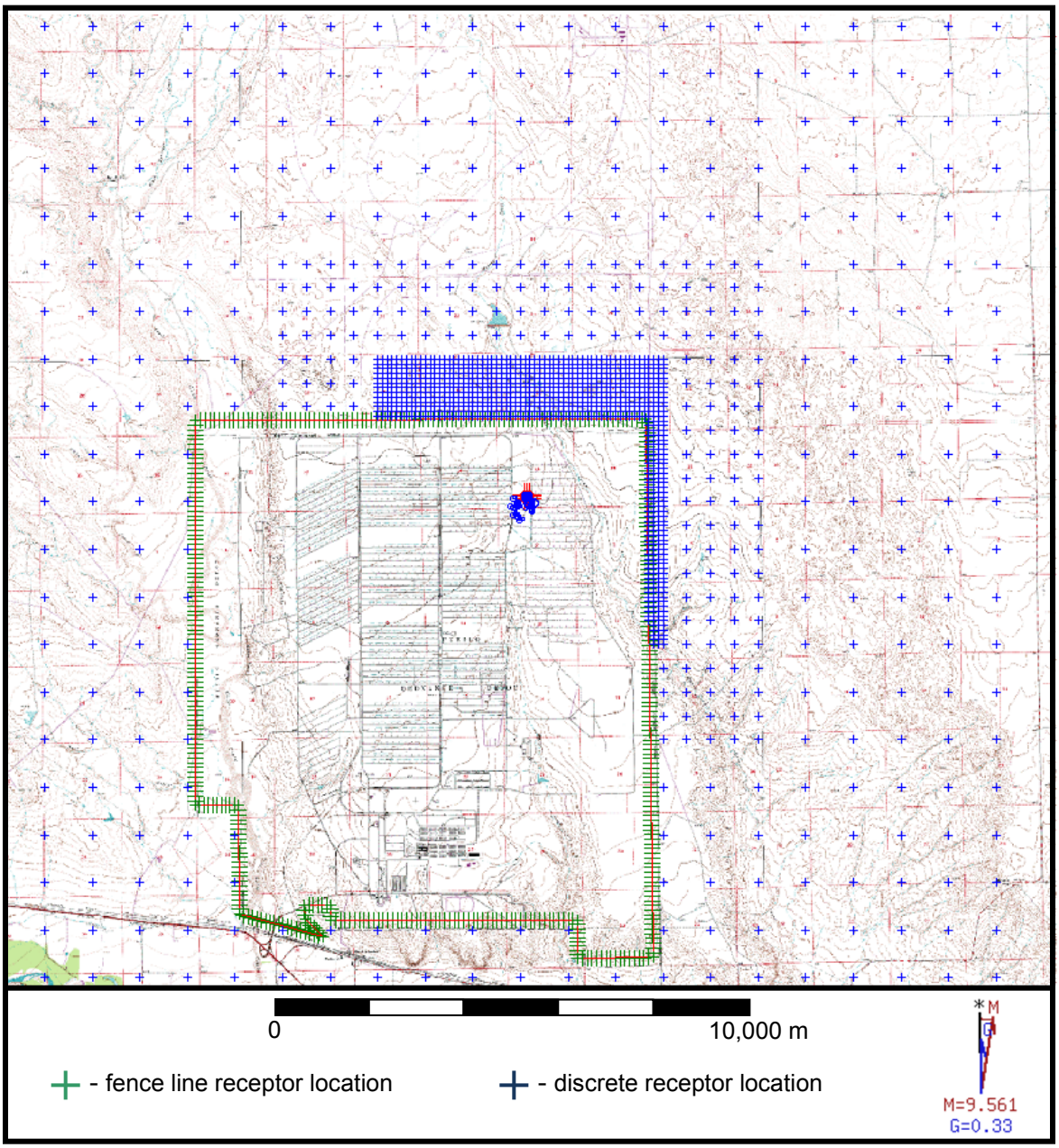

Figure 3-5. Tiered full receptor grid layout.

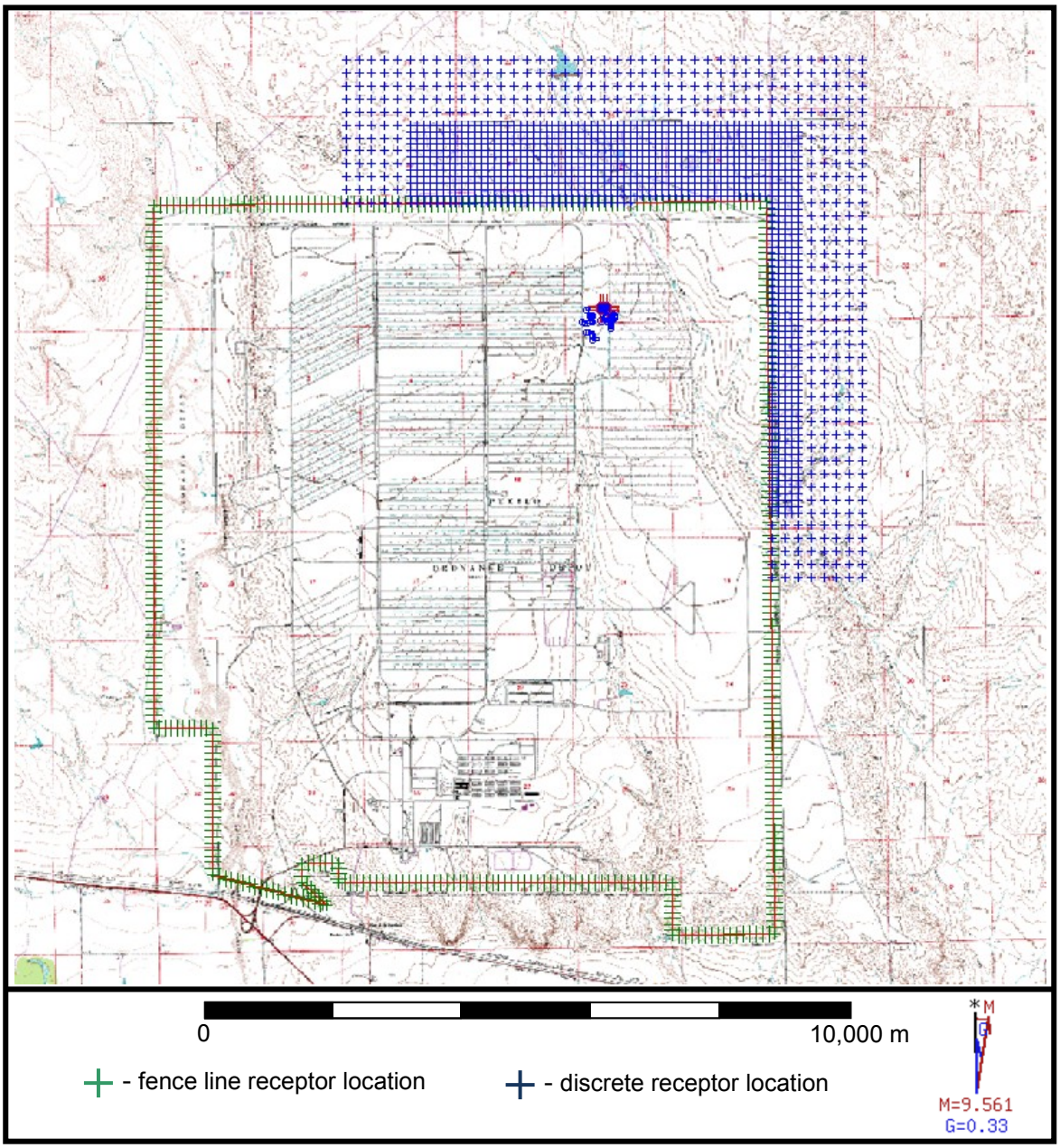

Figure 3-6. Tiered refined receptor grid layout.

3.2.3.2 On-site Receptor Locations

The on-site receptor grid, which is identical to the on-site grid used in the PCAPP MPHRA, was oriented at the center of the PCAPP facility and included the following array of receptors:

- 100 m (328 ft) spacing out to a distance of 3 km (1.9 miles) or to the north and east PCD fence line
- 500 m (1,640 ft) spacing out to the remainder of the PCD fence line
- 100 m (328 ft) spacing along the PCD fence line

Figure 3-7 presents the layout of the on-site receptor grid.

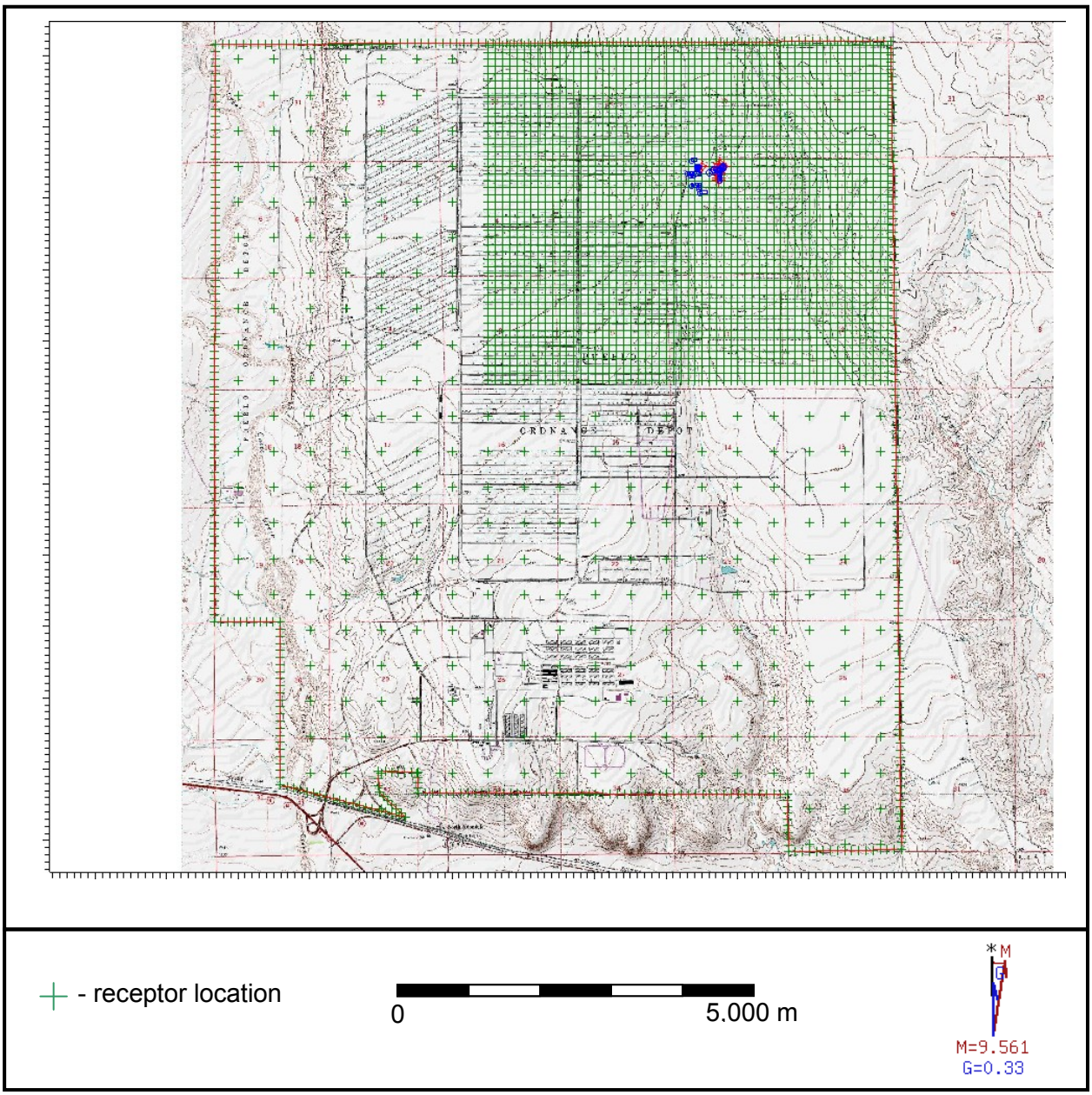

Figure 3-7. On-site receptor grid.

3.2.3.3 Cultivated Farmland Receptor Locations

The cultivated farmland receptor grid was oriented at the center of the PCAPP facility and included an array of receptors at 500 m (1,640 ft) intervals located south of Colorado Highway 96 and extending out to a distance of 15 km from the EDT footprint. Figure 3-8 presents the layout of the cultivated farmland receptor grid.

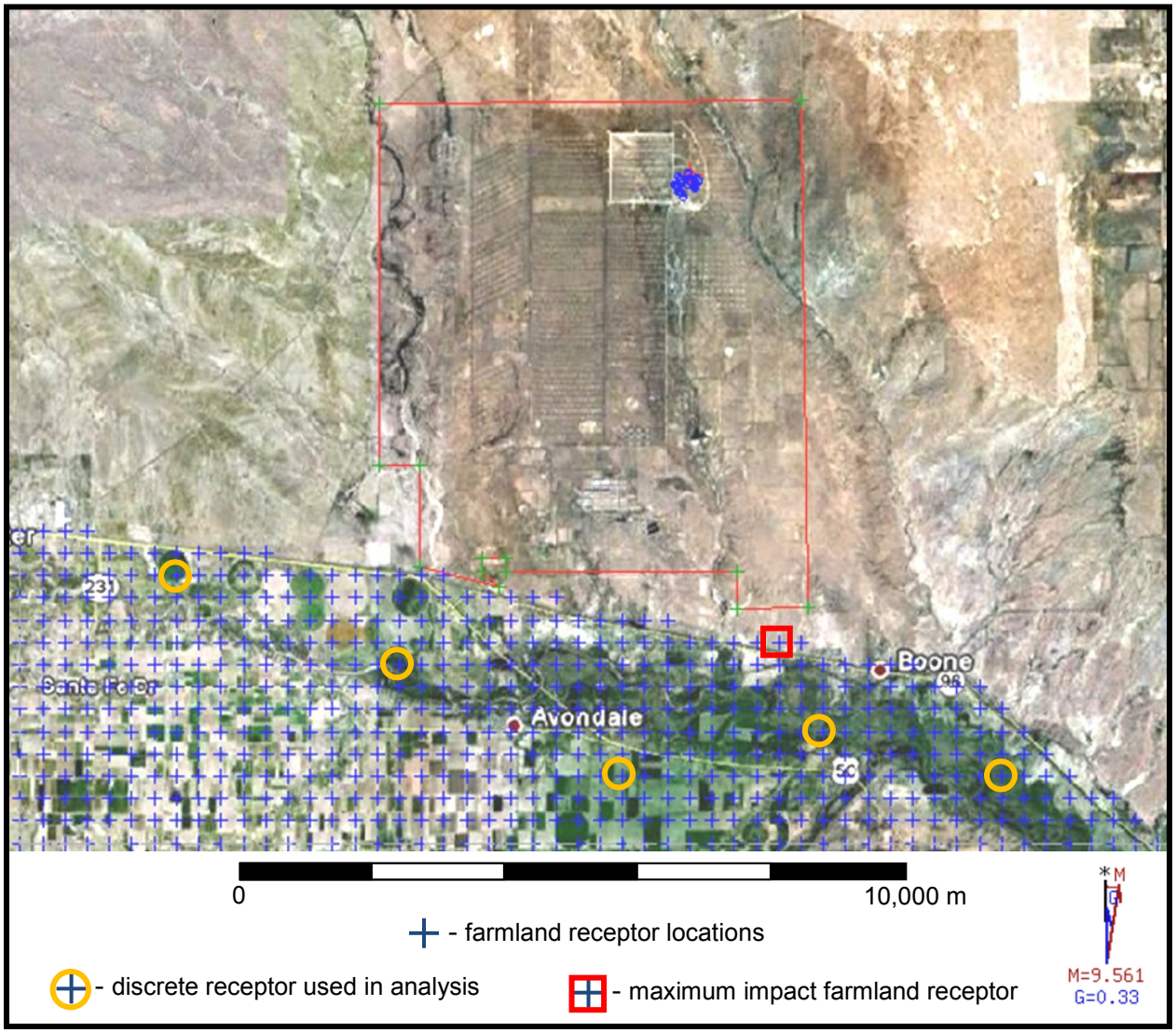

Figure 3-8. Cultivated farmland receptor grid.

3.2.3.4 Terrain Data

Accuracy of receptor elevation data is critical in evaluating the dispersion of a plume. If the terrain data are not accurate, the model may underestimate or overestimate the maximum concentrations and deposition rates. Terrain data used to determine receptor elevations consist of 7.5-minute digital elevation models (DEM) data (1:24,000 scale). The 7.5-minute DEM data files are digital representations of cartographic information in raster (i.e., rectangular grid) form. DEMs consist of a sampled array of elevations for a number of ground positions at regularly spaced intervals. These digital cartographic/geographic data files are produced by the USGS as part of the National Mapping Program. DEM data for 7.5-minutes of latitude and longitude correspond to the USGS 7.5-minute topographic quadrangle map series. Each 7.5-minute DEM is based on a data spacing of 30 m by 30 m (98 ft by 98 ft) with the UTM projection. Each 7.5- by 7.5-minute block provides the same coverage as the standard USGS 7.5-minute map series. The AERMOD terrain preprocessor, AERMAP, was used to calculate terrain elevations for each receptor using the following 7.5-minute DEM files:

- Bar J H Ranch
- North Avondale NE
- Highlands Church
- Devine
- North Avondale
- Boone Hill

3.2.4 Meteorological Information

AERMOD utilizes two meteorological data files: (1) a file of surface boundary layer parameters, and (2) a file of profile variables including wind speed, wind direction, and turbulence parameters. These two meteorological input files are generated by the AERMET meteorological preprocessor program. Both of these meteorological input files are sequential American Standard Code for Information Interchange (ASCII) files, and AERMOD automatically recognizes the format generated by AERMET as the default format. AERMOD processes all available meteorological data in the specified input file by default.

A meteorological monitoring station has been in operation at the PCD near the PCAPP location since December 1997. The meteorological monitoring station includes three height levels of data collection: 2, 10, and 30 m above ground level. Three years (January 1, 1998 through December 31, 2000) of on-site hourly surface data were collected and processed with AERMET for the PCAPP MPHRA. The PCD on-site hourly surface data were processed with upper air data collected from the National Weather Service's (NWS) Denver station (Station 23062) and precipitation and relative humidity data collected from the NWS's Pueblo Memorial Airport station (Station 72464). AERMET was used to process the three sets (i.e., on site, NWS airport, and upper air) of meteorological data into the surface and profile meteorological input files required by AERMOD. The 3 years of AERMET-processed surface meteorological data were approved for use in the PCAPP MPHRA by CDPHE and used as input to AERMOD for the EDT MPHRA. Additional information on the meteorological data preprocessing is available in Appendix C of the PCAPP MPHRA Report.

3.2.5 Output Options

AERMOD provides a number of optional output file formats. The "plot file" format is the most useful output option for facilitating post-processing of the air parameter values in the model output. The plot file output option allows the user to select the source groups and averaging periods for which a plot file will be generated. A single plot file is generated for each source group and averaging period selected. The plot file format lists the x and y coordinates for each

modeled receptor and the corresponding maximum unit response concentration and deposition values. The plot file data are provided in a format that can easily be imported into a post-processing program (e.g., spreadsheet).

The output options selected for the EDT MPHRA included plot files for annual and 1-hour averaging periods for each source group modeled. The annual plot files for each source group were used in a post-processing step to generate the maximum COPC-specific annual concentrations and deposition rates for the chronic risk assessment. The 1-hour plot files for each source group were used in a post-processing step to generate the maximum COPC-specific 1-hour air concentrations for the acute risk assessment.

3.3 POST-PROCESSING AERMOD RESULTS

AERMOD provides a plot file for each modeled source group that includes unit response concentrations and deposition rates from the 3-year meteorological period for each modeled receptor. The COPC-specific emission rates vary for each emission source. Therefore, a spreadsheet-based model output post-processor program was required to calculate the maximum total COPC-specific concentrations and deposition rates. The COPC-specific concentrations and deposition rates calculated at each receptor location for all modeled source groups for each EDT were then evaluated to determine the maximum cumulative COPC-specific concentrations and deposition rates from all of the modeled receptor locations.

As a very conservative approach, maximum total COPC-specific air concentrations and deposition rates were used to calculate exposure to the RME individual, even though the maximum air concentration, dry deposition rate, and wet deposition rate locations vary for each COPC, especially in comparison to the PCAPP RME individual location. Thus, the different receptor locations positioned hundreds of meters away from each other were used to evaluate the single RME individual location for each EDT.

3.4 CULTIVATED FARMLAND DISPERSION ANALYSIS RESULTS

The EDT MPHRA included a comparison of the unit response concentrations and deposition rates at cultivated farmland receptors to those at the maximum off-site impact receptor (RME individual location). This analysis was conducted at the request of USEPA as part of the MPHRA analysis for the EA. The PCAPP MPHRA did not require this type of analysis, because the screening-level risk assessment conducted for the hazardous waste permitting process demonstrated that exposures to the RME individual were below all CDPHE-specified risk threshold values. Therefore, further evaluation of potential exposures to specific receptors, such as organic farmers, was not necessary as the results would be less than those evaluated for the RME individual and thus below all risk threshold values.

This analysis was performed to provide a means of assessing the potential impacts of emissions from the EDTs on organic farmlands located along the Arkansas River and south of the PCD. The analysis consisted of comparing the AERMOD-calculated unit response concentrations and deposition rates at the RME individual receptor with those at various farmland receptors. While this comparison (expressed as the percent difference in ambient concentrations or total deposition rates) does not directly correlate to the differences in carcinogenic risk and noncarcinogenic hazards at the two receptor locations, the comparison does provide a reasonable basis for assessing the magnitude of potential risks and hazards at the farmland receptors. The EDT emission plume characteristics (i.e., short stacks and near ambient temperatures), produce maximum impacts at the nearest (northern) PCD fence line; this is the RME individual receptor location. The basis for the comparison is the dilution of COPC concentrations in the EDT emission plume as atmospheric mixing increases while the plume travels from the stack to the farmland receptors, thus resulting in lower ambient

concentrations and total deposition rates at the farmland receptors than at the RME individual receptor.

Figure 3-8 shows that the land surrounding the Arkansas River to the south of PCD is comprised primarily of cultivated farmland, including numerous unidentified organic farmlands. The farmland analysis was conducted over the entire area of cultivated farmlands located south of Colorado Highway 96 and extending out to a distance of 15 km from the EDT footprint. Table 3-5 provides the AERMOD unit response results for ambient concentrations and total deposition rates at three sets of receptors including: 1) the maximum farmland impact location, 2) five other discrete farmland receptor locations, and 3) the RME individual location. Figure 3-8 shows the locations of the three sets of receptors, and Table 3-6 provides the percent differences in the two types of AERMOD unit response results for each of the three sets of receptor locations. As seen in Table 3-6, the ambient concentrations for the maximum farmland impact location range from 16.7 to 23.6 percent of the ambient concentrations for the RME individual location, and the total deposition rates range from 2.9 to 3.8 percent. Figures 3-9 through 3-16 provide isopleths (i.e., lines connecting points of equal concentration/deposition rates) that illustrate the dilution effect that was estimated to occur as the EDT emission plume travels away from the PCD fence line for each EDT. The largest percentage for any EDT is 23.6% (air concentration unit response for TDC), which indicates that no adverse impact would be expected at the cultivated farmlands due to EDT operations.

Table 3-5. Summary of Maximum Unit Responses at Three Sets of Receptors Used in the Farmland Analysis

Receptor		SDC		TDC		DAVINCH		EDS	
X	Y	Concentration ($\mu g/m^3$)	Total Deposition (g/m^2)	Concentration ($\mu g/m^3$)	Total Deposition (g/m^2)	Concentration ($\mu g/m^3$)	Total Deposition (g/m^2)	Concentration ($\mu g/m^3$)	Total Deposition (g/m^2)
RME Individual maximum impact unit response (maximum at the PCD fence line)									
559,372	4,246,175	0.06791	0.00759	0.31026	0.03242	0.06883	0.0074	0.57045	0.06862
Cultivated farmland maximum impact unit response (maximum at any farmland location)									
562,641	4,234,075	0.01133	0.00025	0.07326	0.00102	0.01295	0.00028	0.12863	0.00201
Other discrete receptor unit responses									
549,141	4,235,575	0.00388	0.00013	0.0163	0.00057	0.00425	0.00016	0.03294	0.00156
554,141	4,233,575	0.00454	0.00015	0.0268	0.00074	0.00562	0.00016	0.0465	0.00146
559,141	4,231,075	0.00608	0.00011	0.0414	0.0004	0.00765	0.00014	0.07143	0.00083
563,641	4,232,075	0.00828	0.0002	0.04575	0.00049	0.00886	0.00022	0.09413	0.00109
567,641	4,231,075	0.00526	0.00017	0.02803	0.00038	0.00564	0.00017	0.05764	0.00126

Table 3-6. Differences Between AERMOD Unit Response Results for the RME Individual Receptor and Farmland Receptors

Receptor		SDC		TDC		DAVINCH		EDS	
X	Y	Percent of RME Individual Unit Response at Each Farmland Receptor							
		Concentration	Total Deposition	Concentration	Total Deposition	Concentration	Total Deposition	Concentration	Total Deposition
Cultivated farmland receptor									
562,641	4,234,075	16.7%	3.3%	23.6%	3.1%	18.8%	3.8%	22.5%	2.9%
Other discrete farmland receptor unit response									
549,141	4,235,575	5.7%	1.7%	5.3%	1.8%	6.2%	2.2%	5.8%	2.3%
554,141	4,233,575	6.7%	2.0%	8.6%	2.3%	8.2%	2.2%	8.2%	2.1%
559,141	4,231,075	9.0%	1.4%	13.3%	1.2%	11.1%	1.9%	12.5%	1.2%
563,641	4,232,075	12.2%	2.6%	14.7%	1.5%	12.9%	3.0%	16.5%	1.6%
567,641	4,231,075	7.7%	2.2%	9.0%	1.2%	8.2%	2.3%	10.1%	1.8%

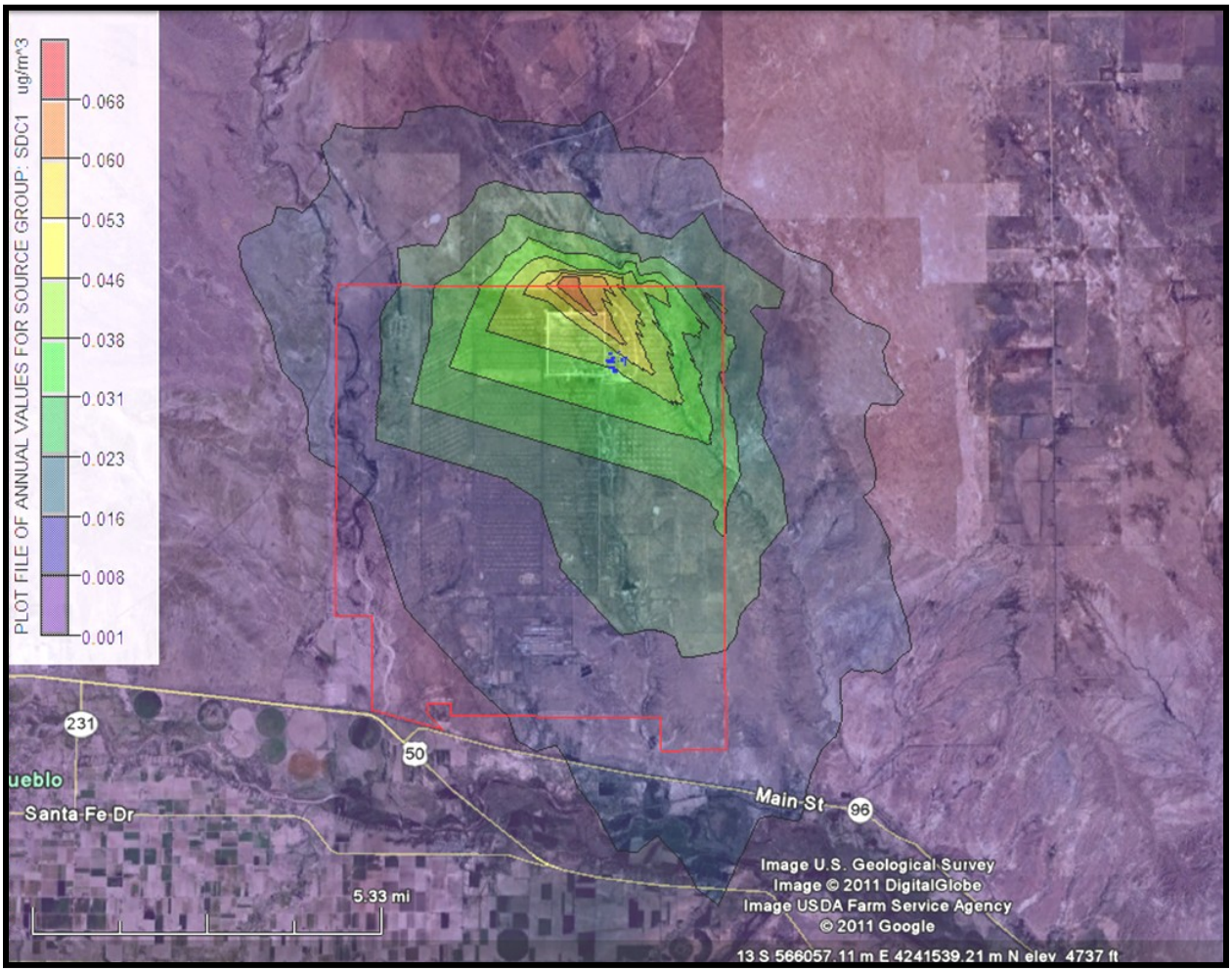

Figure 3-9. Isopleths of unit response air concentrations from the SDC process stack.

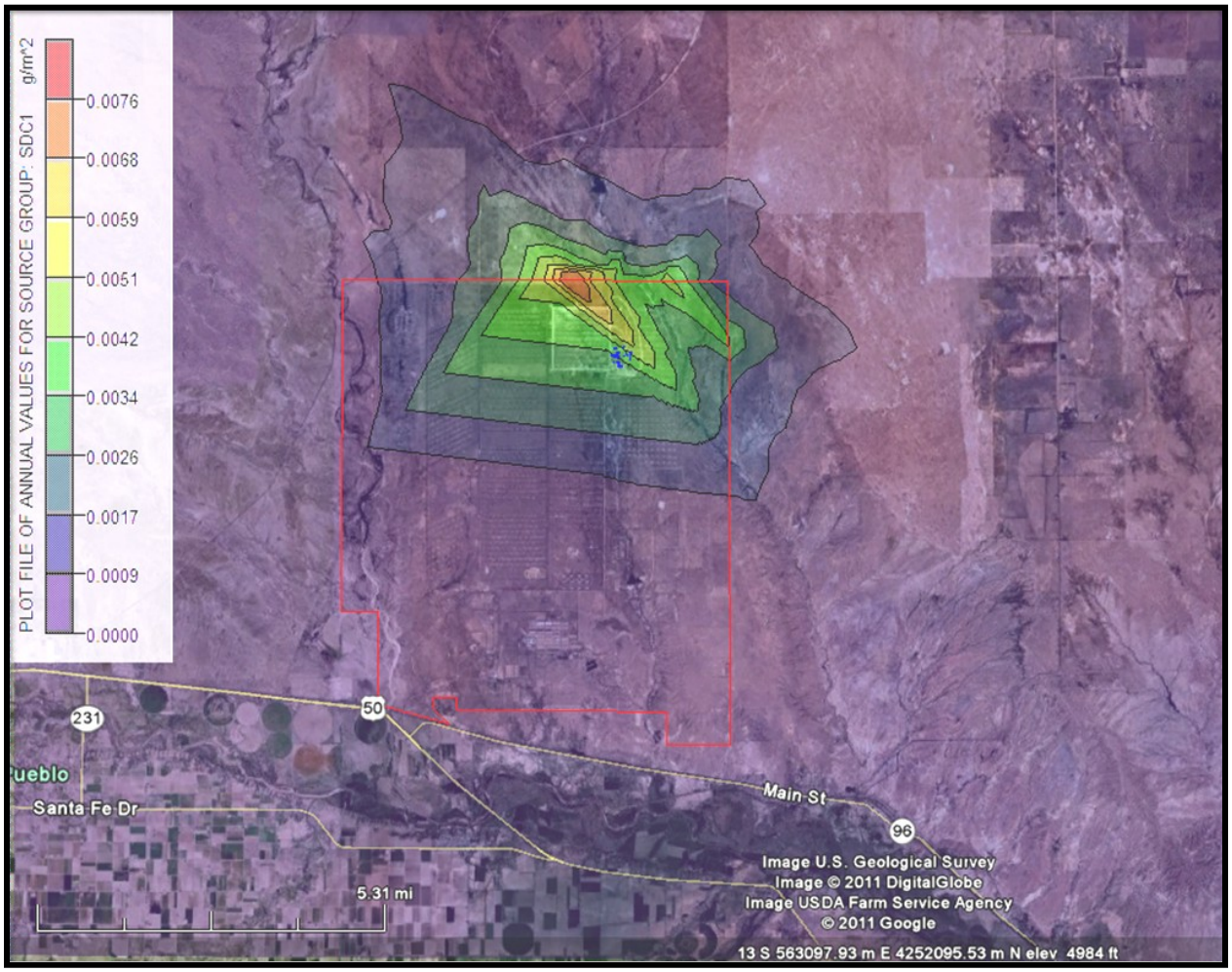

Figure 3-10. Isopleths of unit response total deposition from the SDC process stack.

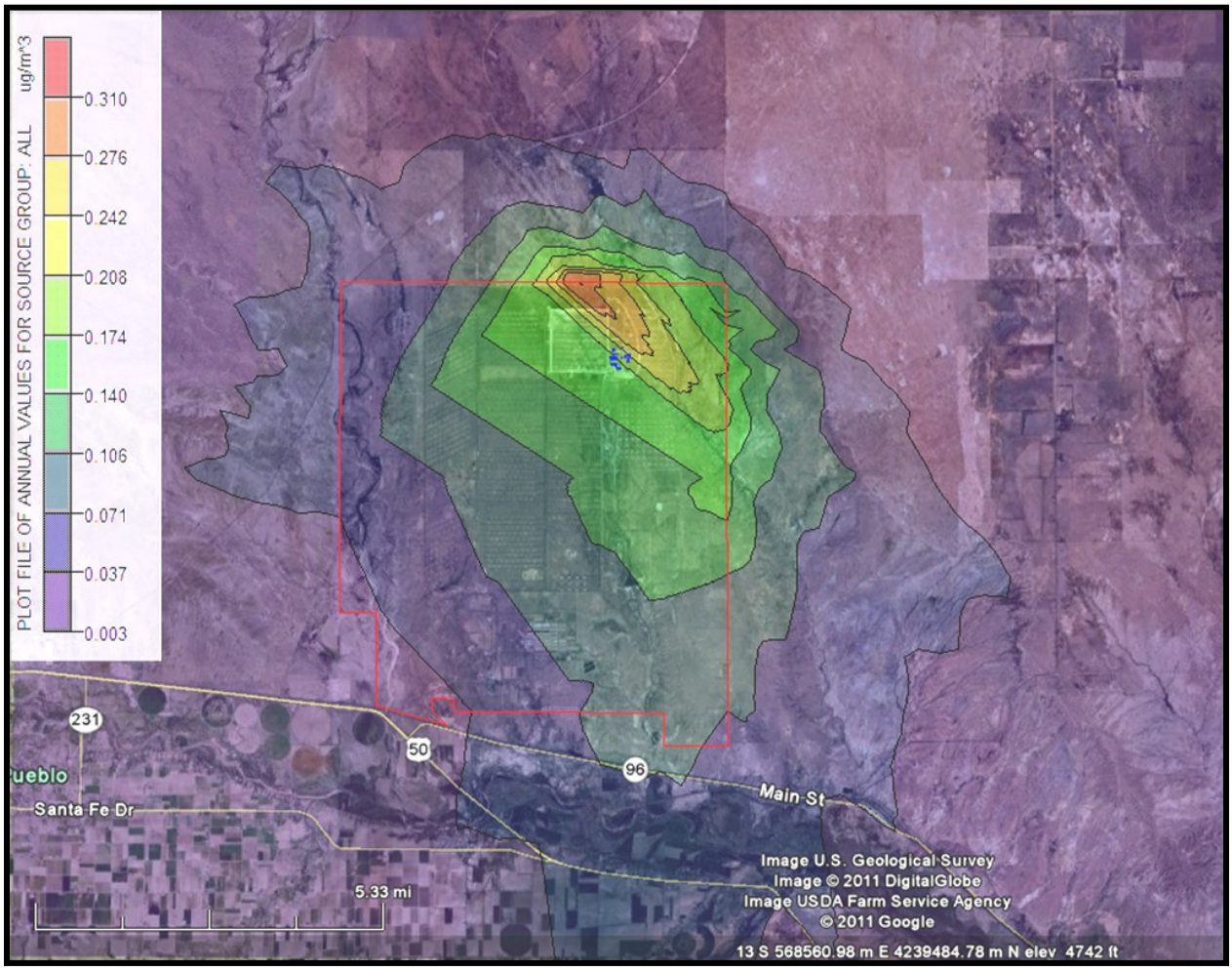

Figure 3-11. Isopleths of unit response air concentrations from the four TDC stacks.

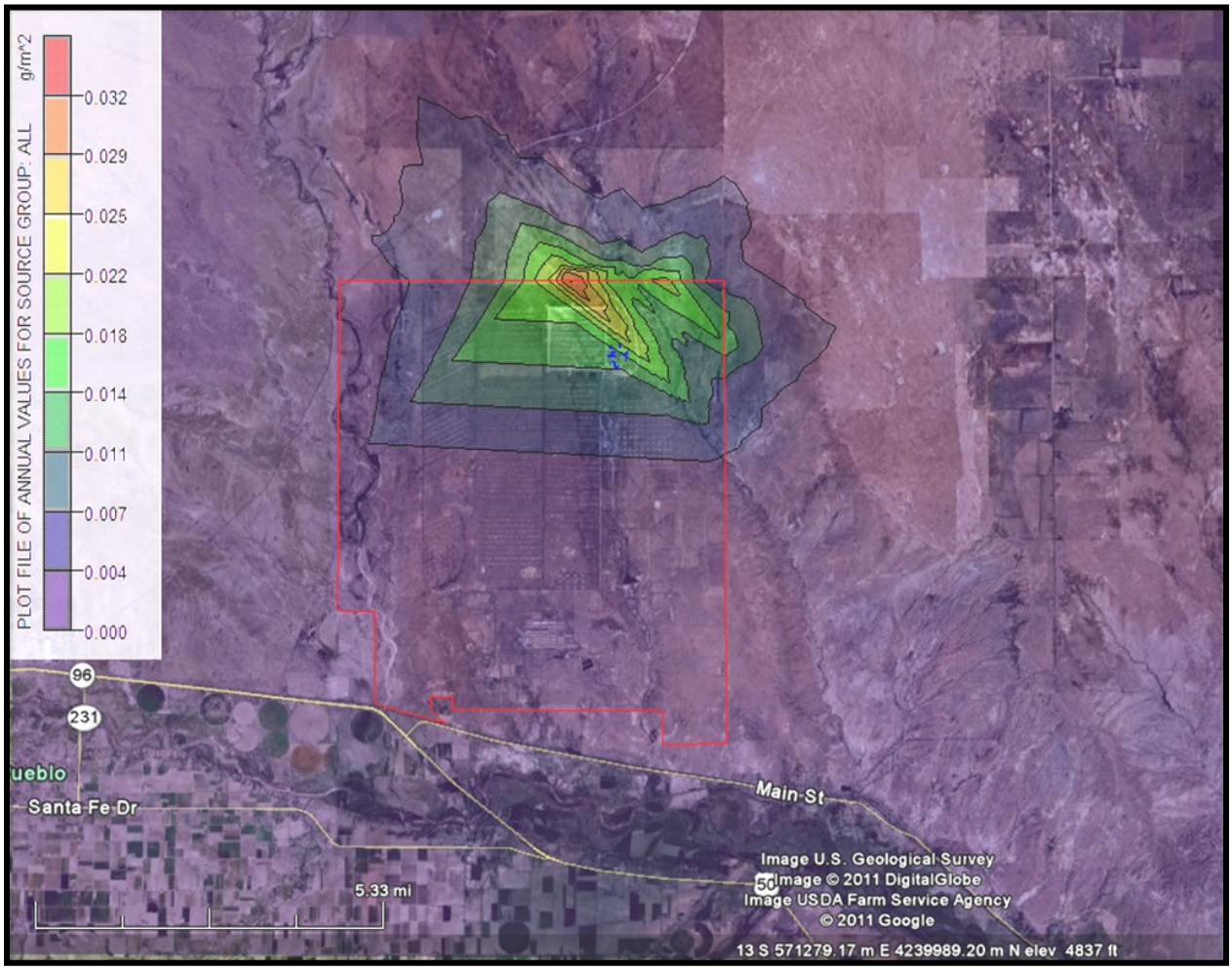

Figure 3-12. Isopleths of unit response total deposition from the four TDC stacks.

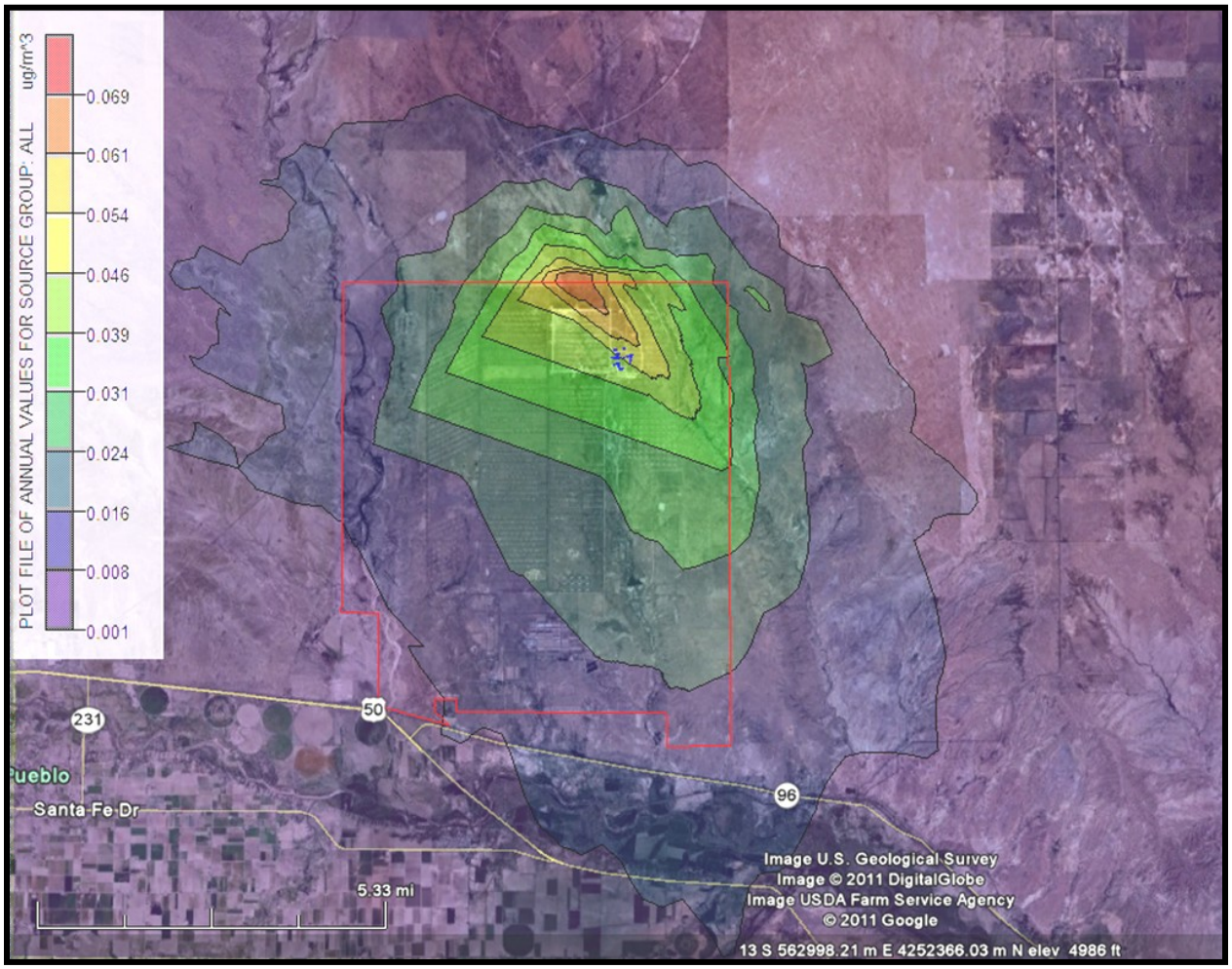

Figure 3-13. Isopleths of unit response air concentrations from the DAVINCH stack.

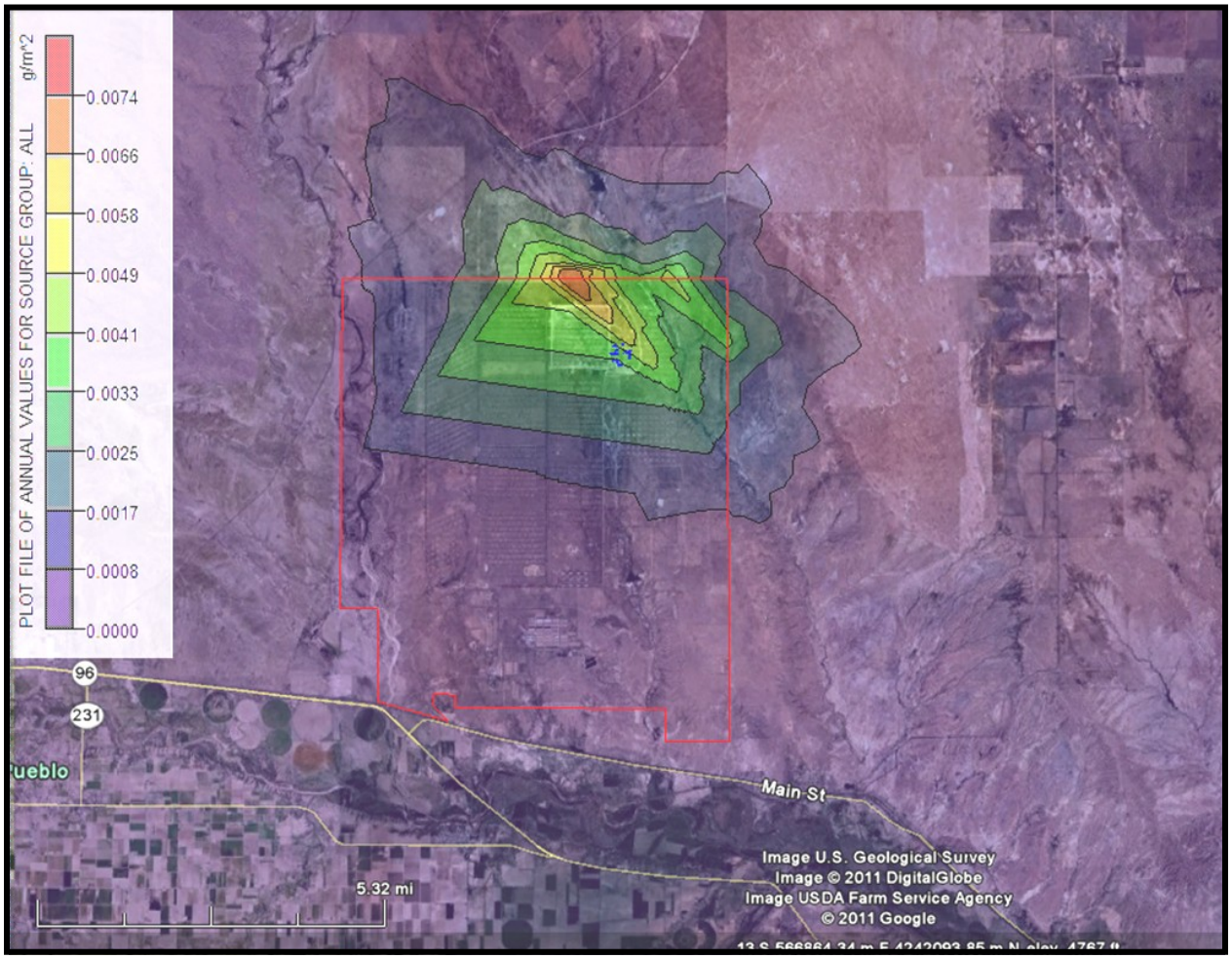

Figure 3-14. Isopleths of unit response total deposition from the DAVINCH stack.

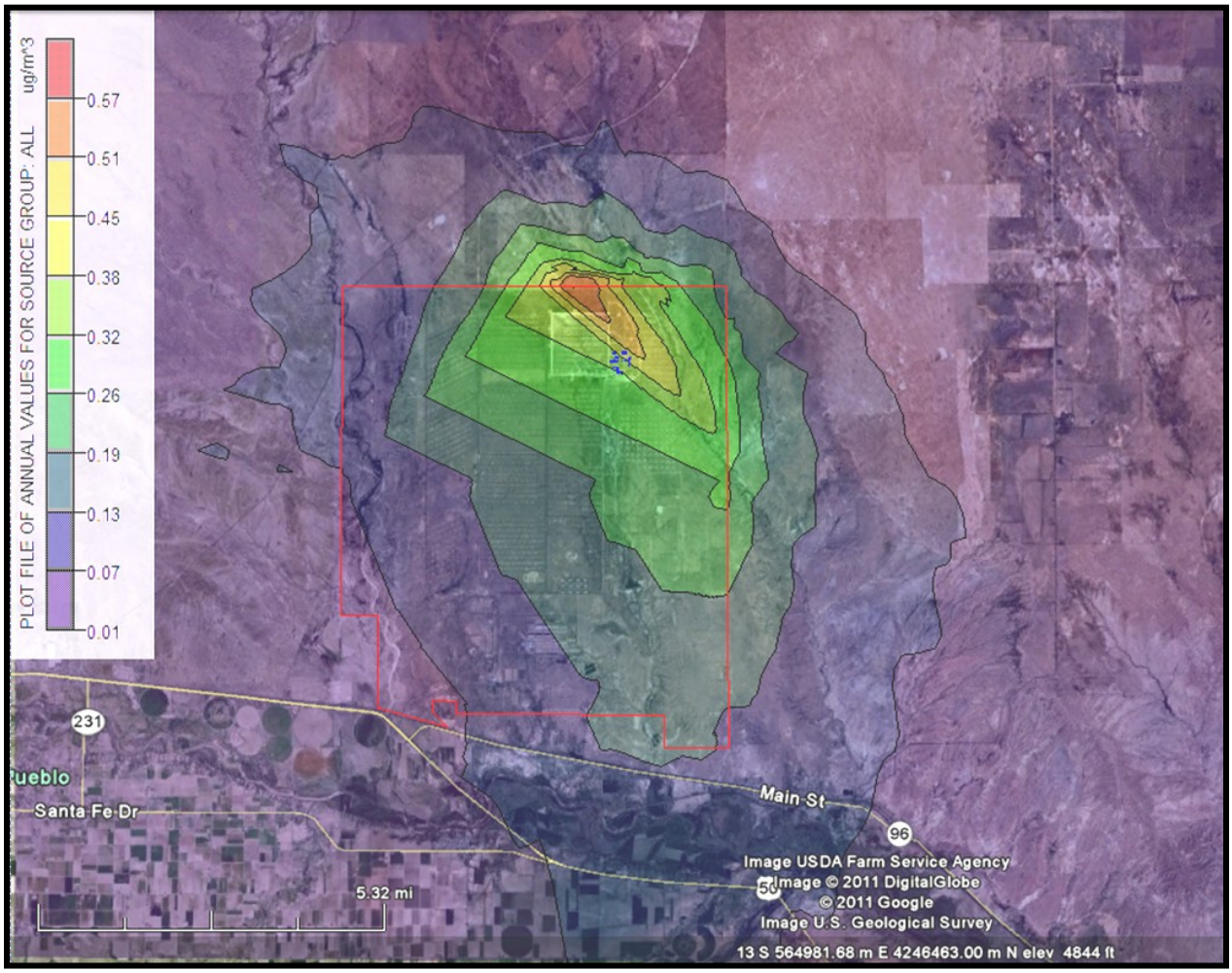

Figure 3-15. Isopleths of unit response air concentrations from nine EDS units.

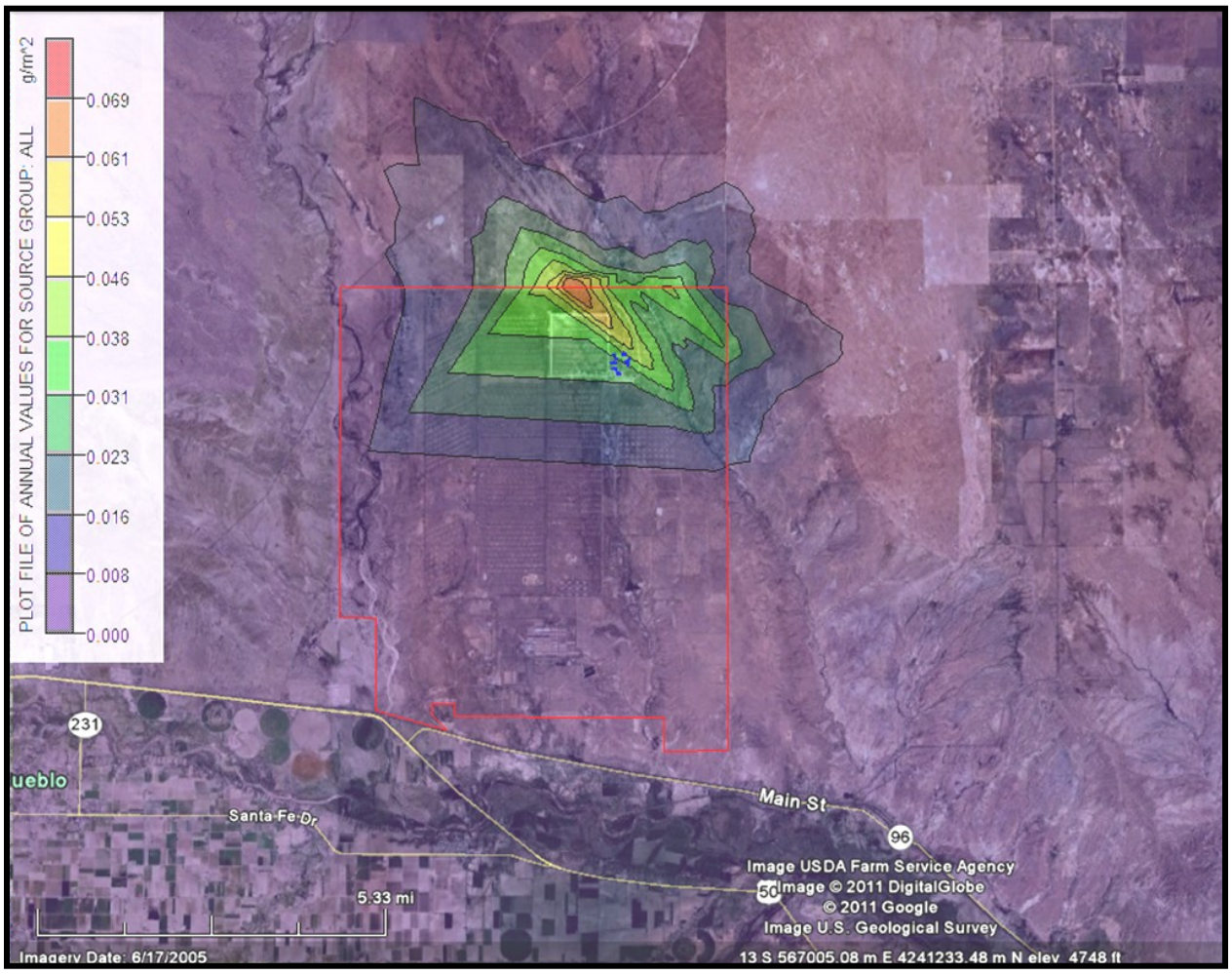

Figure 3-16. Isopleths of unit response total deposition from nine EDS units.

4 SELECTION OF EXPOSURE SCENARIOS

This section discusses the pathways and scenarios that were selected for use when estimating potential exposures of human receptors to chemicals emitted from hazardous waste operations for each of the EDTs. The selected pathways and scenarios are the same pathways and scenarios evaluated in the PCAPP MPHRA.

A conceptual site model produces a framework for identifying the pathways by which human receptors may be exposed to emissions from hazardous waste operations for each of the EDTs. This process makes it easier to evaluate risks using a consistent and comprehensive approach. The elements necessary to construct a complete conceptual site model are as follows:

- emission sources
- emission scenarios
- transport pathways
- exposure pathways and receptors

With the exception of emission sources (which are discussed in Section 2.1 and shown in Table 3-3), each of the aforementioned elements of the EDT conceptual site model are identical to those same elements of the conceptual site model used in the PCAPP MPHRA. The reader is referred to Section 4.1 of the PCAPP MPHRA Report for additional details of the conceptual site model elements.

4.1 EXPOSURE SCENARIOS

Table 4-1 identifies the chronic human receptor exposure scenarios included in this EDT MPHRA and discussed below. A detailed description of the resident, subsistence farmer, subsistence fisher, and worker human receptors used in the chronic assessment is provided in Section 4.1.4 of the PCAPP MPHRA Report. All chronic exposure calculations occur at the RME individual location, which is the point of maximum off-site impacts determined by the air dispersion model. Only the adult worker exposure scenario was evaluated for the acute assessment in this MPHRA. The purpose of this acute assessment was to represent an on-site PCD worker within the fence line of the PCD. This approach is identical to that used in the PCAPP MPHRA and based on guidance from the CDPHE. The PCD worker is located at the point of maximum calculated on-site impacts determined by the air dispersion model.

Table 4-1. Chronic Human Receptor Exposure Pathways Evaluated

Exposure Scenarios	Resident	Subsistence Farmer	Subsistence Fisher	Worker
Adult	✓	✓	✓	✓
Child	✓	✓	✓	
Infant	✓	✓	✓	
Lifetime (I)	✓	✓	✓	
Lifetime (II)	✓	✓	✓	

The adult chronic exposure scenarios were based on the assumption that an adult is physically located at the RME individual location continuously for the entire exposure duration (40 years for a subsistence farmer, 30 years for a resident and subsistence fisher, and 25 years for a worker). During the initial 5 years of exposure, he/she receives direct exposure through inhalation of EDT emissions. During the entire exposure duration, he/she receives indirect exposure through ingestion of contaminated foodstuffs and dermal contact with soil and water.

The child chronic exposure scenarios were based on the assumption that a child is physically located at the RME individual location continuously from the second through the sixth year of life. This 5-year exposure scenario was assumed to coincide exactly with the 5-year operational period of the EDT technologies. Therefore, he/she receives direct exposure through inhalation of EDT emissions for the entire childhood exposure duration. During this time, the child also receives indirect exposure to the same pathways and contaminated foodstuff.

The infant chronic exposure scenarios were based on the assumption that an infant is physically located at the RME individual location continuously for the first year of life. The infant exposure scenarios were assumed to occur during the 5-year operational period of the EDT. During this time, the infant obtains some nourishment through breast feeding. In addition to ingestion of breast milk, the inhalation pathway and consumption of home-produced foodstuffs pathways were evaluated for the infant scenario. Infants were exposed dermally to soil, but not to surface water.

Because the EDTs will operate only for a 5-year period, and the exposure period due to consumption of local foodstuffs was either 30 or 40 years (depending on the receptor), two unique cumulative lifetime exposure scenarios [lifetime (I) and lifetime (II)] were evaluated as a combination of several different exposure scenarios. The lifetime (I) chronic exposure scenario assumed that the human receptor is born at the start of the 5-year operational period of the EDT, is directly and indirectly exposed to the EDT emissions for the first 5 years of life, and indirectly exposed for the remainder of the scenario-specific exposure duration. This exposure scenario, therefore, consisted of the cumulative exposure from the following pathways:

- 1 year of inhalation exposure as an infant, plus
- 4 years of inhalation exposure as a child, plus
- 1 year of indirect exposure as an infant, plus
- 5 years of indirect exposure as a child, plus
- 24 (resident and subsistence fisher) or 34 (subsistence farmer) years of indirect exposure as an adult

The lifetime (II) chronic exposure scenario assumed that the human receptor is a child (i.e., 1 year old) at the start of the 5-year operational period of the EDT, is directly and indirectly exposed to the EDT emissions as a child (ages 1 through 6), and indirectly exposed as an adult for the remainder of the scenario-specific exposure duration. This exposure scenario, therefore, consisted of the cumulative exposure from the following pathways:

- 5 years of inhalation exposure as a child, plus
- 5 years of indirect exposure as a child, plus
- 25 (resident and subsistence fisher) or 35 (subsistence farmer) years of indirect exposure as an adult

A lifetime (III) exposure scenario was not necessary, because following the pattern for the lifetime (I) and (II) scenarios would have resulted in an exposure scenario that is identical to the adult scenario as previously defined.

As previously mentioned, the human receptors (i.e., resident, subsistence farmer, subsistence fisher, and worker) used for this EDT MPHRA are identical to those same receptors and pathway combinations used in the PCAPP MPHRA. Table 4-2 presents a summary of the exposure pathway/human receptor combinations evaluated under both this EDT MPHRA and the PCAPP MPHRA.

Table 4-2. Exposure Pathway/Human Receptor Combinations Evaluated

Receptor	Exposure Pathway								
	Inhalation	Dermal Contact with Surface Water	Dermal Contact with Soil	Incidental Ingestion of Soil	Incidental Ingestion of Surface Water	Ingestion of Produce[a]	Ingestion of Terrestrial Animal Products[b]	Ingestion of Fish	Ingestion of Breast Milk
Adult resident	√[c]	√	√	√	√	√	√	√	n/a[d]
Adult subsistence fisher	√	√	√	√	√	√	√	√	n/a
Adult subsistence farmer	√	√	√	√	√	√	√	√	n/a
Adult worker	√	n/a	√	√	n/a	n/a	n/a	n/a	n/a
Child resident	√	√	√	√	√	√	√	√	n/a
Child subsistence fisher	√	√	√	√	√	√	√	√	n/a
Child subsistence farmer	√	√	√	√	√	√	√	√	n/a
Infant resident	√	n/a	√	√	n/a	√	√	√	√
Infant subsistence fisher	√	n/a	√	√	n/a	√	√	√	√
Infant subsistence farmer	√	n/a	√	√	n/a	√	√	√	√

a. Produce includes above-ground exposed fruits and vegetables, above-ground protected fruits and vegetables, and below-ground vegetables.
b. Terrestrial animal products include beef, pork, poultry, eggs, and milk.
c. √ - indicates this pathway was assessed for this receptor.
d. n/a - pathway not evaluated for this human receptor.

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5 QUANTIFYING MEDIA CONCENTRATIONS AND EXPOSURES

This section describes the methodologies used to quantify media concentrations and exposures. The primary difference between the EDT and PCAPP MPHRA methodologies involves the selected COPCs and their transport and uptake properties. COPCs from the EDTs include elemental mercury, methyl mercury, mercuric chloride, polychlorinated biphenyls (PCBs), PCDDs, PCDFs, and bis(2-ethylhexyl)phthalate (BEHP); these particular compounds were not identified as COPCs in the PCAPP MPHRA, and thus, the necessary methods to estimate media concentrations of these COPCs were not previously employed. For other COPCs, the general methods used in this EDT MPHRA to quantify media concentrations for exposure pathways are the same as were used in the PCAPP MPHRA. These general methods are described in detail in Appendix D of the PCAPP MPHRA Report.

5.1 QUANTIFYING MEDIA CONCENTRATIONS

Media concentrations must first be quantified before they can be used in the exposure pathway calculations. COPC concentrations were determined for the following media:

- air
- soil
- surface water
- above-ground (exposed and protected) fruits and vegetables
- below-ground vegetables and protected fruits
- beef
- pork
- dairy milk
- breast milk
- poultry and eggs
- fish

The COPC concentrations in the various media are needed to supply inputs to the exposure calculations for the identified human receptors. Some of the COPCs emitted from the EDTs were also emitted from PCAPP operations and included in the PCAPP MPHRA. Others were not emitted from PCAPP operations and were assessed in the EDT MPHRA using exactly the same procedures as had been used for the other COPCs. A small number of other newly-emitted COPCs (specifically, mercury compounds, PCBs, PCDDs, PCDFs, and BEHP) required different evaluation methods and calculation procedures due to specific health effect properties or behaviors of the COPCs in the environment. For these and all other COPCs included in the EDT MPHRA, however, media concentrations were estimated using the equations and methods presented in the Human Health Risk Assessment Protocol for Hazardous Waste Combustion Facilities (HHRAP). (USEPA, 2005b) Table 5-1 presents a matrix identifying the media for which COPC-specific procedures are required when calculating media concentrations and, subsequently, health impacts. Appendix B of this MPHRA Report details the specific media concentration calculations used for these COPCs that differ from those used for other COPCs; contains discussions of risk and hazard calculation methods specific to these COPCs; and identifies the methods for estimating dermal exposure to inorganic compounds.

Figure 5-1 shows the relationship between the different media concentrations (e.g., the concentration in fish tissue depends on the concentration in surface water, which depends on the soil concentration). Figure 5-1 also identifies the sections in Appendix B that present the COPC-specific calculation method for each media used in this EDT MPHRA.

Table 5-1. Media Requiring COPC-specific Calculation Methods[a]

Media	Elemental Mercury, Methyl Mercury, Mercuric Chloride	PCBs	PCDDs	PCDFs	BEHP	Inorganic Compounds[b]
Soil	X					
Above-ground produce	X					
Below-ground produce	X					
Animal feed	X					
Animal products					X	
Surface water	X	X	X	X		X
Fish	X	X	X	X		
Air	X	X	X	X		

a. Based on recommendations provided in HHRAP. (USEPA, 2005b)
b. Inorganic compounds use specific exposure calculations.

Ambient air concentrations and wet and dry deposition rates resulting from EDT emissions will occur only during the 5-year operational period of the EDT; therefore, the only direct exposure to COPCs will occur through inhalation during this 5-year period. Additional exposure to COPCs will occur through indirect pathways, such as food consumption, where residual COPC concentrations may exist in the media over the entire exposure period. In real situations, COPCs deposited onto the soil and taken up by plants or animals will slowly be depleted once emissions cease. However, except for soil concentrations, the media concentration equations used in the indirect pathway analysis conservatively assume that the media concentrations remained constant over the entire 25-, 30-, or 40-year exposure period. The resulting media concentrations used to estimate the indirect exposure to the adult populations are therefore overestimated.

Specific input parameters applicable to the actual site characteristics, COPCs, and exposure pathways were acquired and entered into the exposure model. All input parameters used in this EDT MPHRA are the same as those used in the PCAPP MPHRA (see Appendix D of the PCAPP MPHRA Report), except for the chemical-specific values for new COPCs (i.e., those compounds that are specific to the EDTs and not PCAPP) and the EDT-specific AERMOD results. Appendix B of this EDT MPHRA Report presents the media concentration and risk calculation methods for COPCs identified in Table 5-1 that differ from the methods previously presented in the PCAPP MPHRA Report and employed for all other COPCs. Table 5-2 summarizes the types of parameters needed to quantify media concentrations and exposures and the locations where the detailed parameter values can be found in this report.

5.1.1 COPC Concentrations in Air

Maximum COPC air concentrations were obtained from the AERMOD post-processor outputs discussed in Section 3. Maximum annual and 1-hour COPC-specific air concentrations at the RME individual location were used in the chronic and acute risk assessments, respectively. (Air is the only medium that enters into the acute risk assessment.) Air concentrations of elemental mercury and mercuric chloride were obtained from the AERMOD post-processor outputs for total mercury emissions and then allocated into the speciated forms of mercury using the calculations described in Appendix B. The annual air concentrations used to calculate surface water concentrations (Section 5.1.3) were the maximum air concentration calculated at model receptors located at actual water bodies in the vicinity of PCD. Tables 5-3 through 5-6 present the air concentrations used in the chronic and acute risk assessments for the SDC, TDC, DAVINCH, and EDS, respectively.

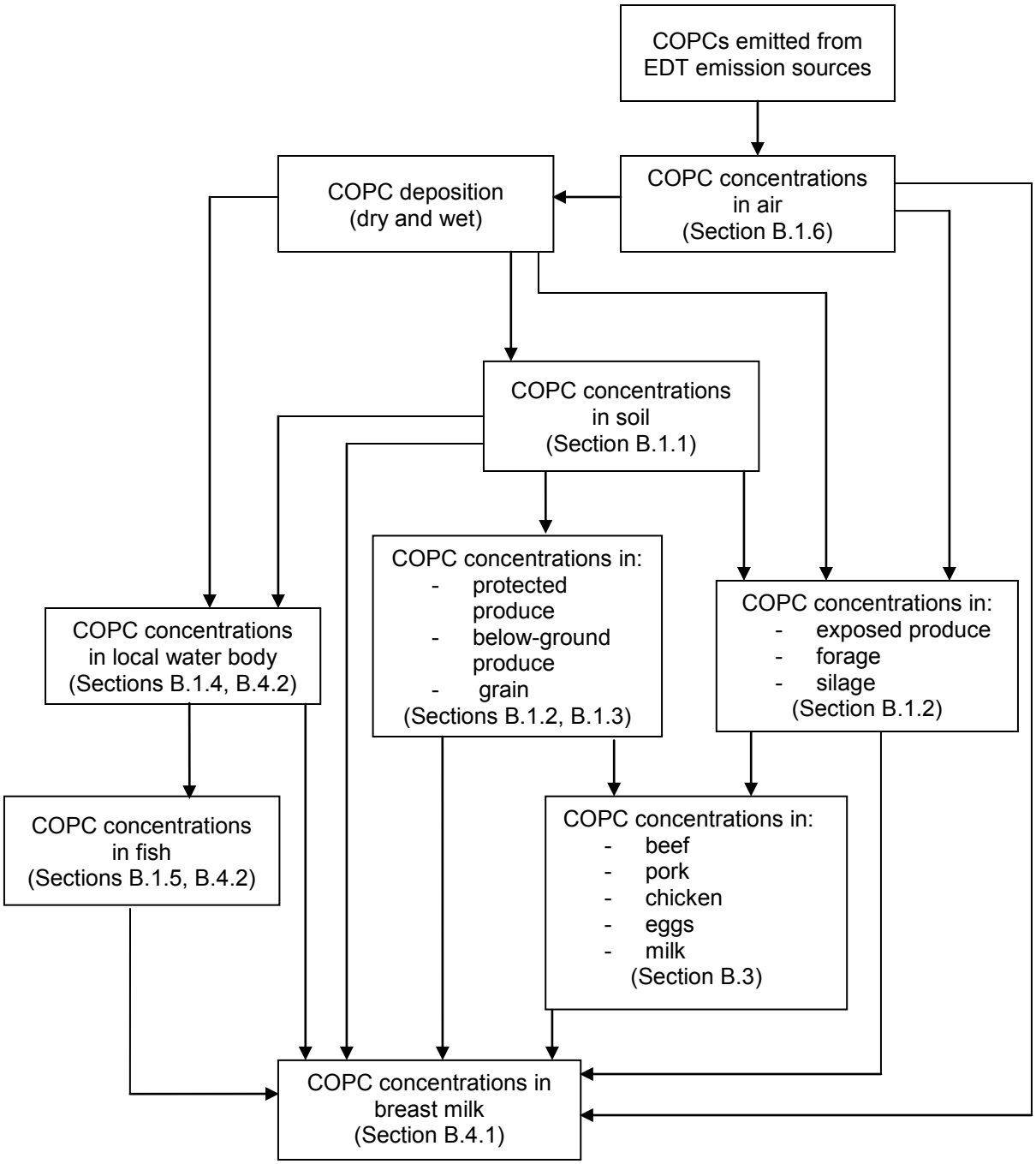

Figure 5-1. Transport of COPCs to evaluated media.

Table 5-2. Types of Parameters Needed to Quantify Media Concentrations and Exposures

Parameter Type	Example of Parameter	Parameter Values
Environmental concentrations (modeled values)	Air concentration Deposition rates	Unit response output from AERMOD, see Tables 5-3 through 5-10
Site-specific values	Precipitation amount Water body surface area Watershed area	See Appendixes C, D, E, and F
Chemical-specific values	Emission rates Transport properties Biotransfer factors Toxicity data	See Tables 2-4 and 2-5; Appendixes C, D, E, and F
Exposure scenario-specific values	Inhalation rate Food consumption rate Exposure duration Soil ingestion rate	Appendixes C, D, E, and F
Default values	USEPA recommended inputs when specific data are lacking	Appendixes C, D, E, and F

5.1.2 COPC Concentrations in Soil

COPC concentrations in soil due to EDT emissions were calculated from the annual wet and dry deposition rates at the RME individual location which were obtained from the AERMOD post-processor outputs. Calculation of soil concentrations for mercury compound requires a different methodology than for other COPCs. Soil concentrations for elemental mercury, methyl mercury, and mercuric chloride were calculated from the annual wet and dry deposition rates for total mercury at the RME individual location and then allocated into the speciated forms of mercury using the calculations described in Appendix B.

Like the PCAPP MPHRA, the individual COPC soil concentrations (including those for elemental mercury, methyl mercury, and mercuric chloride) were determined separately for carcinogenic and noncarcinogenic effects for each exposure scenario. COPC concentrations in soil resulting from wet and dry deposition onto the soil are impacted by subsequent soil loss processes, including leaching, erosion, runoff, degradation, and volatilization. The maximum annual COPC deposition rates were calculated as the highest total deposition rate for each COPC occurring over one of the 3 years of meteorological data (i.e., the calendar year producing the highest total deposition rate). Tables 5-7 through 5-10 present the annual COPC-specific dry and wet deposition rates used in the chronic risk assessment. Soil concentration does not enter into the acute risk assessment.

Chemical concentrations in soil due to EDT emissions were used to calculate uptake of contaminants by soil ingestion and through dermal contact and also to estimate chemical concentrations in fruits, vegetables, animal feed, beef, dairy milk, pork, fish, breast milk, and chicken meat and eggs.

Table 5-3. Annual and 1-hour COPC-specific Air Concentrations for SDC[a, b]

COPC	Annual Air Concentration[c] ($\mu g/m^3$)	Annual Water Body Air Concentration ($\mu g/m^3$)	1-hour Air Concentration ($\mu g/m^3$)
1,1,1-trichloroethane	1.45E-08	4.31E-09	3.63E-04
1,1-dichloroethane	6.89E-09	2.04E-09	1.72E-04
1,1-dichloroethene	6.32E-09	1.88E-09	1.58E-04
1,2-dichloroethane	6.98E-09	2.07E-09	1.74E-04
1,2-dichloropropane	8.41E-09	2.50E-09	2.10E-04
1,3-butadiene	6.04E-09	1.79E-09	1.51E-04
2-butanone	1.03E-07	3.07E-08	1.80E-03
acetone	1.63E-07	4.85E-08	2.68E-03
benzene	1.20E-07	3.55E-08	1.02E-03
benzoic acid	3.55E-07	1.05E-07	8.87E-03
benzyl alcohol	1.51E-07	4.49E-08	1.10E-03
bis(2-ethylhexyl)-phthalate	5.38E-08 (P)	1.60E-08 (P)	1.34E-03 (P)
bromodichloromethane	2.98E-08	8.86E-09	4.71E-04
bromomethane	3.52E-08	1.04E-08	8.78E-04
carbon disulfide	8.25E-08	2.45E-08	6.42E-04
carbon tetrachloride	4.05E-08	1.20E-08	9.42E-04
chlorobenzene	9.47E-09	2.81E-09	1.75E-04
chloroform	1.17E-07	3.48E-08	2.74E-03
chloromethane	1.04E-07	3.08E-08	9.38E-04
cis-1,3-dichloropropene	8.44E-09	2.51E-09	2.11E-04
dibromochloromethane	2.73E-08	8.11E-09	3.44E-04
dichlorodifluoromethane	1.79E-08	5.31E-09	4.46E-04
dimethyl phthalate	1.17E-07	3.47E-08	1.09E-03
di-n-butyl phthalate	1.79E-07	5.32E-08	1.32E-03
ethylbenzene	1.11E-08	3.30E-09	2.23E-04
Freon 113	1.85E-08	5.49E-09	4.62E-04
HD	1.43E-08	4.24E-09	1.42E-02
hexane	2.18E-08	6.46E-09	3.90E-04
methylene chloride	9.81E-08	2.91E-08	2.21E-03
styrene	3.05E-08	9.06E-09	2.25E-04
tetrachloroethene	1.07E-08	3.18E-09	2.03E-04
toluene	1.36E-08	4.04E-09	1.33E-04
trans-1,3-dichloropropene	8.95E-09	2.66E-09	2.24E-04
trichloroethene	1.13E-08	3.37E-09	2.02E-04
trichlorofluoromethane	9.32E-09	2.77E-09	2.33E-04
vinyl chloride	1.04E-08	3.09E-09	2.60E-04
xylenes	2.75E-08	8.16E-09	5.35E-04
2,3,7,8-TCDF	2.30E-14 (P)	6.83E-15 (P)	5.74E-10 (P)
antimony	1.19E-10 (P)	3.53E-11 (P)	2.97E-06 (P)
cadmium	6.22E-10 (P)	1.85E-10 (P)	4.26E-06 (P)
chromium (3+)	5.72E-09 (P)	1.70E-09 (P)	4.28E-05 (P)
chromium (6+)	5.72E-09 (P)	1.70E-09 (P)	4.28E-05 (P)
copper	8.51E-09 (P)	2.53E-09 (P)	6.04E-05 (P)
lead	2.85E-09 (P)	8.45E-10 (P)	2.49E-05 (P)
nickel	1.19E-08 (P)	3.52E-09 (P)	9.74E-05 (P)
zinc	1.15E-07 (P)	3.42E-08 (P)	1.02E-03 (P)

a. Only the 46 COPCs emitted from SDC are listed in this table.
b. All concentrations presented are in the vapor phase, unless denoted as (P) which represents particle phase concentrations.
c. Concentration is the maximum annual concentration at the RME individual location.

Table 5-4. Annual and 1-hour COPC-specific Air Concentrations for TDC[a, b]

COPC	Annual Air Concentration[c] (µg/m^3)	Annual Water Body Air Concentration (µg/m^3)	1-hour Air Concentration (µg/m^3)
1,4-dioxane	7.00E-06	3.10E-06	2.58E-01
2-butanone	1.34E-05	5.93E-06	4.95E-01
2-ethyl 1,3-butadiene	1.32E-06	5.84E-07	2.58E-02
acetone	1.92E-04	8.51E-05	7.11E+00
benzene	1.49E-04	6.58E-05	2.80E+00
bis(2-ethylhexyl)-phthalate	3.45E-06 (P)	1.52E-06 (P)	9.47E-02 (P)
chloromethane	1.46E-06	6.45E-07	5.38E-02
dichlorodifluoromethane	1.69E-06	7.48E-07	6.24E-02
di-n-butyl phthalate	4.29E-07	1.90E-07	6.89E-03
di-n-octyl phthalate	2.57E-06 (P)	1.14E-06 (P)	9.47E-02 (P)
ethane	2.80E-03	1.24E-03	8.18E+01
HD	4.58E-07	2.03E-07	1.69E-02
methane	1.41E-02	6.25E-03	2.58E+02
naphthalene	2.56E-06	1.13E-06	9.47E-02
propene	1.43E-04	6.33E-05	2.80E+00
toluene	5.63E-05	2.49E-05	1.18E+00
trichlorofluoromethane	7.58E-07	3.35E-07	2.80E-02
xylenes	8.80E-07	3.89E-07	1.72E-02
1,2,3,4,6,7,8-HpCDD	8.58E-13 (P)	3.80E-13 (P)	3.17E-08 (P)
1,2,3,4,6,7,8,9-OCDD	5.25E-12 (P)	2.32E-12 (P)	1.94E-07 (P)
1,2,3,4,6,7,8-HpCDF	5.01E-13 (P)	2.21E-13 (P)	1.85E-08 (P)
1,2,3,4,6,7,8,9-OCDF	1.70E-12 (P)	7.53E-13 (P)	6.28E-08 (P)
ammonia	1.68E-06	7.45E-07	2.15E-02
aluminum	4.18E-06	1.85E-06	8.18E-02
antimony	1.98E-07 (P)	8.77E-08 (P)	7.32E-03 (P)
barium	3.97E-08 (P)	1.75E-08 (P)	1.46E-03 (P)
beryllium	1.87E-08 (P)	8.26E-09 (P)	6.89E-04 (P)
cadmium	2.01E-07 (P)	8.89E-08 (P)	6.24E-03 (P)
chlorine	2.02E-05	8.94E-06	2.58E-01
chromium (3+)	3.10E-07 (P)	1.37E-07 (P)	8.18E-03 (P)
chromium (6+)	3.10E-07 (P)	1.37E-07 (P)	8.18E-03 (P)
cobalt	7.00E-08 (P)	3.10E-08 (P)	2.58E-03 (P)
copper	3.44E-06 (P)	1.52E-06 (P)	6.46E-02 (P)
hydrogen chloride	6.73E-05	2.98E-05	8.61E-01
iron	3.04E-04 (P)	1.34E-04 (P)	1.08E+01 (P)
lead	2.08E-07 (P)	9.20E-08 (P)	2.80E-03 (P)
manganese	1.54E-05 (P)	6.82E-06 (P)	3.01E-01 (P)
total mercury[d]	7.58E-08 (P)	3.35E-08 (P)	2.80E-03 (P)
nickel	1.39E-07 (P)	6.16E-08 (P)	3.23E-03 (P)
selenium	5.48E-07 (P)	2.43E-07 (P)	2.02E-02 (P)
silver	4.84E-08 (P)	2.14E-08 (P)	1.79E-03 (P)
vanadium	5.38E-07 (P)	2.38E-07 (P)	1.38E-02 (P)
zinc	8.77E-06 (P)	3.88E-06 (P)	1.21E-01 (P)

a. Only the 42 COPCs (plus total mercury) emitted from TDC are listed in this table.
b. All concentrations presented are in the vapor phase unless denoted as (P) which represents particle phase concentrations.
c. Concentration is the maximum annual concentration at the RME individual location.
d. Total mercury is not a COPC. Total mercury emissions are modeled in AERMOD and speciated into the COPCs methyl mercury, elemental mercury, and mercuric chloride using the equations presented in Appendix B.

Table 5-5. Annual and 1-hour COPC-specific Air Concentrations for DAVINCH[a, b]

COPC	Annual Air Concentration[c] (µg/m^3)	Annual Water Body Air Concentration (µg/m^3)	1-hour Air Concentration (µg/m^3)
2-butanone	2.29E-08	8.64E-09	1.41E-04
2-ethyl 1,3-butadiene	1.08E-06	4.08E-07	6.67E-03
acetone	4.09E-08	1.55E-08	2.53E-04
benzene	1.17E-04	4.42E-05	7.23E-01
benzyl alcohol	8.58E-08	3.24E-08	5.29E-04
bis(2-ethylhexyl)-phthalate	7.22E-07 (P)	2.72E-07 (P)	4.45E-03 (P)
bromodichloromethane	7.98E-09	3.01E-09	4.92E-05
carbon disulfide	5.02E-08	1.89E-08	3.09E-04
carbon tetrachloride	2.05E-09	7.73E-10	1.26E-05
chlorobenzene	1.80E-09	6.80E-10	1.11E-05
chloroform	5.30E-09	2.00E-09	3.27E-05
chloromethane	4.81E-08	1.82E-08	2.97E-04
dibromochloromethane	9.84E-09	3.71E-09	6.07E-05
dimethyl phthalate	8.51E-08	3.21E-08	5.25E-04
di-n-butyl phthalate	1.98E-07	7.49E-08	1.22E-03
ethane	4.78E-04	1.80E-04	2.95E+00
ethylbenzene	1.59E-09	5.99E-10	9.79E-06
HD	4.97E-07	1.88E-07	3.72E-03
hexane	4.46E-09	1.68E-09	2.75E-05
methane	1.08E-02	4.08E-03	6.67E+01
methylene chloride	6.91E-09	2.61E-09	4.26E-05
propene	1.17E-04	4.42E-05	7.23E-01
styrene	1.76E-08	6.64E-09	1.09E-04
tetrachloroethene	1.87E-09	7.04E-10	1.15E-05
toluene	1.98E-05	7.49E-06	1.22E-01
trichloroethene	2.37E-09	8.95E-10	1.46E-05
vinyl chloride	3.54E-07	1.34E-07	2.65E-03
xylenes	7.22E-07	2.72E-07	4.45E-03
3,3',4,4'-TCB (PCB 77)	1.97E-15 (P)	7.42E-16 (P)	1.47E-11 (P)
2,3',4,4',5-PeCB (PCB 118)	4.92E-15 (P)	1.86E-15 (P)	3.68E-11 (P)
2,3,3',4,4'-PeCB (PCB 105)	1.97E-15 (P)	7.42E-16 (P)	1.47E-11 (P)
ammonia	9.02E-07	3.40E-07	5.56E-03
aluminum	3.43E-06	1.29E-06	2.11E-02
cadmium	2.62E-08 (P)	9.87E-09 (P)	1.61E-04 (P)
chlorine	1.08E-05	4.08E-06	6.67E-02
chromium (3+)	7.22E-08 (P)	2.72E-08 (P)	4.45E-04 (P)
chromium (6+)	7.22E-08 (P)	2.72E-08 (P)	4.45E-04 (P)
copper	2.71E-06 (P)	1.02E-06 (P)	1.67E-02 (P)
hydrogen chloride	6.88E-05	2.60E-05	2.45E-01
iron	9.92E-06 (P)	3.75E-06 (P)	6.12E-02 (P)
lead	1.08E-07 (P)	4.09E-08 (P)	6.67E-04 (P)
manganese	1.26E-05 (P)	4.77E-06 (P)	7.79E-02 (P)
total mercury[d]	2.46E-11 (P)	9.27E-12 (P)	1.84E-07 (P)
nickel	4.24E-08 (P)	1.60E-08 (P)	2.61E-04 (P)
vanadium	1.35E-07 (P)	5.11E-08 (P)	8.34E-04 (P)
zinc	4.51E-06 (P)	1.70E-06 (P)	2.78E-02 (P)

a. Only the 45 COPCs (plus total mercury) emitted from DAVINCH are listed in this table.
b. All concentrations presented are in the vapor phase unless denoted as (P) which represents particle phase concentrations.
c. Concentration is the maximum annual concentration at the RME individual location.
d. Total mercury is not a COPC. Total mercury emissions are modeled in AERMOD and speciated into the COPCs methyl mercury, elemental mercury, and mercuric chloride using the equations presented in Appendix B.

Table 5-6. Annual and 1-hour COPC-specific Air Concentrations for EDS[a, b]

COPC	Annual Air Concentration[c] (µg/m^3)	Annual Water Body Air Concentration (µg/m^3)	1-hour Air Concentration (µg/m^3)
1,1-dichloroethene	8.48E-10	2.95E-10	4.99E-04
1,2-dichloroethane	2.58E-13	8.98E-14	1.49E-06
1,4-dichlorobenzene	2.10E-12	7.31E-13	1.24E-06
1,4-dithiane	2.38E-10	8.28E-11	1.40E-04
1,4-oxathiane	5.03E-10	1.75E-10	2.96E-04
2,4-dinitrotoluene	3.08E-14	1.07E-14	1.81E-08
2-butanone	4.38E-10	1.52E-10	2.57E-04
acetylene	2.55E-04	8.87E-05	2.41E+01
benzene	2.54E-12	8.83E-13	1.49E-06
chlorobenzene	3.54E-12	1.23E-12	2.08E-06
chloroform	3.32E-10	1.15E-10	1.91E-04
ethane	1.13E-05	3.94E-06	1.07E+00
HD	1.60E-06	5.55E-07	1.15E-02
methane	1.25E-04	4.33E-05	1.18E+01
monoethanolamine	1.01E-06	3.50E-07	6.70E-01
nitrobenzene	6.02E-14	2.09E-14	3.55E-08
tetrachloroethene	8.23E-11	2.86E-11	4.84E-05
trichloroethene	1.02E-09	3.54E-10	5.97E-04
vinyl chloride	8.27E-07	2.87E-07	4.84E-01
ammonia	1.08E-04	3.74E-05	1.60E+01
hydrogen cyanide	7.69E-05	2.67E-05	7.27E+00
total mercury[d]	1.54E-19 (P)	5.35E-20 (P)	8.78E-14 (P)

a. Only the 21 COPCs (plus total mercury) emitted from EDS are listed in this table.
b. All concentrations presented are in the vapor phase unless denoted as (P) which represents particle phase concentrations.
c. Concentration is the maximum annual concentration at the RME individual location.
d. Total mercury is not a COPC. Total mercury emissions are modeled in AERMOD and speciated into the COPCs methyl mercury, elemental mercury, and mercuric chloride using the equations presented in Appendix B.

Table 5-7. COPC-specific Annual Deposition Rates for SDC[a, b]

COPC	Dry Deposition Rate[c] (g/m^2-yr)	Wet Deposition Rate[c] (g/m^2-yr)	Water Body Dry Deposition Rate (g/m^2-yr)	Water Body Wet Deposition Rate (g/m^2-yr)
1,1,1-trichloroethane	1.63E-09	1.29E-11	3.67E-10	2.15E-12
1,1-dichloroethane	7.72E-10	6.11E-12	1.74E-10	1.02E-12
1,1-dichloroethene	7.09E-10	5.61E-12	1.60E-10	9.35E-13
1,2-dichloroethane	7.82E-10	6.19E-12	1.77E-10	1.03E-12
1,2-dichloropropane	9.43E-10	7.46E-12	2.13E-10	1.24E-12
1,3-butadiene	6.78E-10	5.36E-12	1.53E-10	8.94E-13
2-butanone	1.16E-08	9.18E-11	2.62E-09	1.53E-11
acetone	1.83E-08	1.45E-10	4.13E-09	2.42E-11
benzene	1.34E-08	1.06E-10	3.03E-09	1.77E-11
benzoic acid	3.98E-08	3.15E-10	8.99E-09	5.26E-11
benzyl alcohol	1.70E-08	1.34E-10	3.83E-09	2.24E-11
bis(2-ethylhexyl)-phthalate	2.62E-09 (P)	0 (P)	9.08E-10 (P)	0 (P)
bromodichloromethane	3.34E-09	2.65E-11	7.55E-10	4.41E-12
bromomethane	3.94E-09	3.12E-11	8.90E-10	5.20E-12
carbon disulfide	9.26E-09	7.33E-11	2.09E-09	1.22E-11
carbon tetrachloride	4.55E-09	3.60E-11	1.03E-09	6.00E-12
chlorobenzene	1.06E-09	8.41E-12	2.40E-10	1.40E-12
chloroform	1.31E-08	1.04E-10	2.96E-09	1.73E-11
chloromethane	1.16E-08	9.20E-11	2.62E-09	1.53E-11
cis-1,3-dichloropropene	9.47E-10	7.49E-12	2.14E-10	1.25E-12
dibromochloromethane	3.06E-09	2.42E-11	6.91E-10	4.04E-12
dichlorodifluoromethane	2.00E-09	1.59E-11	4.52E-10	2.64E-12
dimethyl phthalate	1.31E-08	1.04E-10	2.96E-09	1.73E-11
di-n-butyl phthalate	2.01E-08	1.59E-10	4.53E-09	2.65E-11
ethylbenzene	1.24E-09	9.85E-12	2.81E-10	1.64E-12
Freon 113	2.07E-09	1.64E-11	4.68E-10	2.74E-12
HD	1.60E-09	1.27E-11	3.61E-10	2.11E-12
hexane	2.44E-09	1.93E-11	5.50E-10	3.22E-12
methylene chloride	1.10E-08	8.71E-11	2.48E-09	1.45E-11
styrene	3.42E-09	2.71E-11	7.72E-10	4.52E-12
tetrachloroethene	1.20E-09	9.49E-12	2.71E-10	1.58E-12
toluene	1.53E-09	1.21E-11	3.44E-10	2.01E-12
trans-1,3-dichloropropene	1.00E-09	7.95E-12	2.27E-10	1.32E-12
trichloroethene	1.27E-09	1.01E-11	2.87E-10	1.68E-12
trichlorofluoromethane	1.05E-09	8.27E-12	2.36E-10	1.38E-12
vinyl chloride	1.17E-09	9.25E-12	2.64E-10	1.54E-12
xylenes	3.08E-09	2.44E-11	6.95E-10	4.06E-12
2,3,7,8-TCDF	1.12E-15 (P)	0 (P)	3.88E-16 (P)	0 (P)
antimony	5.78E-12 (P)	0 (P)	2.00E-12 (P)	0 (P)
cadmium	3.03E-11 (P)	0 (P)	1.05E-11 (P)	0 (P)
chromium (3+)	2.78E-10 (P)	0 (P)	9.64E-11 (P)	0 (P)
chromium (6+)	2.78E-10 (P)	0 (P)	9.64E-11 (P)	0 (P)
copper	4.14E-10 (P)	0 (P)	1.44E-10 (P)	0 (P)
lead	1.39E-10 (P)	0 (P)	4.80E-11 (P)	0 (P)
nickel	5.77E-10 (P)	0 (P)	2.00E-10 (P)	0 (P)
zinc	5.61E-09 (P)	0 (P)	1.95E-09 (P)	0 (P)

a. Only the 46 COPCs emitted from SDC are listed in this table.
b. All deposition rates presented are from the vapor phase unless denoted as (P) which represents deposition rates due to the particle phase.
c. Deposition rates are the maximum annual deposition rates at the RME individual location.

Table 5-8. COPC-specific Annual Deposition Rates for TDC[a, b]

COPC	Dry Deposition Rate[c] (g/m^2-yr)	Wet Deposition Rate[c] (g/m^2-yr)	Water Body Dry Deposition Rate (g/m^2-yr)	Water Body Wet Deposition Rate (g/m^2-yr)
1,4-dioxane	7.29E-07	4.52E-09	1.61E-07	9.04E-10
2-butanone	1.40E-06	8.67E-09	3.09E-07	1.73E-09
2-ethyl 1,3-butadiene	1.38E-07	8.53E-10	3.04E-08	1.71E-10
acetone	2.01E-05	1.24E-07	4.43E-06	2.49E-08
benzene	1.55E-05	9.61E-08	3.43E-06	1.92E-08
bis(2-ethylhexyl)-phthalate	1.52E-07 (P)	0 (P)	5.21E-08 (P)	0 (P)
chloromethane	1.52E-07	9.42E-10	3.36E-08	1.88E-10
dichlorodifluoromethane	1.76E-07	1.09E-09	3.90E-08	2.19E-10
di-n-butyl phthalate	4.47E-08	2.77E-10	9.88E-09	5.54E-11
di-n-octyl phthalate	1.13E-07 (P)	0 (P)	3.88E-08 (P)	0 (P)
ethane	2.92E-04	1.81E-06	6.45E-05	3.62E-07
HD	4.77E-08	2.96E-10	1.06E-08	5.92E-11
methane	1.47E-03	9.14E-06	3.26E-04	1.83E-06
naphthalene	2.67E-07	1.66E-09	5.91E-08	3.32E-10
propene	1.49E-05	9.25E-08	3.30E-06	1.85E-08
toluene	5.86E-06	3.64E-08	1.30E-06	7.27E-09
trichlorofluoromethane	7.90E-08	4.90E-10	1.75E-08	9.80E-11
xylenes	9.17E-08	5.69E-10	2.03E-08	1.14E-10
1,2,3,4,6,7,8-HpCDD	3.79E-14 (P)	0 (P)	1.30E-14 (P)	0 (P)
1,2,3,4,6,7,8,9-OCDD	2.32E-13 (P)	0 (P)	7.93E-14 (P)	0 (P)
1,2,3,4,6,7,8-HpCDF	2.21E-14 (P)	0 (P)	7.57E-15 (P)	0 (P)
1,2,3,4,6,7,8,9-OCDF	7.51E-14 (P)	0 (P)	2.57E-14 (P)	0 (P)
ammonia	1.75E-07	1.09E-09	3.88E-08	2.18E-10
aluminum	4.36E-07	2.70E-09	9.63E-08	5.41E-10
antimony	8.75E-09 (P)	0 (P)	3.00E-09 (P)	0 (P)
barium	1.75E-09 (P)	0 (P)	6.00E-10 (P)	0 (P)
beryllium	8.24E-10 (P)	0 (P)	2.82E-10 (P)	0 (P)
cadmium	8.87E-09 (P)	0 (P)	3.04E-09 (P)	0 (P)
chlorine	2.11E-06	1.31E-08	4.65E-07	2.61E-09
chromium (3+)	1.37E-08 (P)	0 (P)	4.68E-09 (P)	0 (P)
chromium (6+)	1.37E-08 (P)	0 (P)	4.68E-09 (P)	0 (P)
cobalt	3.09E-09 (P)	0 (P)	1.06E-09 (P)	0 (P)
copper	1.52E-07 (P)	0 (P)	5.20E-08 (P)	0 (P)
hydrogen chloride	7.02E-06	4.35E-08	1.55E-06	8.70E-09
iron	1.34E-05 (P)	0 (P)	4.59E-06 (P)	0 (P)
lead	9.17E-09 (P)	0 (P)	3.14E-09 (P)	0 (P)
manganese	6.80E-07 (P)	0 (P)	2.33E-07 (P)	0 (P)
total mercury[d]	3.35E-09 (P)	0 (P)	1.15E-09 (P)	0 (P)
nickel	6.14E-09 (P)	0 (P)	2.10E-09 (P)	0 (P)
selenium	2.42E-08 (P)	0 (P)	8.29E-09 (P)	0 (P)
silver	2.14E-09 (P)	0 (P)	7.32E-10 (P)	0 (P)
vanadium	2.38E-08 (P)	0 (P)	8.14E-09 (P)	0 (P)
zinc	3.87E-07 (P)	0 (P)	1.33E-07 (P)	0 (P)

a. Only the 42 COPCs (plus total mercury) emitted from TDC are listed in this table.
b. All deposition rates presented are from the vapor phase unless denoted as (P) which represents deposition rates due to the particle phase.
c. Deposition rates are the maximum annual deposition rates at the RME individual location.
d. Total mercury is not a COPC. Total mercury emissions are modeled in AERMOD and speciated into the COPCs methyl mercury, elemental mercury, and mercuric chloride using the equations presented in Appendix B.

Table 5-9. COPC-specific Annual Deposition Rates for DAVINCH[a, b]

COPC	Dry Deposition Rate[c] (g/m^2-yr)	Wet Deposition Rate[c] (g/m^2-yr)	Water Body Dry Deposition Rate (g/m^2-yr)	Water Body Wet Deposition Rate (g/m^2-yr)
2-butanone	2.46E-09	2.00E-11	6.09E-10	3.33E-12
2-ethyl 1,3-butadiene	1.16E-07	9.43E-10	2.88E-08	1.57E-10
acetone	4.40E-09	3.57E-11	1.09E-09	5.95E-12
benzene	1.26E-05	1.02E-07	3.12E-06	1.70E-08
benzyl alcohol	9.21E-09	7.48E-11	2.28E-09	1.25E-11
bis(2-ethylhexyl)-phthalate	3.42E-08 (P)	0 (P)	1.26E-08 (P)	0 (P)
bromodichloromethane	8.56E-10	6.95E-12	2.12E-10	1.16E-12
carbon disulfide	5.38E-09	4.37E-11	1.33E-09	7.29E-12
carbon tetrachloride	2.20E-10	1.79E-12	5.45E-11	2.98E-13
chlorobenzene	1.93E-10	1.57E-12	4.79E-11	2.62E-13
chloroform	5.69E-10	4.62E-12	1.41E-10	7.70E-13
chloromethane	5.16E-09	4.19E-11	1.28E-09	6.99E-12
dibromochloromethane	1.06E-09	8.58E-12	2.62E-10	1.43E-12
dimethyl phthalate	9.14E-09	7.42E-11	2.26E-09	1.24E-11
di-n-butyl phthalate	2.13E-08	1.73E-10	5.27E-09	2.88E-11
ethane	5.13E-05	4.17E-07	1.27E-05	6.94E-08
ethylbenzene	1.70E-10	1.38E-12	4.22E-11	2.31E-13
HD	5.33E-08	4.33E-10	1.32E-08	7.22E-11
hexane	4.79E-10	3.89E-12	1.19E-10	6.48E-13
methane	1.16E-03	9.43E-06	2.88E-04	1.57E-06
methylene chloride	7.42E-10	6.02E-12	1.84E-10	1.00E-12
propene	1.26E-05	1.02E-07	3.12E-06	1.70E-08
styrene	1.89E-09	1.53E-11	4.68E-10	2.56E-12
tetrachloroethene	2.00E-10	1.63E-12	4.96E-11	2.71E-13
toluene	2.13E-06	1.73E-08	5.27E-07	2.88E-09
trichloroethene	2.55E-10	2.07E-12	6.30E-11	3.44E-13
vinyl chloride	3.80E-08	3.08E-10	9.41E-09	5.14E-11
xylenes	7.75E-08	6.29E-10	1.92E-08	1.05E-10
3,3',4,4'-TCB (PCB 77)	9.31E-17 (P)	0 (P)	3.43E-17 (P)	0 (P)
2,3',4,4',5-PeCB (PCB 118)	2.33E-16 (P)	0 (P)	8.57E-17 (P)	0 (P)
2,3,3',4,4'-PeCB (PCB 105)	9.31E-17 (P)	0 (P)	3.43E-17 (P)	0 (P)
ammonia	9.68E-08	7.86E-10	2.40E-08	1.31E-10
aluminum	3.68E-07	2.99E-09	9.11E-08	4.98E-10
cadmium	1.24E-09 (P)	0 (P)	4.56E-10 (P)	0 (P)
chlorine	1.16E-06	9.43E-09	2.88E-07	1.57E-09
chromium (3+)	3.42E-09 (P)	0 (P)	1.26E-09 (P)	0 (P)
chromium (6+)	3.42E-09 (P)	0 (P)	1.26E-09 (P)	0 (P)
copper	1.28E-07 (P)	0 (P)	4.72E-08 (P)	0 (P)
hydrogen chloride	7.39E-06	6.00E-08	1.83E-06	1.00E-08
iron	4.70E-07 (P)	0 (P)	1.73E-07 (P)	0 (P)
lead	5.13E-09 (P)	0 (P)	1.89E-09 (P)	0 (P)
manganese	5.98E-07 (P)	0 (P)	2.20E-07 (P)	0 (P)
total mercury[d]	1.16E-12 (P)	0 (P)	4.28E-13 (P)	0 (P)
nickel	2.01E-09 (P)	0 (P)	7.39E-10 (P)	0 (P)
vanadium	6.41E-09 (P)	0 (P)	2.36E-09 (P)	0 (P)
zinc	2.14E-07 (P)	0 (P)	7.86E-08 (P)	0 (P)

a. Only the 45 COPCs (plus total mercury) emitted from DAVINCH are listed in this table.
b. All deposition rates presented are from the vapor phase unless denoted as (P) which represents deposition rates due to the particle phase.
c. Deposition rates are the maximum annual deposition rates at the RME individual location.
d. Total mercury is not a COPC. Total mercury emissions are modeled in AERMOD and speciated into the COPCs methyl mercury, elemental mercury, and mercuric chloride using the equations presented in Appendix B.

Table 5-10. COPC-specific Annual Deposition Rates for EDS[a, b]

COPC	Dry Deposition Rate[c] (g/m^2-yr)	Wet Deposition Rate[c] (g/m^2-yr)	Water Body Dry Deposition Rate (g/m^2-yr)	Water Body Wet Deposition Rate (g/m^2-yr)
1,1-dichloroethene	1.03E-10	7.48E-13	2.29E-11	2.39E-13
1,2-dichloroethane	3.12E-14	2.28E-16	6.98E-15	7.29E-17
1,4-dichlorobenzene	2.54E-13	1.86E-15	5.68E-14	5.94E-16
1,4-dithiane	2.88E-11	2.10E-13	6.44E-12	6.73E-14
1,4-oxathiane	6.09E-11	4.44E-13	1.36E-11	1.42E-13
2,4-dinitrotoluene	3.72E-15	2.72E-17	8.33E-16	8.70E-18
2-butanone	5.30E-11	3.87E-13	1.18E-11	1.24E-13
acetylene	3.09E-05	2.25E-07	6.90E-06	7.21E-08
benzene	3.07E-13	2.24E-15	6.87E-14	7.18E-16
chlorobenzene	4.28E-13	3.13E-15	9.58E-14	1.00E-15
chloroform	4.01E-11	2.93E-13	8.97E-12	9.37E-14
ethane	1.37E-06	1.00E-08	3.06E-07	3.20E-09
HD	1.93E-07	1.41E-09	4.32E-08	4.51E-10
methane	1.51E-05	1.10E-07	3.37E-06	3.52E-08
monoethanolamine	1.22E-07	8.90E-10	2.73E-08	2.85E-10
nitrobenzene	7.29E-15	5.32E-17	1.63E-15	1.70E-17
tetrachloroethene	9.96E-12	7.27E-14	2.23E-12	2.33E-14
trichloroethene	1.23E-10	8.98E-13	2.75E-11	2.87E-13
vinyl chloride	1.00E-07	7.30E-10	2.24E-08	2.34E-10
ammonia	1.30E-05	9.51E-08	2.91E-06	3.04E-08
hydrogen cyanide	9.30E-06	6.79E-08	2.08E-06	2.17E-08
total mercury[d]	7.97E-21 (P)	5.43E-24 (P)	2.73E-21 (P)	2.72E-24 (P)

a. Only the 21 COPCs (plus total mercury) emitted from EDS are listed in this table.
b. All deposition rates presented are from the vapor phase unless denoted as (P) which represents deposition rates due to the particle phase.
c. Deposition rates are the maximum annual deposition rates at the RME individual location.
d. Total mercury is not a COPC. Total mercury emissions are modeled in AERMOD and speciated into the COPCs methyl mercury, elemental mercury, and mercuric chloride using the equations presented in Appendix B.

5.1.3 COPC Concentrations in Surface Water

COPCs from EDT emission sources may be introduced into local surface water bodies through the following mechanisms:

- diffusive transfer from air into the water body
- deposition directly into the water bodies
- runoff from impervious surfaces
- runoff from pervious surfaces
- erosion of COPC-containing soils

The equations used in this EDT MPHRA to quantify the COPC concentrations in surface water and the partitioning between the sediment and aqueous phase of the water column can be found in Appendix D of the PCAPP MPHRA Report. Appendix B of this EDT MPHRA Report presents the equations for EDT-specific COPCs that require equations other than those used for the PCAPP MPHRA, including elemental mercury, methyl mercury, mercuric chloride, PCBs, PCDDs, and PCDFs.

Two different sets of AERMOD receptors were used to quantify COPC concentrations in surface water. The first set includes receptors located at the local water bodies. These receptors were used to determine the location of maximum air concentrations and deposition rates at the surface of the water bodies. The second set of AERMOD receptor locations was the RME

individual location, which was used to estimate the loading from impervious surface runoff, pervious surface runoff, and erosion. The use of these two AERMOD receptors constituted a maximum annual water body loading. Tables 5-3 through 5-6 and Tables 5-7 through 5-10 present the annual COPC-specific concentrations and deposition rates, respectively, for the RME individual location and maximum water body receptor location. The annual COPC concentrations in the water body associated with these receptors were then used in the calculations for several exposure pathways, including consumption of locally caught fish, ingestion of human breast milk, incidental surface water ingestion during swimming, and dermal exposure during swimming.

5.1.4 COPC Concentrations in Produce for Human Consumption

COPC concentrations in produce were calculated based on whether the produce is characterized as being above-ground or below-ground; in addition, above-ground produce are further characterized as protected or exposed. Above-ground protected produce include fruits and vegetables in which the edible portion of the plant is covered by a protective inedible coating (e.g., corn or watermelon) that prevents uptake of chemicals into the edible portion by direct deposition or air-to-plant transfer. Above-ground exposed produce include fruits and vegetables in which the edible portion of the plant is exposed to direct deposition or air-to-plant transfer.

COPC concentrations in below-ground vegetables and above-ground protected fruits and vegetables are attributed to root uptake of chemicals deposited on soil. COPC concentrations in above-ground exposed fruits and vegetables are attributable to several uptake mechanisms, including direct deposition onto the plant with subsequent absorption, direct uptake of vapor-phase chemicals through plant foliage, and root uptake of chemicals deposited on soil. The COPC concentrations in above-ground exposed produce due to EDT emissions are the sum of these uptake processes. Annual COPC concentrations in produce were used to quantify human uptake of contaminants through ingestion of the various produce types and to quantify the COPC concentrations in human breast milk.

5.1.5 COPC Concentrations in Animal Products and Fish

COPC concentrations in animal products occur by consumption of contaminated feed and incidental ingestion of contaminated soil by the animal. The feed items may be contaminated through three major mechanisms: direct deposition onto forage and silage; vapor-phase air-to-plant transfer into forage and silage; and direct uptake from soil through the plant roots for forage, silage, and grain. Soil may become contaminated through wet and dry depositional processes. COPC concentrations in forage, silage, grain, and soil were calculated at the location of the maximum off-site air concentration and deposition rates (i.e., RME individual locations). These concentrations were then used to calculate COPC concentrations in animal products (beef, pork, chicken, eggs, and dairy milk). COPC concentrations in fish are attributed to contamination of the surface water, as described in Section 5.1.3. The COPC concentrations in animal products and fish were used to quantify human exposure to COPCs through ingestion of contaminated animal products and fish and to quantify COPC concentrations in human breast milk. BEHP, which was not a COPC in the PCAPP MPHRA, is more readily metabolized and excreted by mammalian species than other contaminants. Thus, the methodology used for the EDT MPHRA included a metabolism factor for BEHP, whereas no metabolism factors were needed for other COPCs. Appendix B of this report presents COPC-specific methods for calculating concentrations of elemental mercury, methyl mercury, mercuric chloride, PCBs, PCDDs, and PCDFs in fish.

5.1.6 COPC Concentrations in Breast Milk

The National Center for Environmental Assessment (NCEA) report describing the breast milk pathway includes three groups of chemicals which may be found in breast milk: lipophilic compounds (e.g., PCDDs, PCDFs, and PCBs), organic chemicals with low octanol/water partitioning coefficients, and inorganic (metallic or organometallic) compounds. (USEPA, 1998) Table 5-11 presents the COPCs emitted by the EDTs that are identified in the references as chemicals that may be found in the aqueous or lipid phase of breast milk.

Table 5-11. COPCs Potentially Found in Breast Milk

COPCs With Chronic Toxicity Data	
1,2-dichloroethane	1,2,3,4,6,7,8-HpCDF
1,4-dichlorobenzene	1,2,3,4,6,7,8,9-OCDF
2-butanone	3,3',4,4'-TCB (PCB 77)
acetone	2,3',4,4',5-PeCB (PCB 118)
benzene	2,3,3',4,4'-PeCB (PCB 105)
carbon disulfide	aluminum
chloroform	antimony
chloromethane	barium
cis-1,3-dichloropropene	beryllium
dichlorodifluoromethane	cadmium
ethylbenzene	chlorine
Freon 113	chromium (3+)
hexane	chromium (6+)
methylene chloride	cobalt
naphthalene	copper
styrene	iron
tetrachloroethene	lead
toluene	manganese
trans-1,3-dichloropropene	mercuric chloride
trichloroethene	methyl mercury
trichlorofluoromethane	nickel
xylenes	selenium
1,2,3,4,6,7,8-HpCDD	silver
1,2,3,4,6,7,8,9-OCDD	vanadium
2,3,7,8-TCDF	zinc

As illustrated in Table 5-11, chronic toxicity data are available for all 50 of the COPCs potentially found in breast milk. A total of 23 of these COPCs have carcinogenic toxicity data available, and 46 of these COPCs have noncarcinogenic toxicity data available. Concentrations of all COPCs with emission rates for any of the four EDTs were quantified for both the aqueous and lipid portions of breast milk. COPC concentrations in human breast milk were used to quantify infant COPC exposure through ingestion of human breast milk.

5.1.7 Results of Quantified Media Concentrations

Appendixes C, D, E, and F present a full listing of the COPC-specific concentrations for all the media evaluated in the exposure calculation routine for the SDC, TDC, DAVINCH, and EDS, respectively.

5.2 QUANTIFICATION OF EXPOSURES

5.2.1 Direct Exposure through Inhalation

The direct inhalation of COPCs by each human receptor was calculated using the COPC-specific air concentrations output by the AERMOD post-processor. Because toxicity values are based on exposure time and body weight, quantification of inhalation of COPCs must also be in terms of body weight and exposure time to allow for comparison. Other factors used in the

calculation of direct inhalation exposure include inhalation rate, exposure frequency, body weight, and averaging time.

As noted earlier in Table 5-1 and as described in HHRAP, elemental mercury, methyl mercury, mercuric chloride, PCBs, PCDDs, and PCDFs require specific methods in order to estimate exposure to these COPCs through the inhalation pathway. (USEPA, 2005b) The method used for mercury compounds was to calculate air concentrations for total mercury and then convert the concentrations to concentrations of the specific mercury species (elemental mercury and mercuric chloride). Exposures to PCDDs and PCDFs were evaluated on both a congener-specific basis and a toxic equivalent (TEQ) basis for each exposure medium. The same was done for exposures to coplanar PCBs. The conger-specific basis carried the media concentrations for each congener through to the risk calculation step. The TEQ basis applied TEFs to congener-specific media concentrations which were then summed to obtain a single equivalent concentration that was subsequently used in exposure and risk or hazard calculations. Appendix B of this report describes these procedures in more detail. Table 5-12 presents the congener-specific TEFs used to estimate overall media concentrations on a TEQ basis.

To accommodate the 5-year EDT operating period, the maximum exposure duration for direct exposures (i.e., inhalation) was 5 years; this exposure duration was used for all adult, child, and lifetime exposure scenarios, while a 1-year exposure duration was used for all infant exposure scenarios. For carcinogenic effects, the direct exposure was averaged over a lifetime (70 years); for noncarcinogenic effects, the direct exposure was averaged over the period of EDT operation (5 years). The different averaging periods account for the fact that carcinogens are assumed to have a cumulative effect without a lower threshold.

Tables 5-13 through 5-16 present the calculated COPC-specific intakes for COPCs with potential carcinogenic health effects through the direct inhalation pathway for all exposure scenarios. Tables 5-17 through 5-20 present the calculated COPC-specific intakes for COPCs with potential noncarcinogenic health hazards through the direct inhalation pathway for all exposure scenarios.

Table 5-12. Toxicity Equivalency Factors Used in the EDT MPHRA[a]

COPC		CAS No.	Chemical Type	Toxicity Equivalency Factor
Compound	Alternative Name			(dimensionless)
3,3',4,4'-tetrachlorobiphenyl	3,3',4,4'-TCB (PCB 77)	32598-13-3	Coplanar PCB	0.0001
3,4,4',5-tetrachlorobiphenyl	3,4,4,5'-TCB (PCB 81)	70362-50-4	Coplanar PCB	0.0003
2,3,3',4,4'-pentachlorobiphenyl	2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	Coplanar PCB	0.00003
2,3,4,4',5-pentachlorobiphenyl	2,3,4,4',5-PeCB (PCB 114)	74472-37-0	Coplanar PCB	0.00003
2,3',4,4',5-pentachlorobiphenyl	2,3',4,4',5-PeCB (PCB 118)	31508-00-6	Coplanar PCB	0.00003
2',3,4,4',5-pentachlorobiphenyl	2',3,4,4',5-PeCB (PCB 123)	65510-44-3	Coplanar PCB	0.00003
3,3',4,4',5-pentachlorobiphenyl	3,3',4,4',5-PeCB (PCB 126)	57465-28-8	Coplanar PCB	0.1
2,3,3',4,4',5-hexachlorobiphenyl	2,3,3',4,4',5-HxCB (PCB 156)	38380-08-4	Coplanar PCB	0.00003
2,3,3',4,4',5'-hexachlorobiphenyl	2,3,3',4,4',5'-HxCB (PCB 157)	69782-90-7	Coplanar PCB	0.00003
2,3',4,4',5,5'-hexachlorobiphenyl	2,3',4,4',5,5'-HxCB (PCB 167)	52663-72-6	Coplanar PCB	0.00003
3,3',4,4',5,5'-hexachlorobiphenyl	3,3',4,4',5,5'-HxCB (PCB 169)	32774-16-6	Coplanar PCB	0.03
2,3,3',4,4',5,5'-heptachlorobiphenyl	2,3,3',4,4',5,5'-HpCB (PCB 189)	39635-31-9	Coplanar PCB	0.00003
2,3,7,8-tetrachlorodibenzo(p)dioxin	2,3,7,8-TCDD	1746-01-6	PCDD	1
1,2,3,7,8-pentachlorodibenzo(p)dioxin	1,2,3,7,8-PeCDD	40321-76-4	PCDD	1
1,2,3,4,7,8-hexachlorodibenzo(p)dioxin	1,2,3,4,7,8-HxCDD	39227-28-6	PCDD	0.1
1,2,3,6,7,8-hexachlorodibenzo(p)dioxin	1,2,3,6,7,8-HxCDD	57653-85-7	PCDD	0.1
1,2,3,7,8,9-hexachlorodibenzo(p)dioxin	1,2,3,7,8,9-HxCDD	19408-74-3	PCDD	0.1
1,2,3,4,6,7,8-heptachlorodibenzo(p)dioxin	1,2,3,4,6,7,8-HpCDD	35822-46-9	PCDD	0.01
1,2,3,4,6,7,8,9-octachlorodibenzo(p)dioxin	1,2,3,4,6,7,8,9-OCDD	3268-87-9	PCDD	0.0003
2,3,7,8-tetrachlorodibenzofuran	2,3,7,8-TCDF	51207-31-9	PCDF	0.1
1,2,3,7,8-pentachlorodibenzofuran	1,2,3,7,8-PeCDF	57117-31-4	PCDF	0.03
2,3,4,7,8-pentachlorodibenzofuran	2,3,4,7,8-PeCDF	57117-31-4	PCDF	0.3
1,2,3,4,7,8-hexachlorodibenzofuran	1,2,3,4,7,8-HxCDF	70648-26-9	PCDF	0.1
1,2,3,6,7,8-hexachlorodibenzofuran	1,2,3,6,7,8-HxCDF	57117-44-9	PCDF	0.1
1,2,3,7,8,9-hexachlorodibenzofuran	1,2,3,7,8,9-HxCDF	72918-21-9	PCDF	0.1
2,3,4,6,7,8-hexachlorodibenzofuran	2,3,4,6,7,8-HxCDF	60851-34-5	PCDF	0.1
1,2,3,4,6,7,8-heptachlorodibenzofuran	1,2,3,4,6,7,8-HpCDF	67562-39-4	PCDF	0.01
1,2,3,4,7,8,9-heptachlorodibenzofuran	1,2,3,4,7,8,9-HpCDF	55673-89-7	PCDF	0.01
1,2,3,4,6,7,8,9-octachlorodibenzofuran	1,2,3,4,6,7,8,9-OCDF	39001-02-0	PCDF	0.0003

a. Reference: "Recommended Toxicity Equivalence Factors (TEFs) for Human Health Risk Assessments of 2,3,7,8-Tetrachlorodinezo-p-dioxin and Dioxin-Like Compounds". (USEPA, 2010)

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Table 5-13. Calculated Direct Inhalation Exposures to COPCs with Carcinogenic Effects for All Exposure Scenarios for SDC[a]

COPC	Direct Inhalation Exposure (mg COPC/kg of body weight-day)			
	Adult Exposure Scenarios		All Child Exposure Scenarios	All Infant Exposure Scenarios
	Resident, Subsistence Fisher, and Subsistence Farmer	Worker		
1,1-dichloroethane	1.35E-13	3.21E-14	3.77E-13	4.24E-14
1,2-dichloroethane	1.37E-13	3.25E-14	3.82E-13	4.30E-14
1,2-dichloropropane	1.64E-13	3.92E-14	4.61E-13	5.18E-14
1,3-butadiene	1.18E-13	2.82E-14	3.31E-13	3.73E-14
benzene	2.34E-12	5.58E-13	6.56E-12	7.38E-13
bis(2-ethylhexyl)-phthalate	9.16E-13	2.18E-13	2.56E-12	2.88E-13
bromodichloromethane	5.84E-13	1.39E-13	1.63E-12	1.84E-13
carbon tetrachloride	7.93E-13	1.89E-13	2.22E-12	2.50E-13
chloroform	2.29E-12	5.46E-13	6.42E-12	7.22E-13
cis-1,3-dichloropropene	1.65E-13	3.93E-14	4.63E-13	5.20E-14
dibromochloromethane	5.34E-13	1.27E-13	1.50E-12	1.68E-13
ethylbenzene	2.17E-13	5.17E-14	6.08E-13	6.84E-14
HD	2.79E-13	6.65E-14	7.82E-13	8.79E-14
methylene chloride	1.92E-12	4.57E-13	5.38E-12	6.05E-13
tetrachloroethene	2.09E-13	4.98E-14	5.86E-13	6.59E-14
trans-1,3-dichloropropene	1.75E-13	4.17E-14	4.91E-13	5.52E-14
trichloroethene	2.22E-13	5.28E-14	6.21E-13	6.99E-14
vinyl chloride	2.04E-13	4.85E-14	5.71E-13	6.42E-14
Total PCDDs and PCDFs[b]	1.03E-20	2.46E-21	2.90E-20	3.26E-21
cadmium	1.21E-14	2.87E-15	3.38E-14	3.80E-15
chromium (6+)	1.11E-13	2.64E-14	3.10E-13	3.49E-14
lead	5.53E-14	1.32E-14	1.55E-13	1.74E-14
nickel	2.30E-13	5.48E-14	6.44E-13	7.25E-14

a. Only the 23 carcinogenic COPCs with inhalation toxicity values emitted from SDC are listed in this table.
b. Exposures to total PCDDs and PCDFs are presented in units of mg TEQ/(kg-day).

Table 5-14. Calculated Direct Inhalation Exposures to COPCs with Carcinogenic Effects for All Exposure Scenarios for TDC[a]

COPC	Direct Inhalation Exposure (mg COPC/kg of body weight-day)			
	Adult Exposure Scenarios		All Child Exposure Scenarios	All Infant Exposure Scenarios
	Resident, Subsistence Fisher, and Subsistence Farmer	Worker		
1,4-dioxane	1.37E-10	3.26E-11	3.83E-10	4.31E-11
benzene	2.91E-09	6.93E-10	8.15E-09	9.17E-10
bis(2-ethylhexyl)-phthalate	5.86E-11	1.40E-11	1.64E-10	1.85E-11
HD	8.97E-12	2.13E-12	2.51E-11	2.82E-12
naphthalene	5.02E-11	1.20E-11	1.41E-10	1.58E-11
Total PCDDs and PCDFs[b]	3.05E-19	7.26E-20	8.54E-19	9.61E-20
beryllium	3.62E-13	8.62E-14	1.01E-12	1.14E-13
cadmium	3.90E-12	9.28E-13	1.09E-11	1.23E-12
chromium (6+)	6.00E-12	1.43E-12	1.68E-11	1.89E-12
lead	4.04E-12	9.62E-13	1.13E-11	1.27E-12
nickel	2.70E-12	6.43E-13	7.56E-12	8.50E-13

a. Only the 11 carcinogenic COPCs with inhalation toxicity values emitted from TDC are listed in this table.
b. Exposures to total PCDDs and PCDFs are presented in units of mg TEQ/(kg-day).

Table 5-15. Calculated Direct Inhalation Exposures to COPCs with Carcinogenic Effects for All Exposure Scenarios for DAVINCH[a]

COPC	Direct Inhalation Exposure (mg COPC/kg of body weight-day)			
	Adult Exposure Scenarios		All Child Exposure Scenarios	All Infant Exposure Scenarios
	Resident, Subsistence Fisher, and Subsistence Farmer	Worker		
benzene	2.29E-09	5.46E-10	6.42E-09	7.23E-10
bis(2-ethylhexyl)-phthalate	1.23E-11	2.92E-12	3.44E-11	3.87E-12
bromodichloromethane	1.56E-13	3.72E-14	4.37E-13	4.92E-14
carbon tetrachloride	4.01E-14	9.55E-15	1.12E-13	1.26E-14
chloroform	1.04E-13	2.47E-14	2.90E-13	3.27E-14
dibromochloromethane	1.93E-13	4.59E-14	5.39E-13	6.07E-14
ethylbenzene	3.11E-14	7.40E-15	8.70E-14	9.79E-15
HD	9.72E-12	2.32E-12	2.72E-11	3.06E-12
methylene chloride	1.35E-13	3.22E-14	3.79E-13	4.26E-14
tetrachloroethene	3.65E-14	8.70E-15	1.02E-13	1.15E-14
trichloroethene	4.64E-14	1.10E-14	1.30E-13	1.46E-14
vinyl chloride	6.93E-12	1.65E-12	1.94E-11	2.18E-12
total coplanar PCBs[b]	3.29E-25	7.84E-26	9.21E-25	1.04E-25
cadmium	5.07E-13	1.21E-13	1.42E-12	1.60E-13
chromium (6+)	1.40E-12	3.33E-13	3.92E-12	4.41E-13
lead	2.10E-12	5.01E-13	5.89E-12	6.63E-13
nickel	8.22E-13	1.96E-13	2.30E-12	2.59E-13

a. Only the 17 carcinogenic COPCs with inhalation toxicity values emitted from DAVINCH are listed in this table.
b. Exposures to total coplanar PCBs are presented in units of mg TEQ/(kg-day).

Table 5-16. Calculated Direct Inhalation Exposures to COPCs with Carcinogenic Effects for All Exposure Scenarios for EDS[a]

COPC	Direct Inhalation Exposure (mg COPC/kg of body weight-day)			
	Adult Exposure Scenarios		All Child Exposure Scenarios	All Infant Exposure Scenarios
	Resident, Subsistence Fisher, and Subsistence Farmer	Worker		
1,2-dichloroethane	5.05E-18	1.20E-18	1.41E-17	1.59E-18
1,4-dichlorobenzene	4.11E-17	9.79E-18	1.15E-16	1.30E-17
2,4-dinitrotoluene	6.02E-19	1.43E-19	1.69E-18	1.90E-19
benzene	4.97E-17	1.18E-17	1.39E-16	1.57E-17
chloroform	6.49E-15	1.55E-15	1.82E-14	2.04E-15
HD	3.13E-11	7.44E-12	8.75E-11	9.84E-12
nitrobenzene	1.18E-18	2.81E-19	3.30E-18	3.71E-19
tetrachloroethene	1.61E-15	3.84E-16	4.51E-15	5.08E-16
trichloroethene	1.99E-14	4.74E-15	5.57E-14	6.27E-15
vinyl chloride	1.62E-11	3.85E-12	4.53E-11	5.10E-12

a. Only the 10 carcinogenic COPCs with inhalation toxicity values emitted from EDS are listed in this table.

Table 5-17. Calculated Direct Inhalation Exposures to COPCs with Noncarcinogenic Effects for All Exposure Scenarios for SDC[a]

COPC	Direct Inhalation Exposure (mg COPC/kg of body weight-day)			
	Adult Exposure Scenarios		All Child Exposure Scenarios	All Infant Exposure Scenarios
	Resident, Subsistence Fisher, and Subsistence Farmer	Worker		
1,1,1-trichloroethane	3.98E-12	9.47E-13	1.11E-11	6.27E-12
1,1-dichloroethane	1.89E-12	4.49E-13	5.28E-12	2.97E-12
1,1-dichloroethene	1.73E-12	4.12E-13	4.85E-12	2.73E-12
1,2-dichloroethane	1.91E-12	4.55E-13	5.35E-12	3.01E-12
1,2-dichloropropane	2.30E-12	5.48E-13	6.45E-12	3.63E-12
1,3-butadiene	1.66E-12	3.94E-13	4.64E-12	2.61E-12
2-butanone	2.83E-11	6.75E-12	7.93E-11	4.46E-11
acetone	4.48E-11	1.07E-11	1.25E-10	7.05E-11
benzene	3.28E-11	7.81E-12	9.18E-11	5.16E-11
bromomethane	9.63E-12	2.29E-12	2.70E-11	1.52E-11
carbon disulfide	2.26E-11	5.38E-12	6.33E-11	3.56E-11
carbon tetrachloride	1.11E-11	2.64E-12	3.11E-11	1.75E-11
chlorobenzene	2.59E-12	6.18E-13	7.27E-12	4.09E-12
chloroform	3.21E-11	7.64E-12	8.99E-11	5.06E-11
chloromethane	2.84E-11	6.76E-12	7.95E-11	4.47E-11
cis-1,3-dichloropropene	2.31E-12	5.51E-13	6.48E-12	3.64E-12
dichlorodifluoromethane	4.90E-12	1.17E-12	1.37E-11	7.71E-12
ethylbenzene	3.04E-12	7.24E-13	8.51E-12	4.79E-12
Freon 113	5.07E-12	1.21E-12	1.42E-11	7.98E-12
HD	3.91E-12	9.31E-13	1.09E-11	6.16E-12
hexane	5.96E-12	1.42E-12	1.67E-11	9.39E-12
methylene chloride	2.69E-11	6.40E-12	7.53E-11	4.23E-11
styrene	8.36E-12	1.99E-12	2.34E-11	1.32E-11
tetrachloroethene	2.93E-12	6.98E-13	8.20E-12	4.62E-12
toluene	3.73E-12	8.88E-13	1.04E-11	5.87E-12
trans-1,3-dichloropropene	2.45E-12	5.84E-13	6.87E-12	3.86E-12
trichloroethene	3.10E-12	7.39E-13	8.69E-12	4.89E-12
trichlorofluoromethane	2.55E-12	6.08E-13	7.15E-12	4.02E-12
vinyl chloride	2.85E-12	6.80E-13	7.99E-12	4.50E-12
xylenes	7.53E-12	1.79E-12	2.11E-11	1.19E-11
Total PCDDs and PCDFs[b]	1.45E-19	3.45E-20	4.06E-19	2.28E-19
cadmium	1.69E-13	4.02E-14	4.73E-13	2.66E-13
chromium (6+)	1.55E-12	3.70E-13	4.35E-12	2.44E-12
nickel	3.22E-12	7.67E-13	9.02E-12	5.07E-12

a. Only the 34 noncarcinogenic COPCs with inhalation toxicity values emitted from SDC are listed in this table.
b. Exposures to total PCDDs and PCDFs are presented in units of mg TEQ/(kg-day).

Table 5-18. Calculated Direct Inhalation Exposures to COPCs with Noncarcinogenic Effects for All Exposure Scenarios for TDC[a]

COPC	Direct Inhalation Exposure (mg COPC/kg of body weight-day)			
	Adult Exposure Scenarios		All Child Exposure Scenarios	All Infant Exposure Scenarios
	Resident, Subsistence Fisher, and Subsistence Farmer	Worker		
1,4-dioxane	1.92E-09	4.56E-10	5.37E-09	3.02E-09
2-butanone	3.67E-09	8.75E-10	1.03E-08	5.79E-09
acetone	5.27E-08	1.25E-08	1.48E-07	8.30E-08
benzene	4.08E-08	9.70E-09	1.14E-07	6.42E-08
chloromethane	3.99E-10	9.51E-11	1.12E-09	6.29E-10
dichlorodifluoromethane	4.63E-10	1.10E-10	1.30E-09	7.29E-10
HD	1.26E-10	2.99E-11	3.51E-10	1.98E-10
naphthalene	7.03E-10	1.67E-10	1.97E-09	1.11E-09
propene	3.92E-08	9.33E-09	1.10E-07	6.17E-08
toluene	1.54E-08	3.67E-09	4.32E-08	2.43E-08
trichlorofluoromethane	2.08E-10	4.94E-11	5.81E-10	3.27E-10
xylenes	2.41E-10	5.74E-11	6.75E-10	3.80E-10
Total PCDDs and PCDFs[b]	4.27E-18	1.02E-18	1.20E-17	6.73E-18
ammonia	4.61E-10	1.10E-10	1.29E-09	7.26E-10
aluminum	1.15E-09	2.73E-10	3.21E-09	1.80E-09
barium	1.08E-11	2.56E-12	3.01E-11	1.70E-11
beryllium	5.07E-12	1.21E-12	1.42E-11	7.98E-12
cadmium	5.46E-11	1.30E-11	1.53E-10	8.60E-11
chlorine	5.53E-09	1.32E-09	1.55E-08	8.72E-09
chromium (6+)	8.41E-11	2.00E-11	2.35E-10	1.32E-10
cobalt	1.90E-11	4.52E-12	5.32E-11	2.99E-11
hydrogen chloride	1.84E-08	4.39E-09	5.17E-08	2.91E-08
manganese	4.18E-09	9.96E-10	1.17E-08	6.59E-09
mercuric chloride	1.50E-12	3.56E-13	4.19E-12	2.36E-12
nickel	3.78E-11	9.00E-12	1.06E-10	5.95E-11
selenium	1.50E-10	3.58E-11	4.20E-10	2.37E-10
vanadium	1.46E-10	3.48E-11	4.09E-10	2.30E-10

a. Only the 27 noncarcinogenic COPCs with inhalation toxicity values emitted from TDC are listed in this table.
b. Exposures to total PCDDs and PCDFs are presented in units of mg TEQ/(kg-day).

Table 5-19. Calculated Direct Inhalation Exposures to COPCs with Noncarcinogenic Effects for All Exposure Scenarios for DAVINCH[a]

COPC	Direct Inhalation Exposure (mg COPC/kg of body weight-day)			
	Adult Exposure Scenarios		All Child Exposure Scenarios	All Infant Exposure Scenarios
	Resident, Subsistence Fisher, and Subsistence Farmer	Worker		
2-butanone	6.27E-12	1.49E-12	1.76E-11	9.88E-12
acetone	1.12E-11	2.67E-12	3.14E-11	1.77E-11
benzene	3.21E-08	7.65E-09	8.99E-08	5.06E-08
carbon disulfide	1.37E-11	3.27E-12	3.85E-11	2.16E-11
carbon tetrachloride	5.61E-13	1.34E-13	1.57E-12	8.84E-13
chlorobenzene	4.94E-13	1.18E-13	1.38E-12	7.78E-13
chloroform	1.45E-12	3.46E-13	4.07E-12	2.29E-12
chloromethane	1.32E-11	3.14E-12	3.69E-11	2.08E-11
ethylbenzene	4.35E-13	1.04E-13	1.22E-12	6.85E-13
HD	1.36E-10	3.24E-11	3.81E-10	2.14E-10
hexane	1.22E-12	2.91E-13	3.42E-12	1.93E-12
methylene chloride	1.89E-12	4.51E-13	5.30E-12	2.98E-12
propene	3.21E-08	7.65E-09	8.99E-08	5.06E-08
styrene	4.82E-12	1.15E-12	1.35E-11	7.59E-12
tetrachloroethene	5.11E-13	1.22E-13	1.43E-12	8.05E-13
toluene	5.44E-09	1.29E-09	1.52E-08	8.56E-09
trichloroethene	6.50E-13	1.55E-13	1.82E-12	1.02E-12
vinyl chloride	9.70E-11	2.31E-11	2.72E-10	1.53E-10
xylenes	1.98E-10	4.71E-11	5.53E-10	3.11E-10
3,3',4,4'-TCB (PCB 77)	1.62E-20	3.85E-21	4.53E-20	2.55E-20
2,3',4,4',5-PeCB (PCB 118)	6.74E-20	1.60E-20	1.89E-19	1.06E-19
2,3,3',4,4'-PeCB (PCB 105)	3.23E-20	7.70E-21	9.05E-20	5.09E-20
ammonia	2.47E-10	5.88E-11	6.92E-10	3.89E-10
aluminum	9.39E-10	2.24E-10	2.63E-09	1.48E-09
cadmium	7.10E-12	1.69E-12	1.99E-11	1.12E-11
chlorine	2.97E-09	7.06E-10	8.30E-09	4.67E-09
chromium (6+)	1.96E-11	4.67E-12	5.49E-11	3.09E-11
hydrogen chloride	1.89E-08	4.49E-09	5.28E-08	2.97E-08
manganese	3.43E-09	8.16E-10	9.60E-09	5.40E-09
mercuric chloride	4.84E-16	1.15E-16	1.36E-15	7.63E-16
nickel	1.15E-11	2.74E-12	3.22E-11	1.81E-11
vanadium	3.67E-11	8.75E-12	1.03E-10	5.79E-11

a. Only the 32 noncarcinogenic COPCs with inhalation toxicity values emitted from DAVINCH are listed in this table.

Table 5-20. Calculated Direct Inhalation Exposures to COPCs with Noncarcinogenic Effects for All Exposure Scenarios for EDS[a]

COPC	Direct Inhalation Exposure (mg COPC/kg of body weight-day)			
	Adult Exposure Scenarios		All Child Exposure Scenarios	All Infant Exposure Scenarios
	Resident, Subsistence Fisher, and Subsistence Farmer	Worker		
1,1-dichloroethene	2.32E-13	5.53E-14	6.50E-13	3.66E-13
1,2-dichloroethane	7.07E-17	1.68E-17	1.98E-16	1.11E-16
1,4-dichlorobenzene	5.76E-16	1.37E-16	1.61E-15	9.07E-16
1,4-dithiane	6.53E-14	1.55E-14	1.83E-13	1.03E-13
2-butanone	1.20E-13	2.86E-14	3.36E-13	1.89E-13
benzene	6.96E-16	1.66E-16	1.95E-15	1.10E-15
chlorobenzene	9.71E-16	2.31E-16	2.72E-15	1.53E-15
chloroform	9.09E-14	2.16E-14	2.54E-13	1.43E-13
HD	4.38E-10	1.04E-10	1.23E-09	6.89E-10
nitrobenzene	1.65E-17	3.93E-18	4.62E-17	2.60E-17
tetrachloroethene	2.26E-14	5.37E-15	6.32E-14	3.55E-14
trichloroethene	2.79E-13	6.63E-14	7.80E-13	4.39E-13
vinyl chloride	2.26E-10	5.39E-11	6.34E-10	3.57E-10
ammonia	2.95E-08	7.02E-09	8.26E-08	4.65E-08
hydrogen cyanide	2.11E-08	5.02E-09	5.90E-08	3.32E-08
mercuric chloride	3.04E-24	7.23E-25	8.50E-24	4.78E-24

a. Only the 16 noncarcinogenic COPCs with inhalation toxicity values emissions from EDS are listed in this table.

5.2.2 Indirect Exposures

Appendix D of the PCAPP MPHRA presents the equations for calculating COPC intake through indirect exposures. In addition to methods described in the preceding subsections, some of the COPCs previously identified in Table 5-1 required different methods for calculating exposures than had been used in the PCAPP MPHRA. All such methods were based on those recommended in the HHRAP. (USEPA, 2005b) In this EDT MPHRA, indirect exposures to PCDDs, PCDFs, and coplanar PCBs were evaluated on both a congener-specific basis and a TEQ basis for total PCDDs and PCDFs as well as for total coplanar PCBs for each media. The following subsections generally describe these methods, and Appendix B of this report provides greater detail.

5.2.2.1 COPC Intake through Ingestion

COPC intake via ingestion occurs through the following pathways:

- incidental soil ingestion
- consumption of contaminated locally grown produce
- consumption of contaminated locally raised animal products
- incidental surface water ingestion while swimming
- consumption of human breast milk (for infant exposure scenarios only)

COPC intake through ingestion is calculated by multiplying the COPC concentration in a given medium by the consumption rate of the medium and the fraction of consumed medium that is contaminated. This is the same methodology used in the PCAPP MPHRA. Cumulative ingestion exposure is the sum of ingestion exposure through each of the individual ingestion routes. Intake through ingestion (in units of milligrams per day [mg/day] or milligrams TEQ per day [mg TEQ/day] for PCBs, PCDDs, and PCDFs) is used along with exposure frequency, exposure duration, body weight, and averaging time to determine the total ingestion exposure in units of milligrams of COPC per kilogram of body weight per day (mg COPC/kg of body weight-day) or milligrams of COPCs on a TEQ basis per kilogram of body weight per day (mg TEQ/kg of body weight-day) for PCBs, PCDDs, and PCDFs.

5.2.2.2 COPC Intake through Dermal Absorption

Daily intake of COPCs via dermal uptake from soil and surface water was calculated for the adult and child resident, subsistence fisher, and subsistence farmer receptors in the same manner as was conducted for the PCAPP MPHRA. Dermal exposure to inorganic compounds (including mercury compounds), which were not COPCs for the PCAPP MPHRA, are treated differently than exposure to organic compounds in that intake from dermal exposure to inorganic compounds while swimming is a much simpler process. Appendix B of this report provides additional details regarding this procedure for calculating the dermally absorbed dose of inorganics.

5.2.2.3 Total Indirect COPC Exposure

The total indirect COPC exposure is the sum of the total COPC ingestion intake and the COPC intake through dermal absorption. Appendixes C, D, E, and F present detailed summary tables of the calculated indirect exposures of COPCs for all exposure scenarios for the SDC, TDC, DAVINCH, and EDS, respectively. Tables 5-21 through 5-24 present the calculated total indirect exposures of COPCs with potential carcinogenic health effects for all exposure scenarios. Tables 5-25 through 5-28 present the calculated total indirect exposures of COPCs with potential noncarcinogenic health hazards for all exposure scenarios.

Table 5-21. Calculated Total Indirect Exposures to COPCs with Carcinogenic Effects for SDC[a]

COPC	Total Indirect Exposure (mg COPC/kg body weight-day)									
	Adult Resident	Adult Subsistence Fisher	Adult Subsistence Farmer	Adult Worker	Child Resident	Child Subsistence Fisher	Child Subsistence Farmer	Infant Resident	Infant Subsistence Fisher	Infant Subsistence Farmer
1,1-dichloroethane	4.22E-15	7.83E-15	7.63E-15	5.78E-21	4.43E-15	5.90E-15	9.54E-15	1.13E-15	1.58E-15	2.39E-15
1,2-dichloroethane	7.28E-15	9.52E-15	1.64E-14	1.39E-20	1.20E-14	1.30E-14	2.92E-14	1.35E-13	1.36E-13	1.47E-13
1,2-dichloropropane	7.42E-15	1.41E-14	1.32E-14	2.01E-20	7.65E-15	1.04E-14	1.63E-14	1.95E-15	2.77E-15	4.06E-15
1,3-butadiene	4.09E-15	8.01E-15	8.10E-15	1.62E-21	1.96E-15	3.56E-15	3.24E-15	5.35E-16	1.01E-15	8.60E-16
benzene	9.64E-14	2.04E-13	1.54E-13	1.69E-19	7.40E-14	1.18E-13	1.39E-13	2.23E-12	2.26E-12	2.27E-12
bis(2-ethylhexyl)-phthalate	6.26E-10	6.27E-10	2.08E-09	8.17E-16	4.07E-10	4.07E-10	1.02E-09	2.72E-10	2.72E-10	6.80E-10
bromodichloromethane	2.75E-12	2.78E-12	6.85E-12	6.66E-18	5.17E-12	5.18E-12	1.29E-11	1.12E-12	1.12E-12	2.79E-12
carbon tetrachloride	1.07E-13	2.38E-13	1.68E-13	3.05E-20	7.32E-14	1.27E-13	1.29E-13	2.99E-14	4.59E-14	5.86E-14
chloroform	8.35E-14	1.73E-13	1.38E-13	1.42E-19	6.99E-14	1.06E-13	1.37E-13	2.18E-12	2.20E-12	2.22E-12
cis-1,3-dichloropropene	3.24E-15	6.38E-15	5.56E-15	2.10E-21	2.97E-15	4.24E-15	6.08E-15	1.55E-13	1.56E-13	1.58E-13
dibromochloromethane	1.84E-11	1.84E-11	4.59E-11	7.31E-17	3.41E-11	3.41E-11	8.53E-11	6.47E-12	6.48E-12	1.62E-11
ethylbenzene	5.21E-14	1.15E-13	8.01E-14	7.95E-20	3.45E-14	6.03E-14	6.01E-14	2.26E-13	2.43E-13	2.45E-13
HD	4.38E-14	8.36E-14	8.94E-14	1.86E-19	2.82E-14	4.44E-14	5.41E-14	7.41E-15	1.23E-14	1.37E-14
methylene chloride	4.77E-14	6.84E-14	1.02E-13	6.16E-20	7.20E-14	8.04E-14	1.71E-13	1.83E-12	1.84E-12	1.90E-12
tetrachloroethene	7.55E-14	1.78E-13	1.09E-13	1.49E-20	4.02E-14	8.18E-14	5.84E-14	2.22E-13	2.51E-13	2.36E-13
trans-1,3-dichloropropene	1.29E-14	2.45E-14	2.31E-14	9.93E-20	1.49E-14	1.96E-14	3.24E-14	1.72E-13	1.75E-13	1.83E-13
trichloroethene	1.44E-14	3.24E-14	2.18E-14	2.75E-20	9.46E-15	1.68E-14	1.62E-14	2.12E-13	2.17E-13	2.17E-13
vinyl chloride	2.11E-15	4.67E-15	3.16E-15	7.83E-22	1.34E-15	2.38E-15	2.23E-15	3.53E-16	6.66E-16	5.71E-16
Total PCDDs and PCDFs[b]	6.37E-16	6.38E-16	2.11E-15	6.68E-22	4.11E-16	4.11E-16	1.03E-15	1.62E-14	1.62E-14	4.04E-14
chromium (6+)	6.15E-12	6.15E-12	2.05E-11	4.02E-20	3.45E-12	3.46E-12	8.64E-12	2.29E-12	2.29E-12	5.57E-12
lead	2.30E-12	2.30E-12	7.67E-12	1.46E-18	1.32E-12	1.32E-12	3.29E-12	7.74E-13	7.74E-13	1.86E-12

a. Only the 21 carcinogenic COPCs with oral toxicity values are listed in this table.
b. Exposures to total PCDDs/PCDFs are presented in units of mg TEQ/(kg-day).

Table 5-22. Calculated Total Indirect Exposures to COPCs with Carcinogenic Effects for TDC[a]

COPC	Total Indirect Exposure (mg COPC/kg body weight-day)									
	Adult Resident	Adult Subsistence Fisher	Adult Subsistence Farmer	Adult Worker	Child Resident	Child Subsistence Fisher	Child Subsistence Farmer	Infant Resident	Infant Subsistence Fisher	Infant Subsistence Farmer
1,4-dioxane	3.30E-10	3.46E-10	8.13E-10	3.43E-16	6.33E-10	6.40E-10	1.58E-09	1.57E-10	1.59E-10	3.90E-10
benzene	1.10E-10	2.32E-10	1.76E-10	1.95E-16	8.48E-11	1.35E-10	1.60E-10	2.76E-09	2.80E-09	2.81E-09
bis(2-ethylhexyl)-phthalate	3.63E-08	3.64E-08	1.21E-07	4.74E-14	2.36E-08	2.36E-08	5.90E-08	1.58E-08	1.58E-08	3.94E-08
HD	1.49E-12	2.91E-12	2.97E-12	5.55E-18	9.21E-13	1.50E-12	1.72E-12	2.44E-13	4.17E-13	4.38E-13
Total PCDDs and PCDFs[b]	6.34E-15	6.35E-15	2.11E-14	1.68E-20	3.61E-15	3.61E-15	9.03E-15	1.60E-13	1.60E-13	4.00E-13
chromium (6+)	3.02E-10	3.02E-10	1.01E-09	1.98E-18	1.70E-10	1.70E-10	4.24E-10	1.13E-10	1.13E-10	2.74E-10
lead	1.52E-10	1.52E-10	5.08E-10	9.65E-17	8.73E-11	8.73E-11	2.18E-10	5.16E-11	5.16E-11	1.23E-10

a. Only the 7 carcinogenic COPCs with oral toxicity values are listed in this table.
b. Exposures to total PCDDs/PCDFs are presented in units of mg TEQ/(kg-day).

Table 5-23. Calculated Total Indirect Exposures to COPCs with Carcinogenic Effects for DAVINCH[a]

COPC	Total Indirect Exposure (mg COPC/kg body weight-day)									
	Adult Resident	Adult Subsistence Fisher	Adult Subsistence Farmer	Adult Worker	Child Resident	Child Subsistence Fisher	Child Subsistence Farmer	Infant Resident	Infant Subsistence Fisher	Infant Subsistence Farmer
benzene	9.74E-11	2.08E-10	1.54E-10	1.59E-16	7.22E-11	1.17E-10	1.34E-10	2.18E-09	2.21E-09	2.22E-09
bis(2-ethylhexyl)-phthalate	8.16E-09	8.17E-09	2.72E-08	1.07E-14	5.30E-09	5.31E-09	1.32E-08	3.55E-09	3.55E-09	8.86E-09
bromodichloromethane	7.05E-13	7.13E-13	1.76E-12	1.71E-18	1.32E-12	1.33E-12	3.30E-12	2.86E-13	2.88E-13	7.15E-13
carbon tetrachloride	5.61E-15	1.26E-14	8.75E-15	1.48E-21	3.72E-15	6.56E-15	6.42E-15	1.50E-15	2.35E-15	2.90E-15
chloroform	3.88E-15	8.12E-15	6.31E-15	6.13E-21	3.13E-15	4.86E-15	6.05E-15	9.85E-14	9.96E-14	1.00E-13
dibromochloromethane	6.34E-12	6.35E-12	1.58E-11	2.52E-17	1.18E-11	1.18E-11	2.94E-11	2.23E-12	2.24E-12	5.58E-12
ethylbenzene	7.71E-15	1.72E-14	1.17E-14	1.09E-20	4.96E-15	8.84E-15	8.47E-15	3.23E-14	3.50E-14	3.49E-14
HD	1.64E-12	3.20E-12	3.26E-12	6.21E-18	1.02E-12	1.65E-12	1.90E-12	2.69E-13	4.60E-13	4.83E-13
methylene chloride	3.31E-15	4.85E-15	7.02E-15	4.15E-21	4.89E-15	5.52E-15	1.16E-14	1.29E-13	1.29E-13	1.34E-13
tetrachloroethene	1.37E-14	3.25E-14	1.96E-14	2.49E-21	7.17E-15	1.48E-14	1.02E-14	3.89E-14	4.41E-14	4.12E-14
trichloroethene	3.13E-15	7.08E-15	4.69E-15	5.51E-21	1.99E-15	3.60E-15	3.34E-15	4.44E-14	4.55E-14	4.54E-14
vinyl chloride	7.45E-14	1.66E-13	1.11E-13	2.55E-20	4.59E-14	8.30E-14	7.49E-14	1.21E-14	2.33E-14	1.92E-14
total coplanar PCBs[b]	4.26E-22	1.00E-21	6.09E-22	4.29E-26	1.50E-22	3.44E-22	1.82E-22	1.69E-16	4.03E-16	1.88E-16
chromium (6+)	7.55E-11	7.55E-11	2.52E-10	4.94E-19	4.24E-11	4.24E-11	1.06E-10	2.81E-11	2.81E-11	6.84E-11
lead	8.51E-11	8.51E-11	2.84E-10	5.39E-17	4.88E-11	4.88E-11	1.22E-10	2.87E-11	2.87E-11	6.88E-11

a. Only the 15 carcinogenic COPCs with oral toxicity values are listed in this table.
b. Exposures to total coplanar PCBs are presented in units of mg TEQ/(kg-day).

Table 5-24. Calculated Total Indirect Exposures to COPCs with Carcinogenic Effects for EDS[a]

COPC	Total Indirect Exposure (mg COPC/kg body weight-day)									
	Adult Resident	Adult Subsistence Fisher	Adult Subsistence Farmer	Adult Worker	Child Resident	Child Subsistence Fisher	Child Subsistence Farmer	Infant Resident	Infant Subsistence Fisher	Infant Subsistence Farmer
1,2-dichloroethane	2.90E-19	3.80E-19	6.53E-19	5.56E-25	4.80E-19	5.17E-19	1.16E-18	5.03E-18	5.06E-18	5.52E-18
1,4-dichlorobenzene	3.10E-17	5.73E-17	5.72E-17	9.54E-23	3.20E-17	4.27E-17	6.91E-17	6.14E-17	6.87E-17	8.87E-17
2,4-dinitrotoluene	4.80E-16	4.80E-16	1.22E-15	1.79E-21	8.22E-16	8.23E-16	2.06E-15	1.56E-16	1.57E-16	3.91E-16
benzene	2.20E-18	4.66E-18	3.51E-18	3.88E-24	1.69E-18	2.69E-18	3.19E-18	4.73E-17	4.80E-17	4.84E-17
chloroform	2.54E-16	5.25E-16	4.19E-16	4.32E-22	2.13E-16	3.23E-16	4.18E-16	6.17E-15	6.25E-15	6.32E-15
HD	5.26E-12	1.02E-11	1.05E-11	2.25E-17	3.37E-12	5.38E-12	6.39E-12	8.88E-13	1.49E-12	1.62E-12
tetrachloroethene	6.25E-16	1.47E-15	8.98E-16	1.23E-22	3.32E-16	6.77E-16	4.83E-16	1.73E-15	1.96E-15	1.84E-15
trichloroethene	1.39E-15	3.13E-15	2.11E-15	2.66E-21	9.13E-16	1.62E-15	1.56E-15	1.91E-14	1.96E-14	1.96E-14
vinyl chloride	1.80E-13	3.98E-13	2.70E-13	6.70E-20	1.14E-13	2.03E-13	1.90E-13	3.01E-14	5.68E-14	4.87E-14

a. Only the 9 carcinogenic COPCs with oral toxicity values are listed in this table.

Table 5-25. Calculated Total Indirect Exposures to COPCs with Noncarcinogenic Effects for SDC[a]

COPC	Total Indirect Exposure (mg COPC/kg body weight-day)									
	Adult Resident	Adult Subsistence Fisher	Adult Subsistence Farmer	Adult Worker	Child Resident	Child Subsistence Fisher	Child Subsistence Farmer	Infant Resident	Infant Subsistence Fisher	Infant Subsistence Farmer
1,1,1-trichloroethane	1.16E-13	1.81E-13	2.24E-13	1.38E-19	3.06E-13	4.63E-13	6.03E-13	6.72E-13	9.09E-13	1.44E-12
1,1-dichloroethane	2.97E-14	3.82E-14	6.56E-14	7.66E-20	6.20E-14	8.26E-14	1.34E-13	7.94E-14	1.10E-13	1.68E-13
1,1-dichloroethene	1.50E-14	2.81E-14	2.37E-14	1.68E-20	3.32E-14	6.53E-14	4.98E-14	4.40E-14	9.22E-14	6.18E-14
1,2-dichloroethane	8.34E-14	8.86E-14	2.03E-13	1.84E-19	1.69E-13	1.81E-13	4.08E-13	9.47E-12	9.51E-12	1.03E-11
1,2-dichloropropane	5.00E-14	6.55E-14	1.09E-13	2.66E-19	1.07E-13	1.45E-13	2.29E-13	1.37E-13	1.94E-13	2.84E-13
2-butanone	4.40E-11	4.42E-11	1.10E-10	4.88E-16	1.22E-10	1.22E-10	3.04E-10	4.66E-10	4.67E-10	9.67E-10
acetone	3.67E-11	3.69E-11	9.15E-11	2.23E-16	8.70E-11	8.76E-11	2.17E-10	4.77E-10	4.79E-10	8.80E-10
benzene	4.71E-13	7.23E-13	9.15E-13	2.24E-18	1.04E-12	1.65E-12	1.95E-12	1.56E-10	1.58E-10	1.59E-10
benzoic acid	1.57E-07	1.57E-07	3.91E-07	2.78E-14	2.97E-07	2.97E-07	7.42E-07	3.74E-07	3.74E-07	9.35E-07
benzyl alcohol	5.12E-08	5.12E-08	1.28E-07	1.51E-13	1.23E-07	1.23E-07	3.08E-07	1.40E-07	1.40E-07	3.49E-07
bis(2-ethylhexyl)-phthalate	1.47E-09	1.47E-09	3.66E-09	1.10E-14	5.69E-09	5.70E-09	1.42E-08	1.90E-08	1.90E-08	4.76E-08
bromodichloromethane	3.82E-11	3.83E-11	9.55E-11	8.42E-17	7.24E-11	7.26E-11	1.81E-10	7.83E-11	7.86E-11	1.95E-10
bromomethane	1.10E-13	1.24E-13	2.59E-13	5.36E-19	2.54E-13	2.88E-13	5.97E-13	3.01E-13	3.53E-13	7.01E-13
carbon disulfide	1.80E-13	3.88E-13	2.35E-13	1.85E-19	4.22E-13	9.29E-13	5.31E-13	1.06E-10	1.08E-10	1.07E-10
carbon tetrachloride	3.98E-13	7.04E-13	6.83E-13	4.00E-19	1.02E-12	1.77E-12	1.80E-12	2.09E-12	3.21E-12	4.10E-12
chlorobenzene	4.92E-13	5.64E-13	1.16E-12	1.29E-18	1.35E-12	1.53E-12	3.20E-12	3.44E-12	3.70E-12	8.32E-12
chloroform	4.50E-13	6.58E-13	9.11E-13	1.88E-18	9.78E-13	1.49E-12	1.92E-12	1.52E-10	1.54E-10	1.56E-10
chloromethane	1.66E-13	2.60E-13	3.19E-13	4.31E-19	3.85E-13	6.14E-13	7.24E-13	1.33E-10	1.34E-10	1.34E-10
cis-1,3-dichloropropene	1.98E-14	2.71E-14	4.18E-14	2.64E-20	4.15E-14	5.94E-14	8.51E-14	1.09E-11	1.09E-11	1.10E-11
dibromochloromethane	2.57E-10	2.57E-10	6.42E-10	9.20E-16	4.79E-10	4.80E-10	1.20E-09	4.55E-10	4.55E-10	1.14E-09
dichlorodifluoromethane	1.80E-13	2.22E-13	4.06E-13	1.56E-18	4.21E-13	5.23E-13	9.47E-13	2.40E-11	2.44E-11	2.56E-11
di-n-butyl phthalate	2.72E-07	2.73E-07	6.80E-07	1.67E-13	1.06E-06	1.07E-06	2.66E-06	3.68E-06	3.68E-06	9.20E-06
ethylbenzene	2.23E-13	3.71E-13	4.07E-13	1.05E-18	4.84E-13	8.44E-13	8.42E-13	1.58E-11	1.70E-11	1.71E-11
Freon 113	3.09E-13	5.93E-13	4.87E-13	1.78E-19	8.67E-13	1.56E-12	1.47E-12	2.62E-11	2.86E-11	2.79E-11
HD	1.46E-13	2.39E-13	2.71E-13	2.47E-18	3.95E-13	6.21E-13	7.57E-13	5.19E-13	8.59E-13	9.58E-13
hexane	7.30E-13	1.80E-12	7.35E-13	1.41E-19	1.77E-12	4.39E-12	1.78E-12	3.37E-11	4.26E-11	3.37E-11
methylene chloride	4.95E-13	5.44E-13	1.19E-12	8.16E-19	1.01E-12	1.13E-12	2.39E-12	1.28E-10	1.29E-10	1.33E-10
styrene	2.17E-10	2.17E-10	5.41E-10	1.69E-15	8.38E-10	8.38E-10	2.09E-09	3.87E-09	3.87E-09	9.60E-09
tetrachloroethene	2.50E-13	4.89E-13	3.84E-13	1.97E-19	5.62E-13	1.15E-12	8.17E-13	1.56E-11	1.75E-11	1.65E-11
toluene	1.38E-13	2.25E-13	2.56E-13	6.57E-19	3.00E-13	5.12E-13	5.33E-13	1.84E-11	1.91E-11	1.92E-11
trans-1,3-dichloropropene	8.78E-14	1.15E-13	1.92E-13	1.29E-18	2.09E-13	2.75E-13	4.54E-13	1.21E-11	1.23E-11	1.28E-11
trichloroethene	5.88E-14	1.01E-13	1.04E-13	3.65E-19	1.32E-13	2.35E-13	2.26E-13	1.49E-11	1.52E-11	1.52E-11
trichlorofluoromethane	3.52E-14	7.54E-14	4.68E-14	1.53E-20	8.82E-14	1.87E-13	1.20E-13	1.54E-13	3.02E-13	2.39E-13

Table 5-25. Calculated Total Indirect Exposures to COPCs with Noncarcinogenic Effects for SDC (continued)[a]

COPC	Total Indirect Exposure (mg COPC/kg body weight-day)									
	Adult Resident	Adult Subsistence Fisher	Adult Subsistence Farmer	Adult Worker	Child Resident	Child Subsistence Fisher	Child Subsistence Farmer	Infant Resident	Infant Subsistence Fisher	Infant Subsistence Farmer
vinyl chloride	8.34E-15	1.43E-14	1.45E-14	1.04E-20	1.87E-14	3.33E-14	3.12E-14	2.47E-14	4.66E-14	4.00E-14
xylenes	6.62E-13	1.04E-12	1.26E-12	1.43E-17	1.48E-12	2.41E-12	2.74E-12	4.00E-11	4.32E-11	4.43E-11
Total PCDDs and PCDFs[b]	1.52E-15	1.52E-15	3.80E-15	2.46E-21	5.94E-15	5.95E-15	1.49E-14	1.13E-12	1.13E-12	2.83E-12
antimony	2.22E-13	2.23E-13	5.54E-13	3.86E-20	7.52E-13	7.54E-13	1.88E-12	2.17E-12	2.18E-12	5.20E-12
cadmium	1.18E-12	1.28E-12	2.86E-12	2.58E-19	3.97E-12	4.21E-12	9.70E-12	1.14E-11	1.22E-11	2.65E-11
chromium (3+)	1.43E-11	1.43E-11	3.59E-11	4.97E-19	4.84E-11	4.84E-11	1.21E-10	1.60E-10	1.60E-10	3.90E-10
chromium (6+)	1.43E-11	1.43E-11	3.59E-11	4.97E-19	4.84E-11	4.84E-11	1.21E-10	1.60E-10	1.60E-10	3.90E-10
copper	2.31E-11	2.31E-11	5.76E-11	1.71E-17	7.48E-11	7.48E-11	1.87E-10	2.49E-10	2.49E-10	6.06E-10
nickel	2.82E-11	2.83E-11	7.03E-11	5.70E-18	9.31E-11	9.35E-11	2.32E-10	2.98E-10	2.99E-10	7.22E-10
zinc	2.35E-10	2.75E-10	5.48E-10	5.00E-17	7.78E-10	8.76E-10	1.85E-09	2.26E-09	2.59E-09	5.09E-09

a. Only the 43 noncarcinogenic COPCs with oral toxicity values are listed in this table.
b. Exposures to total PCDDs/PCDFs are presented in units of mg TEQ/(kg-day).

Table 5-26. Calculated Total Indirect Exposures to COPCs with Noncarcinogenic Effects for TDC[a]

COPC	Total Indirect Exposure (mg COPC/kg body weight-day)									
	Adult Resident	Adult Subsistence Fisher	Adult Subsistence Farmer	Adult Worker	Child Resident	Child Subsistence Fisher	Child Subsistence Farmer	Infant Resident	Infant Subsistence Fisher	Infant Subsistence Farmer
1,4-dioxane	4.50E-09	4.54E-09	1.12E-08	4.54E-15	8.86E-09	8.95E-09	2.21E-08	1.10E-08	1.11E-08	2.73E-08
2-butanone	5.30E-09	5.32E-09	1.32E-08	5.87E-14	1.47E-08	1.47E-08	3.66E-08	5.73E-08	5.75E-08	1.18E-07
acetone	4.01E-08	4.04E-08	1.00E-07	2.44E-13	9.52E-08	9.59E-08	2.37E-07	5.39E-07	5.42E-07	9.79E-07
benzene	5.40E-10	8.26E-10	1.05E-09	2.59E-15	1.19E-09	1.89E-09	2.24E-09	1.93E-07	1.96E-07	1.97E-07
bis(2-ethylhexyl)-phthalate	8.51E-08	8.52E-08	2.13E-07	6.40E-13	3.30E-07	3.31E-07	8.26E-07	1.10E-06	1.11E-06	2.76E-06
chloromethane	2.16E-12	3.36E-12	4.15E-12	5.62E-18	4.99E-12	7.93E-12	9.42E-12	1.87E-09	1.88E-09	1.88E-09
dichlorodifluoromethane	1.57E-11	1.93E-11	3.56E-11	1.37E-16	3.68E-11	4.57E-11	8.30E-11	2.26E-09	2.29E-09	2.40E-09
di-n-butyl phthalate	6.51E-07	6.52E-07	1.63E-06	3.71E-13	2.55E-06	2.55E-06	6.36E-06	8.80E-06	8.80E-06	2.20E-05
HD	4.78E-12	8.08E-12	8.60E-12	7.35E-17	1.29E-11	2.10E-11	2.41E-11	1.71E-11	2.92E-11	3.07E-11
naphthalene	3.67E-09	3.73E-09	9.13E-09	9.41E-13	1.15E-08	1.16E-08	2.86E-08	3.33E-08	3.38E-08	7.79E-08
toluene	5.26E-10	8.54E-10	9.78E-10	2.52E-15	1.14E-09	1.94E-09	2.04E-09	7.56E-08	7.83E-08	7.88E-08
trichlorofluoromethane	2.62E-12	5.59E-12	3.49E-12	1.16E-18	6.57E-12	1.38E-11	9.00E-12	1.15E-11	2.24E-11	1.79E-11
xylenes	1.96E-11	3.07E-11	3.74E-11	4.25E-16	4.36E-11	7.09E-11	8.11E-11	1.27E-09	1.36E-09	1.40E-09
Total PCDDs and PCDFs[b]	1.51E-14	1.51E-14	3.78E-14	6.49E-20	5.18E-14	5.18E-14	1.29E-13	1.12E-11	1.12E-11	2.80E-11
aluminum	1.56E-12	3.83E-12	1.57E-12	2.41E-16	3.86E-12	9.41E-12	3.88E-12	5.33E-09	5.35E-09	5.33E-09
antimony	3.36E-10	3.37E-10	8.38E-10	5.84E-17	1.14E-09	1.14E-09	2.84E-09	3.31E-09	3.32E-09	7.89E-09
barium	7.12E-11	7.51E-11	1.74E-10	1.09E-16	2.43E-10	2.53E-10	5.99E-10	7.30E-10	7.62E-10	1.72E-09
beryllium	3.11E-11	3.13E-11	7.76E-11	1.54E-16	1.05E-10	1.05E-10	2.62E-10	3.01E-10	3.03E-10	7.17E-10
cadmium	3.46E-10	3.74E-10	8.37E-10	7.57E-17	1.16E-09	1.23E-09	2.84E-09	3.36E-09	3.59E-09	7.78E-09
chlorine	3.07E-09	3.08E-09	7.65E-09	1.37E-14	8.24E-09	8.28E-09	2.06E-08	4.89E-08	4.90E-08	8.35E-08
chromium (3+)	7.04E-10	7.04E-10	1.76E-09	2.44E-17	2.38E-09	2.38E-09	5.94E-09	7.91E-09	7.91E-09	1.92E-08
chromium (6+)	7.04E-10	7.04E-10	1.76E-09	2.44E-17	2.38E-09	2.38E-09	5.94E-09	7.91E-09	7.91E-09	1.92E-08
cobalt	2.08E-10	2.08E-10	5.21E-10	1.27E-17	6.39E-10	6.39E-10	1.60E-09	2.22E-09	2.22E-09	5.41E-09
copper	8.45E-09	8.46E-09	2.11E-08	6.29E-15	2.74E-08	2.74E-08	6.85E-08	9.17E-08	9.17E-08	2.23E-07
iron	7.47E-07	7.47E-07	1.87E-06	2.86E-14	2.13E-06	2.13E-06	5.33E-06	6.64E-06	6.64E-06	1.60E-05
manganese	2.68E-08	2.68E-08	6.70E-08	3.85E-15	9.23E-08	9.23E-08	2.31E-07	2.76E-07	2.76E-07	6.61E-07
mercuric chloride	1.75E-11	1.75E-11	4.37E-11	1.85E-14	5.65E-11	5.65E-11	1.40E-10	1.85E-10	1.85E-10	4.50E-10
methyl mercury	2.07E-09	5.16E-09	2.07E-09	3.31E-16	5.05E-09	1.26E-08	5.06E-09	1.72E-08	4.29E-08	1.72E-08
nickel	3.00E-10	3.01E-10	7.48E-10	6.06E-17	9.91E-10	9.95E-10	2.47E-09	3.19E-09	3.20E-09	7.70E-09
selenium	1.99E-09	2.00E-09	4.97E-09	4.61E-17	7.23E-09	7.26E-09	1.80E-08	2.78E-08	2.79E-08	6.83E-08
silver	3.71E-10	3.71E-10	9.26E-10	2.61E-18	1.44E-09	1.44E-09	3.60E-09	6.23E-09	6.23E-09	1.55E-08
vanadium	9.28E-10	9.28E-10	2.32E-09	1.97E-15	3.08E-09	3.08E-09	7.69E-09	3.93E-09	3.93E-09	9.81E-09
zinc	1.62E-08	1.89E-08	3.77E-08	3.44E-15	5.36E-08	6.03E-08	1.27E-07	1.56E-07	1.79E-07	3.51E-07

a. Only the 33 noncarcinogenic COPCs with oral toxicity values are listed in this table.
b. Exposures to total PCDDs/PCDFs are presented in units of mg TEQ/(kg-day).

Table 5-27. Calculated Total Indirect Exposures to COPCs with Noncarcinogenic Effects for DAVINCH[a]

COPC	Total Indirect Exposure (mg COPC/kg body weight-day)									
	Adult Resident	Adult Subsistence Fisher	Adult Subsistence Farmer	Adult Worker	Child Resident	Child Subsistence Fisher	Child Subsistence Farmer	Infant Resident	Infant Subsistence Fisher	Infant Subsistence Farmer
2-butanone	9.34E-12	9.37E-12	2.33E-11	1.04E-16	2.58E-11	2.59E-11	6.45E-11	1.00E-10	1.00E-10	2.06E-10
acetone	8.81E-12	8.88E-12	2.20E-11	5.36E-17	2.09E-11	2.11E-11	5.21E-11	1.17E-10	1.17E-10	2.13E-10
benzene	4.58E-10	7.18E-10	8.75E-10	2.10E-15	1.01E-09	1.64E-09	1.87E-09	1.53E-07	1.55E-07	1.56E-07
benzyl alcohol	2.78E-08	2.78E-08	6.95E-08	8.21E-14	6.70E-08	6.70E-08	1.67E-07	7.58E-08	7.58E-08	1.90E-07
bis(2-ethylhexyl)-phthalate	1.91E-08	1.92E-08	4.78E-08	1.44E-13	7.42E-08	7.43E-08	1.86E-07	2.48E-07	2.48E-07	6.20E-07
bromodichloromethane	9.80E-12	9.82E-12	2.45E-11	2.16E-17	1.85E-11	1.86E-11	4.63E-11	2.01E-11	2.01E-11	5.00E-11
carbon disulfide	1.13E-13	2.45E-13	1.45E-13	1.08E-19	2.65E-13	5.89E-13	3.29E-13	6.47E-11	6.58E-11	6.49E-11
carbon tetrachloride	2.03E-14	3.65E-14	3.41E-14	1.94E-20	5.20E-14	9.18E-14	8.98E-14	1.05E-13	1.65E-13	2.03E-13
chlorobenzene	9.07E-14	1.05E-13	2.12E-13	2.35E-19	2.49E-13	2.84E-13	5.86E-13	6.31E-13	6.84E-13	1.52E-12
chloroform	2.01E-14	3.00E-14	4.01E-14	8.12E-20	4.39E-14	6.81E-14	8.47E-14	6.89E-12	6.97E-12	7.03E-12
chloromethane	7.68E-14	1.23E-13	1.45E-13	1.91E-19	1.78E-13	2.90E-13	3.29E-13	6.18E-11	6.21E-11	6.23E-11
dibromochloromethane	8.86E-11	8.87E-11	2.21E-10	3.18E-16	1.65E-10	1.66E-10	4.13E-10	1.57E-10	1.57E-10	3.92E-10
di-n-butyl phthalate	3.01E-07	3.02E-07	7.53E-07	1.77E-13	1.18E-06	1.18E-06	2.95E-06	4.08E-06	4.08E-06	1.02E-05
ethylbenzene	3.19E-14	5.42E-14	5.71E-14	1.44E-19	6.95E-14	1.24E-13	1.19E-13	2.26E-12	2.45E-12	2.44E-12
HD	5.27E-12	8.91E-12	9.50E-12	8.23E-17	1.42E-11	2.31E-11	2.65E-11	1.88E-11	3.22E-11	3.38E-11
hexane	1.57E-13	3.88E-13	1.58E-13	2.77E-20	3.82E-13	9.46E-13	3.84E-13	6.97E-12	8.89E-12	6.98E-12
methylene chloride	3.36E-14	3.72E-14	8.02E-14	5.50E-20	6.85E-14	7.73E-14	1.62E-13	9.03E-12	9.06E-12	9.36E-12
styrene	1.20E-10	1.20E-10	2.99E-10	9.32E-16	4.62E-10	4.63E-10	1.15E-09	2.13E-09	2.14E-09	5.30E-09
tetrachloroethene	4.44E-14	8.82E-14	6.68E-14	3.29E-20	1.00E-13	2.07E-13	1.43E-13	2.72E-12	3.09E-12	2.88E-12
toluene	2.01E-10	3.34E-10	3.65E-10	9.17E-16	4.39E-10	7.64E-10	7.64E-10	2.68E-08	2.79E-08	2.79E-08
trichloroethene	1.23E-14	2.16E-14	2.14E-14	7.30E-20	2.79E-14	5.04E-14	4.67E-14	3.11E-12	3.19E-12	3.18E-12
vinyl chloride	2.85E-13	4.98E-13	4.84E-13	3.37E-19	6.42E-13	1.16E-12	1.05E-12	8.50E-13	1.63E-12	1.35E-12
xylenes	1.73E-11	2.79E-11	3.24E-11	3.59E-16	3.87E-11	6.45E-11	7.04E-11	1.05E-09	1.14E-09	1.16E-09
3,3',4,4'-TCB (PCB 77)	4.69E-18	1.12E-17	5.21E-18	5.75E-22	1.17E-17	2.76E-17	1.34E-17	1.67E-15	3.97E-15	1.86E-15
2,3',4,4',5-PeCB (PCB 118)	1.95E-17	4.67E-17	2.17E-17	2.40E-21	4.88E-17	1.15E-16	5.57E-17	6.95E-15	1.66E-14	7.73E-15
2,3,3',4,4'-PeCB (PCB 105)	9.38E-18	2.24E-17	1.04E-17	1.15E-21	2.34E-17	5.52E-17	2.67E-17	3.34E-15	7.95E-15	3.71E-15
aluminum	1.47E-12	3.62E-12	1.48E-12	2.04E-16	3.64E-12	8.88E-12	3.66E-12	4.37E-09	4.39E-09	4.37E-09
cadmium	4.85E-11	5.26E-11	1.17E-10	1.06E-17	1.63E-10	1.73E-10	3.97E-10	4.68E-10	5.02E-10	1.09E-09
chlorine	1.70E-09	1.71E-09	4.23E-09	7.56E-15	4.56E-09	4.58E-09	1.14E-08	2.66E-08	2.67E-08	4.57E-08
chromium (3+)	1.76E-10	1.76E-10	4.40E-10	6.11E-18	5.94E-10	5.94E-10	1.48E-09	1.97E-09	1.97E-09	4.79E-09
chromium (6+)	1.76E-10	1.76E-10	4.40E-10	6.11E-18	5.94E-10	5.94E-10	1.48E-09	1.97E-09	1.97E-09	4.79E-09
copper	7.13E-09	7.13E-09	1.78E-08	5.30E-15	2.31E-08	2.31E-08	5.78E-08	7.71E-08	7.71E-08	1.88E-07
iron	2.62E-08	2.62E-08	6.54E-08	1.00E-15	7.48E-08	7.48E-08	1.87E-07	2.32E-07	2.32E-07	5.61E-07
manganese	2.36E-08	2.36E-08	5.90E-08	3.39E-15	8.12E-08	8.12E-08	2.03E-07	2.42E-07	2.42E-07	5.80E-07
mercuric chloride	6.09E-15	6.09E-15	1.52E-14	6.41E-18	1.96E-14	1.96E-14	4.88E-14	6.41E-14	6.41E-14	1.56E-13
methyl mercury	7.26E-13	1.81E-12	7.27E-13	1.15E-19	1.77E-12	4.43E-12	1.78E-12	6.03E-12	1.51E-11	6.04E-12
nickel	9.80E-11	9.86E-11	2.44E-10	1.98E-17	3.24E-10	3.25E-10	8.08E-10	1.04E-09	1.04E-09	2.51E-09
vanadium	2.50E-10	2.50E-10	6.25E-10	5.30E-16	8.30E-10	8.30E-10	2.07E-09	1.06E-09	1.06E-09	2.65E-09
zinc	9.01E-09	1.06E-08	2.09E-08	1.90E-15	2.97E-08	3.37E-08	7.04E-08	8.65E-08	1.00E-07	1.94E-07

a. Only the 39 noncarcinogenic COPCs with oral toxicity values are listed in this table.

Table 5-28. Calculated Total Indirect Exposures to COPCs with Noncarcinogenic Effects for EDS[a]

COPC	Total Indirect Exposure (mg COPC/kg body weight-day)									
	Adult Resident	Adult Subsistence Fisher	Adult Subsistence Farmer	Adult Worker	Child Resident	Child Subsistence Fisher	Child Subsistence Farmer	Infant Resident	Infant Subsistence Fisher	Infant Subsistence Farmer
1,1-dichloroethene	2.16E-15	4.05E-15	3.43E-15	2.43E-21	4.79E-15	9.42E-15	7.19E-15	6.34E-15	1.33E-14	8.91E-15
1,2-dichloroethane	3.32E-18	3.53E-18	8.09E-18	7.36E-24	6.73E-18	7.24E-18	1.63E-17	3.52E-16	3.54E-16	3.86E-16
1,4-dichlorobenzene	2.21E-16	2.83E-16	4.90E-16	1.26E-21	4.48E-16	5.98E-16	9.67E-16	4.29E-15	4.81E-15	6.21E-15
1,4-dithiane	1.15E-12	1.15E-12	2.88E-12	1.17E-17	2.86E-12	2.86E-12	7.14E-12	3.20E-12	3.21E-12	8.00E-12
2,4-dinitrotoluene	6.41E-15	6.41E-15	1.60E-14	2.25E-20	1.23E-14	1.23E-14	3.08E-14	1.17E-14	1.18E-14	2.93E-14
2-butanone	2.01E-13	2.02E-13	5.02E-13	2.23E-18	5.56E-13	5.58E-13	1.39E-12	2.08E-12	2.09E-12	4.37E-12
benzene	1.08E-17	1.65E-17	2.09E-17	5.14E-23	2.37E-17	3.77E-17	4.46E-17	3.31E-15	3.36E-15	3.39E-15
chlorobenzene	1.97E-16	2.27E-16	4.64E-16	5.20E-22	5.43E-16	6.14E-16	1.28E-15	1.38E-15	1.49E-15	3.34E-15
chloroform	1.37E-15	2.01E-15	2.78E-15	5.72E-21	2.98E-15	4.53E-15	5.86E-15	4.32E-13	4.37E-13	4.42E-13
HD	1.75E-11	2.90E-11	3.22E-11	2.98E-16	4.72E-11	7.53E-11	8.95E-11	6.21E-11	1.04E-10	1.13E-10
nitrobenzene	1.22E-16	1.23E-16	3.06E-16	3.20E-21	3.35E-16	3.36E-16	8.38E-16	3.81E-16	3.82E-16	9.53E-16
tetrachloroethene	2.07E-15	4.05E-15	3.18E-15	1.63E-21	4.65E-15	9.48E-15	6.77E-15	1.21E-13	1.37E-13	1.29E-13
trichloroethene	5.68E-15	9.72E-15	1.01E-14	3.53E-20	1.28E-14	2.27E-14	2.19E-14	1.34E-12	1.37E-12	1.37E-12
vinyl chloride	7.12E-13	1.22E-12	1.24E-12	8.87E-19	1.60E-12	2.84E-12	2.67E-12	2.11E-12	3.97E-12	3.41E-12
hydrogen cyanide	3.76E-09	3.83E-09	9.34E-09	1.30E-15	1.22E-08	1.24E-08	3.04E-08	1.44E-08	1.47E-08	3.59E-08
mercuric chloride	4.17E-23	4.17E-23	1.04E-22	4.40E-26	1.35E-22	1.35E-22	3.35E-22	4.38E-22	4.38E-22	1.07E-21
methyl mercury	4.92E-21	1.23E-20	4.93E-21	7.89E-28	1.20E-20	3.01E-20	1.21E-20	4.09E-20	1.02E-19	4.10E-20

a. Only the 17 noncarcinogenic COPCs with oral toxicity values are listed in this table.

6 TOXICITY ASSESSMENT

This section describes the data used to assess the toxicity of COPCs emitted by any of the four EDT technologies. The toxicity assessment weighs the available evidence regarding the potential for particular chemicals to cause adverse effects in an exposed individual. Two broad categories of chemically induced disease states were evaluated in this toxicity assessment: cancer and noncancer health effects. The toxicity assessment links adverse effects associated with exposure to a particular COPC. For COPCs in this EDT MPHRA that are common to both the EDT and PCAPP operations, the toxicity data are the same as those listed in Chapter 6 of the PCAPP MPHRA Report. However, the most recent toxicity data available were identified for COPCs emitted only from the EDTs (i.e., not those EDT COPCs also emitted from PCAPP operations). A slight change was also incorporated in the hierarchy to accommodate the recent harmonizing of USEPA databases.

6.1 TOXICITY VALUES FOR CHRONIC EXPOSURES

Toxicity values are used in risk characterization to quantify the probability of observing cancer and noncancer effects in a potentially exposed human receptor. Two types of toxicity values are used to express a chemical's dose-response-effect relationship for chronic exposures:

- a cancer slope factor (CSF) for estimating the likelihood of carcinogenic effects (based on evidence that a chemical is a known or probable human carcinogen)
- a reference dose (RfD) for estimating possible noncarcinogenic effects (based on an estimate of the daily exposure to a human population, including sensitive subpopulations, that is unlikely to cause an increased incidence of deleterious health effects during a lifetime of exposure)

CSF values (expressed in units of [mg COPC/kg of body weight-day]$^{-1}$) and RfD values (expressed in units of mg COPC/kg of body weight-day) are derived from long-term animal studies and incorporate uncertainty factors (UF) to compensate for extrapolation of observed adverse effects in laboratory animals to estimate possible adverse effects of chemicals in humans. If adequate human data from epidemiological studies are available, these data are used to reduce uncertainty in deriving toxicity values.

RfDs and CSFs were obtained from information sources based on the hierarchy of human health toxicity values described in Office of Solid Waste and Emergency Response (OSWER) Directive 9285.7-53. (USEPA, 2003) The recommended toxicity value hierarchy is as follows:

- Tier 1 - USEPA's Integrated Risk Information System (IRIS)
- Tier 2 - USEPA's provisional peer reviewed toxicity values
- Tier 3 - Other toxicity values, including:
  - The California EPA - Office of Environmental Health Hazard Assessment (OEHHA) Toxicity Criteria Database
  - The ATSDR minimal risk levels (MRLs)
  - USEPA RSLs

Recently, the Region IX preliminary remediation goal (PRG) tables were harmonized with similar risk-based screening levels used by Regions III and VI into a single table: "Regional Screening Levels (RSL) for Chemical Contaminants at Superfund Sites." (USEPA, 2011b)

Table 6-1 presents the RfDs and CSFs obtained from various sources based on the hierarchy presented above.

Table 6-1. Toxicity Values for Chronic Exposures

COPC	Cancer Slope Factor						Reference Dose			
	EPA Cancer WOE	IARC Group	Inhalation		Oral		Inhalation		Oral	
			$(mg/kg/day)^{-1}$	Reference	$(mg/kg/day)^{-1}$	Reference	(mg/kg/day)	Reference	(mg/kg/day)	Reference
1,1,1-trichloroethane	D	3					1.43E+00	IRIS	2.00E+00	IRIS
1,1-dichloroethane	C		5.70E-03	Cal/EPA	5.70E-03	Cal/EPA	1.40E-01	Reg. 9 PRG	1.00E-01	Reg. 9 PRG
1,1-dichloroethene	C	3					5.71E-02	RSL	5.00E-02	IRIS
1,2-dichloroethane	B2	2B	9.10E-02	IRIS	9.10E-02	IRIS	1.40E-03	Reg. 9 PRG	2.00E-02	Reg. 9 PRG
1,2-dichloropropane	N/A	3	6.80E-02	Reg. 9 PRG	6.80E-02	Reg. 9 PRG	1.10E-03	IRIS	9.00E-02	ATSDR
1,3-butadiene	A	1	1.05E-01	IRIS	3.40E+00	RSL	5.71E-04	IRIS		
1,4-dichlorobenzene	N/A	2B	1.30E+02	RSL	5.40E-03	RSL	6.00E-02	ATSDR	7.00E-02	ATSDR
1,4-dioxane	C	2B	2.70E-02	Cal/EPA	1.10E-02	IRIS	8.60E-01	Cal/EPA	1.00E-01	ATSDR
1,4-dithiane	D						1.00E-02	Reg. 9 PRG	1.00E-02	IRIS
1,4-oxathiane	-									
2,4-dinitrotoluene	N/A	2B	3.12E-01	RSL	3.10E-01	RSL			2.00E-03	IRIS
2-butanone	D						1.40E+00	IRIS	6.00E-01	IRIS
2-ethyl 1,3-butadiene	-									
acetone	D						9.00E-01	Reg. 9 PRG	9.00E-01	IRIS
acetylene	-									
benzene	A	1	2.70E-02	IRIS	5.50E-02	IRIS	8.60E-03	IRIS	4.00E-03	IRIS
benzoic acid	D								4.00E+00	IRIS
benzyl alcohol	-								1.00E-01	RSL
bis(2-ethylhexyl)-phthalate	B2	2B	8.40E-03	RSL	1.40E-02	IRIS			2.00E-02	IRIS
bromodichloromethane	B2	2B	1.30E-01	RSL	6.20E-02	IRIS			2.00E-02	IRIS
bromomethane	D	3					1.43E-03	IRIS	1.40E-03	IRIS
carbon disulfide	N/A						2.00E-01	IRIS	1.00E-01	IRIS
carbon tetrachloride	C	2B	2.10E-02	IRIS	7.00E-02	IRIS	2.86E-02	IRIS	4.00E-03	IRIS
chlorobenzene	D						1.43E-02	RSL	2.00E-02	IRIS
chloroform	B2	2B	8.10E-02	IRIS	3.10E-02	Cal/EPA	1.40E-02	Reg. 9 PRG	1.00E-02	IRIS
chloromethane	D	3					2.60E-02	IRIS	2.60E-02	Reg. 9 PRG
cis-1,3-dichloropropene	B2	3	1.40E-02	IRIS	1.00E-01	IRIS	5.71E-03	IRIS	3.00E-02	IRIS
dibromochloromethane	C	3	9.40E-02	Cal/EPA	8.40E-02	IRIS			2.00E-02	IRIS
dichlorodifluoromethane	N/A						2.86E-02	RSL	2.00E-01	IRIS
dimethyl phthalate	D									
di-n-butyl phthalate	D								1.00E-01	IRIS
di-n-octyl phthalate	-									
ethane	-									
ethylbenzene	D	2B	8.87E-02	Cal/EPA	1.10E-02	Cal/EPA	2.90E-01	IRIS	1.00E-01	IRIS
Freon 113	N/A						8.57E+00	RSL	3.00E+01	IRIS

Table 6-1. Toxicity Values for Chronic Exposures (continued)

COPC	Cancer Slope Factor						Reference Dose			
	EPA Cancer WOE	IARC Group	Inhalation		Oral		Inhalation		Oral	
			$(mg/kg/day)^{-1}$	Reference	$(mg/kg/day)^{-1}$	Reference	(mg/kg/day)	Reference	(mg/kg/day)	Reference
HD	-	1	1.40E+01	CHPPM	7.70E+00	CHPPM	6.00E-06	CHPPM	7.00E-06	CHPPM
hexane	D						2.00E-01	IRIS	1.10E+01	Reg. 9 PRG
methane	-									
methylene chloride	B2	2B	1.60E-03	IRIS	7.50E-03	IRIS	1.10E-01	Cal/EPA	6.00E-02	IRIS
monoethanolamine	-									
naphthalene	C	2B	1.20E-01	Cal/EPA			8.60E-04	IRIS	2.00E-02	IRIS
nitrobenzene	C	2B	1.40E-01	IRIS			2.57E-03	IRIS	2.00E-03	IRIS
propene	-	3					8.60E-01	Cal/EPA		
styrene	N/A	2B					2.86E-01	IRIS	2.00E-01	IRIS
tetrachloroethene	N/A	2A	2.10E-02	Reg. 9 PRG	5.40E-01	Reg. 9 PRG	1.00E-02	Reg. 9 PRG	1.00E-02	IRIS
toluene	D	3					1.40E+00	IRIS	8.00E-02	IRIS
trans-1,3-dichloropropene	-		1.40E-02	IRIS	1.00E-01	IRIS	3.06E-02	ATSDR	3.00E-02	IRIS
trichloroethene	A	2A	4.00E-01	Reg. 9 PRG	4.00E-01	Reg. 9 PRG	1.00E-02	Reg. 9 PRG	3.00E-04	Reg. 9 PRG
trichlorofluoromethane	N/A						2.00E-01	RSL	3.00E-01	IRIS
vinyl chloride	A	1	1.50E-02	IRIS	7.20E-01	IRIS	2.90E-02	IRIS	3.00E-03	IRIS
xylenes	D	3					2.90E-02	IRIS	2.00E-01	IRIS
1,2,3,4,6,7,8-HpCDD	-		TEQ Basis	TEQ Basis	TEQ Basis	TEQ Basis	TEQ Basis	TEQ Basis	TEQ Basis	TEQ Basis
1,2,3,4,6,7,8,9-OCDD	-									
2,3,7,8-TCDF	-									
1,2,3,4,6,7,8-HpCDF	-									
1,2,3,4,6,7,8,9-OCDF	-									
Total PCDDs and PCDFs	-		1.33E+05	RSL	1.30E+05	RSL	1.14E-08	RSL	7.00E-10	IRIS
3,3',4,4'-TCB (PCB 77)	-		TEQ Basis	TEQ Basis	TEQ Basis	TEQ Basis	1.14E-04	RSL	1.00E-05	RSL
2,3',4,4',5-PeCB (PCB 118)	-						3.71E-04	RSL	3.30E-05	RSL
2,3,3',4,4'-PeCB (PCB 105)	-						3.71E-04	RSL	3.30E-05	RSL
Total coplanar PCBs	-		1.33E+05	RSL	1.30E+05	RSL				
ammonia	N/A						2.86E-02	IRIS		
aluminum	-						1.43E-03	RSL	1.00E+00	ATSDR
antimony	N/A								4.00E-04	IRIS
barium	D						1.43E-04	RSL	2.00E-01	IRIS
beryllium	B1	1	8.40E+00	IRIS			5.71E-06	IRIS	2.00E-03	IRIS
cadmium	B1	1	6.30E+00	IRIS			2.86E-06	ATSDR	5.00E-04	IRIS
chlorine	N/A						4.13E-05	ATSDR	1.00E-01	IRIS
chromium (3+)	D	3							1.50E+00	IRIS
chromium (6+)	A (inh.) D (oral)	1	4.20E+01	IRIS	5.00E-01	RSL	2.86E-05	IRIS	3.00E-03	IRIS

Table 6-1. Toxicity Values for Chronic Exposures (continued)

COPC	Cancer Slope Factor						Reference Dose			
	EPA Cancer WOE	IARC Group	Inhalation		Oral		Inhalation		Oral	
			$(mg/kg/day)^{-1}$	Reference	$(mg/kg/day)^{-1}$	Reference	(mg/kg/day)	Reference	(mg/kg/day)	Reference
cobalt	-	2B					6.87E-05	ATSDR	3.00E-04	RSL
copper	D								4.00E-02	RSL
hydrogen chloride	N/A	3					5.71E-03	IRIS		
hydrogen cyanide	D						2.30E-04	RSL	6.00E-04	IRIS
iron	-								7.00E-01	RSL
lead	B2	2B	4.20E-02	Cal/EPA	8.50E-03	Cal/EPA				
manganese	D						1.43E-05	IRIS	1.40E-01	IRIS
mercuric chloride	C						8.57E-06	RSL	3.00E-04	IRIS
methyl mercury	C								1.00E-04	IRIS
elemental mercury	D						8.57E-06	IRIS		
nickel	C	2B	8.40E-01	IRIS			2.57E-05	ATSDR	2.00E-02	IRIS
selenium	D	3					5.71E-03	RSL	5.00E-03	IRIS
silver	D								5.00E-03	IRIS
vanadium	-						2.97E-05	ATSDR	5.00E-03	RSL
zinc	D								3.00E-01	IRIS

Notes:
EPA Cancer Weight of Evidence (WOE)
- A Human carcinogen.
- B1 Probable human carcinogen - based on limited evidence of carcinogenicity in humans.
- B2 Probable human carcinogen - based on sufficient evidence of carcinogenicity in animals.
- C Possible human carcinogen/Likely to be carcinogenic to humans.
- D Not classifiable as to human carcinogenicity/Inadequate information to assess carcinogenic potential.
- N/A Not assessed under the IRIS program.
- \- Not found in IRIS.

IARC Group - World Health Organization's International Agency for Research on Cancer (IARC) (http://monographs.iarc.fr/ENG/Classification/index.php)
- Group 1 Carcinogenic to humans
- Group 2A Probably carcinogenic to humans.
- Group 2B Possibly carcinogenic to humans.
- Group 3 Not classifiable as to its carcinogenicity to humans.
- Group 4 Probably not carcinogenic to humans.

IRIS - USEPA's Integrated Risk Information System
Cal/EPA - California EPA, OEHHA Toxicity Criteria Database.
Reg. 9 PRG – USEPA Region IX PRGs 2004 table (USEPA, 2004b)
RSL – USEPA RSL tables (June 2011)
USEPA - Koppikar, A., R. McGaughy, AND L. Rhomberg. "Upper-Bound Quantitative Cancer Risk Estimates for Population Adjacent to Sulfur Mustard Incineration Facilities." US Environmental Protection Agency, Washington, D.C., EPA/600/8-91/053 (NTIS PB92137207).
USACHPMM - "Derivation of Health-Based Environmental Screening Levels for Chemical Warfare Agents - A Technical Evaluation." March 1999, US Army Center for Health Promotion and Preventive Medicine.
ATSDR - The ATSDR MRLs.
TEQ Basis - Cancer risk from PCDDs, PCDFs, and coplanar PCBs is evaluated on the basis of toxic equivalence to 2,3,7,8-TCDD, not individually.

6.2 TOXICITY VALUES FOR ACUTE EXPOSURES

Acute inhalation exposure criteria (AIEC) were selected for each COPC using the hierarchal approach recommended in the HHRAP and presented below in order of preference:

- Cal/EPA acute reference exposure levels (REL)
- Acute inhalation exposure guidelines (AEGL-1)
- Level 1 emergency response planning guidelines (ERPG-1)
- Temporary emergency exposure limits (TEEL-1)
- AEGL-2 values

As directed by the HHRAP, if an instance occurred when an AEGL-1 value was not available but an AEGL-2 value was available, the AEGL-2 value was selected as the AIEC only when it was a more protective value (i.e., lower in concentration) than an ERPG-2 or TEEL-1 value, if either of these values was available.

Table 6-2 presents the acute toxicity data obtained from all hierarchal sources, as well as the AIEC used to estimate potential acute hazards for each COPC evaluated in this EDT MPHRA.

Table 6-2. Toxicity Values for Acute Exposures

COPC	Cal/EPA Acute REL	AEGL-1	AIHA ERPG-1	TEEL-1	AEGL-2	Selected AIEC	
	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	Ave. Time
1,1,1-trichloroethane	68	1,254	1,908	1,250	3,272	68	1-hour
1,1-dichloroethane				3,000		3,000	15-minute
1,1-dichloroethene				250		250	15-minute
1,2-dichloroethane			202	202		202	1-hour
1,2-dichloropropane				1000		1,000	15-minute
1,3-butadiene		1,482	22	1,480	11,720	1,482	1-hour
1,4-dichlorobenzene				60		60	15-minute
1,4-dioxane	3	61		61.2	1,152	3	1-hour
1,4-dithiane							
1,4-oxathiane				50		50	15-minute
2,4-dinitrotoluene				7.5		7.5	15-minute
2-butanone	13	589		590	7,958	13	1-hour
2-ethyl 1,3-butadiene							
acetone		475		475	7,597	475	1-hour
acetylene				350		350	15-minute
benzene	1.3	166	160	166	2,554	1.3	1-hour
benzoic acid				12.5		12.5	15-minute
benzyl alcohol				600		600	15-minute
bis(2-ethylhexyl)-phthalate				10		10	15-minute
bromodichloromethane				4		4	15-minute
bromomethane				100	815	100	15-minute
carbon disulfide	6.2	40	3.1	40.5	498	6.2	1-hour
carbon tetrachloride	1.9	278	127	277	1202	1.9	1-hour
chlorobenzene		46		46	690	46	1-hour
chloroform	0.15			10	312	0.15	1-hour
chloromethane				200	1,878	200	15-minute
cis-1,3-dichloropropene				0.6		0.6	15-minute
dibromochloromethane				125		125	15-minute
dichlorodifluoromethane				15,000		15,000	15-minute
dimethyl phthalate				15		15	15-minute
di-n-butyl phthalate				10		10	15-minute
di-n-octyl phthalate				50		50	15-minute
ethane				3,500		3,500	15-minute
ethylbenzene		143		143	4775	143	1-hour
Freon 113				10,000		10,000	15-minute
HD		0.07		0.065	0.13	0.065	1-hour
hexane				1,500	11627	1,500	15-minute
methane				2,000		2,000	15-minute
methylene chloride	14	694	1,041	694	1944	14	1-hour
monoethanolamine				15		15	15-minute
naphthalene				75		75	15-minute
nitrobenzene				15		15	15-minute
propene				2,500		2,500	15-minute
styrene	21	85	213	85.1	554	21	1-hour
tetrachloroethene	20	237	678	237	1,559	20	1-hour
toluene	37	753	188	753	4,520	37	1-hour
trans-1,3-dichloropropene				75		75	15-minute
trichloroethene		698	537	698	2417	698	1-hour

Table 6-2. Toxicity Values for Acute Exposures (continued)

COPC	Cal/EPA Acute REL	AEGL-1	AIHA ERPG-1	TEEL-1	AEGL-2	Selected AIEC	
	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	Ave. Time
trichlorofluoromethane				5,000		5,000	15-minute
vinyl chloride	180	639	1,277	639	3,066	180	1-hour
xylenes	22	564		564	3,992	22	1-hour
1,2,3,4,6,7,8-HpCDD				0.5		0.5	15-minute
1,2,3,4,6,7,8,9-OCDD				0.01		0.01	15-minute
2,3,7,8-TCDF				0.0006		0.0006	15-minute
1,2,3,4,6,7,8-HpCDF				0.15		0.15	15-minute
1,2,3,4,6,7,8,9-OCDF				0.0075		0.0075	15-minute
3,3',4,4'-TCB (PCB 77)				0.125		0.125	15-minute
2,3',4,4',5-PeCB (PCB 118)				0.125		0.125	15-minute
2,3,3',4,4'-PeCB (PCB 105)				0.125		0.125	15-minute
ammonia	3.2	21	17	20.9	111	3.2	1-hour
aluminum				3		3	15-minute
antimony				1.5		1.5	15-minute
barium				1.5		1.5	15-minute
beryllium				0.0035		0.0035	15-minute
cadmium		0.1		0.1	0.76	0.1	1-hour
chlorine	0.21	1.4	2.9	1.45	5.8	0.21	1-hour
chromium (3+)				1		1	15-minute
chromium (6+)							
cobalt				0.3		0.3	15-minute
copper	0.1			3		0.1	1-hour
hydrogen chloride	2.1	2.7	4.5	2.68	33	2.1	1-hour
hydrogen cyanide	0.34	2.2		2.21	7.8	0.34	1-hour
iron				6		6	15-minute
lead				0.15		0.15	15-minute
manganese				3		3	15-minute
mercuric chloride				4		4	15-minute
methyl mercury				0.0322		0.0322	15-minute
elemental mercury	0.0006			0.25	1.7	0.0006	1-hour
nickel	0.006			4.5		0.006	1-hour
selenium				0.6		0.6	15-minute
silver				0.3		0.3	15-minute
vanadium				1.5		1.5	15-minute
zinc				3		3	15-minute

Notes:
Cal/EPA Acute REL – California EPA Acute Reference Exposure Level.
AEGL-1 – Acute Exposure Guideline Level 1.
AIHA ERPG-1 – American Industrial Hygiene Association (AIHA) Level 1 Emergency Response Planning Guidelines (ERPG).
TEEL-1 – United States Department of Energy (DOE) Temporary Emergency Exposure Limits.
AEGL-2 – Acute Exposure Guideline Level 2.
AEGL-1 and AEGL-2 values for acetaldehyde, acetone, and vinyl chloride are interim values.
AEGL-1 and AEGL-2 values for 1, 2, 4-trimethyl benzene and methyl tert-butyl ether are proposed values.
All AEGL-1, AEGL-2, and AIHA ERPG-1 data were provided in parts per million. Conversion to mg/m^3 was completed using a temperature and pressure of 25°C and 1 atmosphere, respectively.

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7 CHARACTERIZATION OF RISK AND HAZARD

The risk characterization combines the information presented in the exposure assessment with the information presented in the toxicity assessment to describe the types and magnitudes of potential carcinogenic risk and noncarcinogenic hazard due to exposure to EDT emissions. The magnitude and types of risks depend on the nature, duration, and frequency of exposure to chemicals and the characteristics of the exposed human receptors. The risk characterization for this EDT MPHRA was performed in the same manner as the PCAPP MPHRA and in accordance with USEPA risk assessment guidelines. (USEPA, 1989, 1994a, 1998, and 2005b) Appendix D to the PCAPP MPHRA Report provides details on all of the procedures discussed in this report except lead, which is a qualitative assessment.

This section provides several sets of results obtained from the EDT MPHRA. Results of the EDT MPHRA are presented in Section 7.5 below in a series of tables organized first by EDT and then by the type of effect. Detailed MPHRA model output also is provided in Appendixes C, D, E, and F for SDC, TDC, DAVINCH, and EDS, respectively. The results for EDTs discussed in this section are presented in the same order as these appendixes and elsewhere in this EDT MPHRA Report: SDC, TDC, DAVINCH, and EDS. Health effects results are presented in the following order: carcinogenic risk, noncarcinogenic hazard, acute hazard, which are then followed by a summary of the top five COPCs contributing the majority of the risk and hazard.

Quantitative estimates of carcinogenic risks and noncarcinogenic hazards were calculated for direct inhalation exposures and indirect exposures to EDT emissions. Quantified total carcinogenic risk was compared to the CDPHE acceptable level of 1 case in a million (i.e., 1/1,000,000, 1.00 E-06, or 1×10^{-6}), and total noncarcinogenic hazard was compared to the CDPHE acceptable hazard index (HI) of 0.25 (i.e., total cumulative dose is less than 25 percent of the RfD). In addition, an acute hazard analysis was performed; the results of that assessment are compared to the CDPHE acceptable HI of 1.0. Finally, lead (Pb) concentrations for all EDTs are presented in a table (Section 7.4) that compares the calculated concentrations to the CDPHE acceptable soil and air concentrations. (Lead was not included in the PCAPP MPHRA.) In the interest of looking at collective PCAPP impacts, the results of the EDT MPHRA are conservatively added to the results of the PCAPP MPHRA and compared to CDPHE acceptable levels. These results are tabulated and presented below in Section 7.6, and a discussion of the potential sources of uncertainty that may impact the results is included in Section 7.7.

7.1 CHARACTERIZATION OF CARCINOGENIC HEALTH EFFECTS

Carcinogenic risk was estimated as the incremental probability of an individual developing cancer over a lifetime as a result of exposure to the EDT emission of a potential carcinogen (i.e., excess individual lifetime cancer risk). Carcinogenic risk was estimated from direct exposures, indirect exposures, and early life exposures. The CSFs presented in Section 6 were used to make this estimate. A CSF converts estimated daily intakes averaged over a lifetime of exposure (presented in Section 5) to incremental risk of an individual developing cancer. A critical assumption of this estimating procedure is that the dose-response relationship is a linear relationship in the low-dose portion of the dose-response curve. In other words, even the smallest dose of a carcinogen presents some risk of inducing cancer in the exposed human receptor. Under this assumption, the CSF is a constant, and risk is directly related to intake. In addition, as was done in the PCAPP MPHRA, vinyl chloride was treated as a mutagenic compound potentially contributing to carcinogenic effects from prenatal and postnatal exposures. USEPA guidance recommends applying a factor of two to toxicity values used in early life exposure calculations. Because the early life exposures calculated in this MPHRA, however, are based on an exposure duration less than 70 years (1 year for infants or 5 years for

children), the cancer risk increases by more than the factor of two recommended in the USEPA guidance entitled "Supplemental Guidance for Assessing Susceptibility from Early-Life Exposure to Carcinogens." (USEPA, 2005c) The early life exposure used in this MPHRA, therefore, was the later life exposure multiplied by averaging time/exposure duration (70/1 [70] for infants or 70/5 [14] for children).

7.2 CHARACTERIZATION OF NONCARCINOGENIC HEALTH EFFECTS

For COPCs with noncarcinogenic effects, the potential for noncarcinogenic toxicity to occur in an individual was evaluated by comparing the estimated exposure level over a specified time period (e.g., lifetime) with the appropriate noncancer toxicity value (i.e., RfD). The noncarcinogenic hazard quotient (HQ) assumes that there is a level of exposure (e.g., RfD) below which it is unlikely for even sensitive subpopulations to experience adverse health effects. Both direct and indirect exposures were considered when estimating the noncancer health effects. HQs for direct exposures to COPCs were calculated by dividing the inhalation intake of a COPC by the inhalation RfD (RfD_i) for that COPC. HQs for indirect exposures to COPCs were calculated using a procedure similar to that used to calculate the direct exposure HQ, taking into account the averaging time for noncarcinogenic health effects (equal to the exposure duration). HQs represent the noncarcinogenic hazard associated with a single COPC and a particular exposure pathway. Inhalation (direct) HQs for each COPC were summed to calculate the inhalation HI. Indirect HQs for each COPC were summed to calculate the indirect HI. The total HI was then calculated by summing the individual pathway HIs for a given human receptor.

7.3 CHARACTERIZATION OF ACUTE HEALTH EFFECTS

Potential acute hazards associated with short-term emission release events were assessed for each COPC that has an available AIEC value.

The acute HQ (HQ_A) represents the hazard associated with short-term direct exposure to each COPC in air during a short-term emission release event. Unlike the HQ for direct exposures from chronic (i.e., long-term) exposures, which are based on the amount of COPC inhaled, the calculation of HQ_A is based only on the air concentration of COPC to which a human receptor is exposed. The HQ was calculated for each COPC by dividing the calculated COPC air concentration by its AIEC provided in Table 6-2. HQ_As for each COPC were summed to calculate the overall acute HI (HI_A).

7.4 CHARACTERIZATION OF LEAD IMPACTS AND RESULTS

Adult and child exposures to lead were evaluated qualitatively by comparing calculated lead concentrations in soil and air with levels in those media that are associated with no adverse effects. The Implementation Guidance recommends comparing lead concentrations in soil to the "health-based" level of 100 mg/kg. (USEPA, 1994b) The concentration of lead in air was compared with the CDPHE regulatory level of 0.09 µg Pb/m^3, as provided in the Code of Colorado Regulations. (6 CCR 1007-3, Section 264.348, Table IV) Table 7-1 presents the results of this qualitative lead evaluation for EDT emissions.

7.5 RESULTS FOR EACH EDT

7.5.1 SDC Results

The following tables present MPHRA results obtained for SDC:

- Table 7-2: Total carcinogenic risks for each human receptor by pathway
- Table 7-3: Total noncarcinogenic HI for each human receptor by pathway
- Table 7-4: Acute hazards associated with short-term emission release events
- Table 7-5: Top COPCs contributing to carcinogenic risk

- Table 7-6: Top COPCs contributing to hazard
- Table 7-7: Top COPCs contributing to acute hazard

Table 7-1. Summary of Lead Analysis Results

EDT	Lead Soil Concentration		Lead Air Concentration	
	EDT MPHRA Result[a] (mg Pb/kg)	Health-based Screening Level[b] (mg Pb/kg)	EDT MPHRA Result[c] (µg Pb/m^3)	Colorado Reference Air Concentration[d] (µg Pb/m^3)
SDC	4.07E-11	100	2.85E-09	0.09
TDC	2.69E-09		2.08E-07	
DAVINCH	1.51E-09		1.08E-07	
EDS	n/a[e]		n/a	

a. Highest annual soil concentration at the RME location.
b. Health-based screening soil concentration (USEPA, 1994b)
c. Air concentration at the RME location based on AERMOD modeling.
d. Source: 6 CCR 1007-3, Section 264.348, Table IV.
e. n/a = Not applicable. Lead emissions are not expected from EDS.

7.5.2 TDC Results

The following tables present MPHRA results obtained for TDC:

- Table 7-8: Total carcinogenic risks for each human receptor by pathway
- Table 7-9: Total noncarcinogenic HI for each human receptor by pathway
- Table 7-10: Acute hazards associated with short-term emission release events
- Table 7-11: Top COPCs contributing to carcinogenic risk
- Table 7-12: Top COPCs contributing to hazard
- Table 7-13: Top COPCs contributing to acute hazard

7.5.3 DAVINCH Results

The following tables present MPHRA results obtained for DAVINCH:

- Table 7-14: Total carcinogenic risks for each human receptor by pathway
- Table 7-15: Total noncarcinogenic HI for each human receptor by pathway
- Table 7-16: Acute hazards associated with short-term emission release events
- Table 7-17: Top COPCs contributing to carcinogenic risk
- Table 7-18: Top COPCs contributing to hazard
- Table 7-19: Top COPCs contributing to acute hazard

7.5.4 EDS Results

The following tables present MPHRA results obtained for EDS:

- Table 7-20: Total carcinogenic risks for each human receptor by pathway
- Table 7-21: Total noncarcinogenic HI for each human receptor by pathway
- Table 7-22: Acute hazards associated with short-term emission release events
- Table 7-23: Top COPCs contributing to carcinogenic risk
- Table 7-24: Top COPCs contributing to hazard
- Table 7-25: Top COPCs contributing to acute hazard

Table 7-2. Total Carcinogenic Risks for Each Human Receptor by Pathway for SDC

Receptor	Pathway									
	Inhalation	Dermal Contact with Surface Water	Dermal Contact with Soil	Incidental Ingestion of Soil	Incidental Ingestion of Surface Water	Ingestion of Produce	Ingestion of Terrestrial Animal Products	Ingestion of Fish	Ingestion of Breast Milk	All Pathways[a]
Adult resident	9.40E-12	3.85E-15	3.24E-17	2.25E-16	8.99E-16	3.44E-12	9.31E-11	3.31E-13	n/a[b]	0.000106E-06
Adult subsistence fisher	9.40E-12	3.85E-15	3.24E-17	2.25E-16	8.99E-16	3.44E-12	9.31E-11	8.28E-13	n/a	0.000107E-06
Adult subsistence farmer	9.40E-12	5.07E-15	3.70E-17	2.63E-16	1.20E-15	1.10E-11	3.08E-10	4.36E-13	n/a	0.000329E-06
Adult worker	2.24E-12	n/a	3.48E-17	7.16E-17	n/a	n/a	n/a	n/a	n/a	0.00000224E-06
Child resident	2.64E-11	1.32E-15	7.59E-17	4.83E-16	9.76E-16	2.94E-12	6.13E-11	1.40E-13	n/a	0.0000908E-06
Child subsistence fisher	2.64E-11	1.32E-15	7.59E-17	4.83E-16	9.76E-16	2.94E-12	6.13E-11	3.49E-13	n/a	0.000091E-06
Child subsistence farmer	2.64E-11	1.32E-15	7.59E-17	4.83E-16	9.76E-16	7.35E-12	1.53E-10	1.40E-13	n/a	0.000187E-06
Infant resident	3.03E-12	n/a	2.14E-17	1.45E-16	n/a	7.23E-13	4.13E-11	5.03E-14	2.07E-09	0.00211E-06
Infant subsistence fisher	3.03E-12	n/a	2.14E-17	1.45E-16	n/a	7.23E-13	4.13E-11	1.26E-13	2.07E-09	0.00211E-06
Infant subsistence farmer	3.03E-12	n/a	2.14E-17	1.45E-16	n/a	1.81E-12	1.03E-10	5.03E-14	5.16E-09	0.00527E-06
Resident lifetime (I)[c]	2.41E-11	4.40E-15	1.23E-16	8.08E-16	1.69E-15	6.41E-12	1.77E-10	4.48E-13	2.07E-09	0.00227E-06
Resident lifetime (II)[d]	2.64E-11	4.53E-15	1.03E-16	6.71E-16	1.72E-15	5.81E-12	1.39E-10	4.15E-13	n/a	0.000171E-06
Subsistence fisher lifetime (I)[c]	2.41E-11	4.40E-15	1.23E-16	8.08E-16	1.69E-15	6.41E-12	1.77E-10	1.12E-12	2.07E-09	0.00228E-06
Subsistence fisher lifetime (II)[d]	2.64E-11	4.53E-15	1.03E-16	6.71E-16	1.72E-15	5.81E-12	1.39E-10	1.04E-12	n/a	0.000172E-06
Subsistence farmer lifetime (I)[e]	2.41E-11	5.63E-15	1.29E-16	8.52E-16	1.99E-15	1.85E-11	5.18E-10	5.53E-13	5.16E-09	0.00572E-06
Subsistence farmer lifetime (II)[f]	2.64E-11	5.76E-15	1.08E-16	7.14E-16	2.02E-15	1.70E-11	4.23E-10	5.21E-13	n/a	0.000467E-06

a. CDPHE acceptable risk = 1.00E-06.
b. n/a = Pathway not applicable to receptor.
c. Lifetime exposure consists of: 1 year of inhalation exposure as an infant and 4 years of inhalation exposure as a child (5 years of total inhalation exposure); 1 year of indirect exposure as an infant, 5 years of indirect exposure as a child, and 24 years of indirect exposure as an adult (30 years of total indirect exposure).
d. Lifetime exposure consists of: 5 years of inhalation exposure as a child (5 years of total inhalation exposure); 5 years of indirect exposure as a child and 25 years of indirect exposure as an adult (30 years of total indirect exposure).
e. Lifetime exposure consists of: 1 year of inhalation exposure as an infant and 4 years of inhalation exposure as a child (5 years of total inhalation exposure); 1 year of indirect exposure as an infant, 5 years of indirect exposure as a child, and 34 years of indirect exposure as an adult (40 years of total indirect exposure).
f. Lifetime exposure consists of: 5 years of inhalation exposure as a child (5 years of total inhalation exposure); 5 years of indirect exposure as a child and 35 years of indirect exposure as an adult (40 years of total indirect exposure).

Table 7-3. Total Noncarcinogenic HI for Each Human Receptor by Pathway for SDC

Receptor	Pathway									
	Inhalation	Dermal Contact with Surface Water	Dermal Contact with Soil	Incidental Ingestion of Soil	Incidental Ingestion of Surface Water	Ingestion of Produce	Ingestion of Terrestrial Animal Products	Ingestion of Fish	Ingestion of Breast Milk	All Pathways[a]
Adult resident	9.13E-07	1.11E-10	2.80E-12	1.40E-11	3.34E-11	5.82E-07	4.97E-06	1.36E-08	n/a	0.00000648
Adult subsistence fisher	9.13E-07	1.11E-10	2.80E-12	1.40E-11	3.34E-11	5.82E-07	4.97E-06	3.41E-08	n/a	0.0000065
Adult subsistence farmer	9.13E-07	1.11E-10	2.80E-12	1.40E-11	3.34E-11	1.46E-06	1.24E-05	1.36E-08	n/a	0.0000148
Adult worker	2.17E-07	n/a	3.97E-12	5.98E-12	n/a	n/a	n/a	n/a	n/a	0.000000217
Child resident	2.56E-06	1.90E-10	1.83E-11	1.30E-10	1.56E-10	1.40E-06	1.94E-05	3.33E-08	n/a	0.0000234
Child subsistence fisher	2.56E-06	1.90E-10	1.83E-11	1.30E-10	1.56E-10	1.40E-06	1.94E-05	8.33E-08	n/a	0.0000235
Child subsistence farmer	2.56E-06	1.90E-10	1.83E-11	1.30E-10	1.56E-10	3.50E-06	4.86E-05	3.33E-08	n/a	0.0000546
Infant resident	1.44E-06	n/a	2.58E-11	1.95E-10	n/a	1.60E-06	6.71E-05	5.00E-08	1.59E-03	0.00166
Infant subsistence fisher	1.44E-06	n/a	2.58E-11	1.95E-10	n/a	1.60E-06	6.71E-05	1.25E-07	1.59E-03	0.00166
Infant subsistence farmer	1.44E-06	n/a	2.58E-11	1.95E-10	n/a	4.01E-06	1.68E-04	5.00E-08	3.97E-03	0.00414
Resident lifetime (I)[c]	3.48E-06	3.01E-10	4.69E-11	3.40E-10	1.89E-10	3.59E-06	9.15E-05	9.70E-08	1.59E-03	0.00169
Resident lifetime (II)[d]	2.56E-06	3.01E-10	2.11E-11	1.44E-10	1.89E-10	1.98E-06	2.44E-05	4.70E-08	n/a	0.000029
Subsistence fisher lifetime (I)[c]	3.48E-06	3.01E-10	4.69E-11	3.40E-10	1.89E-10	3.59E-06	9.15E-05	2.42E-07	1.59E-03	0.00169
Subsistence fisher lifetime (II)[d]	2.56E-06	3.01E-10	2.11E-11	1.44E-10	1.89E-10	1.98E-06	2.44E-05	1.17E-07	n/a	0.0000291
Subsistence farmer lifetime (I)[e]	3.48E-06	3.01E-10	4.69E-11	3.40E-10	1.89E-10	8.97E-06	2.29E-04	9.70E-08	3.97E-03	0.00421
Subsistence farmer lifetime (II)[f]	2.56E-06	3.01E-10	2.11E-11	1.44E-10	1.89E-10	4.96E-06	6.10E-05	4.70E-08	n/a	0.0000685

a. CDPHE acceptable HI = 0.25.
b. n/a = Pathway not applicable to receptor.
c. Lifetime exposure consists of: 1 year of inhalation exposure as an infant and 4 years of inhalation exposure as a child (5 years of total inhalation exposure); 1 year of indirect exposure as an infant, 5 years of indirect exposure as a child, and 24 years of indirect exposure as an adult (30 years of total indirect exposure).
d. Lifetime exposure consists of: 5 years of inhalation exposure as a child (5 years of total inhalation exposure); 5 years of indirect exposure as a child and 25 years of indirect exposure as an adult (30 years of total indirect exposure).
e. Lifetime exposure consists of: 1 year of inhalation exposure as an infant and 4 years of inhalation exposure as a child (5 years of total inhalation exposure); 1 year of indirect exposure as an infant, 5 years of indirect exposure as a child, and 34 years of indirect exposure as an adult (40 years of total indirect exposure).
f. Lifetime exposure consists of: 5 years of inhalation exposure as a child (5 years of total inhalation exposure); 5 years of indirect exposure as a child and 35 years of indirect exposure as an adult (40 years of total indirect exposure).

Table 7-4. Acute Hazards Associated With Short-term Emission Release Events for SDC[a]

COPC	AIEC (mg/m^3)	Averaging Time	Acute Air Concentration ($\mu g/m^3$)	Acute Hazard Quotient[b] (dimensionless)
1,1,1-trichloroethane	68	1-hour	3.63E-04	5.33E-09
1,1-dichloroethane	3,000	15-minute	1.72E-04	5.73E-11
1,1-dichloroethene	250	15-minute	1.58E-04	6.31E-10
1,2-dichloroethane	202	1-hour	1.74E-04	8.62E-10
1,2-dichloropropane	1,000	15-minute	2.10E-04	2.10E-10
1,3-butadiene	1,482	1-hour	1.51E-04	1.02E-10
2-butanone	13	1-hour	1.80E-03	1.38E-07
acetone	475	1-hour	2.68E-03	5.64E-09
benzene	1.3	1-hour	1.02E-03	7.85E-07
benzoic acid	12.5	15-minute	8.87E-03	7.10E-07
benzyl alcohol	600	15-minute	1.10E-03	1.83E-09
bis(2-ethylhexyl)-phthalate	10	15-minute	1.34E-03	1.34E-07
bromodichloromethane	4	15-minute	4.71E-04	1.18E-07
bromomethane	100	15-minute	8.78E-04	8.78E-09
carbon disulfide	6.2	1-hour	6.42E-04	1.03E-07
carbon tetrachloride	1.9	1-hour	9.42E-04	4.96E-07
chlorobenzene	46	1-hour	1.75E-04	3.80E-09
chloroform	0.15	1-hour	2.74E-03	1.83E-05
chloromethane	200	15-minute	9.38E-04	4.69E-09
cis-1,3-dichloropropene	0.6	15-minute	2.11E-04	3.51E-07
dibromochloromethane	125	15-minute	3.44E-04	2.76E-09
dichlorodifluoromethane	15,000	15-minute	4.46E-04	2.98E-11
dimethyl phthalate	15	15-minute	1.09E-03	7.26E-08
di-n-butyl phthalate	10	15-minute	1.32E-03	1.32E-07
ethylbenzene	143	1-hour	2.23E-04	1.55E-09
Freon 113	10,000	15-minute	4.62E-04	4.62E-11
HD	0.065	1-hour	1.42E-02	2.19E-04
hexane	1,500	15-minute	3.90E-04	2.60E-10
methylene chloride	14	1-hour	2.21E-03	1.58E-07
styrene	21	1-hour	2.25E-04	1.07E-08
tetrachloroethene	20	1-hour	2.03E-04	1.02E-08
toluene	37	1-hour	1.33E-04	3.59E-09
trans-1,3-dichloropropene	75	15-minute	2.24E-04	2.98E-09
trichloroethene	698	1-hour	2.02E-04	2.89E-10
trichlorofluoromethane	5,000	15-minute	2.33E-04	4.66E-11
vinyl chloride	180	1-hour	2.60E-04	1.45E-09
xylenes	22	1-hour	5.35E-04	2.43E-08
2,3,7,8-TCDF	0.0006	15-minute	5.74E-10	9.57E-10
antimony	1.5	15-minute	2.97E-06	1.98E-09
cadmium	0.1	1-hour	4.26E-06	4.26E-08
chromium (3+)	1	15-minute	4.28E-05	4.28E-08
copper	0.1	1-hour	6.04E-05	6.04E-07
lead	0.15	15-minute	2.49E-05	1.66E-07
nickel	0.006	1-hour	9.74E-05	1.62E-05
zinc	3	15-minute	1.02E-03	3.38E-07
			Total HI_A	**0.00026**

a. Only COPCs with available AIEC are listed in this table.
b. CDPHE acceptable total HI = 1.0.

Table 7-5. Top COPCs Contributing to Carcinogenic Risk for SDC [a]

COPC	Inhalation	Total for All Indirect Pathways	Total for All Pathways
Total PCDDs and PCDFs	3.52E-15	5.62E-09	5.62E-09
bis(2-ethylhexyl)-phthalate	1.97E-14	4.85E-11	4.86E-11
chromium (6+)	1.19E-11	1.58E-11	2.77E-11
dibromochloromethane	1.28E-13	1.18E-11	1.19E-11
HD	9.99E-12	1.11E-12	1.11E-11
All Other COPCS Combined	2.14E-12	2.16E-12	4.29E-12
Total Pathway Risk	2.42E-11	5.70E-09	5.72E-09

a. Data presented are for the subsistence farmer lifetime (I) scenario which represents the highest carcinogenic risks of all exposure scenarios evaluated.

Table 7-6. Top COPCs Contributing to Hazard for SDC [a]

COPC	Inhalation	Total for All Indirect Pathways	Total for All Pathways
Total PCDDs and PCDFs	4.84E-11	4.07E-03	4.07E-03
di-n-butyl phthalate	0.00E+00	1.25E-04	1.25E-04
benzyl alcohol	0.00E+00	7.85E-06	7.85E-06
bis(2-ethylhexyl)-phthalate	0.00E+00	3.27E-06	3.27E-06
HD	2.49E-06	2.84E-07	2.77E-06
All Other COPCS Combined	9.98E-07	1.26E-06	2.25E-06
Total Pathway Hazard	3.48E-06	4.21E-03	4.21E-03

a. Data presented are for the subsistence farmer lifetime (I) scenario which represents the highest noncarcinogenic risks of all exposure scenarios evaluated.

Table 7-7. Top COPCs Contributing to Acute Hazard for SDC

COPC	Acute Hazard Quotient (dimensionless)
HD	2.19E-04
chloroform	1.83E-05
nickel	1.62E-05
benzene	7.85E-07
benzoic acid	7.10E-07
All Other COPCS Combined	2.99E-06
Total HI_A	0.00026

Table 7-8. Total Carcinogenic Risks for Each Human Receptor by Pathway for TDC

Receptor	Pathway									
	Inhalation	Dermal Contact with Surface Water	Dermal Contact with Soil	Incidental Ingestion of Soil	Incidental Ingestion of Surface Water	Ingestion of Produce	Ingestion of Terrestrial Animal Products	Ingestion of Fish	Ingestion of Breast Milk	All Pathways[a]
Adult resident	4.97E-10	2.42E-13	1.02E-15	5.57E-15	5.28E-14	1.49E-10	1.35E-09	1.26E-11	n/a[b]	0.00200E-06
Adult subsistence fisher	4.97E-10	2.42E-13	1.02E-15	5.57E-15	5.28E-14	1.49E-10	1.35E-09	3.14E-11	n/a	0.00202E-06
Adult subsistence farmer	4.97E-10	3.23E-13	1.12E-15	6.41E-15	7.04E-14	4.91E-10	4.47E-09	1.67E-11	n/a	0.00548E-06
Adult worker	1.18E-10	n/a	1.12E-15	1.79E-15	n/a	n/a	n/a	n/a	n/a	0.000118E-06
Child resident	1.39E-09	6.92E-14	3.27E-15	1.21E-14	4.11E-14	9.37E-11	8.06E-10	5.13E-12	n/a	0.00229E-06
Child subsistence fisher	1.39E-09	6.92E-14	3.27E-15	1.21E-14	4.11E-14	9.37E-11	8.06E-10	1.28E-11	n/a	0.00230E-06
Child subsistence farmer	1.39E-09	6.92E-14	3.27E-15	1.21E-14	4.11E-14	2.34E-10	2.01E-09	5.13E-12	n/a	0.00364E-06
Infant resident	1.56E-10	n/a	9.19E-16	3.63E-15	n/a	2.37E-11	5.34E-10	1.54E-12	2.07E-08	0.0214E-06
Infant subsistence fisher	1.56E-10	n/a	9.19E-16	3.63E-15	n/a	2.37E-11	5.34E-10	3.84E-12	2.07E-08	0.0214E-06
Infant subsistence farmer	1.56E-10	n/a	9.19E-16	3.63E-15	n/a	5.93E-11	1.33E-09	1.54E-12	5.15E-08	0.0530E-06
Resident lifetime (I)[c]	1.27E-09	2.63E-13	5.00E-15	2.02E-14	8.34E-14	2.36E-10	2.42E-09	1.67E-11	2.07E-08	0.0246E-06
Resident lifetime (II)[d]	1.39E-09	2.71E-13	4.12E-15	1.67E-14	8.51E-14	2.18E-10	1.93E-09	1.56E-11	n/a	0.00355E-06
Subsistence fisher lifetime (I)[c]	1.27E-09	2.63E-13	5.00E-15	2.02E-14	8.34E-14	2.36E-10	2.42E-09	4.18E-11	2.07E-08	0.0247E-06
Subsistence fisher lifetime (II)[d]	1.39E-09	2.71E-13	4.12E-15	1.67E-14	8.51E-14	2.18E-10	1.93E-09	3.90E-11	n/a	0.00357E-06
Subsistence farmer lifetime (I)[e]	1.27E-09	3.43E-13	5.14E-15	2.12E-14	1.01E-13	7.11E-10	7.15E-09	2.09E-11	5.15E-08	0.0606E-06
Subsistence farmer lifetime (II)[f]	1.39E-09	3.51E-13	4.25E-15	1.77E-14	1.03E-13	6.64E-10	5.93E-09	1.98E-11	n/a	0.00800E-06

a. CDPHE acceptable risk = 1.00E-06.
b. n/a = Pathway not applicable to receptor.
c. Lifetime exposure consists of: 1 year of inhalation exposure as an infant and 4 years of inhalation exposure as a child (5 years of total inhalation exposure); 1 year of indirect exposure as an infant, 5 years of indirect exposure as a child, and 24 years of indirect exposure as an adult (30 years of total indirect exposure).
d. Lifetime exposure consists of: 5 years of inhalation exposure as a child (5 years of total inhalation exposure); 5 years of indirect exposure as a child and 25 years of indirect exposure as an adult (30 years of total indirect exposure).
e. Lifetime exposure consists of: 1 year of inhalation exposure as an infant and 4 years of inhalation exposure as a child (5 years of total inhalation exposure); 1 year of indirect exposure as an infant, 5 years of indirect exposure as a child, and 34 years of indirect exposure as an adult (40 years of total indirect exposure).
f. Lifetime exposure consists of: 5 years of inhalation exposure as a child (5 years of total inhalation exposure); 5 years of indirect exposure as a child and 35 years of indirect exposure as an adult (40 years of total indirect exposure).

Table 7-9. Total Noncarcinogenic HI for Each Human Receptor by Pathway for TDC

Receptor	Pathway									
	Inhalation	Dermal Contact with Surface Water	Dermal Contact with Soil	Incidental Ingestion of Soil	Incidental Ingestion of Surface Water	Ingestion of Produce	Ingestion of Terrestrial Animal Products	Ingestion of Fish	Ingestion of Breast Milk	All Pathways[a]
Adult resident	4.87E-04	4.76E-09	8.14E-11	5.02E-10	1.36E-09	4.57E-06	3.32E-05	2.11E-05	n/a	0.000546
Adult subsistence fisher	4.87E-04	4.76E-09	8.14E-11	5.02E-10	1.36E-09	4.57E-06	3.32E-05	5.27E-05	n/a	0.000578
Adult subsistence farmer	4.87E-04	4.76E-09	8.14E-11	5.02E-10	1.36E-09	1.14E-05	8.31E-05	2.11E-05	n/a	0.000603
Adult worker	1.16E-04	n/a	1.15E-10	2.15E-10	n/a	n/a	n/a	n/a	n/a	0.000116
Child resident	1.36E-03	8.15E-09	5.33E-10	4.69E-09	6.37E-09	1.51E-05	1.18E-04	5.15E-05	n/a	0.00155
Child subsistence fisher	1.36E-03	8.15E-09	5.33E-10	4.69E-09	6.37E-09	1.51E-05	1.18E-04	1.29E-04	n/a	0.00163
Child subsistence farmer	1.36E-03	8.15E-09	5.33E-10	4.69E-09	6.37E-09	3.78E-05	2.95E-04	5.15E-05	n/a	0.00175
Infant resident	7.67E-04	n/a	7.50E-10	7.03E-09	n/a	1.90E-05	3.88E-04	7.72E-05	1.59E-02	0.0172
Infant subsistence fisher	7.67E-04	n/a	7.50E-10	7.03E-09	n/a	1.90E-05	3.88E-04	1.93E-04	1.61E-02	0.0175
Infant subsistence farmer	7.67E-04	n/a	7.50E-10	7.03E-09	n/a	4.75E-05	9.71E-04	7.72E-05	3.96E-02	0.0415
Resident lifetime (I)[c]	1.86E-03	1.29E-08	1.36E-09	1.22E-08	7.73E-09	3.87E-05	5.40E-04	1.50E-04	1.59E-02	0.0185
Resident lifetime (II)[d]	1.36E-03	1.29E-08	6.14E-10	5.19E-09	7.73E-09	1.97E-05	1.51E-04	7.25E-05	n/a	0.00161
Subsistence fisher lifetime (I)[c]	1.86E-03	1.29E-08	1.36E-09	1.22E-08	7.73E-09	3.87E-05	5.40E-04	3.74E-04	1.61E-02	0.0189
Subsistence fisher lifetime (II)[d]	1.36E-03	1.29E-08	6.14E-10	5.19E-09	7.73E-09	1.97E-05	1.51E-04	1.81E-04	n/a	0.00172
Subsistence farmer lifetime (I)[e]	1.86E-03	1.29E-08	1.36E-09	1.22E-08	7.73E-09	9.67E-05	1.35E-03	1.50E-04	3.96E-02	0.0431
Subsistence farmer lifetime (II)[f]	1.36E-03	1.29E-08	6.14E-10	5.19E-09	7.73E-09	4.92E-05	3.79E-04	7.25E-05	n/a	0.00186

a. CDPHE acceptable HI = 0.25.
b. n/a = Pathway not applicable to receptor.
c. Lifetime exposure consists of: 1 year of inhalation exposure as an infant and 4 years of inhalation exposure as a child (5 years of total inhalation exposure); 1 year of indirect exposure as an infant, 5 years of indirect exposure as a child, and 24 years of indirect exposure as an adult (30 years of total indirect exposure).
d. Lifetime exposure consists of: 5 years of inhalation exposure as a child (5 years of total inhalation exposure); 5 years of indirect exposure as a child and 25 years of indirect exposure as an adult (30 years of total indirect exposure).
e. Lifetime exposure consists of: 1 year of inhalation exposure as an infant and 4 years of inhalation exposure as a child (5 years of total inhalation exposure); 1 year of indirect exposure as an infant, 5 years of indirect exposure as a child, and 34 years of indirect exposure as an adult (40 years of total indirect exposure).
f. Lifetime exposure consists of: 5 years of inhalation exposure as a child (5 years of total inhalation exposure); 5 years of indirect exposure as a child and 35 years of indirect exposure as an adult (40 years of total indirect exposure).

Table 7-10. Acute Hazards Associated With Short-term Emission Release Events for TDC[a]

COPC	AIEC (mg/m^3)	Averaging Time	Acute Air Concentration ($\mu g/m^3$)	Acute Hazard Quotient[b] (dimensionless)
1,4-dioxane	3	1-hour	2.58E-01	8.61E-05
2-butanone	13	1-hour	4.95E-01	3.81E-05
acetone	475	1-hour	7.11E+00	1.50E-05
benzene	1.3	1-hour	2.80E+00	2.15E-03
bis(2-ethylhexyl)-phthalate	10	15-minute	9.47E-02	9.47E-06
chloromethane	200	15-minute	5.38E-02	2.69E-07
dichlorodifluoromethane	15,000	15-minute	6.24E-02	4.16E-09
di-n-butyl phthalate	10	15-minute	6.89E-03	6.89E-07
di-n-octyl phthalate	50	15-minute	9.47E-02	1.89E-06
ethane	3,500	15-minute	8.18E+01	2.34E-05
HD	0.065	1-hour	1.69E-02	2.60E-04
methane	2,000	15-minute	2.58E+02	1.29E-04
naphthalene	75	15-minute	9.47E-02	1.26E-06
propene	2,500	15-minute	2.80E+00	1.12E-06
toluene	37	1-hour	1.18E+00	3.20E-05
trichlorofluoromethane	5,000	15-minute	2.80E-02	5.60E-09
xylenes	22	1-hour	1.72E-02	7.83E-07
1,2,3,4,6,7,8-HpCDD	0.5	15-minute	3.17E-08	6.34E-11
1,2,3,4,6,7,8,9-OCDD	0.01	15-minute	1.94E-07	1.94E-08
1,2,3,4,6,7,8-HpCDF	0.15	15-minute	1.85E-08	1.23E-10
1,2,3,4,6,7,8,9-OCDF	0.0075	15-minute	6.28E-08	8.38E-09
ammonia	3.2	1-hour	2.15E-02	6.73E-06
aluminum	3	15-minute	8.18E-02	2.73E-05
antimony	1.5	15-minute	7.32E-03	4.88E-06
barium	1.5	15-minute	1.46E-03	9.76E-07
beryllium	0.0035	15-minute	6.89E-04	1.97E-04
cadmium	0.1	1-hour	6.24E-03	6.24E-05
chlorine	0.21	1-hour	2.58E-01	1.23E-03
chromium (3+)	1	15-minute	8.18E-03	8.18E-06
cobalt	0.3	15-minute	2.58E-03	8.61E-06
copper	0.1	1-hour	6.46E-02	6.46E-04
hydrogen chloride	2.1	1-hour	8.61E-01	4.10E-04
iron	6	15-minute	1.08E+01	1.79E-03
lead	0.15	15-minute	2.80E-03	1.87E-05
manganese	3	15-minute	3.01E-01	1.00E-04
nickel	0.006	1-hour	3.23E-03	5.38E-04
selenium	0.6	15-minute	2.02E-02	3.37E-05
silver	0.3	15-minute	1.79E-03	5.96E-06
vanadium	1.5	15-minute	1.38E-02	9.19E-06
zinc	3	15-minute	1.21E-01	4.02E-05
			Total HI_A	**0.0079**

a. Only COPCs with available AIEC are listed in this table.
b. CDPHE acceptable total HI = 1.0.

Table 7-11. Top COPCs Contributing to Carcinogenic Risk for TDC [a]

COPC	Inhalation	Total for All Indirect Pathways	Total for All Pathways
Total PCDDs and PCDFs	1.04E-13	5.55E-08	5.55E-08
bis(2-ethylhexyl)-phthalate	1.26E-12	2.82E-09	2.82E-09
chromium (6+)	6.44E-10	7.77E-10	1.42E-09
benzene	2.01E-10	1.72E-10	3.73E-10
HD	3.21E-10	3.61E-11	3.57E-10
All Other COPCS Combined	1.02E-10	3.58E-11	1.37E-10
Total Pathway Risk	1.27E-09	5.93E-08	6.06E-08

a. Data presented are for the subsistence farmer lifetime (I) scenario which represents the highest carcinogenic risks of all exposure scenarios evaluated.

Table 7-12. Top COPCs Contributing to Hazard for TDC [a]

COPC	Inhalation	Total for All Indirect Pathways	Total for All Pathways
Total PCDDs and PCDFs	1.43E-09	4.03E-02	4.03E-02
manganese	1.12E-03	6.85E-06	1.12E-03
chlorine	5.11E-04	1.12E-06	5.12E-04
di-n-butyl phthalate	0.00E+00	3.00E-04	3.00E-04
methyl mercury	0.00E+00	2.43E-04	2.43E-04
All Other COPCS Combined	2.31E-04	4.19E-04	6.50E-04
Total Pathway Hazard	1.86E-03	4.12E-02	4.31E-02

a. Data presented are for the subsistence farmer lifetime (I) scenario which represents the highest noncarcinogenic risks of all exposure scenarios evaluated.

Table 7-13. Top COPCs Contributing to Acute Hazard for TDC

COPC	Acute Hazard Quotient (dimensionless)
benzene	2.15E-03
iron	1.79E-03
chlorine	1.23E-03
copper	6.46E-04
nickel	5.38E-04
All Other COPCS Combined	1.53E-03
Total HI_A	0.0079

Table 7-14. Total Carcinogenic Risks for Each Human Receptor by Pathway for DAVINCH

Receptor	Pathway									
	Inhalation	Dermal Contact with Surface Water	Dermal Contact with Soil	Incidental Ingestion of Soil	Incidental Ingestion of Surface Water	Ingestion of Produce	Ingestion of Terrestrial Animal Products	Ingestion of Fish	Ingestion of Breast Milk	All Pathways[a]
Adult resident	2.61E-10	2.28E-13	1.17E-16	1.98E-16	5.17E-14	3.99E-11	1.19E-10	1.23E-11	n/a[b]	0.000432E-06
Adult subsistence fisher	2.61E-10	2.28E-13	1.17E-16	1.98E-16	5.17E-14	3.99E-11	1.19E-10	3.06E-11	n/a	0.000451E-06
Adult subsistence farmer	2.61E-10	3.04E-13	1.17E-16	1.98E-16	6.89E-14	1.31E-10	3.96E-10	1.63E-11	n/a	0.000805E-06
Adult worker	6.22E-11	n/a	1.38E-16	7.07E-17	n/a	n/a	n/a	n/a	n/a	0.0000622E-06
Child resident	7.35E-10	7.36E-14	7.55E-16	1.83E-15	4.98E-14	2.69E-11	7.70E-11	5.25E-12	n/a	0.000844E-06
Child subsistence fisher	7.35E-10	7.36E-14	7.55E-16	1.83E-15	4.98E-14	2.69E-11	7.70E-11	1.31E-11	n/a	0.000852E-06
Child subsistence farmer	7.35E-10	7.36E-14	7.55E-16	1.83E-15	4.98E-14	6.71E-11	1.92E-10	5.25E-12	n/a	0.00100E-06
Infant resident	8.45E-11	n/a	2.13E-16	5.53E-16	n/a	6.91E-12	5.25E-11	1.87E-12	1.47E-10	0.000293E-06
Infant subsistence fisher	8.45E-11	n/a	2.13E-16	5.53E-16	n/a	6.91E-12	5.25E-11	4.68E-12	1.79E-10	0.000327E-06
Infant subsistence farmer	8.45E-11	n/a	2.13E-16	5.53E-16	n/a	1.73E-11	1.31E-10	1.87E-12	1.60E-10	0.000395E-06
Resident lifetime (I)[c]	6.69E-10	2.56E-13	1.06E-15	2.54E-15	9.12E-14	6.55E-11	2.25E-10	1.67E-11	1.47E-10	0.00112E-06
Resident lifetime (II)[d]	7.35E-10	2.64E-13	8.52E-16	2.00E-15	9.29E-14	6.01E-11	1.76E-10	1.55E-11	n/a	0.000987E-06
Subsistence fisher lifetime (I)[c]	6.69E-10	2.56E-13	1.06E-15	2.54E-15	9.12E-14	6.55E-11	2.25E-10	4.17E-11	1.79E-10	0.00118E-06
Subsistence fisher lifetime (II)[d]	7.35E-10	2.64E-13	8.52E-16	2.00E-15	9.29E-14	6.01E-11	1.76E-10	3.87E-11	n/a	0.00101E-06
Subsistence farmer lifetime (I)[e]	6.69E-10	3.32E-13	1.07E-15	2.55E-15	1.08E-13	1.95E-10	6.60E-10	2.08E-11	1.60E-10	0.00171E-06
Subsistence farmer lifetime (II)[f]	7.35E-10	3.40E-13	8.57E-16	2.00E-15	1.10E-13	1.82E-10	5.39E-10	1.95E-11	n/a	0.00148E-06

a. CDPHE acceptable risk = 1.00E-06.
b. n/a = Pathway not applicable to receptor.
c. Lifetime exposure consists of: 1 year of inhalation exposure as an infant and 4 years of inhalation exposure as a child (5 years of total inhalation exposure); 1 year of indirect exposure as an infant, 5 years of indirect exposure as a child, and 24 years of indirect exposure as an adult (30 years of total indirect exposure).
d. Lifetime exposure consists of: 5 years of inhalation exposure as a child (5 years of total inhalation exposure); 5 years of indirect exposure as a child and 25 years of indirect exposure as an adult (30 years of total indirect exposure).
e. Lifetime exposure consists of: 1 year of inhalation exposure as an infant and 4 years of inhalation exposure as a child (5 years of total inhalation exposure); 1 year of indirect exposure as an infant, 5 years of indirect exposure as a child, and 34 years of indirect exposure as an adult (40 years of total indirect exposure).
f. Lifetime exposure consists of: 5 years of inhalation exposure as a child (5 years of total inhalation exposure); 5 years of indirect exposure as a child and 35 years of indirect exposure as an adult (40 years of total indirect exposure).

Table 7-15. Total Noncarcinogenic HI for Each Human Receptor by Pathway for DAVINCH

Receptor	Pathway									
	Inhalation	Dermal Contact with Surface Water	Dermal Contact with Soil	Incidental Ingestion of Soil	Incidental Ingestion of Surface Water	Ingestion of Produce	Ingestion of Terrestrial Animal Products	Ingestion of Fish	Ingestion of Breast Milk	All Pathways[a]
Adult resident	3.47E-04	4.72E-09	1.21E-11	2.63E-11	1.43E-09	1.33E-06	4.03E-06	4.12E-07	n/a	0.000353
Adult subsistence fisher	3.47E-04	4.72E-09	1.21E-11	2.63E-11	1.43E-09	1.33E-06	4.03E-06	1.03E-06	n/a	0.000353
Adult subsistence farmer	3.47E-04	4.72E-09	1.21E-11	2.63E-11	1.43E-09	3.32E-06	1.01E-05	4.12E-07	n/a	0.000361
Adult worker	8.26E-05	n/a	1.71E-11	1.13E-11	n/a	n/a	n/a	n/a	n/a	0.0000826
Child resident	9.71E-04	8.08E-09	7.91E-11	2.45E-10	6.65E-09	3.95E-06	1.56E-05	1.01E-06	n/a	0.000992
Child subsistence fisher	9.71E-04	8.08E-09	7.91E-11	2.45E-10	6.65E-09	3.95E-06	1.56E-05	2.52E-06	n/a	0.000993
Child subsistence farmer	9.71E-04	8.08E-09	7.91E-11	2.45E-10	6.65E-09	9.88E-06	3.91E-05	1.01E-06	n/a	0.00102
Infant resident	5.46E-04	n/a	1.11E-10	3.68E-10	n/a	4.81E-06	5.39E-05	1.51E-06	4.17E-05	0.000648
Infant subsistence fisher	5.46E-04	n/a	1.11E-10	3.68E-10	n/a	4.81E-06	5.39E-05	3.77E-06	4.21E-05	0.000651
Infant subsistence farmer	5.46E-04	n/a	1.11E-10	3.68E-10	n/a	1.20E-05	1.35E-04	1.51E-06	4.66E-05	0.000741
Resident lifetime (I)[c]	1.32E-03	1.28E-08	2.02E-10	6.40E-10	8.08E-09	1.01E-05	7.35E-05	2.93E-06	4.17E-05	0.00145
Resident lifetime (II)[d]	9.71E-04	1.28E-08	9.12E-11	2.72E-10	8.08E-09	5.28E-06	1.97E-05	1.42E-06	n/a	0.000998
Subsistence fisher lifetime (I)[c]	1.32E-03	1.28E-08	2.02E-10	6.40E-10	8.08E-09	1.01E-05	7.35E-05	7.32E-06	4.21E-05	0.00146
Subsistence fisher lifetime (II)[d]	9.71E-04	1.28E-08	9.12E-11	2.72E-10	8.08E-09	5.28E-06	1.97E-05	3.54E-06	n/a	0.000100
Subsistence farmer lifetime (I)[e]	1.32E-03	1.28E-08	2.02E-10	6.40E-10	8.08E-09	2.52E-05	1.84E-04	2.93E-06	4.66E-05	0.00158
Subsistence farmer lifetime (II)[f]	9.71E-04	1.28E-08	9.12E-11	2.72E-10	8.08E-09	1.32E-05	4.92E-05	1.42E-06	n/a	0.00104

a. CDPHE acceptable HI = 0.25.
b. n/a = Pathway not applicable to receptor.
c. Lifetime exposure consists of: 1 year of inhalation exposure as an infant and 4 years of inhalation exposure as a child (5 years of total inhalation exposure); 1 year of indirect exposure as an infant, 5 years of indirect exposure as a child, and 24 years of indirect exposure as an adult (30 years of total indirect exposure).
d. Lifetime exposure consists of: 5 years of inhalation exposure as a child (5 years of total inhalation exposure); 5 years of indirect exposure as a child and 25 years of indirect exposure as an adult (30 years of total indirect exposure).
e. Lifetime exposure consists of: 1 year of inhalation exposure as an infant and 4 years of inhalation exposure as a child (5 years of total inhalation exposure); 1 year of indirect exposure as an infant, 5 years of indirect exposure as a child, and 34 years of indirect exposure as an adult (40 years of total indirect exposure).
f. Lifetime exposure consists of: 5 years of inhalation exposure as a child (5 years of total inhalation exposure); 5 years of indirect exposure as a child and 35 years of indirect exposure as an adult (40 years of total indirect exposure).

Table 7-16. Acute Hazards Associated With Short-term Emission Release Events for DAVINCH[a]

COPC	AIEC (mg/m^3)	Averaging Time	Acute Air Concentration ($\mu g/m^3$)	Acute Hazard Quotient[b] (dimensionless)
2-butanone	13	1-hour	1.41E-04	1.09E-08
acetone	475	1-hour	2.53E-04	5.32E-10
benzene	1.3	1-hour	7.23E-01	5.56E-04
benzyl alcohol	600	15-minute	5.29E-04	8.82E-10
bis(2-ethylhexyl)-phthalate	10	15-minute	4.45E-03	4.45E-07
bromodichloromethane	4	15-minute	4.92E-05	1.23E-08
carbon disulfide	6.2	1-hour	3.09E-04	4.99E-08
carbon tetrachloride	1.9	1-hour	1.26E-05	6.65E-09
chlorobenzene	46	1-hour	1.11E-05	2.41E-10
chloroform	0.15	1-hour	3.27E-05	2.18E-07
chloromethane	200	15-minute	2.97E-04	1.48E-09
dibromochloromethane	125	15-minute	6.07E-05	4.86E-10
dimethyl phthalate	15	15-minute	5.25E-04	3.50E-08
di-n-butyl phthalate	10	15-minute	1.22E-03	1.22E-07
ethane	3,500	15-minute	2.95E+00	8.42E-07
ethylbenzene	143.2519	1-hour	9.79E-06	6.84E-11
HD	0.065	1-hour	3.72E-03	5.71E-05
hexane	1,500	15-minute	2.75E-05	1.83E-11
methane	2,000	15-minute	6.67E+01	3.34E-05
methylene chloride	14	1-hour	4.26E-05	3.04E-09
propene	2,500	15-minute	7.23E-01	2.89E-07
styrene	21	1-hour	1.09E-04	5.17E-09
tetrachloroethene	20	1-hour	1.15E-05	5.76E-10
toluene	37	1-hour	1.22E-01	3.31E-06
trichloroethene	698	1-hour	1.46E-05	2.09E-11
vinyl chloride	180	1-hour	2.65E-03	1.47E-08
xylenes	22	1-hour	4.45E-03	2.02E-07
3,3',4,4'-TCB (PCB 77)	0.125	15-minute	1.47E-11	1.18E-13
2,3',4,4',5-PeCB (PCB 118)	0.125	15-minute	3.68E-11	2.94E-13
2,3,3',4,4'-PeCB (PCB 105)	0.125	15-minute	1.47E-11	1.18E-13
ammonia	3.2	1-hour	5.56E-03	1.74E-06
aluminum	3	15-minute	2.11E-02	7.05E-06
cadmium	0.1	1-hour	1.61E-04	1.61E-06
chlorine	0.21	1-hour	6.67E-02	3.18E-04
chromium (3+)	1	15-minute	4.45E-04	4.45E-07
copper	0.1	1-hour	1.67E-02	1.67E-04
hydrogen chloride	2.1	1-hour	2.45E-01	1.17E-04
iron	6	15-minute	6.12E-02	1.02E-05
lead	0.15	15-minute	6.67E-04	4.45E-06
manganese	3	15-minute	7.79E-02	2.60E-05
nickel	0.006	1-hour	2.61E-04	4.36E-05
vanadium	1.5	15-minute	8.34E-04	5.56E-07
zinc	3	15-minute	2.78E-02	9.27E-06
			Total HI_A	**0.0014**

a. Only COPCs with available AIEC are listed in this table.
b. CDPHE acceptable total HI = 1.0.

Table 7-17. Top COPCs Contributing to Carcinogenic Risk for DAVINCH [a]

COPC	Inhalation	Total for All Indirect Pathways	Total for All Pathways
bis(2-ethylhexyl)-phthalate	2.63E-13	6.33E-10	6.33E-10
HD	3.48E-10	3.96E-11	3.87E-10
chromium (6+)	1.50E-10	1.94E-10	3.44E-10
benzene	1.58E-10	1.37E-10	2.95E-10
total coplanar PCBs	1.12E-19	2.44E-11	2.44E-11
All Other COPCS Combined	1.62E-11	1.00E-11	2.62E-11
Total Pathway Risk	6.73E-10	1.04E-09	1.71E-09

a. Data presented are for the subsistence farmer lifetime (I) scenario which represents the highest carcinogenic risks of all exposure scenarios evaluated.

Table 7-18. Top COPCs Contributing to Hazard for DAVINCH [a]

COPC	Inhalation	Total for All Indirect Pathways	Total for All Pathways
manganese	9.15E-04	6.01E-06	9.21E-04
chlorine	2.74E-04	6.13E-07	2.75E-04
di-n-butyl phthalate	0.00E+00	1.39E-04	1.39E-04
HD	8.66E-05	9.97E-06	9.65E-05
benzene	1.42E-05	3.96E-05	5.38E-05
All Other COPCS Combined	3.38E-05	6.35E-05	9.74E-05
Total Pathway Hazard	1.32E-03	2.59E-04	1.58E-03

a. Data presented are for the subsistence farmer lifetime (I) scenario which represents the highest noncarcinogenic risks of all exposure scenarios evaluated.

Table 7-19. Top COPCs Contributing to Acute Hazard for DAVINCH

COPC	Acute Hazard Quotient (dimensionless)
benzene	5.56E-04
chlorine	3.18E-04
copper	1.67E-04
hydrogen chloride	1.17E-04
HD	5.71E-05
All Other COPCS Combined	1.44E-04
Total HI_A	**0.0014**

Table 7-20. Total Carcinogenic Risks for Each Human Receptor by Pathway for EDS

Receptor	Pathway									
	Inhalation	Dermal Contact with Surface Water	Dermal Contact with Soil	Incidental Ingestion of Soil	Incidental Ingestion of Surface Water	Ingestion of Produce	Ingestion of Terrestrial Animal Products	Ingestion of Fish	Ingestion of Breast Milk	All Pathways[a]
Adult resident	4.38E-10	2.26E-13	8.33E-17	2.09E-16	8.72E-14	1.46E-11	3.90E-13	2.54E-11	n/a[b]	0.000478E-06
Adult subsistence fisher	4.38E-10	2.26E-13	8.33E-17	2.09E-16	8.72E-14	1.46E-11	3.90E-13	6.35E-11	n/a	0.000517E-06
Adult subsistence farmer	4.38E-10	3.01E-13	8.33E-17	2.09E-16	1.16E-13	4.57E-11	1.26E-12	3.38E-11	n/a	0.000519E-06
Adult worker	1.04E-10	n/a	9.85E-17	7.46E-17	n/a	n/a	n/a	n/a	n/a	0.000104E-06
Child resident	1.24E-09	8.46E-14	5.48E-16	1.96E-15	9.08E-14	1.58E-11	3.10E-13	1.09E-11	n/a	0.00126E-06
Child subsistence fisher	1.24E-09	8.46E-14	5.48E-16	1.96E-15	9.08E-14	1.58E-11	3.10E-13	2.73E-11	n/a	0.00128E-06
Child subsistence farmer	1.24E-09	8.46E-14	5.48E-16	1.96E-15	9.08E-14	3.94E-11	7.76E-13	1.09E-11	n/a	0.00129E-06
Infant resident	1.43E-10	n/a	1.57E-16	5.96E-16	n/a	4.19E-12	1.85E-13	4.00E-12	8.62E-15	0.000152E-06
Infant subsistence fisher	1.43E-10	n/a	1.57E-16	5.96E-16	n/a	4.19E-12	1.85E-13	9.99E-12	8.80E-15	0.000158E-06
Infant subsistence farmer	1.43E-10	n/a	1.57E-16	5.96E-16	n/a	1.05E-11	4.63E-13	4.00E-12	8.78E-15	0.000158E-06
Resident lifetime (I)[c]	1.12E-09	2.65E-13	7.69E-16	2.71E-15	1.61E-13	3.11E-11	8.07E-13	3.46E-11	8.62E-15	0.00119E-06
Resident lifetime (II)[d]	1.24E-09	2.73E-13	6.17E-16	2.13E-15	1.63E-13	2.79E-11	6.35E-13	3.21E-11	n/a	0.00130E-06
Subsistence fisher lifetime (I)[c]	1.12E-09	2.65E-13	7.69E-16	2.71E-15	1.61E-13	3.11E-11	8.07E-13	8.66E-11	8.80E-15	0.00124E-06
Subsistence fisher lifetime (II)[d]	1.24E-09	2.73E-13	6.17E-16	2.13E-15	1.63E-13	2.79E-11	6.35E-13	8.02E-11	n/a	0.00134E-06
Subsistence farmer lifetime (I)[e]	1.12E-09	3.41E-13	7.73E-16	2.72E-15	1.90E-13	8.74E-11	2.31E-12	4.31E-11	8.78E-15	0.00126E-06
Subsistence farmer lifetime (II)[f]	1.24E-09	3.48E-13	6.21E-16	2.14E-15	1.93E-13	7.94E-11	1.88E-12	4.05E-11	n/a	0.00136E-06

a. CDPHE acceptable risk = 1.00E-06.
b. n/a = Pathway not applicable to receptor.
c. Lifetime exposure consists of: 1 year of inhalation exposure as an infant and 4 years of inhalation exposure as a child (5 years of total inhalation exposure); 1 year of indirect exposure as an infant, 5 years of indirect exposure as a child, and 24 years of indirect exposure as an adult (30 years of total indirect exposure).
d. Lifetime exposure consists of: 5 years of inhalation exposure as a child (5 years of total inhalation exposure); 5 years of indirect exposure as a child and 25 years of indirect exposure as an adult (30 years of total indirect exposure).
e. Lifetime exposure consists of: 1 year of inhalation exposure as an infant and 4 years of inhalation exposure as a child (5 years of total inhalation exposure); 1 year of indirect exposure as an infant, 5 years of indirect exposure as a child, and 34 years of indirect exposure as an adult (40 years of total indirect exposure).
f. Lifetime exposure consists of: 5 years of inhalation exposure as a child (5 years of total inhalation exposure); 5 years of indirect exposure as a child and 35 years of indirect exposure as an adult (40 years of total indirect exposure).

Table 7-21. Total Noncarcinogenic HI for Each Human Receptor by Pathway for EDS

Receptor	Pathway									
	Inhalation	Dermal Contact with Surface Water	Dermal Contact with Soil	Incidental Ingestion of Soil	Incidental Ingestion of Surface Water	Ingestion of Produce	Ingestion of Terrestrial Animal Products	Ingestion of Fish	Ingestion of Breast Milk	All Pathways[a]
Adult resident	1.66E-04	9.94E-09	2.27E-11	5.70E-11	4.87E-09	7.56E-06	2.69E-08	1.17E-06	n/a	0.000174
Adult subsistence fisher	1.66E-04	9.94E-09	2.27E-11	5.70E-11	4.87E-09	7.56E-06	2.69E-08	2.93E-06	n/a	0.000176
Adult subsistence farmer	1.66E-04	9.94E-09	2.27E-11	5.70E-11	4.87E-09	1.89E-05	6.72E-08	1.17E-06	n/a	0.000186
Adult worker	3.94E-05	n/a	3.22E-11	2.44E-11	n/a	n/a	n/a	n/a	n/a	0.0000394
Child resident	4.64E-04	1.70E-08	1.49E-10	5.32E-10	2.27E-08	2.41E-05	8.32E-08	2.86E-06	n/a	0.000491
Child subsistence fisher	4.64E-04	1.70E-08	1.49E-10	5.32E-10	2.27E-08	2.41E-05	8.32E-08	7.16E-06	n/a	0.000495
Child subsistence farmer	4.64E-04	1.70E-08	1.49E-10	5.32E-10	2.27E-08	6.03E-05	2.08E-07	2.86E-06	n/a	0.000527
Infant resident	2.61E-04	n/a	2.09E-10	7.98E-10	n/a	2.84E-05	2.47E-07	4.30E-06	4.46E-09	0.000294
Infant subsistence fisher	2.61E-04	n/a	2.09E-10	7.98E-10	n/a	2.84E-05	2.47E-07	1.07E-05	4.52E-09	0.000300
Infant subsistence farmer	2.61E-04	n/a	2.09E-10	7.98E-10	n/a	7.10E-05	6.18E-07	4.30E-06	4.53E-09	0.000337
Resident lifetime (I)[c]	6.32E-04	2.69E-08	3.81E-10	1.39E-09	2.76E-08	6.01E-05	3.57E-07	8.33E-06	4.46E-09	0.000701
Resident lifetime (II)[d]	4.64E-04	2.69E-08	1.72E-10	5.89E-10	2.76E-08	3.17E-05	1.10E-07	4.04E-06	n/a	0.000500
Subsistence fisher lifetime (I)[c]	6.32E-04	2.69E-08	3.81E-10	1.39E-09	2.76E-08	6.01E-05	3.57E-07	2.08E-05	4.52E-09	0.000713
Subsistence fisher lifetime (II)[d]	4.64E-04	2.69E-08	1.72E-10	5.89E-10	2.76E-08	3.17E-05	1.10E-07	1.01E-05	n/a	0.000506
Subsistence farmer lifetime (I)[e]	6.32E-04	2.69E-08	3.81E-10	1.39E-09	2.76E-08	1.50E-04	8.93E-07	8.33E-06	4.53E-09	0.000791
Subsistence farmer lifetime (II)[f]	4.64E-04	2.69E-08	1.72E-10	5.89E-10	2.76E-08	7.92E-05	2.75E-07	4.04E-06	n/a	0.000547

a. CDPHE acceptable HI = 0.25.
b. n/a = Pathway not applicable to receptor.
c. Lifetime exposure consists of: 1 year of inhalation exposure as an infant and 4 years of inhalation exposure as a child (5 years of total inhalation exposure); 1 year of indirect exposure as an infant, 5 years of indirect exposure as a child, and 24 years of indirect exposure as an adult (30 years of total indirect exposure).
d. Lifetime exposure consists of: 5 years of inhalation exposure as a child (5 years of total inhalation exposure); 5 years of indirect exposure as a child and 25 years of indirect exposure as an adult (30 years of total indirect exposure).
e. Lifetime exposure consists of: 1 year of inhalation exposure as an infant and 4 years of inhalation exposure as a child (5 years of total inhalation exposure); 1 year of indirect exposure as an infant, 5 years of indirect exposure as a child, and 34 years of indirect exposure as an adult (40 years of total indirect exposure).
f. Lifetime exposure consists of: 5 years of inhalation exposure as a child (5 years of total inhalation exposure); 5 years of indirect exposure as a child and 35 years of indirect exposure as an adult (40 years of total indirect exposure).

Table 7-22. Acute Hazards Associated With Short-term Emission Release Events for EDS[a]

COPC	AIEC (mg/m^3)	Averaging Time	Acute Air Concentration ($\mu g/m^3$)	Acute Hazard Quotient[b] (dimensionless)
1,1-dichloroethene	250	15-minute	4.99E-04	2.00E-09
1,2-dichloroethane	202	1-hour	1.49E-06	7.35E-12
1,4-dichlorobenzene	60	15-minute	1.24E-06	2.06E-11
1,4-oxathiane	50	15-minute	2.96E-04	5.92E-09
2,4-dinitrotoluene	7.5	15-minute	1.81E-08	2.42E-12
2-butanone	13	1-hour	2.57E-04	1.98E-08
acetylene	350	15-minute	2.41E+01	6.89E-05
benzene	1.3	1-hour	1.49E-06	1.15E-09
chlorobenzene	46	1-hour	2.08E-06	4.52E-11
chloroform	0.15	1-hour	1.91E-04	1.27E-06
ethane	3,500	15-minute	1.07E+00	3.05E-07
HD	0.065	1-hour	1.15E-02	1.76E-04
methane	2,000	15-minute	1.18E+01	5.88E-06
monoethanolamine	15	15-minute	6.70E-01	4.47E-05
nitrobenzene	15	15-minute	3.55E-08	2.36E-12
tetrachloroethene	20	1-hour	4.84E-05	2.42E-09
trichloroethene	698	1-hour	5.97E-04	8.55E-10
vinyl chloride	180	1-hour	4.84E-01	2.69E-06
ammonia	3.2	1-hour	1.60E+01	5.01E-03
hydrogen cyanide	0.34	1-hour	7.27E+00	2.14E-02
			Total HI_A	**0.027**

a. Only COPCs with available AIEC are listed in this table.
b. CDPHE acceptable total HI = 1.0

Table 7-23. Top COPCs Contributing to Carcinogenic Risk for EDS [a]

COPC	Inhalation	Total for All Indirect Pathways	Total for All Pathways
HD	1.23E-09	1.20E-10	1.35E-09
vinyl chloride	1.02E-11	2.23E-12	1.24E-11
trichloroethene	2.23E-14	1.36E-15	2.37E-14
1,4-dichlorobenzene	1.50E-14	6.43E-19	1.50E-14
chloroform	1.47E-15	2.43E-17	1.50E-15
All Other COPCS Combined	1.01E-16	1.65E-15	1.75E-15
Total Pathway Risk	1.24E-09	1.22E-10	1.36E-09

a. Data presented are for the subsistence farmer lifetime (II) scenario which represents the highest carcinogenic risks of all exposure scenarios evaluated.

Table 7-24. Top COPCs Contributing to Hazard for EDS [a]

COPC	Inhalation	Total for All Indirect Pathways	Total for All Pathways
hydrogen cyanide	3.50E-04	1.26E-04	4.75E-04
HD	2.78E-04	3.36E-05	3.12E-04
ammonia	3.94E-06	0.00E+00	3.94E-06
vinyl chloride	2.98E-08	2.44E-09	3.22E-08
trichloroethene	1.06E-10	4.67E-09	4.78E-09
All Other COPCS Combined	7.49E-11	1.91E-09	1.99E-09
Total Pathway Hazard	6.32E-04	1.60E-04	7.91E-04

a. Data presented are for the subsistence farmer lifetime (I) scenario which represents the highest noncarcinogenic risks of all exposure scenarios evaluated.

Table 7-25. Top COPCs Contributing to Acute Hazard for EDS

COPC	Acute Hazard Quotient (dimensionless)
hydrogen cyanide	2.14E-02
ammonia	5.01E-03
HD	1.76E-04
acetylene	6.89E-05
monoethanolamine	4.47E-05
All Other COPCS Combined	1.02E-05
Total HI_A	**0.027**

7.6 SUMMARY AND CUMULATIVE EDT AND PCAPP RISK AND HEALTH EFFECTS

Tables 7-26, 7-27, and 7-28 present a summary of the carcinogenic risks, noncarcinogenic hazards, and acute hazards, respectively, for all of the EDTs. Figures 7-1, 7-2, and 7-3 present the same information graphically. Each of these tables and figures includes the baseline results previously obtained when conducting the PCAPP MPHRA and compares the total impacts to CDPHE acceptable levels. As seen in these tables and figures, each of the EDTs is expected to produce impacts that, when added to previously determined PCAPP impacts, are less than CDPHE acceptable levels.

Table 7-26. Summary of Carcinogenic Risk Results

EDT	Total Carcinogenic Risk		Percent of Acceptable Risk for EDT+PCAPP [b]
	EDT	EDT+PCAPP[a]	
SDC	0.00572E-06	0.0577E-06	5.8%
TDC	0.0606E-06	0.113E-06	11.3%
DAVINCH	0.00171E-06	0.0537E-06	5.4%
EDS	0.00136E-06	0.0534E-06	5.3%

a. PCAPP Risk Level = 0.0520E-06.
b. Acceptable Risk Level = 1.0E-06.

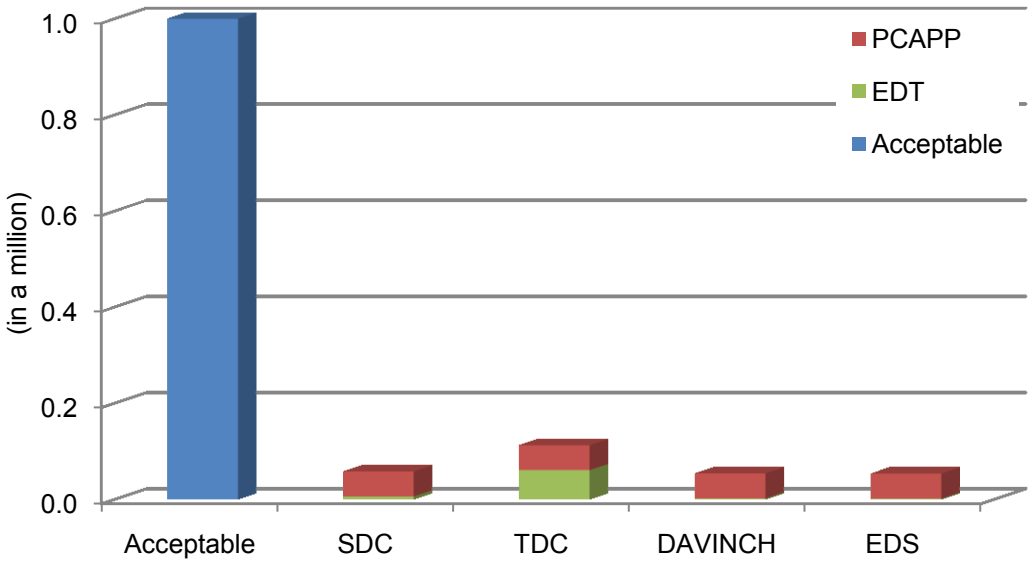

Figure 7-1. Visual Comparison of Combined Carcinogenic Risks.

Table 7-27. Summary of Noncarcinogenic Hazard Results

EDT	Total Hazard Index		Percent of Acceptable Hazard for EDT+PCAPP [b]
	EDT	EDT+PCAPP[a]	
SDC	0.00421	0.0103	4.1%
TDC	0.0431	0.0492	19.7%
DAVINCH	0.00158	0.00767	3.1%
EDS	0.000791	0.00688	2.8%

a. PCAPP Total HI = 0.00609.
b. Acceptable HI = 0.25.

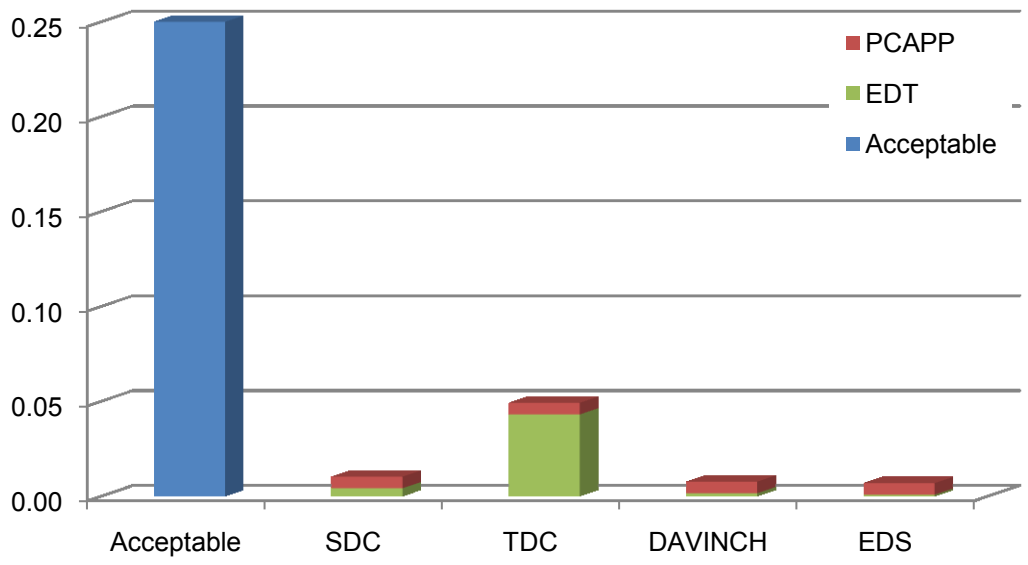

Figure 7-2. Visual Comparison of Combined Noncarcinogenic Hazards.

Table 7-28. Summary of Acute Hazard Results

EDT	Total Hazard Index		Percent of Acceptable Hazard for EDT+PCAPP [b]
	EDT	EDT+PCAPP[a]	
SDC	0.00026	0.0313	3.1%
TDC	0.0079	0.0389	3.9%
DAVINCH	0.00136	0.0324	3.2%
EDS	0.0267	0.0577	5.8%

a. PCAPP Total HI_A = 0.031.
b. Acceptable HI_A= 1.0.

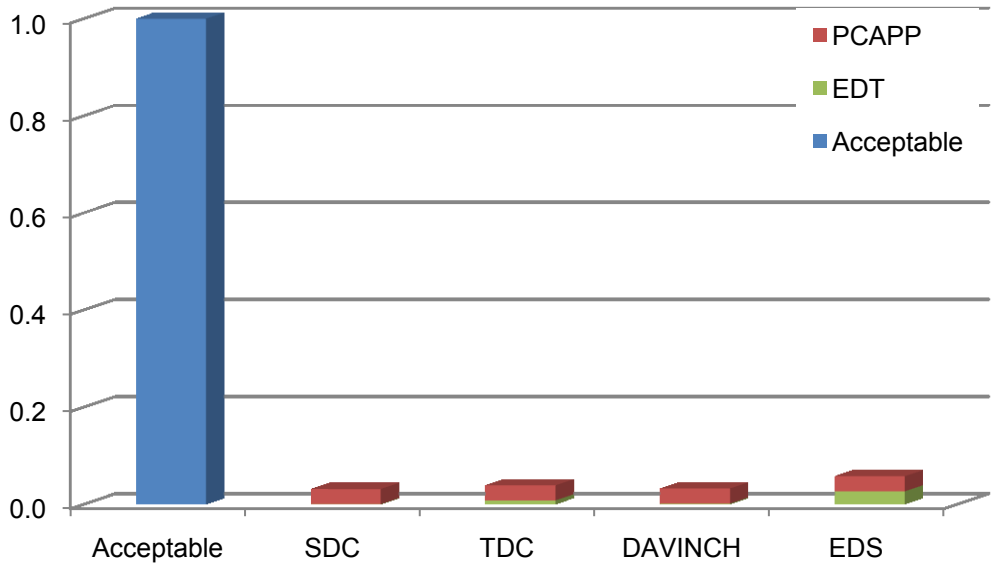

Figure 7-3. Visual Comparison of Combined Acute Hazards.

7.7 UNCERTAINTY ANALYSIS OF RISK CHARACTERIZATION

Several potential sources of uncertainty may impact the results obtained from this MPHRA. These uncertainties may cause the results previously discussed to be either more or less conservative. Table 7-29 summarizes these potential uncertainties and their impacts on the risk and hazard results previously discussed in this section.

Table 7-29. Impact of Various Sources of Uncertainties on Risk and Hazard

Source of Uncertainty	Reason for Uncertainty	Impact on Risk and/or Hazard
FACILITY CHARACTERIZATION - COPC EMISSION RATES		
Used 0.7 times the VSL to calculate a continuous HD emission rate during the 12 hours each day when processing overpacks and rejects	The EDT processes are not continuous operations, and therefore a continuous HD emission rate cannot be produced. Even given an HD leak, the HD emission would eventually be stopped when the leak was discovered or the munition treated. In the case of EDS, overpacks are unpacked before processing, but this again cannot produce continuous emissions of the magnitude used in the MPHRA. Only if HD is not treated whatsoever could this emission rate result.	Overestimation of risk. For additional detail see discussion in Section 7.7.1.
SDC and TDC emission rates	In many cases, the emission rates provided by the SDC and TDC vendors and used for this MPHRA are based on the quantitation limit, reporting level, or detection level during the test in which that COPC was identified. Emission rates in Appendix A-1, Table A-1-1 that are preceded by "<" denote such data.	Overestimation of risk. For additional detail see discussion in Section 7.7.1.
TDC PCDD/PCDF emission rates	TDC emission rates were obtained by scaling up emission test data by a factor of 4 to account for the ratio of agent feed rates in the 155-mm at PCAPP EDT to the U.K. 25-pdr munitions processed during the emission test. The true feed ratio for 155-mm munitions is 3.45; the true feed ratio for 105-mm munitions is 1.9; and the true feed ratio for 4.2-in mortars is 1.8.	TDC risks and hazards due to processing overpacks and rejects are overestimated, by as much as 2 times due to the overestimate of emission rates. For additional detail see discussion in Section 7.7.1.
AIR DISPERSION AND DEPOSITION MODELING		
No major items	Various parameters could take on different values than used.	Insignificant
EXPOSURE SCENARIO SELECTION		
Ingestion rates represent the 95th percentile exposures	Consumption is over 8 times higher than the average ingestion rates.	Overestimation of risk and hazard due to exposures to PCDD/PCDF (up to 8 times overestimate).
Infant exposure scenario consumption rates	Consumption of fruits, vegetables, meat, eggs, and fish is assumed for the whole first year of life, even though most infants do not consume solid food until approximately 6 months of age.	Insignificant

Table 7-29. Impact of Various Sources of Uncertainties on Risk and Hazard (continued)

Source of Uncertainty	Reason for Uncertainty	Impact on Risk and/or Hazard
EXPOSURE SCENARIO SELECTION (continued)		
Location of maximum deposition rates	Each receptor accounts for an area of 100 m by 100 m, or about 2 acres. This amount of land cannot support the amount of locally grown food and livestock assumed to be present at the RME location. Such farming operations are at least 5 km from the PCAPP and occupy up to 100 acres.	Potentially significant overestimation of risk and hazard. The concentrations of COPCs in contaminated foodstuff would have to be much lower than calculated in this MPHRA, because the deposition rates for a 100-acre plot of land are 100 to 1,000 times lower than those along the PCD fenceline and would result in a lower risk than is presented in this MPHRA. PCDD and PCDF are particularly sensitive to this parameter and produce very large overestimates of COPC ingestion (as many as 100 to 1,000 times) due to COPC transfers to infants.
ESTIMATES OF MEDIA CONCENTRATIONS		
No major items	Various parameters could take on different values than used.	Insignificant
QUANTIFYING EXPOSURE		
RME location	The RME individual is assumed to remain at the PCD fence line and breathe the air at that location for the entire 5-year EDT operating period.	Significant overestimation (at least double the true risk/hazard). No one would remain at a single location for an entire 5-year period.
Infant and child exposure factors	USEPA has published revisions to the Child-specific Exposure Factors Handbook (CEFH) that present different exposure rates than used in the MPHRA.	Insignificant, but using the new factors, exposure can be either less than or greater than exposures calculated in the EDT MPHRA. The impacts are likely to offset each other for the aggregate intake of COPCs due to inhalation, ingestion, and dermal exposure.
Exposure via breast milk	21 of the COPCs in the EDT MPHRA are identified in NCEA's list of chemicals potentially being transported through the breast milk pathway. Open literature identified data suggesting an additional 29 COPCS may be found in breast milk. Toxicity data were available for all 50 chemicals identified as potentially being found in breast milk.	Significant overestimation of risk. Twice as many COPCs are identified in the EDT MPHRA as transporting through the breast milk pathway than are identified by NCEA.
Breast milk transfer data	Several biological transfer factors needed for the breast milk pathway are not available for COPCs identified in open literature, so the worst-case transfer factors were used.	Insignificant; risk increases as the fraction of a COPC in blood increases. Use of worst-case values for COPCs in the EDT MPHRA, therefore, produces a higher estimate of risk than if actual transfer data were available. Dose also increases as the biological half-life of the COPC in blood increases.
TOXICITY ASSESSMENT		
COPCs have no verified toxicity values	Of the 83 COPCs in the EDT MPHRA, 75 have either carcinogenic or noncarcinogenic chronic toxicity factors or both. 80 of the 84 COPCs have acute toxicity factors.	Insignificant; the most toxic COPCs are among those with toxicity data and were already included in the risk and hazard calculations.
Route-to-route extrapolation of toxicity data	Assessment of chemicals is usually based on data from experimental animals and related systems, often involving less than ideal data sets. Information is often available only for one route of exposure, usually the oral route.	Underestimation or overestimation of risk. See supporting discussion in PCAPP MPHRA.

Table 7-29. Impact of Various Sources of Uncertainties on Risk and Hazard (continued)

Source of Uncertainty	Reason for Uncertainty	Impact on Risk and/or Hazard
TOXICITY ASSESSMENT(continued)		
Oral RfD for HD	The oral RfD is used to calculate noncancer risk due to ingestion. The HD oral RfD was derived from the lowest-observed-adverse-effect-level (LOAEL) in animal studies with a total UF of 3,000.	Underestimation or overestimation of risk. Due to the way in which the toxicity study was conducted, the LOAEL is likely to overestimate the toxicity of HD, resulting in an oral RfD that might be overprotective for noncancer health effects. See PCAPP MPHRA for supporting discussion.
Inhalation RfD for HD	The inhalation RfD is used to calculate noncancer risk due to inhalation. The HD inhalation RfD is derived from the general population air exposure limit (GPL), which was established using one human study and two animal studies with adjustments for exposure time and various uncertainties.	Underestimation or overestimation of risk. The assessment in the MPHRA utilized the Army's accepted estimate of HD toxicity. Use of another inhalation RfD would either raise or lower the calculated HI, depending on the magnitude of the alternate value. See PCAPP MPHRA for supporting discussion.
Oral CSF for HD	The oral CSF is used to calculate cancer risk due to ingestion of HD. The CSFs derived by various researchers (seven studies total) ranged from 1.6 to 95, with the geometric mean being 7.7. Further discussion of oral CSF for HD is provided in the PCAPP MPHRA.	Underestimation or overestimation of risk. The carcinogenic risk attributable to a specific COPC increases as the CSF increases. Use of an oral CSF of 5.0 (the geometric mean excluding the maximum value of 95) serves to reduce total cancer risk in all exposure scenarios for all EDTs. Using 95 as the oral CSF will produce a higher total cancer risk in all exposure scenarios for all EDTs. For additional detail see discussion in Section 7.7.2.
Inhalation CSF for HD	The inhalation CSF is used to calculate cancer risk due to inhalation of HD. The inhalation CSF used in this MPHRA is the Army's recommended inhalation CSF for HD, which is based on the geometric mean of the slope factors of all known studies (which range from 1.6 to 300 per mg/kg of body weight-day). Further discussion of oral CSF for HD is provided in the PCAPP MPHRA.	Underestimation of risk. Use of the USEPA inhalation CSF serves to increase total cancer risk from inhalation of HD although the magnitude of the increase varies by exposure scenario for each EDT. Using 300 as the inhalation CSF will produce a higher total cancer risk for each EDT. For additional detail see discussion in Section 7.7.2.
HT	This risk assessment assumes that all agent contained in the munitions to be treated at PCAPP is HD. However, 21 percent of the 4.2-inch mortar rounds are comprised of HT (a mixture that contains approximately 60 percent HD and 40 percent Agent T). The HT contained within this portion of the 4.2-inch mortar rounds represents 2.3 percent of the total weight of the agent stockpile.	Underestimation or overestimation of risk. Because no specific toxicity data exist for HT, this risk assessment may overestimate or underestimate risk by assuming that all agent is HD, including the 2.3 percent of the agent stockpile that is HT.
Oral CSF for PCDD/PCDFs and coplanar PCBs	USEPA is reassessing the CSF for PCDD/PCDFs with the goal of formalizing an oral CSF for PCDD/PCDFs. The current draft oral CSF is approximately 7.7 times the PCDD/PCDFs oral CSF used in the EDT MPHRA. The schedule for finalizing the PCDD/PCDFs CSF is unknown.	Underestimation of risk. The carcinogenic risk attributable to a specific COPC increases as the CSF increases. For additional detail see discussion in Section 7.7.2.

A number of the sources of uncertainty provided in Table 7-29 were discussed in detail in the PCAPP MPHRA report. The following subsections discuss in more detail those sources of uncertainty that either are unique to the EDT MPHRA or may have significant influence on the results.

7.7.1 Uncertainty in Emission Rates

- The emission rate of 0.7 times VSL was used in emission calculations as that is the alarm level for worker protection monitoring throughout the facility. However, emissions to the environment would not approach such a high level. For example, if the level somewhere in the facility were 0.7 VSL, that concentration would be diluted by cleaner air from other parts of the facility before it reaches the air filtration system. The filtration system then removes agent from the exhaust stream with 99.9 percent efficiency until the carbon filters became full, at which point, the filters would be changed out. Therefore, assuming a dilution factor of 5x and a filter removal efficiency of 0.999, the use of 0.7 times VSL in the calculations is estimated to be 5,000 times conservative. The fact that even at this high emission level (0.7 VSL) the MPHRA did not determine any unacceptable risks due to agent emissions only serves to support the conservative nature of the worker protection exposure limits.

- Emission rates were provided by the EDT vendors for all pollutants determined to be present after the OTS while processing overpacks/rejects and energetics. The emission rates provided by the SDC and TDC vendors were based on test data and were qualified as necessary to identify compounds that were either not detected or detected below the quantitation limit. Compounds that were identified as not detected were assumed not to be present in the off-gas emissions. Those compounds that were detected, but at levels below the quantitation limit, were assumed to be emitted at the quantitation limit, which results in an overestimate of emissions and risk/hazards.

  For SDC, of the 45 COPCs whose emission rates were estimated for overpacks/rejects, 36 COPCs were measured below the quantitation limit, and of the 28 COPCs with emission rates estimated for energetics, 14 were measured below the quantitation limit. In addition, for those COPCs measured above the quantitation limit, only nickel is included as one of the highest contributing COPCs to hazard; none of the COPCs measured above the quantitation limit was included as one of the highest contributing COPCs to risk.

  For TDC, of the 38 COPCs whose emission rates were estimated for overpacks/rejects, 16 COPCs were measured below the quantitation limit, and of the 23 COPCs with emission rates estimated for energetics, 18 were measured below the quantitation limit. In addition, for those COPCs measured above the quantitation limit, only chlorine and di-n-butyl phthalate were included as one of the highest contributing COPCs to hazard, and only benzene was included as one of the highest contributing COPCs to risk.

- The PCDD/PCDF emission rates provided by CH2M Hill were obtained during testing at Porton Down, UK, using 25-pdr British munitions in one TDC unit. The average agent feed rate during testing was 4.48 lb/hr. The maximum expected agent feed rate for one TDC unit at PCAPP would be obtained when processing 155-mm projectiles, which contain 11.7 pounds of agent per munition. One 155-mm projectile can be processed every 45 minutes; therefore, the average feed rate is 15.6 lb agent/hr (11.7 lb/batch / 45 min/batch x 60 min/hr).

CH2M Hill recommended Battelle apply the ratio of these feed rates (15.6/4.48 = 4) to the original PCDD/PCDF test results to obtain estimated emission rates for PCAPP. However, the quantity of agent in each munition, as well as the number of munitions that can be processed in each batch, varies for each munition type. CH2M Hill recommended that a scale-up factor of 4 be applied to the PCDD/PCDF emission rates obtained from the testing at Porton Down to account for the maximum agent feed rate, which occurs when feeding the 155-mm projectiles. Because the 155-mm projectiles are only a portion of the feed to be processed at PCAPP, this scale-up factor overestimates the long-term average PCDD/PCDF emission rates for the TDC. If a scale-up factor based on the weighted average agent feed rate (2.7) is used instead, the PCDD/PCDF emission rates would be reduced by a factor of 0.675. This factor can also be used to estimate the reduction in risk resulting in the use of this reduced scale-up factor.

7.7.2 Uncertainty in Toxicity Assessment

- The Army's oral CSF for HD is 7.7 per mg/kg of body weight-day, which is the geometric mean of the slope factors estimated from seven different studies (slope factors of 1.6, 5.0, 2.6, 5.3, 15.6, 9.5, and 95 per mg/kg of body weight-day). The Army used the Shapiro-Wilk test for normality to evaluate the distribution of these values, which indicated that the values are distributed lognormally. Therefore, the geometric mean of 7.7 per mg/kg-day was considered to be the most appropriate overall measure of the oral CSF for HD. However, if the slope factor of 95 is considered an outlier (it is six times higher than the next highest oral CSF) and removed from the estimate, the final geometric mean is 5.0 per mg/kg-day. Section 7.7.3 provides a quantitative assessment of uncertainties, and estimates an upper-bound risk using the highest slope factor (95 per mg/kg body weight-day) from the seven different studies.

- The inhalation CSF for HD used to estimate the risk due to inhalation of HD presented in Section 6.1 is the Army's recommended inhalation CSF for HD of 14 per mg/kg of body weight-day (or presented as a unit risk of 0.0041 per $\mu g/m^3$), which is based on the geometric mean of the slope factors of all known studies. (United States Army Center for Health Promotion and Preventive Medicine [USACHPPM], 2000) Table 7-30 presents the values resulting from these studies.

  The highest inhalation CSF is that recommended by the USEPA of 300 per mg/kg of body weight-day (or presented as a unit risk of 0.085 per $\mu g/m^3$), and the lowest inhalation CSF is that derived from the Japanese war gas factory data of 1.6 per mg/kg of body weight-day (or presented as a unit risk of 0.00046 per $\mu g/m^3$). (USEPA, 1991, and USACHPPM, 2000) If the USEPA inhalation CSF is used to estimate the risk from inhalation of HD, the resulting risk is 21 times greater than that estimated using the Army's recommended inhalation CSF. In the 1991 basis for its inhalation CSF, USEPA noted that:

  > "[t]he dose-response estimates are considered to be highly uncertain, but to a degree that could not be measured. The McNamara et al. (1975) study was not of a standard design, and the assumptions required to do a quantitative analysis are considered to be relatively tenuous...too few animals were exposed and followed for a lifetime to give adequate sensitivity for detecting long-term effects, and the uncertainty about the experimental concentrations is too great to allow confidence about the absolute potency value."

Therefore, use of the Army's inhalation CSF is appropriate given the uncertainty of the inhalation CSF, as demonstrated by the range of reported slope factors. Section 7.7.3 provides a quantitative assessment of the uncertainty of the inhalation CSFs for HD, and estimates the upper-bound risk from using the highest inhalation CSF (300 per mg/kg of body weight-day).

Table 7-30. Inhalation Unit Risk Estimates for Sulfur Mustard (HD) [a]

Source or Reference	Data Set/Method	Unit Risk (per µg/m^3)
Gaylor, 1999a	Relative potency (HD to benzo(a)pyrene (BaP)) geometric mean of 3.9 derived from relative potency estimate of 1.3 (Watson et al., 1989) and midpoint of relative potency range (=11.5) in USEPA (1991). Geometric mean of relative potency times BaP potency <1.2 per mg/kg-day (Culp et al., 1998) and oral to inhalation extrapolation (0.286 mg/kg-day per mg/m^3).	1.3×10^{-3}
Gaylor, 1998	HD data, oral exposure, hyperplasia data of Sasser et al. (1989b).	1.4×10^{-3}
Gaylor, 1998	HD data, oral exposure data of Sasser et al., 1989a; maximum tolerated dose method using analysis of Gaylor and Gold (1995).	1.5×10^{-3}
USACHPPM, 2000	HD data, airborne exposure, carcinogenicity study data of McNamara et al., 1975; linear dose-response model to estimate (0.1/LED10).	12.0×10^{-2}
USEPA, 1991	Derived from estimated q1* of 1.6 per mg/kg/day calculated by Rosenblatt (1987) from non-quantitative air concentration estimate in Japanese war gas factory atmosphere and available cancer incidence data for former factory workers (Wada et al., 1968; Yamada et al., 1957), and oral-to-inhalation extrapolation (0.286 mg/kg-day per mg/m^3).	4.6×10^{-4}
Gaylor, 1998	HD data, oral exposure, squamous cell papilloma data of Sasser et al. (1989a); linear extrapolation from benchmark dose.	7.4×10^{-4}
Gaylor, 1999[b]	Relative potency (HD to BaP) estimate of 3.9 as derived above, BaP potency of 7.3 per mg/kg-day (IRIS, 2000) and oral-to-inhalation extrapolation (0.286 mg/kg-day per mg/m^3).	8.0×10^{-3}
USACHPPM, 2000	HD data, airborne exposure, toxicity study data of McNamara et al., 1975; linear dose-response model to estimate (0.1/LED10).	9.0×10^{-2}
	GEOMETRIC MEAN OF ALL VALUES[c]	4.1×10^{-3}

a. Extracted from Evaluation of Airborne Exposure Limits for Sulfur Mustard: Occupational and General Population Exposure Criteria, USACHPPM, Technical Report 47-EM-3767-00, November 2000.
b. Personal communication received 20 July 1999 from D. Gaylor, Associate Director, Risk Assessment, National Center for Toxicological Research (US Food and Drug Administration), Jefferson, AR.
c. Equivalent inhalation slope factor is approximately 14 per mg/kg-day.

- The USEPA is currently addressing several issues related to dioxins and dioxin-like chemicals in the environment. These include the comprehensive human health and exposure assessment for dioxin, commonly called the *dioxin reassessment* and a review of dioxin soil clean-up levels currently in use across the United States. As a result, USEPA has proposed a draft oral cancer toxicity value for PCDD/PCDFs (i.e., different from what is currently used in the EDT MPHRA). This draft cancer value is undergoing further analysis with no specific timetable estimated for a final value to be released.

  Using the draft oral CSF for PCDD/PCDFs and coplanar PCBs would increase the toxicity value from 130,000 to a more conservative 1,000,000 (mg/kg-day)$^{-1}$. Section 7.7.3 presents an estimate of the upper-bound risk resulting from the use of the draft oral CSF for PCDD/PCDFs in the EDT MPHRA as part of the quantitative uncertainty analysis.

7.7.3 Probable Upper Range of Risk and Hazard

As the discussion in this section suggests, uncertainty in various aspects of this EDT MPHRA can influence the results in a positive or negative manner. Some of the uncertainty factors discussed herein produce a quantifiable effect, while the effect of others can only be qualitatively assessed. When a parameter could be quantified and produced an increased risk or hazard for an EDT, calculations were performed to determine the total and incremental increase of the risk or hazard. For the EDT MPHRA, these quantifiable uncertainty parameters were all related to the toxicity assessment. Table 7-31 presents the quantifiable uncertainty parameters and the upper-bound risk results for all EDTs based on the use of the most conservative values; the EDT MPHRA baseline risk values also are provided in Table 7-31 in order to assess the significance of the upper-bound risk results. Table 7-32 presents a summary of the impact on the total carcinogenic risks, including the baseline results from the PCAPP MPHRA, based on incorporating all of the most conservative quantifiable uncertainty parameters into the calculations. Figure 7-4 presents the same information graphically. Application of this quantitative uncertainty analysis demonstrates that even when the most conservative quantifiable uncertainty parameters are incorporated into the MPHRA for all EDTs, the resulting carcinogenic risks, including the baseline results from the PCAPP MPHRA, are below the acceptable risk level specified by CDPHE.

Table 7-31. Upper-bound Risk and Hazard from Quantifiable Uncertainties[a]

Parameter[b]	Baseline Value	Conservative Value	Upper-bound Risk/Hazard Results			
			SDC	TDC	DAVINCH	EDS
Carcinogenic Risk Factors						
EDT Baseline Values	--	--	0.00572E-06	0.0606E-06	0.00171E-06	0.00136E-06
Inhalation CSF for HD	14	300	0.00593E-06	0.0672E-06	0.00926E-06	0.0264E-06
Oral CSF for HD	7.7	95	0.00574E-06	0.0610E-06	0.00216E-06	0.00274E-06
Oral CSF for PCDD/PCDFs and PCBs	130,000	1,000,000	0.0433E-06	0.432E-06	0.00187E-06	NA[c]

a. Reported values are for the human receptor with the highest lifetime risk (one of the farmer or fisher receptors).
b. CSF values are in units of $(mg/kg\text{-}day)^{-1}$.
c. NA indicates uncertainty value not applicable to the EDT.

Table 7-32. Total Upper-bound Carcinogenic Risk Presented by Uncertainty[a]

Condition	Total Lifetime Cancer Risk[b]			
	SDC	TDC	DAVINCH	EDS
Baseline EDT Risk	0.00572E-06	0.0606E-06	0.00171E-06	0.00136E-06
Uncertainty Increment	0.0378E-06	0.378E-06	0.00797E-06	0.0264E-06
PCAPP MPHRA Risk	0.0520E-06	0.0520E-06	0.0520E-06	0.0520E-06
Total Risk[c]	0.0953E-06	0.491E-06	0.0617E-06	0.0797E-06
Percent of Acceptable Risk	9.5%	49.1%	6.2%	8.0%

a. Reported values are for the human receptor with the highest lifetime risk (one of the farmer or fisher receptors).
b. CDPHE acceptable risk = 1.00E-06.
c. Total risk is the sum of the baseline EDT risk, the uncertainty increment, and the PCAPP MPHRA risk.

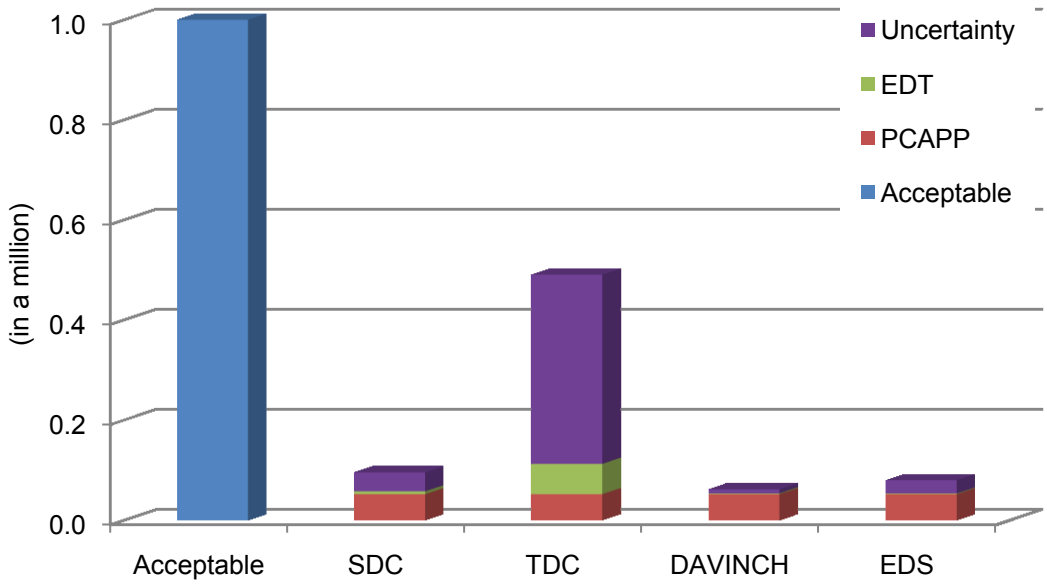

Figure 7-4. Visual Comparison of Combined Carcinogenic Risks with Uncertainty

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APPENDIX A

EMISSIONS AND MODEL INPUT DOCUMENTATION

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Appendix A presents the EDT Emissions and Model Input Documentation. The first two tables present summaries of the EDT equipment and emission parameters, as well as the COPCs emitted from each EDT and PCAPP. More detailed information is presented in Appendixes A-1 (for SDC, TDC, and DAVINCH) and A-2 (for EDS).

EDT Equipment and Emission Parameter Summary

	SDC	TDC	DAVINCH	EDS
Type of process	thermal destruction	"cold" destruction (uses donor explosive)	"cold" destruction (uses donor explosive)	"cold" destruction (uses donor explosive)
Number of units	1	2	1	9
Operating schedule	12 hr/day, 7 day/week	12 hr/day, 7 day/week	12 hr/day, 7 day/week	overpacks/rejects: 24 hr/day, 6 day/week energetics: 12 hr/day, 6 day/week
Percent of stockpile processed				
required				
155-mm projectile, 105-mm projectile, and 4.2-inch mortar overpacks and rejects	100%	100%	100%	100%
155-mm projectiles bursters				
4.2-inch mortar bursters				
105-mm projectile fuze/booster				
desired				
105-mm projectile bursters	75%	100%	100%	19%
105-mm projectile propellant				0%
4.2-inch mortar propellant				0%
Exhaust configuration	The SDC system is enclosed in an environmental enclosure. • One stack for process exhaust (after the OTS). • One stack for air from the environmental enclosure. • Each stack has an agent monitor.	Each TDC system is enclosed in an environmental enclosure. • Exhaust from the TDC OTS is discharged into the system enclosure. • Enclosure air is then discharged through a pair of identical building air filtration systems and stacks. • Each stack has an agent monitor.	The DAVINCH system is enclosed in an environmental enclosure. • Exhaust from OTS is combined with building ventilation air from the environmental enclosure and discharged through a single stack. • The stack has an agent monitor.	Each EDS unit is enclosed in an environmental enclosure. • Emissions from the filter system are combined with enclosure air prior to passing through an air filtration unit and exiting the stack. • The stack has an agent monitor.

EDT Equipment and Emission Parameter Summary (continued)

	SDC	TDC	DAVINCH	EDS
NAAQS pollutants emitted				
PM10	yes	yes	yes	yes
PM2.5	yes	yes	yes	yes
SO2	yes	yes	yes	no (none expected)
CO	yes	yes	no (none expected)	yes
NO2	yes	yes	yes	yes
O3	no (not modeled)	no (not modeled)	no (not modeled)	no (not modeled)
Pb	yes	yes	yes	no (none expected)
Basis for emission rates				
overpacks and rejects	Emission rates were provided by the vendor based on testing performed at the Anniston Chemical Agent Disposal Facility (ANCDF) using agent with the OTS in full operation.	Emission rates were provided by the vendor based on testing performed at Porton Down, UK, using mustard-filled munitions with the OTS in operation.	Emission rates were provided by the vendor based on testing performed at Kanda Port, Japan, and Poelkapelle, Belgium, with the OTS in operation. Vendor stated that no carbon monoxide emissions would be expected.	Emission rates were provided by the Army based on templates developed for Resource Conservation and Recovery Act (RCRA) permit applications at Dugway Proving Ground and Deseret Chemical Depot and the Clean Air Act Notice of Intent for Deseret Chemical Depot. All emissions originate from EDS neutralent and rinsate wastes drained from the EDS vessel into the Waste Transfer System (WTS). Gases expelled from the WTS exit through a canister filter.
energetics	Vendor stated that no data available during testing of the SDC unit with energetics at the ANCDF; however, vendor did provide emissions data for lead (Pb). For the purposes of modeling, the emissions during the processing of energetics (except for lead) were assumed to be the same as for the processing of overpacks/rejects.	Emission rates were provided by the vendor based on testing at the Crane Naval Surface Warfare Center, Crane, Indiana. The OTS used during the tests with energetic material consisted of only a particulate filter.	Vendor stated that no data available during testing of the DAVINCH unit with energetics. For the purposes of modeling, the emissions during the processing of energetics were assumed to be the same as for the processing of overpacks/rejects.	Same as above.

EDT Equipment and Emission Parameter Summary (continued)

		SDC	TDC	DAVINCH	EDS
COPCs emitted (see Chemicals of Potential Concern and Data Availability table below)					
organics		yes	yes	yes	yes
PCDDs		no (measured non-detect)	yes	no (measured non-detect)	no
PCDFs		yes	yes	no (measured non-detect)	no
PCBs		no (measured non-detect)	no (measured non-detect)	yes	no
inorganics		yes	yes	yes	yes
Basis for emission rates					
overpacks and rejects	during testing	Provided by the vendor based on testing performed at the Anniston Chemical Agent Disposal Facility (ANCDF) using agent with the OTS in full operation. The OTS during testing consisted of: • Thermal oxidizer • Quench system • Baghouse filter • Acid and neutral scrubbers • Chem demil filter bank consisting of a high-efficiency particulate air (HEPA) filter followed by a Sulfur Impregnated activated Carbon (SIC) filter followed by an activated carbon (AC) filter and a final HEPA filter	Overpack and reject emission rates provided by the vendor are based on testing performed at Porton Down, UK using 25-pdr mustard-filled munitions. The following OTS was in use during the testing: • Alkali feed - removes approximately 99.5% of acid gases • Particulate filter - removes approximately 99.9% of all particles by weight • Catalytic oxidizer - removes approximately 99% of carbon monoxide and residual organics • Dual bed carbon filters - removes approximately 99% of residual organics • HEPA filter - removes approximately 99.97% of residual particles by weight	Provided by vendor based on testing performed at the Kanda Port, Japan and Poelkapelle, Belgium and include the following: • hydrogen chloride - Measurements at Belgium; maximum value used for emission rate. • dioxins and furans - Measurements at Japan; maximum value used for emission rate. • copper - Assumed 1 percent of copper within the detonator enters the OTS, where 99 % is removed by scrubber and 99.9 % by filter. • lead - Assumed 1 % of lead within the detonator enters the OTS, where 99 % is removed by scrubber and 99.9 % by filter. • mercury - Assumed 0.7 % of mercury within the detonator enters the OTS, where 99 % is removed by scrubber, 99.9 % by filter, and 99.9 % by SIC. OTS consists of: • Off-gas pre-filter and filter • Plasma oxidizer • Scrubber • Charcoal filter/cyclone	Emission rates were estimated using templates developed for Resource Conservation and Recovery Act (RCRA) permit applications at Dugway Proving Ground and Deseret Chemical Depot and the Clean Air Act Notice of Intent for Deseret Chemical Depot. EDS neutralent and rinsate wastes are drained from the EDS vessel into the Waste Transfer System (WTS). Gases expelled from the WTS exit through duct work that connects the EDS WTS to the Air Filtration Unit (AFU) that services the environmental enclosure surrounding the EDS workspace. The WTS exhaust duct includes a canister filter that contains silica gel and activated carbon. The canister filter is replaced with each batch of munitions processed.
	during operation	Same as above.	Same as above.	Same as above.	Same as above.

EDT Equipment and Emission Parameter Summary (continued)

		SDC	TDC	DAVINCH	EDS
energetics	during testing	Provided by vendor based on testing at ANCDF with intact live munitions (including mines) and the OTS in partial operation. The OTS during the energetics tests consisted of: • Thermal oxidizer • Quench system • Baghouse filter • Acid and neutral scrubbers • Two stages of HEPA filters. During testing, SIC and AC filters (two beds) were not installed.	The vendor-supplied energetic emission rates are based on testing at the Crane Naval Surface Warfare Center, Crane, Indiana. The OTS in use during this testing was less complex than used for chemical munitions. The OTS used when testing energetic material only consisted of a particulate filter, which removes approximately 99.9% of particles by weight.	Vendor did not provided energetic emission rates for the DAVINCH. Therefore, the maximum energetics emission rates for either SDC or the two TDC units was used to represent the upper bound of emissions for DAVINCH.	Same as above.
	during operation	During operation SIC and AC filters (two beds) will be placed between the HEPA filters. Thus, Battelle applied carbon control efficiencies to the vendor-supplied energetic emission rates to obtain emission rates after all controls.	Same as above.	Assume same OTS as for overpacks and rejects.	Same as above.

Chemicals of Potential Concern and Data Availability

COPC	CAS	Chemical Grouping	Emission Source			COPC				Toxicity Data		
										Chronic		Acute
			EDT Only	PCAPP Only	Both EDT and PCAPP	SDC	TDC	DAVINCH	EDS	Cancer	Noncancer	Inhalation
1,1,1-trichloroethane	71-55-6	Organic	✓			✓					✓	✓
1,1,2,2-tetrachloroethane	79-34-5			✓						✓	✓	✓
1,1-dichloroethane	75-34-3				✓	✓				✓	✓	✓
1,1-dichloroethene	75-35-4		✓			✓			✓		✓	✓
1,2,3-trichlorobenzene	87-61-6			✓								✓
1,2,4-trichlorobenzene	120-82-1			✓						✓	✓	
1,2,4-trimethyl benzene	95-63-6			✓							✓	✓
1,2-bis(ethylthio)-ethene	NA			✓								
1,2-bis(vinylthio)-ethane	NA			✓								
1,2-dichlorobutane	616-21-7			✓								
1,2-dichloroethane	107-06-2				✓	✓			✓	✓	✓	✓
1,2-dichloropropane	78-87-5				✓	✓				✓	✓	✓
1,3-butadiene	106-99-0		✓			✓				✓	✓	✓
1,4-dichlorobenzene	106-46-7		✓						✓	✓	✓	✓
1,4-dioxane	123-91-1				✓		✓			✓	✓	✓
1,4-dithiane	505-29-3				✓				✓		✓	
1,4-oxathiane	15980-15-1				✓				✓			✓
1-chlorobutane	109-69-3			✓							✓	✓
1-hexene	592-41-6			✓								✓
2,2-dimethyl-trans-thiirane	3772-13-2			✓								
2,3-dimethyl-thiophene	632-16-6			✓								
2,4-dinitrotoluene	121-14-2		✓						✓	✓	✓	✓
2-butanone	78-93-3				✓	✓	✓	✓	✓		✓	✓
2-chlorobutane	78-86-4			✓								
2-chloroethoxyethane	112-26-5			✓								
2-ethyl 1,3-butadiene	3404-63-5				✓		✓	✓				
2-hexanone	591-78-6			✓								✓
2-methyl-1,3-dithiacyclopentane	5616-51-3			✓								
2-methyl-1,3-dithiane	6007-26-7			✓								
2-methyl-1,3-oxathiolane	17642-74-9			✓								
3-methyl phenol	108-39-4			✓							✓	✓
4-methyl phenol	106-44-5			✓							✓	✓
4-methyl-2-pentanone	108-10-1			✓							✓	✓
acetaldehyde	75-07-0			✓						✓	✓	✓
acetone	67-64-1				✓	✓	✓	✓			✓	✓
acetylene	74-86-2		✓						✓			✓
acrolein	107-02-8			✓							✓	✓
alpha-methylstyrene	98-83-9			✓							✓	✓
benzene	71-43-2				✓	✓	✓	✓	✓	✓	✓	✓
benzoic acid	65-85-0		✓			✓					✓	✓
benzyl alcohol	100-51-6		✓			✓		✓			✓	✓
bis(2-ethylhexyl)-phthalate	117-81-7		✓			✓	✓	✓		✓	✓	✓
bromodichloromethane	75-27-4		✓			✓		✓		✓	✓	✓
bromomethane	74-83-9		✓			✓					✓	✓
carbon disulfide	75-15-0				✓	✓		✓			✓	✓
carbon tetrachloride	56-23-5		✓			✓		✓		✓	✓	✓
chlorobenzene	108-90-7		✓			✓		✓	✓		✓	✓
chloroethane	75-00-3			✓						✓	✓	✓
chloroform	67-66-3				✓	✓		✓	✓	✓	✓	✓
chloromethane	74-87-3				✓	✓	✓	✓			✓	✓
chloromethoxyethane	3188-13-4			✓								
cis-1,3-dichloropropene	10061-01-5		✓			✓				✓	✓	✓
dibromochloromethane	124-48-1		✓			✓		✓		✓	✓	✓
dichlorodifluoromethane	75-71-8		✓			✓	✓				✓	✓

Chemicals of Potential Concern and Data Availability (continued)

COPC	CAS	Chemical Grouping	Emission Source			COPC				Toxicity Data		
										Chronic		Acute
			EDT Only	PCAPP Only	Both EDT and PCAPP	SDC	TDC	DAVINCH	EDS	Cancer	Noncancer	Inhalation
diethyl ether	60-29-7	Organic		✓							✓	✓
dimethyl phthalate	131-11-3		✓			✓		✓				✓
di-n-butyl phthalate	84-74-2		✓			✓	✓	✓			✓	✓
di-n-octyl phthalate	117-84-0		✓				✓					✓
ethane	74-84-0				✓		✓	✓	✓			✓
ethane	74-85-1			✓								✓
ethylbenzene	100-41-4				✓	✓		✓		✓	✓	✓
Freon 113	76-13-1		✓			✓					✓	✓
HD	505-60-2				✓	✓	✓	✓	✓	✓	✓	✓
hexachlorobutadiene	87-68-3			✓						✓	✓	✓
hexachloroethane	67-72-1			✓						✓	✓	✓
hexane	110-54-3				✓	✓		✓			✓	✓
methane	74-82-8				✓		✓	✓	✓			✓
methyl tert-butyl ether	1634-04-4			✓						✓	✓	✓
methylene chloride	75-09-2				✓	✓		✓		✓	✓	✓
monoethanolamine	141-43-5		✓						✓			✓
naphthalene	91-20-3				✓		✓			✓	✓	✓
nitrobenzene	98-95-3		✓						✓	✓	✓	✓
octane	111-65-9			✓								✓
pentane	109-66-0			✓								✓
propene	115-07-1				✓		✓	✓			✓	✓
styrene	100-42-5		✓			✓		✓			✓	✓
tert-butyl alcohol	75-65-0			✓								✓
tetrachloroethene	127-18-4				✓	✓		✓	✓	✓	✓	✓
thiirane	420-12-2			✓								
thiodiglycol	111-48-8			✓								✓
toluene	108-88-3				✓	✓	✓	✓			✓	✓
trans-1,3-dichloropropene	10061-02-6		✓			✓				✓	✓	✓
trichloroethene	79-01-6				✓	✓		✓	✓	✓	✓	✓
trichlorofluoromethane	75-69-4		✓			✓	✓				✓	✓
vinyl chloride	75-01-4				✓	✓	·	✓	✓	✓	✓	✓
xylenes	1330-20-7				✓	✓	✓	✓			✓	✓
1,2,3,4,6,7,8-HpCDD	35822-46-9	PCDDs, PCDFs, PCBs	✓				✓			✓		✓
1,2,3,4,6,7,8,9-OCDD	3268-87-9		✓				✓			✓		✓
2,3,7,8-TCDF	51207-31-9		✓			✓				✓		✓
1,2,3,4,6,7,8-HpCDF	67562-39-4		✓				✓			✓		✓
1,2,3,4,6,7,8,9-OCDF	39001-02-0		✓				✓			✓		✓
3,3',4,4'-TCB (PCB 77)	32598-13-3		✓					✓		✓	✓	✓
2,3',4,4',5-PeCB (PCB 118)	31508-00-6		✓					✓		✓	✓	✓
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4		✓					✓		✓	✓	✓
ammonia	7664-41-7	Inorganic			✓		✓	✓	✓		✓	✓
aluminum	91728-14-2		✓				✓	✓			✓	✓
antimony	7440-36-0		✓			✓	✓				✓	✓
barium	7440-39-3		✓				✓				✓	✓
beryllium	7440-41-7		✓				✓			✓	✓	✓
cadmium	7440-43-9		✓			✓	✓	✓		✓	✓	✓
chlorine	7782-50-5		✓				✓	✓			✓	✓
chromium (3+)	16065-83-1		✓			✓	✓	✓			✓	✓
chromium (6+)	18540-29-9		✓			✓	✓	✓		✓	✓	
cobalt	7440-48-4		✓				✓				✓	✓
copper	7440-50-8		✓			✓	✓	✓			✓	✓
hydrogen chloride	7647-01-0		✓				✓	✓			✓	✓
hydrogen cyanide	74-90-8		✓						✓		✓	✓
iron	7439-89-6		✓				✓	✓			✓	✓
lead	7439-92-1		✓			✓	✓	✓		✓		✓

Chemicals of Potential Concern and Data Availability (continued)

COPC	CAS	Chemical Grouping	Emission Source			COPC				Toxicity Data		
										Chronic		Acute
			EDT Only	PCAPP Only	Both EDT and PCAPP	SDC	TDC	DAVINCH	EDS	Cancer	Noncancer	Inhalation
manganese	7439-96-5	Inorganic	✓				✓	✓			✓	✓
mercuric chloride	7487-94-7		✓								✓	✓
methyl mercury	22967-92-6		✓				✓ [a]	✓ [a]	✓ [a]		✓	✓
elemental mercury	7439-97-6		✓								✓	✓
nickel	7440-02-0		✓			✓	✓	✓		✓	✓	✓
selenium	7782-49-2		✓				✓				✓	✓
silver	7440-22-4		✓				✓				✓	✓
vanadium	7440-62-2		✓				✓	✓			✓	✓
zinc	7440-66-6		✓			✓	✓	✓			✓	✓

✓ = Indicates this COPC is emitted from the specific EDT and/or toxicity data are available for this COPC/pathway.

a. Speciated mercury emissions were reported as total mercury.

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APPENDIX A-1 EMISSIONS AND MODEL INPUT DOCUMENTATION FOR SDC, TDC, AND DAVINCH

APPENDIX A-2 EMISSIONS AND MODEL INPUT DOCUMENTATION FOR EDS

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APPENDIX A-1

EMISSIONS AND MODEL INPUT DOCUMENTATION FOR SDC, TDC, AND DAVINCH

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Emissions and EDT MPHRA Input Documentation for SDC, TDC, and DAVINCH

A National Environmental Policy Act (NEPA) Environmental Assessment (EA) must be prepared to evaluate the environmental impacts associated with the destruction of existing and operational overpacks and rejects, as well as some or all of the downloaded energetic material from the Pueblo Chemical Depot (PCD) stockpile. One method of disposing of these materials is an explosive destruction technology (EDT). This Multiple Pathway Health Risk Assessment (MPHRA) was performed to support the EA by providing comparison data for the health risks of the various EDTs considered. This document provides the basis for the emissions and air model inputs that are used as the basis of the MPHRA. Several tables are identified and discussed in this document. Tables identified with an "A-1" followed by a number can be found in Attachment 1 to this document. All other tables are in the Appendix A-1 front matter.

1 Basis for Emission Estimates and Other Documentation

1.1 Pollutants Emitted

In July 2010, interested vendors responded to a request for proposal (RFP) to construct an EDT system at the Pueblo Chemical Agent-destruction Pilot Plant (PCAPP). As part of the response, vendors were requested to provide emission rates for all pollutants known to be emitted from the system. Table 1 presents an excerpt from the RFP that solicited air pollutant emission rates. Vendors were requested to indicate whether each pollutant was known to be present (P), absent (A), or unknown (U) before and after the off-gas treatment system (OTS).

Table 1. Original Pollutant List from EDT RFP[(a)]

Compound	CAS Number	Before OTS	After OTS	Emission Rate
		P, A, or U		g/s or lb/hr
Volatile Organic Compounds				
acetone	67-64-1			
acetaldehyde	75-07-0			
benzene	71-43-2			
bromodichloromethane	75-27-4			
bromoform	75-25-2			
2-butanone	78-93-3			
carbon disulfide	75-15-0			
carbon tetrachloride	56-23-5			
chlorobenzene	108-90-7			
1-chlorobutane	109-69-3			
2-chlorobutane	78-86-4			
chloroethane	75-00-3			
2-chloroethoxyethane	112-26-5			
chloroform	67-66-3			
chloromethane	74-87-3			
chloromethoxyethane	3188-13-4			
dibromochloromethane	124-48-1			
1,2-dichlorobutane	616-21-7			
1,1-dichloroethane	75-34-3			
1,2-dichloroethane	107-06-2			
1,1-dichloroethene	75-35-4			
1,2-dichloropropane	78-87-5			
cis-1,3-dichloropropene	10061-01-5			
trans-1,3-dichloropropene	10061-02-6			
diethyl ether	60-29-7			
1,4-dioxane	123-91-1			

Table 1. Original Pollutant List from EDT RFP (continued)

Compound	CAS Number	Before OTS	After OTS	Emission Rate
		P, A, or U		g/s or lb/hr
1,4-dithiane	505-29-3			
ethane	74-84-0			
ethene	74-85-1			
ethylbenzene	100-41-4			
2-ethyl 1,3-butadiene	3404-63-5			
n-hexane	110-54-3			
2-hexanone	591-78-6			
1-hexene	592-41-6			
methane	74-82-8			
methylene chloride	75-09-2			
4-methyl-2-pentanone	108-10-1			
octane	111-65-9			
1,4-oxathiane	15980-15-1			
pentane	109-66-0			
propene	115-07-1			
styrene	100-42-5			
tert-butyl alcohol	75-65-0			
1,1,1,2-tetrachloroethane	630-20-6			
1,1,2,2-tetrachloroethane	79-34-5			
tetrachloroethene	127-18-4			
toluene	108-88-3			
1,2,3-trichlorobenzene	87-61-6			
1,1,1-trichloroethane	71-55-6			
trichloroethene	79-01-6			
1,2,4-trimethyl benzene	95-63-6			
vinyl chloride	75-01-4			
total xylene	108-38-3, 106-42-3, 95-47-6			
1,2-bis(ethylthio)-ethene	NA			
1,2-bis(vinylthio)-ethane	NA			
Semi-volatile Organic Compounds				
acrolein	107-02-8			
alpha-methylstyrene	98-83-9			
benzoic acid	65-85-0			
benzyl alcohol	100-51-6			
di-n-butyl phthalate	84-74-2			
diethyl phthalate	84-66-2			
dimethyl phthalate	131-11-3			
2,3-dimethyl-thiopene	632-16-6			
2,2-dimethyl-trans-thiirane	3772-13-2			
di-n-octyl phthalate	117-84-0			
bis(2-ethylhexyl)-phthalate	117-81-7			
hexachloro-1,3-butadiene	87-68-3			
hexachloroethane	67-72-1			
2-methyl-1,3-dithiacyclopentane	5616-51-3			
2-methyl-1,3-dithiane	6007-26-7			
2-methyl-1,3-oxathiolane	17642-74-9			
2-methylphenol (o-cresol)	95-48-7			
3-methylphenol (m-cresol)	108-39-4			
4-methylphenol (p-cresol)	106-44-5			
methyl-tert-butyl ether	1634-04-4			
naphthalene	91-20-3			
thiodigylcol	111-48-8			
thiirane	420-12-2			
1,2,4-trichlorobenzene	120-82-1			
Miscellaneous Analytes				
ammonia	7664-41-7			
chlorine				
sulfur mustard (HD)	505-60-2			
hydrogen fluoride	7664-39-3			
hydrogen chloride	7647-01-0			
particulate				

Table 1. Original Pollutant List from EDT RFP (continued)

Compound	CAS Number	Before OTS	After OTS	Emission Rate
		P, A, or U		g/s or lb/hr
Dioxins and Furans (include isomers and congener groups or the 2,3,7,8 tetra-equivalents)				
NAAQS Criteria Pollutants				
ozone				
particulate matter				
carbon monoxide				
nitrogen oxides				
sulfur dioxide				
Metals				
antimony	7440-36-0			
arsenic	7440-38-2			
barium	7440-39-3			
beryllium	7440-41-7			
boron	7440-42-8			
cadmium	7440-43-9			
chromium	7440-47-3			
cobalt	7440-48-4			
copper	744-50-8			
lead	7439-92-1			
manganese	7439-96-5			
mercury	7439-97-6			
nickel	7440-02-0			
phosphorus	7723-14-0			
selenium	7782-49-2			
silver	7440-22-4			
thallium	7440-28-0			
tin	7440-31-5			
vanadium	7440-62-2			
zinc	7440-66-6			
Other Emissions Not Listed Above (Populate)				

a. Source: Document 24852-SRA-MZA0-00001, Rev. 0, Exhibit "C" Form J. Technical Data

In late 2010, vendors were requested to provide separate emission rates for processing of overpacks and rejects versus processing of energetic materials. Table A-1-1 (in Attachment 1) presents the emission rate data as provided by each EDT vendor.

1.2 Feed Material Assumptions

Table 2 presents the quantity of feed materials proposed to be processed by the EDT.

Table 2. Feed Materials

Item	155-mm projectiles	105-mm projectiles	4.2-inch mortars	Comment
Required Feeds				
Overpacks	400	400	200	
Rejects	4,600	5,990	1,420	
Downloaded energetic material	299,554			bursters
		28,376		fuzes/boosters
			97,106	fuze/burster combination
Desired Feeds				
Balance of downloaded energetic material		383,418		bursters
		78,031 lb		propelling charges
			60,011 lb	propelling charges

1.3 Duration of EDT Operations

The EDT specification provides for operation 12 hours per day, 7 days per week during the same 5 years that PCAPP operates. During this 5-year period, each EDT must be capable of processing the required feeds presented in Table 2. If sufficient equipment capacity exists, some or all of the desired feeds will also be processed. Because processing rates vary by EDT, the quantity of desired feed processed also will vary by EDT.

Worst case emissions are based on contributions from both the required and desired feeds and operating scenarios for each EDT considered. Details for each EDT are presented in the following sections.

2 Static Detonation Chamber (SDC)

The Dynasafe Static Detonation Chamber (SDC) is a thermal destruction process. The munition is inserted into an already hot, externally heated (550 to 600º C [1,022 to 1,112º F]) chamber. The destruction of the munitions is achieved by heating the item above the auto initiation temperature for the energetic materials which results in their detonation or deflagration. Agent released from the detonation or deflagration event is pyrolized by the detonation/deflagration and the temperatures existing within the detonation chamber.[1]

2.1 SDC Stack and Enclosure Characteristics

Based on the design proposed by UXB in their response to the RFP, the SDC process is enclosed in a SPRUNG environmental enclosure with the following dimensions.

SPRUNG structure dimensions:	W:	69 feet (ft) at wide end, 39.3 ft at narrow end
	L:	200.5 ft
	H:	49.9 ft at peak

Exhaust from the SDC process OTS is sent to an IONEX CD2000 filter system, or equivalent, for final clean-up. This filter system is located in a separate building, and its stack has an agent monitor set to alarm at 0.7 times the Vapor Screening Level (VSL). The VSL is 0.003 milligrams per cubic meter (mg/m^3). Therefore, the agent monitor will alarm at 0.0021 mg/m^3. The IONEX CD2000 building and stack have the following characteristics.

IONEX CD2000 Building:	3.8 ft W x 25.3 ft L x 6.4 ft H
IONEX CD2000 Stack:	52.2 ft H, 1 ft diameter, 16.68 ft/s (786 ft^3/min), 123.5º F

Air from the environmental enclosure is exhausted through a separate filter system (IONEX CD16000, or equivalent) and stack. This filter system is located in a separate building and also has an agent monitor set to alarm at 0.7 VSL. The IONEX CD16000 building and stack have the following characteristics.

IONEX CD16000 Building:	9.6 ft W x 50.6 ft L x 11.8 ft H
IONEX CD16000 Stack:	16 ft H, 3 ft diameter, 16,000 ft^3/min, ambient temperature

[1] Assessment of Explosive Destruction Technologies for Specific Munitions at the Blue Grass and Pueblo Chemical Agent Destruction Pilot Plants, Committee to Review Assembled Chemical Weapons Alternatives Program Detonation Technologies, National Research Council, ISBN: 0-309-12684-3, 2009.

2.2 SDC Emission Rates

2.2.1 Normal Operations

Emissions from the SDC process are continuous, and under normal conditions are assumed to occur only from the process stack, not from the enclosure stack. Overpack and reject emission rates provided by the vendor are based on testing performed at the Anniston Chemical Agent Disposal Facility (ANCDF) in July 2011 using agent with the OTS in full operation. The OTS during testing consisted of a thermal oxidizer, quench system, baghouse filter, acid and neutral scrubbers, and a chem demil filter bank consisting of a HEPA filter followed by a Sulfur Impregnated activated Carbon (SIC) filter followed by an activated carbon (AC) filter and a final HEPA filter.

The vendor-supplied energetic emission rates are based on testing at ANCDF in December 2010 with intact live munitions (including mines) with the OTS in partial operation. The OTS during the energetics tests consisted of a thermal oxidizer, quench system, baghouse filter, acid and neutral scrubbers, and two stages of HEPA filters. Normally SIC and AC filters (two beds) are placed between the HEPA filters; however the SIC and AC filters were not installed for these tests. Thus, Battelle applied carbon control efficiencies to the energetic emission rates to obtain emission rates after all controls. This methodology followed that used to develop controlled COPC emission rates for the 2008 MPHRA for PCAPP, whereby control efficiencies were assigned according to the carbon adsorption factor for each pollutant.

2.2.1.1 Short-term Emission Rates

Table A-1-2 (in Attachment 1) presents the short-term emission rates for all pollutants indicated by the vendor to be present after the OTS (except HD). (Dioxin emission rates needed to be calculated from test data provided from the vendor. Therefore, Table A-1-3 presents the calculation methodology used to obtain the dioxin and furan emission rates presented in Table A-1-2.) Because HD was indicated to not be present, HD emission rates are based on continuous emissions from the process stack at 0.7 VSL. HD emission calculations are presented in Table A-1-13 in Attachment 1. The maximum short-term emission rates for each pollutant are used for modeling the acute scenario.

2.2.1.2 Long-term Emission Rates

Long-term emissions were estimated using the short-term emission rates and the SDC material processing schedule. Table A-1-4 presents the SDC 5-year processing schedule based on the processing rates for each material type. As indicated in Table A-1-4, the SDC can process the required feeds and 75 percent of the desired feeds within the 5-year PCAPP operating period.

Total (5-year) emissions were calculated for each pollutant by multiplying the short-term overpack/reject and energetics emission rates by 12 hours per day and by the number of days needed to process the materials. These two emission quantities were then summed to obtain the total emissions for each COPC for EDT operations. Long-term (or average) emission rates were obtained for each COPC by dividing the summed emission quantities for EDT operations by the total years of PCAPP operations (5 years) and the hours of EDT operation per year (4,380 [i.e., 12 hours per day, 7 days per week]). Table A-1-5 presents the long-term emission rates. The long-term average emission rates for each pollutant are used for modeling the chronic scenario.

2.2.2 Emergency/Accident Scenario

An emergency/accident scenario is also being considered, whereby agent is assumed to leak into the enclosure and be emitted from the enclosure stack. Because the enclosure stack also

has an agent monitor set to alarm at 0.7 VSL, the emergency/accident scenario incorporates the assumption that agent is emitted from this stack at 0.7 VSL, at the same time emissions are occurring from the process stack. Once the monitor alarms, the building enclosure is assumed to be cleared of agent after 10 building air changes have occurred. The volume of the enclosure is approximately 565,000 ft^3, and 10 air changes have a duration of approximately 6 hours. Therefore, emissions during that 6-hour period range from 0.7 VSL (1.6E-05 pounds HD per hour) at the time of alarm to 0.0 pounds after 6 hours.

2.3 Carbon Change-Out Documentation

The carbon filter backup system used for the SDC is designed for the specific requirements of the US Army chemical demilitarization program (DA PAM 385-61). Gases exiting the primary OTS are discharged to the atmosphere through this secondary filter system. The system provides secondary capacity to the OTS in the event of a system malfunction per the requirements of DA PAM 385-61. The carbon filter system consists of multiple banks of filters and adsorber cells assembled to adhere to industry standards ASME N509, ASME N510, ASME AG-1, and MIL-HDBK-144. Fabrication and testing are accomplished pursuant to the ASME NQA-1 quality standard. The filter system employs type II (tray-type) carbon adsorber cells with un-impregnated coconut shell-based, military grade adsorbents. The system is designed as a series of filters each performing a specific function as described below.

- Prefilter: A dry disposal group III-type per ARI standard 850 filter, Class 1 per UL standard 900. This prefilter removes particulates remaining in the gas stream that could otherwise cause premature blinding or clogging of the downstream HEPA filter.

- HEPA: A throw away, extended media dry, bayonet-type per MIL-HDBK-144. This HEPA filter removes particulates down to 0.3 microns at an efficiency of 99.7%.

- Carbon: Two filter beds containing 8x16 mesh activated coconut shell carbon per ANSI N 509 (non-impregnated). The first carbon filter removes gaseous contaminants (including agent if any), residual hydrocarbons (if any), and volatile and semivolatile heavy metals. The second carbon filter backs up the first.

  A space between the two carbon filters allows for the monitoring of possible agent breakthrough of the first carbon filter while still assuring that residual agent is removed by the second carbon filter before release to the atmosphere. A provision is made in this space for agent monitoring, and the space is continuously monitored using an ACAMS unit to provide early warning. If agent is detected in this space, the system is shut down and the filter elements are replaced. Shutdown happens before the agent can break through the second activated carbon bed and prevents release of agent outside of engineering controls.

- HEPA: A throw away, extended media dry, bayonet-type per MIL-HDBK-144. This HEPA filter captures particulates that may have been generated by the second carbon filter before the gas is released to the atmosphere.

The IONEX filter system housings are made of stainless steel, and each filter is equipped with a differential pressure monitor to enable knowledge of when a filter needs to be replaced. All filters within the system use a bag in/ bag out system so that the operator changing the filters never comes in contact with the actual filter media. The negative pressure induced draft fan

eliminates leakage, and the fan is powered by the emergency power generator again per the requirements of DA PAM 385-61.

The carbon filters are periodically challenged to determine remaining adsorption capacity. This challenge is performed by flowing dioctyl phthalate (DP) vapor into the filters through a specially designed dosing distribution system and monitoring the resulting concentration on the discharge side. The design challenge frequency is every 90 days. DP adsorption onto carbon is difficult, so the DP challenge represents a worst case scenario. The carbon is replaced when the remaining capacity of the first carbon bed becomes low. Both carbon beds are replaced if it is evident through testing that pollutants may have broken through. Note that HD is also continuously monitored between the beds, and if any is detected (this would indicate more problems than just HD breakthrough, since HD is not supposed to be present in the gasses going to the IONEX CD2000 in the first place) then both beds would be replaced. In most installations the carbon lasts several years.

3 Transportable Controlled Detonation Chamber

The CH2M Hill Transportable Controlled Detonation Chamber (TDC) is a "cold" detonation technology. A munition wrapped in explosive (the “donor” charge) is mounted in the detonation chamber. Detonation of the donor charge results in the destruction of the munition's explosive, if present, and the agent fill.[2]

3.1 TDC Stack and Enclosure Characteristics

As discussed in Section 3.2.1.2, two identical TDC systems are needed to treat the required munitions. Each TDC system is enclosed in an environmental enclosure with the following dimensions.

TDC system enclosure dimensions:	W:	70 ft
	L:	83 ft
	H:	20 ft at side wall; 30 ft at peak

Exhaust from the TDC OTS is discharged into the system enclosure. All air within the system enclosure is then discharged through a pair of identical building air filtration systems and stacks. Each stack has an agent monitor set to alarm at 0.7 times the VSL. Each building air filtration system and stack has the following characteristics.

TDC Building Filtration System:	7 ft W x 23 ft L x 9 ft H
TDC Stack:	10 ft H, 16 to 18 inch diameter, 5,000 ft^3/min, ambient temperature

3.2 TDC Emission Rates

3.2.1 Normal Operations

The detonation cycle is a batch process with approximately 45 minutes between detonations. Following detonation, the gases are purged from the detonation chamber over a 15-minute period. All of the purge gases are processed through the OTS and discharged into the system enclosure.

[2] *Ibid*., p. 4.

Overpack and reject emission rates provided by the vendor are based on testing performed at Porton Down, UK using 25-pdr mustard-filled munitions. The following OTS was in use during the testing:

- Alkali feed - removes approximately 99.5% of acid gases
- Particulate filter - removes approximately 99.9% of all particles by weight
- Catalytic oxidizer - removes approximately 99% of carbon monoxide and residual organics
- Dual bed carbon filters - removes approximately 99% of residual organics
- HEPA filter - removes approximately 99.97% of residual particles by weight

The vendor-supplied energetic emission rates are based on testing at the Crane Naval Surface Warfare Center, Crane, Indiana using Composition B explosive. The OTS in use during this testing was less complex than used for chemical munitions. The OTS used when testing energetic material only consisted of a particulate filter, which removes approximately 99.9% of particles by weight.

3.2.1.1 Short-term Emission Rates

Table A-1-6 (in Attachment 1) presents the short-term emission rates for all pollutants indicated by the vendor to be present after the OTS (except HD). (Dioxin emission rates needed to be calculated from test data provided from the vendor. Therefore, Table A-1-7 presents the calculation methodology used to obtain the dioxin and furan emission rates presented in Table A-1-6.) Because HD was indicated to not be present, HD emission rates are based on continuous emissions from the process stack at 0.7 VSL. HD emission calculations are presented in Table A-1-13 in Attachment 1. The maximum short-term emission rates for each pollutant are used for modeling the acute scenario.

3.2.1.2 Long-term Emission Rates

Long-term emissions were estimated using the short-term emission rates and the TDC material processing schedule. Table A-1-8 presents the TDC 5-year processing schedule based on the processing rates for each material type. As indicated in Table A-1-8, it will take more than 5 years to process the required feeds with one TDC unit. Therefore, two TDC units are required. With two TDC units, all the required and desired feeds can be processed in less than the 5-year PCAPP operating period.

Total (5-year) emissions were calculated for each pollutant by multiplying the short-term overpack/reject and energetics emission rates by 12 hours per day and by the number of days needed to process the materials. These two emission quantities were then summed to obtain the total emissions for each COPC for EDT operations. Long-term (or average) emission rates were obtained for each COPC by dividing the summed emission quantities for EDT operations by the total years of PCAPP operations (5 years) and the hours of EDT operation per year (4,380 [i.e., 12 hours per day, 7 days per week]). Table A-1-9 presents the long-term emission rates. The long-term average emission rates for each pollutant are used for modeling the chronic scenario.

3.2.2 Emergency/Accident Scenario

No additional emergency/accident scenario will be considered for the TDC because process emissions and building ventilation air are combined prior to discharge. The stacks have agent monitors set to alarm at 0.7 VSL that do not differentiate the source of the agent. Therefore, the

emission rates assumed under normal operations are adequate to assess risk for both short-term and long-term exposures.

3.3 Carbon Change-Out Documentation

3.3.1 TDC Carbon Filters

This sub-system of the TDC off-gas treatment design is comprised of a lead-lag adsorption arrangement. The lead system is for primary pollutant capture and the lag system is for breakthrough capture. The inlet to the lead system is continuously monitored using a MINICAMS, with DAAMS confirmation monitoring at the same location. There is a DAAMS monitoring location between the lead-lag beds that would be analyzed in the event of an agent alarm. If agent is detected between the lead-lag beds, the lead bed would be replaced with on-site spares. Both the lead and lag carbon adsorption beds are disposed of at the completion of a project (prior to transport of the TDC system to the next location).

3.3.2 System Enclosure Carbon Filters

The System Enclosure OTS consists of two parallel units, each with a pre-filter HEPA/Carbon/Carbon/HEPA filter. Agent monitoring is conducted at several locations. The inlets to each filter include DAAMS monitoring capabilities. These locations are analyzed daily. The mid-beds of the carbon adsorbers on each unit are continuously monitored by MINICAMS, with DAAMS sampling for confirmation in case of detection. In addition, a MINICAM monitor with DAAMS confirmation operates at the location representing the discharge to atmosphere. The upstream (first) carbon filter bed is replaced if agent is detected at the mid-bed location. All filter elements are also disposed of at the completion of the project, prior to shipment of the equipment.

4 DAVINCH

The detonation of ammunition in a vacuum integrated chamber, a.k.a. DAVINCH, was developed by Kobe Steel. Ltd. and is a "cold" detonation technology. The DAVINCH uses a detonation chamber in which chemical munitions and their contents are destroyed when donor charges wrapped around the munitions are detonated under a near vacuum. Agent is destroyed by the high temperatures and pressures resulting from the detonation and by the fireball in the chamber.[3]

4.1 DAVINCH Stack and Enclosure Characteristics

Based on the use of a single DV65 detonation chamber as proposed by Versar, the DAVINCH process is enclosed in a SPRUNG environmental enclosure with the following dimensions.

SPRUNG structure dimensions:	W:	90 ft
	L:	90 ft
	H:	33.4 ft at peak

Exhaust from the DAVINCH OTS is combined with building ventilation air from the environmental enclosure and discharged through a single stack approximately 65 feet from the environmental enclosure. The stack has an agent monitor set to alarm at 0.7 times the VSL. The stack is located adjacent to the final process filter building and has the following characteristics.

DAVINCH Process Filter Building: 8 ft W x 40 ft L x 8.5 ft H

[3] *Ibid.*, p. 4.

DAVINCH Stack:	52 ft H, 22 inch diameter, 17,000 ft^3/min, ambient temperature

4.2 DAVINCH Emission Rates

4.2.1 Normal Operations

The detonation cycle is a batch process with approximately 70 minutes between detonations. Following detonation, the gases are purged from the detonation chamber over a 15-minute period. All of the purge gases are processed through the OTS and discharged together with the air from the system enclosure. The OTS consists of a pre-filter, oxidizer, scrubber, and AC filter. The building ventilation air passes through a pre-filter, HEPA filter, and AC filter prior to discharge.

Overpack and reject emission rates provided by the vendor are based on testing performed at the Kanda Port, Japan and Poelkapelle, Belgium. MPHRA emission rates are based on the following:

- hydrogen chloride - Measurements at Belgium; maximum value used for emission rate.
- dioxins and furans - Measurements at Japan; maximum value used for emission rate.
- copper - Assumed 1 percent of copper within the detonator enters the OTS, where 99 percent is removed by scrubber and 99.9 percent by filter.
- lead - Assumed 1 percent of lead within the detonator enters the OTS, where 99 percent is removed by scrubber and 99.9 percent by filter.
- mercury - Assumed 0.7 percent of mercury within the detonator enters the OTS, where 99 percent is removed by scrubber, 99.9 percent by filter, and 99.9 percent by SIC.

To date, Versar has not provided energetic emission rates for the DAVINCH.

4.2.1.1 Short-term Emission Rates

Table A-1-10 (in Attachment 1) presents the short-term emission rates for all pollutants indicated by the vendor to be present after the OTS (except HD). Because HD was indicated to not be present, HD emission rates are based on continuous emissions from the process stack at 0.7 VSL. HD emission calculations are presented in Table A-1-13 in Attachment 1.

Short-term energetic emission rates were not available for the DAVINCH. Therefore, the maximum short-term energetic emission rate for either the SDC or the two TDC units was used to represent the upper bound of energetic emissions for DAVINCH.

The maximum short-term emission rates for each pollutant are used for modeling the acute scenario.

4.2.1.2 Long-term Emission Rates

Long-term emissions were estimated using the short-term emission rates and the DAVINCH material processing schedule. Table A-1-11 presents the DAVINCH 5-year processing schedule based on the processing rates for each material type. As indicated in Table A-1-11, it will take less than the 5-year PCAPP operating period to process 100 percent of the required and desired feeds with one DAVINCH unit.

Total (5-year) emissions were calculated for each pollutant by multiplying the short-term overpack/reject and energetics emission rates by 12 hours per day and by the number of days needed to process the materials. These two emission quantities were then summed to obtain

the total emissions for each COPC for EDT operations. Long-term (or average) emission rates were obtained for each COPC by dividing the summed emission quantities for EDT operations by the total years of PCAPP operations (5 years) and the hours of EDT operation per year (4,380 [i.e., 12 hours per day, 7 days per week]). Table A-1-12 presents the long-term emission rates. The long-term average emission rates for each pollutant are used for modeling the chronic scenario.

4.2.2 Emergency/Accident Scenario

No additional emergency/accident scenario will be considered for the DAVINCH because process emissions and building ventilation air are combined prior to discharge. The stack has an agent monitor set to alarm at 0.7 VSL that does not differentiate the source of the agent. Therefore, the emission rates assumed under normal operations are adequate to assess risk for short-term and long-term exposures.

4.3 Carbon Change-Out Documentation

To date, Versar has not provided carbon change-out documentation for the DAVINCH.

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Attachment 1

Emission Rate Data Provided by EDT Vendors

and

Emission Rate Calculations

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TABLE A-1-1. EMISSION RATE DATA FROM VENDORS

		SDC					
		Overpacks/Rejects			Energetics		
Compound	CAS Number	Before OTS	After OTS	Emissions Rate (g/sec) [a, b]	Before OTS	After OTS	Emissions Rate (g/sec) [c, d]
Volatile Organic Compounds							
acetone	67-64-1	U	P	5.85E-06	U	P	4.58E-06
acetaldehyde	75-07-0	U	U	U	U	U	U
benzene	71-43-2	U	P	<5.52E-07	U	P	<2.23E-05
bromodichloromethane	75-27-4	U	P	<1.03E-06	U	P	<5.95E-07
bromoform	75-25-2	U	A	<9.93E-07 ND	U	A	<9.43E-07 ND
2-butanone	78-93-3	U	P	<3.93E-06	U	P	<4.27E-06
carbon disulfide	75-15-0	U	P	<7.44E-07	U	P	<3.74E-06
carbon tetrachloride	56-23-5	U	P	<2.06E-06	U	P	<3.82E-07
chlorobenzene	108-90-7	U	P	<3.82E-07	U	P	<5.04E-07
1-chlorobutane	109-69-3	U	U	U	U	U	U
2-chlorobutane	78-86-4	U	U	U	U	U	U
chloroethane	75-00-3	U	A	<1.99E-06 ND	U	A	<1.99E-06 ND
2-chloroethoxyethane	112-26-5	U	U	U	U	U	U
chloroform	67-66-3	U	P	<6.00E-06	U	P	<9.88E-07
chloromethane	74-87-3	U	P	<2.05E-06	U	P	<2.69E-06
chloromethoxyethane	3188-13-4	U	U	U	U	U	U
dibromochloromethane	124-48-1	U	P	<7.53E-07	U	P	<7.34E-07
1,2-dichlorobutane	616-21-7	U	U	U	U	U	U
1,1-dichloroethane	75-34-3	U	P	<3.76E-07	U	A	<4.98E-07 ND
1,2-dichloroethane	107-06-2	U	P	<3.81E-07	U	A	<4.78E-07 ND
1,1-dichloroethene	75-35-4	U	P	<3.45E-07	U	A	<4.98E-07 ND
1,2-dichloropropane	78-87-5	U	P	<4.59E-07	U	A	<4.98E-07 ND
cis-1,3-dichloropropene	10061-01-5	U	P	<4.61E-07	U	A	<4.98E-07 ND
trans-1,3-dichloropropene	10061-02-6	U	P	<4.89E-07	U	A	<4.98E-07 ND
diethyl ether	60-29-7	U	U	U	U	U	U
1,4-dioxane	123-91-1	U	U	U	U	U	U
1,4-dithiane	505-29-3	U	U	U	U	U	U
ethane	74-84-0	U	U	U	U	U	U
ethene	74-85-1	U	U	U	U	U	U
ethylbenzene	100-41-4	U	P	<4.87E-07	U	P	<4.44E-07
2-ethyl 1,3-butadiene	3404-63-5	U	U	U	U	U	U
n-hexane	110-54-3	U	P	<8.53E-07	U	P	<8.32E-07
2-hexanone	591-78-6	U	A	<4.14E-06 ND	U	A	<4.15E-06 ND
1-hexene	592-41-6	U	U	U	U	U	U
methane	74-82-8	U	U	U	U	U	U
methylene chloride	75-09-2	U	P	4.84E-06	U	P	<7.73E-07
4-methyl-2-pentanone	108-10-1	U	A	<4.14E-06 ND	U	A	<4.15E-06 ND
octane	111-65-9	U	U	U	U	U	U
1,4-oxathiane	15980-15-1	U	U	U	U	U	U
pentane	109-66-0	U	U	U	U	U	U
propene	115-07-1	U	U	U	U	U	U
styrene	100-42-5	U	P	<3.47E-07	U	P	<4.92E-06
tert-butyl alcohol	75-65-0	U	U	U	U	U	U
1,1,1,2-tetrachloroethane	630-20-6	U	A	<5.00E-07 ND	U	U	U
1,1,2,2-tetrachloroethane	79-34-5	U	A	<9.93E-07 ND	U	A	<9.96E-07 ND
tetrachloroethene	127-18-4	U	P	<4.44E-07	U	P	<5.22E-07
toluene	108-88-3	U	P	<2.90E-07	U	P	<1.69E-06
1,2,3-trichlorobenzene	87-61-6	U	U	U	U	U	U
1,1,1-trichloroethane	71-55-6	U	P	<7.93E-07	U	U	U
trichloroethene	79-01-6	U	P	<4.41E-07	U	P	<4.42E-07
1,2,4-trimethyl benzene	95-63-6	U	U	U	U	U	U
vinyl chloride	75-01-4	U	P	<5.69E-07	U	A	<4.94E-07 ND
total xylene	108-38-3, 106-42-3, 95-47-6	U	P	<1.17E-06	U	P	<1.23E-06
1,2-bis(ethylthio)-ethene	13105-10-7	U	U	U	U	U	U
1,2-bis(vinylthio)-ethane	63938-34-1	U	U	U	U	U	U

TABLE A-1-1. EMISSION RATE DATA FROM VENDORS

		SDC					
		Overpacks/Rejects			Energetics		
Compound	**CAS Number**	**Before OTS**	**After OTS**	**Emissions Rate (g/sec) [a, b]**	**Before OTS**	**After OTS**	**Emissions Rate (g/sec) [c, d]**
Semi-volatile Organic Compounds							
acrolein	107-02-8	U	U	U	U	U	U
alpha-methylstyrene	98-83-9	U	U	U	U	U	U
benzoic acid	65-85-0	U	P	<1.94E-05	U	A	<2.22E-05 ND
benzyl alcohol	100-51-6	U	P	<1.82E-06	U	P	<2.40E-06
di-n-butyl phthalate	84-74-2	U	P	<2.05E-06	U	P	<2.88E-06
diethyl phthalate	84-66-2	U	A	<2.42E-06 ND	U	A	<2.42E-06 ND
dimethyl phthalate	131-11-3	U	A	<2.42E-06 ND	U	P	<2.38E-06
2,3-dimethyl-thiopene	632-16-6	U	U	U	U	U	U
2,2-dimethyl-trans-thiirane	3772-13-2	U	U	U	U	U	U
di-n-octyl phthalate	117-84-0	U	A	<2.42E-06 ND	U	U	U
bis(2-ethylhexyl)-phthalate	117-81-7	U	P	<2.94E-06	U	A	<2.61E-06 ND
hexachloro-1,3-butadiene	87-68-3	U	A	<2.42E-06 ND	U	U	U
hexachloroethane	67-72-1	U	A	<2.42E-06 ND	U	A	<2.61E-06 ND
2-methyl-1,3-dithiacyclopentane	5616-51-3	U	U	U	U	U	U
2-methyl-1,3-dithiane	6007-26-7	U	U	U	U	U	U
2-methyl-1,3-oxathiolane	17642-74-9	U	U	U	U	U	U
2-methylphenol (o-cresol)	95-48-7	U	A	<2.42E-06 ND	U	A	<2.61E-06 ND
3-methylphenol (m-cresol)	108-39-4	U	A	<1.21E-05 ND	U	A	<1.30E-05 ND
4-methylphenol (p-cresol)	106-44-5	U	A	<2.42E-06 ND	U	A	<2.61E-06 ND
methyl-tert-butyl ether	1634-04-4	U	U	U	U	U	U
naphthalene	91-20-3	U	A	<2.42E-06 ND	U	A	<1.17E-05 ND
thiodigylcol	111-48-8	U	U	U	U	U	U
thiirane	420-12-2	U	U	U	U	U	U
1,2,4-trichlorobenzene	120-82-1	U	A	<2.42E-06 ND	U	A	<2.61E-06 ND
Miscellaneous Analytes							
ammonia	7664-41-7	U	U	U	U	U	U
chlorine		U	A	<1.94E-05 ND	U	A	<7.75E-06 ND
HD	505-60-2	U	A	<8.95E-15 ND (see Note 1)	U	A	<8.95E-15 ND
HF	7664-39-3	U	A	<8.22E-05 ND	U	A	<7.21E-05 ND
HCl	7647-01-0	U	A	<8.11E-05 ND	U	A	<6.97E-05 ND
particulate		U	P	1.07E-04	U	P	5.42E-05
Dioxins and Furans (include isomers and congener groups or the 2, 3, 7, 8 tetra-equivalents)		U	P	0.040 ng/dscm@7%O2	~~U~~	~~P~~	~~0.033 ng/dscm@7%O2~~
2,3,7,8-TCDD	1746-01-6						
1,2,3,7,8-PeCDD	40321-76-4						
1,2,3,4,7,8-HxCDD	39227-28-6						
1,2,3,6,7,8-HxCDD	57653-85-7						
1,2,3,7,8,9-HxCDD	19408-74-3						
1,2,3,4,6,7,8-HpCDD	35822-46-9						
1,2,3,4,6,7,8,9-OCDD	3268-87-9						
2,3,7,8-TCDF	51207-31-9						
1,2,3,7,8-PeCDF	57117-41-6						
2,3,4,7,8-PeCDF	57117-31-4						
1,2,3,4,7,8-HxCDF	70648-26-9						
1,2,3,6,7,8-HxCDF	57117-44-9						
1,2,3,7,8,9-HxCDF	72918-21-9						
2,3,4,6,7,8-HxCDF	60851-34-5						
1,2,3,4,6,7,8-HpCDF	67562-39-4						
1,2,3,4,7,8,9-HpCDF	55673-89-7						
1,2,3,4,6,7,8,9-OCDF	39001-02-0						
3,4,4',5-TCB (PCB 81)	70362-50-4						
3,3',4,4'-TCB (PCB 77)	32598-13-3						
3,3',4,4',5-PeCB (PCB 126)	57465-28-8						
3,3',4,4',5,5'-HxCB (PCB 169)	32774-16-6						
2',3,4,4',5-PeCB (PCB 123)	65510-44-3						
2,3',4,4',5-PeCB (PCB 118)	31508-00-6						
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4						
2,3,4,4',5-PeCB (PCB 114)	74472-37-0						
2,3',4,4',5,5'-HxCB (PCB 167)	52663-72-6						
2,3,3',4,4',5-HxCB (PCB 156)	38380-08-4						
2,3,3',4,4',5'-HxCB (PCB 157)	69782-90-7						
2,3,3',4,4',5,5'-HpCB (PCB 189)	39635-31-9						

TABLE A-1-1. EMISSION RATE DATA FROM VENDORS

		SDC					
		Overpacks/Rejects			Energetics		
Compound	**CAS Number**	**Before OTS**	**After OTS**	**Emissions Rate (g/sec) [a, b]**	**Before OTS**	**After OTS**	**Emissions Rate (g/sec) [c, d]**
NAAQS criteria pollutants							
ozone		U	U	U	U	U	U
particulate matter		U	U	U	U	U	U
carbon monoxide		U	P	1.40E-01 ppm @7%O2	U	P	1.40E-01 ppm @7%O2
nitrogen oxides		U	U	U	U	U	U
sulfur dioxide		U	U	U	U	U	U
Metals							
antimony	7440-36-0	U	P	6.49E-09	U	A	<3.44E-08 ND
arsenic	7440-38-2	~~U~~	~~P~~	~~<6.47E-08~~	~~U~~	~~P~~	~~<3.17E-08~~
barium	7440-39-3	~~U~~	~~P~~	~~2.59E-07~~	~~U~~	~~P~~	~~5.36E-07~~
beryllium	7440-41-7	~~U~~	~~P~~	~~<6.62E-09~~	~~U~~	~~A~~	~~<4.52E-08 ND~~
boron	7440-42-8	~~U~~	~~P~~	~~4.77E-06~~	~~U~~	~~P~~	~~3.23E-06~~
cadmium	7440-43-9	U	P	8.97E-09	U	P	9.32E-09
chromium	7440-47-3	U	P	1.87E-07	U	P	1.63E-07
cobalt	7440-48-4	~~U~~	~~P~~	~~1.14E-08~~	~~U~~	~~P~~	~~7.33E-09~~
copper	744-50-8	U	P	1.32E-07	U	P	1.24E-07
lead	7439-92-1	U	P	5.45E-08	U	P	3.76E-08
manganese	7439-96-5	~~U~~	~~P~~	~~5.41E-05~~	~~U~~	~~P~~	~~7.25E-07~~
mercury	7439-97-6	~~U~~	~~P~~	~~<2.22E-07~~ (see Note 2)	~~U~~	~~P~~	~~2.20E-06~~
nickel	7440-02-0	U	P	2.13E-07	U	P	1.62E-07
phosphorus	7723-14-0	~~U~~	~~P~~	~~<2.27E-06~~	~~U~~	~~P~~	~~<2.41E-06~~
selenium	7782-49-2	~~U~~	~~P~~	~~<9.07E-08~~	~~U~~	~~A~~	~~<1.33E-07 ND~~
silver	7440-22-4	~~U~~	~~P~~	~~7.03E-08~~	~~U~~	~~P~~	~~2.16E-07~~
thallium	7440-28-0	~~U~~	~~A~~	~~<2.51E-08 ND~~	~~U~~	~~A~~	~~<2.26E-08 ND~~
tin	7440-31-5	~~U~~	~~P~~	~~<3.98E-07~~	~~U~~	~~P~~	~~<2.66E-07~~
vanadium	7440-62-2	~~U~~	~~A~~	~~<1.26E-07 ND~~	~~U~~	~~A~~	~~<2.26E-07 ND~~
zinc	7440-66-6	U	P	2.22E-06	U	P	1.52E-06

TABLE A-1-1. EMISSION RATE DATA FROM VENDORS

		SDC					
		Overpacks/Rejects			Energetics		
Compound	**CAS Number**	**Before OTS**	**After OTS**	**Emissions Rate (g/sec) [a, b]**	**Before OTS**	**After OTS**	**Emissions Rate (g/sec) [c, d]**
Other Emissions Not Listed Above (Populated by vendors)							
Total Volatile TOCs (C1 through C7, includes above)		U	P	7.29E-04	U	P	2.51E-03
Semivolatile Total Chromatographable Organics (C8 through C17, includes above)		U	P	4.44E-05	U	P	3.51E-03
Semivolatile Total Gravimetric Organics (includes above)		U	P	2.14E-04	U	P	1.53E-04
Total Organics (includes above)		U	P	<5.48E-03	U	P	6.18E-03
2,4-dinitrotoluene	121-14-2		A	<1.76E-07 ND	U	A	<1.53E-07 ND
2,6-dinitrotoluene	606-20-2		A	<1.76E-07 ND	U	A	<1.53E-07 ND
HMX (cyclotetramethylenetetranitramine)	2691-41-0		A	<1.76E-07 ND	U	A	<1.53E-07 ND
nitroglycerin	55-63-0		A	<7.08E-07 ND	U	A	<6.18E-07 ND
RDX (cyclonite)	121-82-4		A	<1.76E-07 ND	U	A	<1.53E-07 ND
2,4,6-trinitrotoluene	118-96-7		A	<1.76E-07 ND	U	A	<1.53E-07 ND
iron	7439-89-6						
calcium	7789-78-8						
propane	74-98-6						
butane	106-97-8						
dichlorodifluoromethane	75-71-8		P	<9.76E-07			
trichlorofluoromethane	75-69-4		P	<5.09E-07			
1,3-butadiene	106-99-0		P	<3.30E-07			
bromomethane	74-83-9		P	<1.92E-06			
Freon 113	76-13-1		P	<1.01E-06			
aluminum	91728-14-2						
1,4-dichlorobenzene	106-46-7						
acetylene	74-86-2						
bromomethane	74-83-9						
monoethanolamine	141-43-5						
nitrobenzene	98-95-3						
hydrogen cyanide	74-90-8						
VOC							

*P=Present, A=Absent, and U=Unknown
Note: Pollutant order is as presented in the RFP.

Note 1 - Results given for HD are for testing performed in Germany in 2007 using US protocols on a similar system. No H or HD was detected. DE for HD was greater than 99.999999986%.
Note 2 - Hg is high due to no SIC/AC being present in the final filter to remove it.
Note 3 - Strikethrough data indicates pollutants that UXB believes will not be emitted at PCAPP.
a. The emissions rates were obtained during testing at ANCDF in July 2011 using mustard munitions and with the Pollution Abatement System (PAS) in full operation. The PAS in operation consisted of a thermal oxidizer, quench system, baghouse filter, acid and neutral scrubbers, and a chem demil filter bank consisting of a HEPA filter followed by a Sulfur Impregnated activated Carbon (SIC) filter followed by an activated carbon (AC) filter and a final HEPA filter before going to the stack.
b. A value with the "<" qualifier listed but without the "ND" qualifier means that the chemical species so denoted was detected, but the amount detected was below the quantitation limit for that particular chemical. In this case the quantitation limit for the chemical is reported, along with the "<" qualifier to denote that the actual value is less than the quantitation limit but is more than the detection limit. If both the "< " and the "ND" qualifiers are present this means that the chemical species denoted was not detected (i.e., was Absent). The value reported is the detection limit, and the "<" qualifier means the actual value (if any) is less than the detection limit.
c. The emissions rates were obtained during testing at ANCDF in December 2010 using ADAM and M74 mines and with the PAS in partial operation. The PAS in operation consisted of a thermal oxidizer, quench system, baghouse filter, acid and neutral scrubbers, and two stages of HEPA filters. Normally SIC and AC (two banks) are placed between the HEPA filters, however the SIC and AC filters were not installed for these measurements.
d. A value without the "<" or "ND" qualifiers is the actual value determined from analysis of the off gas at the stack. A value with the "<" qualifier listed but without the "ND" qualifier means that the chemical species so denoted was detected, but the amount detected was below the quantitation limit for that particular chemical. In this case the quantitation limit for the chemical is reported, along with the "<" qualifier to denote that the actual value is less than the quantitation limit but is more than the detection limit. If both the "< " and the "ND" qualifiers are present this means that the chemical species denoted was not detected (i.e., was Absent). The value reported is the detection limit, and the "<" qualifier means the actual value (if any) is less than the detection limit.

TABLE A-1-1. EMISSION RATE DATA FROM VENDORS

		TDC					
		Overpacks/Rejects			Energetics		
Compound	CAS Number	Before OTS	After OTS	Emissions Rate (lb/hr) [(a)]	Before OTS	After OTS	Emissions Rate (lb/hr) [(b)]
Volatile Organic Compounds							
acetone	67-64-1	P	P	3.30E-02	A	A	A
acetaldehyde	75-07-0	U	U	U	U	U	U
benzene	71-43-2	P	P	9.80E-04	P	P	1.30E-02
bromodichloromethane	75-27-4	U	U	U	U	U	U
bromoform	75-25-2	U	U	U	U	U	U
2-butanone	78-93-3	U	P	2.30E-03	A	A	A
carbon disulfide	75-15-0	U	U	U	U	U	U
carbon tetrachloride	56-23-5	U	A	<1.9E-3	A	A	A
chlorobenzene	108-90-7	P	A	<1.4E-3	A	A	A
1-chlorobutane	109-69-3	U	U	U	A	A	A
2-chlorobutane	78-86-4	U	U	U	A	A	A
chloroethane	75-00-3	U	A	<8.1E-4	A	A	A
2-chloroethoxyethane	112-26-5	U	U	U	A	A	A
chloroform	67-66-3	U	A	<1.5E-3	A	A	A
chloromethane	74-87-3	U	P	2.50E-04	A	A	A
chloromethoxyethane	3188-13-4	U	U	U	A	A	A
dibromochloromethane	124-48-1	U	U	U	A	A	A
1,2-dichlorobutane	616-21-7	U	U	U	A	A	A
1,1-dichloroethane	75-34-3	U	A	<1.2E-3	A	A	A
1,2-dichloroethane	107-06-2	U	A	<1.2E-3	A	A	A
1,1-dichloroethene	75-35-4	U	A	<1.2E-3	A	A	A
1,2-dichloropropane	78-87-5	U	A	<1.4E-3	A	A	A
cis-1,3-dichloropropene	10061-01-5	U	A	<1E-3	A	A	A
trans-1,3-dichloropropene	10061-02-6	U	U	U	A	A	A
diethyl ether	60-29-7	U	U	U	U	U	U
1,4-dioxane	123-91-1	P	P	1.20E-03	A	A	A
1,4-dithiane	505-29-3	P	U	U	A	A	A
ethane	74-84-0	P	P	<0.38	P	P	<5.3E-2
ethene	74-85-1	U	A	<0.35	U	A	<6.7E-2
ethylbenzene	100-41-4	P	A	<1.3E-3	P	A	<5.4E-4
2-ethyl 1,3-butadiene	3404-63-5	U	U	U	U	U	<1.2E-4
n-hexane	110-54-3	U	A	<0.31	A	A	<1.1E-4
2-hexanone	591-78-6	U	A	0.0012	A	A	A
1-hexene	592-41-6	U	U	U	U	U	U
methane	74-82-8	P	P	<0.16	P	P	<1.2
methylene chloride	75-09-2	U	A	<2.9E-3	A	A	A
4-methyl-2-pentanone	108-10-1	P	A	<1.2E-3	A	A	A
octane	111-65-9	U	U	U	A	A	A
1,4-oxathiane	15980-15-1	U	U	U	A	A	A
pentane	109-66-0	P	A	<0.26	P	A	<4.5E-4
propene	115-07-1	U	U	U	U	U	<1.3E-2
styrene	100-42-5	U	A	<1.3E-3	A	A	A
tert-butyl alcohol	75-65-0	U	U	U	A	A	A
1,1,1,2-tetrachloroethane	630-20-6	U	U	U	A	A	A
1,1,2,2-tetrachloroethane	79-34-5	U	A	<2.1E-3	A	A	A
tetrachloroethene	127-18-4	U	A	<2.1E-3	A	A	A
toluene	108-88-3	P	P	<5.5E-3	P	P	<2.2E-3
1,2,3-trichlorobenzene	87-61-6	U	U	U	A	A	A
1,1,1-trichloroethane	71-55-6	U	U	U	A	A	A
trichloroethene	79-01-6	U	A	<1.6E-3	A	A	A
1,2,4-trimethyl benzene	95-63-6	U	A	<1.5E-3	A	A	A
vinyl chloride	75-01-4	U	A	<7.8E-3	A	A	A
total xylene	108-38-3, 106-42-3, 95-47-6	P	A	<4.0E-3	P	P	8.00E-05
1,2-bis(ethylthio)-ethene	13105-10-7	U	U	U	U	U	U
1,2-bis(vinylthio)-ethane	63938-34-1	U	U	U	U	U	U

TABLE A-1-1. EMISSION RATE DATA FROM VENDORS

		TDC					
		Overpacks/Rejects			Energetics		
Compound	CAS Number	Before OTS	After OTS	Emissions Rate (lb/hr) [(a)]	Before OTS	After OTS	Emissions Rate (lb/hr) [(b)]
Semi-volatile Organic Compounds							
acrolein	107-02-8	U	U	U	A	A	A
alpha-methylstyrene	98-83-9	U	U	U	A	A	A
benzoic acid	65-85-0	U	A	< 2.2E-3	A	A	A
benzyl alcohol	100-51-6	U	A	< 8.8E-4	A	A	A
di-n-butyl phthalate	84-74-2	P	P	3.20E-05	P	P	<2.2E-5
diethyl phthalate	84-66-2	U	A	<4.4E-4	U	A	<4.4E-4
dimethyl phthalate	131-11-3	U	A	< 4.4 E-4	A	A	A
2,3-dimethyl-thiopene	632-16-6	U	U	U	A	A	A
2,2-dimethyl-trans-thiirane	3772-13-2	U	U	U	A	A	A
di-n-octyl phthalate	117-84-0	U	P	<4.4E-4	A	A	A
bis(2-ethylhexyl)-phthalate	117-81-7	U	P	<4.4E-4	U	P	<8E-5
hexachloro-1,3-butadiene	87-68-3	U	A	<4.4E-4	A	A	A
hexachloroethane	67-72-1	U	A	<4.4E-4	A	A	A
2-methyl-1,3-dithiacyclopentane	5616-51-3	U	U	U	A	A	A
2-methyl-1,3-dithiane	6007-26-7	U	U	U	A	A	A
2-methyl-1,3-oxathiolane	17642-74-9	U	U	U	A	A	A
2-methylphenol (o-cresol)	95-48-7	U	A	<4.4E-4	A	A	A
3-methylphenol (m-cresol)	108-39-4	U	A	<4.4E-4	A	A	A
4-methylphenol (p-cresol)	106-44-5	U	A	<4.4E-4	A	A	A
methyl-tert-butyl ether	1634-04-4	U	U	U	A	A	A
naphthalene	91-20-3	U	P	<4.4E-4	A	A	A
thiodigylcol	111-48-8	U	U	U	A	A	A
thiirane	420-12-2	U	U	U	U	U	U
1,2,4-trichlorobenzene	120-82-1	U	A	<4.4E-4	U	U	U
Miscellaneous Analytes							
ammonia	7664-41-7	P	P	1.00E-04	P	P	1.00E-04
chlorine		P	P	1.20E-03	P	P	1.20E-03
HD	505-60-2	P	A	<GPL	P	A	<GPL
HF	7664-39-3	P	U	U	P	U	U
HCl	7647-01-0	P	P	0.004	P	P	0.004
particulate		P	P	0.05	P	P	<1E-2
Dioxins and Furans (include isomers and congener groups or the 2, 3, 7, 8 tetra-equivalents)		P	P	8.2E-13 based on TEQ	A	A	A
2,3,7,8-TCDD	1746-01-6						
1,2,3,7,8-PeCDD	40321-76-4						
1,2,3,4,7,8-HxCDD	39227-28-6						
1,2,3,6,7,8-HxCDD	57653-85-7						
1,2,3,7,8,9-HxCDD	19408-74-3						
1,2,3,4,6,7,8-HpCDD	35822-46-9						
1,2,3,4,6,7,8,9-OCDD	3268-87-9						
2,3,7,8-TCDF	51207-31-9						
1,2,3,7,8-PeCDF	57117-41-6						
2,3,4,7,8-PeCDF	57117-31-4						
1,2,3,4,7,8-HxCDF	70648-26-9						
1,2,3,6,7,8-HxCDF	57117-44-9						
1,2,3,7,8,9-HxCDF	72918-21-9						
2,3,4,6,7,8-HxCDF	60851-34-5						
1,2,3,4,6,7,8-HpCDF	67562-39-4						
1,2,3,4,7,8,9-HpCDF	55673-89-7						
1,2,3,4,6,7,8,9-OCDF	39001-02-0						
3,4,4',5-TCB (PCB 81)	70362-50-4						
3,3',4,4'-TCB (PCB 77)	32598-13-3						
3,3',4,4',5-PeCB (PCB 126)	57465-28-8						
3,3',4,4',5,5'-HxCB (PCB 169)	32774-16-6						
2',3,4,4',5-PeCB (PCB 123)	65510-44-3						
2,3',4,4',5-PeCB (PCB 118)	31508-00-6						
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4						
2,3,4,4',5-PeCB (PCB 114)	74472-37-0						
2,3',4,4',5,5'-HxCB (PCB 167)	52663-72-6						
2,3,3',4,4',5-HxCB (PCB 156)	38380-08-4						
2,3,3',4,4',5'-HxCB (PCB 157)	69782-90-7						
2,3,3',4,4',5,5'-HpCB (PCB 189)	39635-31-9						

TABLE A-1-1. EMISSION RATE DATA FROM VENDORS

		TDC					
		Overpacks/Rejects			Energetics		
Compound	**CAS Number**	**Before OTS**	**After OTS**	**Emissions Rate (lb/hr) [(a)]**	**Before OTS**	**After OTS**	**Emissions Rate (lb/hr) [(b)]**
NAAQS criteria pollutants							
ozone		U	U	U	U	U	U
particulate matter		P	P	0.05	P	P	0.01
carbon monoxide		P	P	8.50E-02	P	P	0.12
nitrogen oxides		P	P	0.58	P	P	0.33
sulfur dioxide		P	P	0.1	A	A	A
Metals							
antimony	7440-36-0	P	P	<3.4E-5	A	A	A
arsenic	7440-38-2	~~P~~	~~P~~	~~8.80E-04~~	~~A~~	~~A~~	~~A~~
barium	7440-39-3	P	P	<6.8E-6	A	A	A
beryllium	7440-41-7	P	P	<3.2E-6	A	A	A
boron	7440-42-8	U	U	U	A	A	A
cadmium	7440-43-9	P	P	2.90E-05	P	P	<2.9E-6
chromium	7440-47-3	P	P	<7.6E-5	P	P	<1.6E-5
cobalt	7440-48-4	P	P	<1.2E-5	A	A	A
copper	744-50-8	P	P	<2.4E-5	P	P	<3.0E-4
lead	7439-92-1	P	P	<1.3E-5	P	P	<1.2E-5
manganese	7439-96-5	U	U	U	U	U	<1.4E-3
mercury	7439-97-6	P	P	<1.3E-5	A	A	A
nickel	7440-02-0	P	P	<1.5E-5	P	P	<4.7E-6
phosphorus	7723-14-0	U	U	U	U	U	U
selenium	7782-49-2	P	P	<9.4E-5	A	A	A
silver	7440-22-4	P	P	<8.3E-6	A	A	A
thallium	7440-28-0	U	A	<4.6E-5	A	A	A
tin	7440-31-5	U	U	U	U	U	U
vanadium	7440-62-2	P	P	<6.4E-5	P	P	<1.5E-5
zinc	7440-66-6	P	P	<5.6E-4	P	P	<5.0E-4

TABLE A-1-1. EMISSION RATE DATA FROM VENDORS

		TDC					
		Overpacks/Rejects			Energetics		
Compound	**CAS Number**	**Before OTS**	**After OTS**	**Emissions Rate (lb/hr) [(a)]**	**Before OTS**	**After OTS**	**Emissions Rate (lb/hr) [(b)]**
Other Emissions Not Listed Above (Populated by vendors)							
Total Volatile TOCs (C1 through C7, includes above)							
Semivolatile Total Chromatographable Organics (C8 through C17, includes above)							
Semivolatile Total Gravimetric Organics (includes above)							
Total Organics (includes above)							
2,4-dinitrotoluene	121-14-2						
2,6-dinitrotoluene	606-20-2						
HMX (cyclotetramethylenetetranitramine)	2691-41-0						
nitroglycerin	55-63-0						
RDX (cyclonite)	121-82-4						
2,4,6-trinitrotoluene	118-96-7						
iron	7439-89-6	P	P	0.05	P	P	<1.1E-3
calcium	7789-78-8	P	P	0.02			
propane	74-98-6	P	P	0.05			
butane	106-97-8	P	P	0.21			
dichlorodifluoromethane	75-71-8	P	P	2.90E-04			
trichlorofluoromethane	75-69-4	P	P	1.30E-04			
1,3-butadiene	106-99-0						
bromomethane	74-83-9						
Freon 113	76-13-1						
aluminum	91728-14-2				P	P	<3.8E-4
1,4-dichlorobenzene	106-46-7						
acetylene	74-86-2						
bromomethane	74-83-9						
monoethanolamine	141-43-5						
nitrobenzene	98-95-3						
hydrogen cyanide	74-90-8						
VOC					P	P	0.2

*P=Present, A=Absent, and U=Unknown
Note: Pollutant order is as presented in the RFP.

a. Emission rates were obtained during testing at Porton Down, UK in 2006 using UK 25-pdr mustard-filled munitions. Emission rates were then scaled up by a factor of 3.5 to account for the difference in mustard contained in the 25-pdr munitions compared to the 155-mm projectiles at the Pueblo Chemical Depot. Emission rates are after controls, including a candle filter with upstream lime addition for particulate and acid gas removal, a catalytic oxidizer for removal of carbon monoxide, and carbon adsorption vessels for semi-volatile compound removal. In addition, the system enclosure has a HEPA/carbon filtration unit.
b. Emission rates were obtained during testing at Crane Naval Surface Warfare Center in 2003 using projectiles containing Composition B. Emission rates are after controls, consisting of only a particulate filter.
c. Strikethrough data indicates metals that CH2M Hill believes will not be emitted at PCAPP.

TABLE A-1-1. EMISSION RATE DATA FROM VENDORS

		DAVINCH					
		Overpacks/Rejects			Energetics		
Compound	CAS Number	Before OTS	After OTS	Emissions Rate (lb/hr) [a]	Before OTS	After OTS	Emissions Rate (lb/hr)
Volatile Organic Compounds							
acetone	67-64-1						
acetaldehyde	75-07-0						
benzene	71-43-2						
bromodichloromethane	75-27-4	A	A	--			
bromoform	75-25-2	A	A	--			
2-butanone	78-93-3	U	U	U			
carbon disulfide	75-15-0						
carbon tetrachloride	56-23-5						
chlorobenzene	108-90-7	U	U	U			
1-chlorobutane	109-69-3	U	U	U			
2-chlorobutane	78-86-4	U	U	U			
chloroethane	75-00-3	U	U	U			
2-chloroethoxyethane	112-26-5	U	U	U			
chloroform	67-66-3						
chloromethane	74-87-3						
chloromethoxyethane	3188-13-4	U	U	U			
dibromochloromethane	124-48-1	A	A	--			
1,2-dichlorobutane	616-21-7	U	U	U			
1,1-dichloroethane	75-34-3	U	U	U			
1,2-dichloroethane	107-06-2	U	U	U			
1,1-dichloroethene	75-35-4						
1,2-dichloropropane	78-87-5	U	U	U			
cis-1,3-dichloropropene	10061-01-5	U	U	U			
trans-1,3-dichloropropene	10061-02-6	U	U	U			
diethyl ether	60-29-7	U	U	U			
1,4-dioxane	123-91-1	U	U	U			
1,4-dithiane	505-29-3	U	U	U			
ethane	74-84-0						
ethene	74-85-1						
ethylbenzene	100-41-4						
2-ethyl 1,3-butadiene	3404-63-5						
n-hexane	110-54-3						
2-hexanone	591-78-6	U	U	U			
1-hexene	592-41-6						
methane	74-82-8	A	A	--			
methylene chloride	75-09-2						
4-methyl-2-pentanone	108-10-1	U	U	U			
octane	111-65-9						
1,4-oxathiane	15980-15-1	U	U	U			
pentane	109-66-0						
propene	115-07-1						
styrene	100-42-5						
tert-butyl alcohol	75-65-0	U	U	U			
1,1,1,2-tetrachloroethane	630-20-6	U	U	U			
1,1,2,2-tetrachloroethane	79-34-5	U	U	U			
tetrachloroethene	127-18-4	U	U	U			
toluene	108-88-3						
1,2,3-trichlorobenzene	87-61-6	U	U	U			
1,1,1-trichloroethane	71-55-6	U	U	U			
trichloroethene	79-01-6	U	U	U			
1,2,4-trimethyl benzene	95-63-6	U	U	U			
vinyl chloride	75-01-4	U	U	U			
total xylene	108-38-3, 106-42-3, 95-47-6						
1,2-bis(ethylthio)-ethene	13105-10-7	U	U	U			
1,2-bis(vinylthio)-ethane	63938-34-1	U	U	U			

TABLE A-1-1. EMISSION RATE DATA FROM VENDORS

		DAVINCH					
		Overpacks/Rejects			Energetics		
Compound	CAS Number	Before OTS	After OTS	Emissions Rate (lb/hr) [(a)]	Before OTS	After OTS	Emissions Rate (lb/hr)
Semi-volatile Organic Compounds							
acrolein	107-02-8	U	U	U			
alpha-methylstyrene	98-83-9	U	U	U			
benzoic acid	65-85-0	U	U	U			
benzyl alcohol	100-51-6	U	U	U			
di-n-butyl phthalate	84-74-2	U	U	U			
diethyl phthalate	84-66-2	U	U	U			
dimethyl phthalate	131-11-3	U	U	U			
2,3-dimethyl-thiopene	632-16-6	U	U	U			
2,2-dimethyl-trans-thiirane	3772-13-2	U	U	U			
di-n-octyl phthalate	117-84-0	U	U	U			
bis(2-ethylhexyl)-phthalate	117-81-7	U	U	U			
hexachloro-1,3-butadiene	87-68-3	U	U	U			
hexachloroethane	67-72-1	U	U	U			
2-methyl-1,3-dithiacyclopentane	5616-51-3	U	U	U			
2-methyl-1,3-dithiane	6007-26-7	U	U	U			
2-methyl-1,3-oxathiolane	17642-74-9	U	U	U			
2-methylphenol (o-cresol)	95-48-7						
3-methylphenol (m-cresol)	108-39-4						
4-methylphenol (p-cresol)	106-44-5						
methyl-tert-butyl ether	1634-04-4	U	U	U			
naphthalene	91-20-3						
thiodigylcol	111-48-8	U	U	U			
thiirane	420-12-2	U	U	U			
1,2,4-trichlorobenzene	120-82-1	U	U	U			
Miscellaneous Analytes							
ammonia	7664-41-7						
chlorine		U	U	U			
HD	505-60-2	A	A	--			
HF	7664-39-3	A	A	--			
HCl	7647-01-0	P	P	8.8E-3 lb/shot			
particulate		P	P	1.1E-5 lb/shot			
Dioxins and Furans (include isomers and congener groups or the 2, 3, 7, 8 tetra-equivalents)		P	P	1.3E-12 lb/shot			
2,3,7,8-TCDD	1746-01-6	P	A	A			
1,2,3,7,8-PeCDD	40321-76-4	U	A	A			
1,2,3,4,7,8-HxCDD	39227-28-6	U	A	A			
1,2,3,6,7,8-HxCDD	57653-85-7	U	A	A			
1,2,3,7,8,9-HxCDD	19408-74-3	U	A	A			
1,2,3,4,6,7,8-HpCDD	35822-46-9	U	A	A			
1,2,3,4,6,7,8,9-OCDD	3268-87-9	U	A	A			
2,3,7,8-TCDF	51207-31-9	U	A	A			
1,2,3,7,8-PeCDF	57117-41-6	U	A	A			
2,3,4,7,8-PeCDF	57117-31-4	U	A	A			
1,2,3,4,7,8-HxCDF	70648-26-9	U	A	A			
1,2,3,6,7,8-HxCDF	57117-44-9	U	A	A			
1,2,3,7,8,9-HxCDF	72918-21-9	U	A	A			
2,3,4,6,7,8-HxCDF	60851-34-5	U	A	A			
1,2,3,4,6,7,8-HpCDF	67562-39-4	U	A	A			
1,2,3,4,7,8,9-HpCDF	55673-89-7	U	A	A			
1,2,3,4,6,7,8,9-OCDF	39001-02-0	U	A	A			
3,4,4',5-TCB (PCB 81)	70362-50-4	U	A	A			
3,3',4,4'-TCB (PCB 77)	32598-13-3	P	P	5.29E-13			
3,3',4,4',5-PeCB (PCB 126)	57465-28-8	U	A	A			
3,3',4,4',5,5'-HxCB (PCB 169)	32774-16-6	U	A	A			
2',3,4,4',5-PeCB (PCB 123)	65510-44-3	U	A	A			
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	P	P	1.32E-12			
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	P	P	5.29E-13			
2,3,4,4',5-PeCB (PCB 114)	74472-37-0	U	A	A			
2,3',4,4',5,5'-HxCB (PCB 167)	52663-72-6	U	A	A			
2,3,3',4,4',5-HxCB (PCB 156)	38380-08-4	U	A	A			
2,3,3',4,4',5'-HxCB (PCB 157)	69782-90-7	U	A	A			
2,3,3',4,4',5,5'-HpCB (PCB 189)	39635-31-9	U	A	A			

TABLE A-1-1. EMISSION RATE DATA FROM VENDORS

		DAVINCH					
		Overpacks/Rejects			Energetics		
Compound	**CAS Number**	**Before OTS**	**After OTS**	**Emissions Rate (lb/hr) [(a)]**	**Before OTS**	**After OTS**	**Emissions Rate (lb/hr)**
NAAQS criteria pollutants							
ozone							
particulate matter							
carbon monoxide							
nitrogen oxides		P	P	9.9E-3 lb/shot			
sulfur dioxide		P	P	2.2E-5 lb/shot			
Metals							
antimony	7440-36-0	A	A	--			
arsenic	7440-38-2	A	A	--			
barium	7440-39-3	A	A	--			
beryllium	7440-41-7	A	A	--			
boron	7440-42-8	A	A	--			
cadmium	7440-43-9	A	A	--			
chromium	7440-47-3	A	A	--			
cobalt	7440-48-4	A	A	--			
copper	744-50-8	P	P	2.2E-8 lb/shot			
lead	7439-92-1	P	P	3.1E-10 lb/shot			
manganese	7439-96-5	A	A	--			
mercury	7439-97-6	P	P	6.6E-9 lb/shot			
nickel	7440-02-0	A	A	--			
phosphorus	7723-14-0	A	A	--			
selenium	7782-49-2	A	A	--			
silver	7440-22-4	A	A	--			
thallium	7440-28-0	A	A	--			
tin	7440-31-5	A	A	--			
vanadium	7440-62-2	A	A	--			
zinc	7440-66-6	A	A	--			

TABLE A-1-1. EMISSION RATE DATA FROM VENDORS

		DAVINCH					
		Overpacks/Rejects			Energetics		
Compound	**CAS Number**	**Before OTS**	**After OTS**	**Emissions Rate (lb/hr) [(a)]**	**Before OTS**	**After OTS**	**Emissions Rate (lb/hr)**
Other Emissions Not Listed Above (Populated by vendors)							
Total Volatile TOCs (C1 through C7, includes above)							
Semivolatile Total Chromatographable Organics (C8 through C17, includes above)							
Semivolatile Total Gravimetric Organics (includes above)							
Total Organics (includes above)							
2,4-dinitrotoluene	121-14-2						
2,6-dinitrotoluene	606-20-2						
HMX (cyclotetramethylenetetranitramine)	2691-41-0						
nitroglycerin	55-63-0						
RDX (cyclonite)	121-82-4						
2,4,6-trinitrotoluene	118-96-7						
iron	7439-89-6						
calcium	7789-78-8						
propane	74-98-6						
butane	106-97-8						
dichlorodifluoromethane	75-71-8						
trichlorofluoromethane	75-69-4						
1,3-butadiene	106-99-0						
bromomethane	74-83-9						
Freon 113	76-13-1						
aluminum	91728-14-2						
1,4-dichlorobenzene	106-46-7						
acetylene	74-86-2						
bromomethane	74-83-9						
monoethanolamine	141-43-5						
nitrobenzene	98-95-3						
hydrogen cyanide	74-90-8						
VOC							

*P=Present, A=Absent, and U=Unknown
Note: Pollutant order is as presented in the RFP.

a. Emission rates are after controls, including an oxidizer (cold plasma), scrubber, HEPA filter, and sulfur-impregnated charcoal filter. Emissions are in units of pounds per hour unless otherwise noted.

TABLE A-1-2. SDC SHORT-TERM EMISSION RATE CALCULATIONS

Basis and Emissions Calculations:

a. Short-term (ST) emission rates were provided by the vendor in units of g/s. Emission rates were converted to units of lb/hr by the following equation

Emissions (lb/hr) = (Emissions, g/s) x (1 lb/454 g) x (60 s/1 min) x (60 min/1 hr)

For pollutants that were indicated to be present but below a specified value, the specified value was used as the emission rate

b. The SDC has a separate process emission stack and a building ventilation stack

c. The maximum between the overpacks/rejects and energetics short-term emission rates as shown in the last column below will be modeled as the emissions from the process stack for the acute risk scenario.

d. To account for an emergency/accident scenario, HD emissions from the building ventilation stack will also be modeled for the acute risk scenario

e. The vendor-supplied energetic emission rates are based on testing at ANCDF with mines with the OTS in partial operation. Normally SIC and AC filters (two beds) are placed between the HEPA filters; however the SIC and AC filters were not installed for these tests. Thus, Battelle applied carbon control efficiencies to the energetic emission rates to obtain emission rates after all controls. This methodology followed that used to develop controlled COPC emission rates for the 2008 MPHRA for PCAPP, whereby control efficiencies were assigned according to the carbon adsorption factor for each pollutant.

f. HD emissions are calculated as presented in Table A-1-13.

g. Chromium emissions are assumed to be half trivalent and half hexavalent.

Emissions Summary:

Compound	CAS Number	Calculated ST Emission Rates						Modeled ST Emission Rates		
		Overpacks/ Rejects		Energetics				Process Stack Max		Building Ventilation Stack
		g/s	lb/hr	g/s	% control efficiency of carbon	controlled g/s	controlled lb/hr	g/s	lb/hr	g/s
1,1,1-trichloroethane	71-55-6	7.93E-07	6.29E-06					7.93E-07	6.29E-06	
1,1-dichloroethane	75-34-3	3.76E-07	2.98E-06					3.76E-07	2.98E-06	
1,1-dichloroethene	75-35-4	3.45E-07	2.74E-06					3.45E-07	2.74E-06	
1,2-dichloroethane	107-06-2	3.81E-07	3.02E-06					3.81E-07	3.02E-06	
1,2-dichloropropane	78-87-5	4.59E-07	3.64E-06					4.59E-07	3.64E-06	
1,3-butadiene	106-99-0	3.30E-07	2.62E-06					3.30E-07	2.62E-06	
2-butanone	78-93-3	3.93E-06	3.12E-05	4.27E-06	85%	6.41E-07	5.08E-06	3.93E-06	3.12E-05	
acetone	67-64-1	5.85E-06	4.64E-05	4.58E-06	75%	1.15E-06	9.08E-06	5.85E-06	4.64E-05	
benzene	71-43-2	5.52E-07	4.38E-06	2.23E-05	90%	2.23E-06	1.77E-05	2.23E-06	1.77E-05	
benzoic acid	65-85-0	1.94E-05	1.54E-04					1.94E-05	1.54E-04	
benzyl alcohol	100-51-6	1.82E-06	1.44E-05	2.40E-06		2.40E-06	1.90E-05	2.40E-06	1.90E-05	
bis(2-ethylhexyl)-phthalate	117-81-7	2.94E-06	2.33E-05					2.94E-06	2.33E-05	
bromodichloromethane	75-27-4	1.03E-06	8.17E-06	5.95E-07	63%	2.23E-07	1.77E-06	1.03E-06	8.17E-06	
bromomethane	74-83-9	1.92E-06	1.52E-05					1.92E-06	1.52E-05	
carbon disulfide	75-15-0	7.44E-07	5.90E-06	3.74E-06	63%	1.40E-06	1.11E-05	1.40E-06	1.11E-05	
carbon tetrachloride	56-23-5	2.06E-06	1.63E-05	3.82E-07	85%	5.73E-08	4.54E-07	2.06E-06	1.63E-05	
chlorobenzene	108-90-7	3.82E-07	3.03E-06	5.04E-07	90%	5.04E-08	4.00E-07	3.82E-07	3.03E-06	
chloroform	67-66-3	6.00E-06	4.76E-05	9.88E-07	85%	1.48E-07	1.18E-06	6.00E-06	4.76E-05	
chloromethane	74-87-3	2.05E-06	1.63E-05	2.69E-06	50%	1.35E-06	1.07E-05	2.05E-06	1.63E-05	
cis-1,3-dichloropropene	10061-01-5	4.61E-07	3.66E-06					4.61E-07	3.66E-06	
dibromochloromethane	124-48-1	7.53E-07	5.97E-06	7.34E-07	63%	2.75E-07	2.18E-06	7.53E-07	5.97E-06	
dichlorodifluoromethane	75-71-8	9.76E-07	7.74E-06					9.76E-07	7.74E-06	
dimethyl phthalate	131-11-3			2.38E-06		2.38E-06	1.89E-05	2.38E-06	1.89E-05	
di-n-butyl phthalate	84-74-2	2.05E-06	1.63E-05	2.88E-06		2.88E-06	2.28E-05	2.88E-06	2.28E-05	
ethylbenzene	100-41-4	4.87E-07	3.86E-06	4.44E-07	90%	4.44E-08	3.52E-07	4.87E-07	3.86E-06	
Freon 113	76-13-1	1.01E-06	8.01E-06					1.01E-06	8.01E-06	
HD	505-60-2	7.79E-07	6.18E-06					7.79E-07	6.18E-06	1.59E-05
hexane	110-54-3	8.53E-07	6.76E-06	8.32E-07	85%	1.25E-07	9.90E-07	8.53E-07	6.76E-06	
methylene chloride	75-09-2	4.84E-06	3.84E-05	7.73E-07	75%	1.93E-07	1.53E-06	4.84E-06	3.84E-05	
styrene	100-42-5	3.47E-07	2.75E-06	4.92E-06	90%	4.92E-07	3.90E-06	4.92E-07	3.90E-06	
tetrachloroethene	127-18-4	4.44E-07	3.52E-06	5.22E-07	90%	5.22E-08	4.14E-07	4.44E-07	3.52E-06	
toluene	108-88-3	2.90E-07	2.30E-06	1.69E-06	90%	1.69E-07	1.34E-06	2.90E-07	2.30E-06	
trans-1,3-dichloropropene	10061-02-6	4.89E-07	3.88E-06					4.89E-07	3.88E-06	
trichloroethene	79-01-6	4.41E-07	3.50E-06	4.42E-07	85%	6.63E-08	5.26E-07	4.41E-07	3.50E-06	
trichlorofluoromethane	75-69-4	5.09E-07	4.04E-06					5.09E-07	4.04E-06	
vinyl chloride	75-01-4	5.69E-07	4.51E-06					5.69E-07	4.51E-06	
xylenes	1330-20-7	1.17E-06	9.28E-06	1.23E-06	90%	1.23E-07	9.75E-07	1.17E-06	9.28E-06	
2,3,7,8-TCDF	51207-31-9	1.26E-12	9.95E-12					1.26E-12	9.95E-12	
antimony	7440-36-0	6.49E-09	5.15E-08					6.49E-09	5.15E-08	
cadmium	7440-43-9	8.97E-09	7.11E-08	9.32E-09		9.32E-09	7.39E-08	9.32E-09	7.39E-08	
chromium (3+)	16065-83-1	9.35E-08	7.41E-07	8.15E-08		8.15E-08	6.46E-07	9.35E-08	7.41E-07	
chromium (6+)	18540-29-9	9.35E-08	7.41E-07	8.15E-08		8.15E-08	6.46E-07	9.35E-08	7.41E-07	
copper	744-50-8	1.32E-07	1.05E-06	1.24E-07		1.24E-07	9.83E-07	1.32E-07	1.05E-06	
lead	7439-92-1	5.45E-08	4.32E-07	3.76E-08		3.76E-08	2.98E-07	5.45E-08	4.32E-07	
nickel	7440-02-0	2.13E-07	1.69E-06	1.62E-07		1.62E-07	1.28E-06	2.13E-07	1.69E-06	
zinc	7440-66-6	2.22E-06	1.76E-05	1.52E-06		1.52E-06	1.21E-05	2.22E-06	1.76E-05	

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TABLE A-1-3. SDC DIOXIN/FURAN EMISSION CALCULATIONS

Basis:

a. Dioxin/furan samples were collected during agent testing of the SDC 1200 CM system in Anniston, AL during the month of July 2011. The results below were provided by UXB and are used to represent the dioxin/furan emission rates when processing overpacks/rejects.

b. Dioxin/furan samples were collected during emissions testing of the SDC 1200 CM system in Anniston, AL during the month of December 2010. The testing involved trials with mines. The results below were provided by UXB and intended to represent the dioxin/furan emission rates when processing energetic material. However, the source of chlorine in these tests (and thus dioxin/furan) was a plastic material packaging for the mines, which would not be present at PCAPP. Therefore, no dioxins are expected at PCAPP when processing energetic materials in the SDC.

Congener	Sample Mass, pg														
	Overpacks/Rejects Sample									Energetics Sample					
	C4aR1			C4aR2			C4aR4			M74			ADAM		
2,3,7,8-TCDD	<	1.65	ND	<	1.23	ND	<	1.01	ND	<	6.51	ND	<	7.67	ND
1,2,3,7,8-PeCDD	<	2.30	ND	<	1.47	ND	<	1.81	ND	<	4.7	ND	<	2.28	ND
1,2,3,4,7,8-HxCDD	<	2.18	ND	<	1.28	ND	<	0.93	ND	<	1.0	ND	<	1.16	ND
1,2,3,6,7,8-HxCDD	<	2.97	ND	<	0.92	ND	<	0.97	ND	<	1.72	ND	<	1.75	ND
1,2,3,7,8,9-HxCDD	<	4.90	ND	<	1.23	ND	<	2.20	ND	<	1.08	ND	<	2.15	ND
1,2,3,4,6,7,8-HpCDD	<	8.70	ND	<	7.00	ND	<	7.00	ND	<	7.0	ND	<	6.17	ND
OCDD	<	28.90	ND	<	23.30	ND	<	19.20	ND	<	37.3	ND	<	36.9	ND
2,3,7,8-TCDF	<	11.62		<	18.65		<	16.35		<	127.1		<	106.6	
1,2,3,7,8-PeCDF	<	1.29	ND	<	0.77	ND	<	1.86	ND	<	35.6	ND	<	28.66	ND
2,3,4,7,8-PeCDF	<	4.80	ND	<	2.04	ND	<	2.33	ND	<	72.63	ND	<	55.69	
1,2,3,4,7,8-HxCDF	<	5.80	ND	<	2.40	ND	<	2.43	ND	<	10.13	ND	<	9.26	ND
1,2,3,6,7,8-HxCDF	<	4.40	ND	<	1.86	ND	<	2.65	ND	<	6.88	ND	<	5.64	ND
2,3,4,6,7,8-HxCDF	<	4.00	ND	<	1.99	ND	<	2.66	ND	<	8.43	ND	<	5.39	ND
1,2,3,7,8,9-HxCDF	<	2.94	ND	<	0.95	ND	<	1.70	ND	<	1.28	ND	<	1.29	ND
1,2,3,4,6,7,8-HpCDF	<	22.20	ND	<	11.60	ND	<	9.20	ND	<	15.2	ND	<	12	ND
1,2,3,4,7,8,9-HpCDF	<	7.00	ND	<	2.32	ND	<	2.90	ND	<	1.88	ND	<	0.98	ND
OCDF	<	50.00	ND	<	16.90	ND	<	10.20	ND	<	22.5	ND	<	7.6	ND
Sample volume, dscf	141.9			135.8			121.0			133.6			135.4		
Stack gas flow rate, dscfm	685			671			575			670			706		

ND = non-detect

c. If a congener was not detected in any of the samples, a 0.0 emission rate is used.

d. If a congener was detected in at least one sample, the non-detect level is used for the non-detect sample to calculate an average concentration for that congener.

Overpacks/Rejects Emission Calculations:

Emission Rate (g/s) = (sample mass, pg) / (sample volume, dscf) x (sample gas flow rate, dscfm) x (1 g/10^{12} pg) x (1 min/60 s)

Average Emission Rate (g/s) = [(sample 1 emission rate, g/s) + (sample 2 emission rate, g/s) + (sample 3 emission rate, g/s)]/3

Congener	Overpacks/Rejects Sample												Overpacks/ Rejects Average Emission Rate (g/s)
	C4aR1				C4aR2				C4aR4				
	Sample Mass (pg)			Emission Rate (g/s)	Sample Mass (pg)			Emission Rate (g/s)	Sample Mass (pg)			Emission Rate (g/s)	
2,3,7,8-TCDD	<	1.65	ND	ND	<	1.23	ND	ND	<	1.01	ND	ND	ND
1,2,3,7,8-PeCDD	<	2.3	ND	ND	<	1.47	ND	ND	<	1.81	ND	ND	ND
1,2,3,4,7,8-HxCDD	<	2.18	ND	ND	<	1.28	ND	ND	<	0.93	ND	ND	ND
1,2,3,6,7,8-HxCDD	<	2.97	ND	ND	<	0.92	ND	ND	<	0.97	ND	ND	ND
1,2,3,7,8,9-HxCDD	<	4.9	ND	ND	<	1.23	ND	ND	<	2.2	ND	ND	ND
1,2,3,4,6,7,8-HpCDD	<	8.7	ND	ND	<	7	ND	ND	<	7	ND	ND	ND
OCDD	<	28.9	ND	ND	<	23.3	ND	ND	<	19.2	ND	ND	ND
2,3,7,8-TCDF	<	11.62		9.35E-13	<	18.65		1.54E-12	<	16.35		1.30E-12	1.26E-12
1,2,3,7,8-PeCDF	<	1.29	ND	ND	<	0.77	ND	ND	<	1.86	ND	ND	ND
2,3,4,7,8-PeCDF	<	4.8	ND	ND	<	2.04	ND	ND	<	2.33	ND	ND	ND
1,2,3,4,7,8-HxCDF	<	5.8	ND	ND	<	2.4	ND	ND	<	2.43	ND	ND	ND
1,2,3,6,7,8-HxCDF	<	4.4	ND	ND	<	1.86	ND	ND	<	2.65	ND	ND	ND
2,3,4,6,7,8-HxCDF	<	4	ND	ND	<	1.99	ND	ND	<	2.66	ND	ND	ND
1,2,3,7,8,9-HxCDF	<	2.94	ND	ND	<	0.95	ND	ND	<	1.7	ND	ND	ND
1,2,3,4,6,7,8-HpCDF	<	22.2	ND	ND	<	11.6	ND	ND	<	9.2	ND	ND	ND
1,2,3,4,7,8,9-HpCDF	<	7	ND	ND	<	2.32	ND	ND	<	2.9	ND	ND	ND
OCDF	<	50	ND	ND	<	16.9	ND	ND	<	10.2	ND	ND	ND
Sample volume, dscf	141.9				135.8				121.0				
Stack gas flow rate, dscfm	685				671				575				

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TABLE A-1-4. SDC PROCESSING SCHEDULE

Feed Type		Item	Quantity		SDC								
					Processing Rate [a]		Operating Schedule (hr/day)	Time to Process all Feeds (days)			Amount Processed in 5 Years		
								days		years	% of feed	days	years
Required	Overpacks/Rejects	155-mm projectile reject	4,600	items	2	item/hr	12	192	494	1.4	100%	494	1.4
	Overpacks/Rejects	105-mm projectile reject	5,990	items	3	item/hr	12	166					
	Overpacks/Rejects	4.2-inch mortar reject	1,420	items	6	item/hr	12	20					
	Overpacks/Rejects	155-mm projectile overpack	400	items	0.5	item/hr	12	67					
	Overpacks/Rejects	105-mm projectile overpack	400	items	1	item/hr	12	33					
	Overpacks/Rejects	4.2-inch mortar overpack	200	items	1	item/hr	12	17					
Required	Energetics	155-mm projectiles bursters	299,554	items	40	item/hr	12	624	774	2.1		774	2.1
	Energetics	4.2-inch mortar bursters	97,106	items	60	item/hr	12	135					
	Energetics	105-mm projectile fuze/booster	28,376	items	160	item/hr	12	15					
Desired	Energetics	105-mm projectile burster	383,418	items	63	item/hr	12	507	737	2.0	75%	380	1.0
	Energetics	105-mm projectile propellant	78,031	lb	50	lb/hr	12	130				98	0.3
	Energetics	4.2-inch mortar propellant	60,011	lb	50	lb/hr	12	100				75	0.2
							Total All Feeds		**2,005**	**5.5**		**1,821**	**5.0**

a. Includes an overall availability factor of 58.3%.

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TABLE A-1-5. SDC LONG-TERM EMISSION RATE CALCULATIONS

Basis and Emission Calculations:

a. Total emissions from processing of overpack/rejects and energetics are calculated as follows.

Pollutant emissions from	=	(overpack/reject emission rate, lb/hr) x (operating hours, hr/day) x (operating days over 5 years, days)
Overpacks/Rejects (lb)	=	(overpack/reject emission rate, lb/hr) x (12 hr/day) x (494 days)
Pollutant emissions from	=	(energetics emission rate, lb/hr) x (operating hours, hr/day) x (operating days over 5 years, days)
Energetics (lb)	=	(energetics emission rate, lb/hr) x (12 hr/day) x (1,327 days)
Total Emissions (lb)	=	Emissions from Overpacks/Rejects (lb) + Emissions from Energetics (lb)

b. Total average long-term emission rates are calculated based on a 5-year operating period, with 12 hours of operation per day.

Average Long-term emissions (lb/hr)	=	(total emissions, lb) / (operating years, yr) / (operating hours, hr/yr)
	=	(total emissions, lb) / (5 yr) / (4,380 hr/yr)
Average Long-term Emissions (g/s)	=	(average long-term emission rate, lb/hr) x (454 g/lb) x (1 hr/60 min) x (1 min/60 s)

Emissions Summary:

		Overpacks/Rejects					Energetics					Total 5-yr Project	Total Operating Time		Modeled (Average) Long-term Emission Rate	
		Emission Rate		Operating Schedule		Emissions	Emission Rate		Operating Schedule		Emissions					
Compound	CAS Number	g/s	lb/hr	hr/day	days/5-yr project	lb/5-yr project	controlled g/s	controlled lb/hr	hr/day	days/5-yr project	lb/5-yr project	lb	yr	hr/yr	lb/hr	g/s
1,1,1-trichloroethane	71-55-6	7.93E-07	6.29E-06	12	494	3.73E-02	0.00E+00	0.00E+00	12	1,327	0.00E+00	3.73E-02	5	4,380	1.70E-06	2.15E-07
1,1-dichloroethane	75-34-3	3.76E-07	2.98E-06	12	494	1.77E-02	0.00E+00	0.00E+00	12	1,327	0.00E+00	1.77E-02	5	4,380	8.08E-07	1.02E-07
1,1-dichloroethene	75-35-4	3.45E-07	2.74E-06	12	494	1.62E-02	0.00E+00	0.00E+00	12	1,327	0.00E+00	1.62E-02	5	4,380	7.41E-07	9.35E-08
1,2-dichloroethane	107-06-2	3.81E-07	3.02E-06	12	494	1.79E-02	0.00E+00	0.00E+00	12	1,327	0.00E+00	1.79E-02	5	4,380	8.19E-07	1.03E-07
1,2-dichloropropane	78-87-5	4.59E-07	3.64E-06	12	494	2.16E-02	0.00E+00	0.00E+00	12	1,327	0.00E+00	2.16E-02	5	4,380	9.86E-07	1.24E-07
1,3-butadiene	106-99-0	3.30E-07	2.62E-06	12	494	1.55E-02	0.00E+00	0.00E+00	12	1,327	0.00E+00	1.55E-02	5	4,380	7.09E-07	8.94E-08
2-butanone	78-93-3	3.93E-06	3.12E-05	12	494	1.85E-01	6.41E-07	5.08E-06	12	1,327	8.09E-02	2.66E-01	5	4,380	1.21E-05	1.53E-06
acetone	67-64-1	5.85E-06	4.64E-05	12	494	2.75E-01	1.15E-06	9.08E-06	12	1,327	1.45E-01	4.20E-01	5	4,380	1.92E-05	2.42E-06
benzene	71-43-2	5.52E-07	4.38E-06	12	494	2.60E-02	2.23E-06	1.77E-05	12	1,327	2.82E-01	3.07E-01	5	4,380	1.40E-05	1.77E-06
benzoic acid	65-85-0	1.94E-05	1.54E-04	12	494	9.13E-01	0.00E+00	0.00E+00	12	1,327	0.00E+00	9.13E-01	5	4,380	4.17E-05	5.26E-06
benzyl alcohol	100-51-6	1.82E-06	1.44E-05	12	494	8.56E-02	2.40E-06	1.90E-05	12	1,327	3.03E-01	3.89E-01	5	4,380	1.77E-05	2.24E-06
bis(2-ethylhexyl)-phthalate	117-81-7	2.94E-06	2.33E-05	12	494	1.38E-01	0.00E+00	0.00E+00	12	1,327	0.00E+00	1.38E-01	5	4,380	6.32E-06	7.97E-07
bromodichloromethane	75-27-4	1.03E-06	8.17E-06	12	494	4.85E-02	2.23E-07	1.77E-06	12	1,327	2.82E-02	7.66E-02	5	4,380	3.50E-06	4.41E-07
bromomethane	74-83-9	1.92E-06	1.52E-05	12	494	9.03E-02	0.00E+00	0.00E+00	12	1,327	0.00E+00	9.03E-02	5	4,380	4.12E-06	5.20E-07
carbon disulfide	75-15-0	7.44E-07	5.90E-06	12	494	3.50E-02	1.40E-06	1.11E-05	12	1,327	1.77E-01	2.12E-01	5	4,380	9.68E-06	1.22E-06
carbon tetrachloride	56-23-5	2.06E-06	1.63E-05	12	494	9.69E-02	5.73E-08	4.54E-07	12	1,327	7.23E-03	1.04E-01	5	4,380	4.76E-06	6.00E-07
chlorobenzene	108-90-7	3.82E-07	3.03E-06	12	494	1.80E-02	5.04E-08	4.00E-07	12	1,327	6.36E-03	2.43E-02	5	4,380	1.11E-06	1.40E-07
chloroform	67-66-3	6.00E-06	4.76E-05	12	494	2.82E-01	1.48E-07	1.18E-06	12	1,327	1.87E-02	3.01E-01	5	4,380	1.37E-05	1.73E-06
chloromethane	74-87-3	2.05E-06	1.63E-05	12	494	9.64E-02	1.35E-06	1.07E-05	12	1,327	1.70E-01	2.66E-01	5	4,380	1.22E-05	1.53E-06
cis-1,3-dichloropropene	10061-01-5	4.61E-07	3.66E-06	12	494	2.17E-02	0.00E+00	0.00E+00	12	1,327	0.00E+00	2.17E-02	5	4,380	9.90E-07	1.25E-07
dibromochloromethane	124-48-1	7.53E-07	5.97E-06	12	494	3.54E-02	2.75E-07	2.18E-06	12	1,327	3.47E-02	7.02E-02	5	4,380	3.20E-06	4.04E-07
dichlorodifluoromethane	75-71-8	9.76E-07	7.74E-06	12	494	4.59E-02	0.00E+00	0.00E+00	12	1,327	0.00E+00	4.59E-02	5	4,380	2.10E-06	2.64E-07
dimethyl phthalate	131-11-3	0.00E+00	0.00E+00	12	494	0.00E+00	2.38E-06	1.89E-05	12	1,327	3.00E-01	3.00E-01	5	4,380	1.37E-05	1.73E-06
di-n-butyl phthalate	84-74-2	2.05E-06	1.63E-05	12	494	9.64E-02	2.88E-06	2.28E-05	12	1,327	3.64E-01	4.60E-01	5	4,380	2.10E-05	2.65E-06
ethylbenzene	100-41-4	4.87E-07	3.86E-06	12	494	2.29E-02	4.44E-08	3.52E-07	12	1,327	5.60E-03	2.85E-02	5	4,380	1.30E-06	1.64E-07
Freon 113	76-13-1	1.01E-06	8.01E-06	12	494	4.75E-02	0.00E+00	0.00E+00	12	1,327	0.00E+00	4.75E-02	5	4,380	2.17E-06	2.74E-07
HD	505-60-2	7.79E-07	6.18E-06	12	494	3.67E-02	0.00E+00	0.00E+00	12	1,327	0.00E+00	3.67E-02	5	4,380	1.67E-06	2.11E-07
hexane	110-54-3	8.53E-07	6.76E-06	12	494	4.01E-02	1.25E-07	9.90E-07	12	1,327	1.58E-02	5.59E-02	5	4,380	2.55E-06	3.22E-07
methylene chloride	75-09-2	4.84E-06	3.84E-05	12	494	2.28E-01	1.93E-07	1.53E-06	12	1,327	2.44E-02	2.52E-01	5	4,380	1.15E-05	1.45E-06
styrene	100-42-5	3.47E-07	2.75E-06	12	494	1.63E-02	4.92E-07	3.90E-06	12	1,327	6.21E-02	7.84E-02	5	4,380	3.58E-06	4.52E-07
tetrachloroethene	127-18-4	4.44E-07	3.52E-06	12	494	2.09E-02	5.22E-08	4.14E-07	12	1,327	6.59E-03	2.75E-02	5	4,380	1.25E-06	1.58E-07
toluene	108-88-3	2.90E-07	2.30E-06	12	494	1.36E-02	1.69E-07	1.34E-06	12	1,327	2.13E-02	3.50E-02	5	4,380	1.60E-06	2.01E-07
trans-1,3-dichloropropene	10061-02-6	4.89E-07	3.88E-06	12	494	2.30E-02	0.00E+00	0.00E+00	12	1,327	0.00E+00	2.30E-02	5	4,380	1.05E-06	1.32E-07
trichloroethene	79-01-6	4.41E-07	3.50E-06	12	494	2.07E-02	6.63E-08	5.26E-07	12	1,327	8.37E-03	2.91E-02	5	4,380	1.33E-06	1.68E-07
trichlorofluoromethane	75-69-4	5.09E-07	4.04E-06	12	494	2.39E-02	0.00E+00	0.00E+00	12	1,327	0.00E+00	2.39E-02	5	4,380	1.09E-06	1.38E-07
vinyl chloride	75-01-4	5.69E-07	4.51E-06	12	494	2.68E-02	0.00E+00	0.00E+00	12	1,327	0.00E+00	2.68E-02	5	4,380	1.22E-06	1.54E-07
xylenes	1330-20-7	1.17E-06	9.28E-06	12	494	5.50E-02	1.23E-07	9.75E-07	12	1,327	1.55E-02	7.06E-02	5	4,380	3.22E-06	4.06E-07

Emissions Summary:

Compound	CAS Number	Overpacks/Rejects					Energetics					Total 5-yr Project	Total Operating Time		Modeled (Average) Long-term Emission Rate	
		Emission Rate		Operating Schedule		Emissions	Emission Rate		Operating Schedule		Emissions					
		g/s	lb/hr	hr/day	days/5-yr project	lb/5-yr project	controlled g/s	controlled lb/hr	hr/day	days/5-yr project	lb/5-yr project	lb	yr	hr/yr	lb/hr	g/s
2,3,7,8-TCDF	51207-31-9	1.26E-12	9.95E-12	12	494	5.91E-08	0.00E+00	0.00E+00	12	1,327	0.00E+00	5.91E-08	5	4,380	2.70E-12	3.40E-13
antimony	7440-36-0	6.49E-09	5.15E-08	12	494	3.05E-04	0.00E+00	0.00E+00	12	1,327	0.00E+00	3.05E-04	5	4,380	1.39E-08	1.76E-09
cadmium	7440-43-9	8.97E-09	7.11E-08	12	494	4.22E-04	9.32E-09	7.39E-08	12	1,327	1.18E-03	1.60E-03	5	4,380	7.30E-08	9.21E-09
chromium (3+)	16065-83-1	9.35E-08	7.41E-07	12	494	4.40E-03	8.15E-08	6.46E-07	12	1,327	1.03E-02	1.47E-02	5	4,380	6.71E-07	8.46E-08
chromium (6+)	18540-29-9	9.35E-08	7.41E-07	12	494	4.40E-03	8.15E-08	6.46E-07	12	1,327	1.03E-02	1.47E-02	5	4,380	6.71E-07	8.46E-08
copper	744-50-8	1.32E-07	1.05E-06	12	494	6.21E-03	1.24E-07	9.83E-07	12	1,327	1.57E-02	2.19E-02	5	4,380	9.98E-07	1.26E-07
lead	7439-92-1	5.45E-08	4.32E-07	12	494	2.56E-03	3.76E-08	2.98E-07	12	1,327	4.75E-03	7.31E-03	5	4,380	3.34E-07	4.21E-08
nickel	7440-02-0	2.13E-07	1.69E-06	12	494	1.00E-02	1.62E-07	1.28E-06	12	1,327	2.05E-02	3.05E-02	5	4,380	1.39E-06	1.75E-07
zinc	7440-66-6	2.22E-06	1.76E-05	12	494	1.04E-01	1.52E-06	1.21E-05	12	1,327	1.92E-01	2.96E-01	5	4,380	1.35E-05	1.71E-06

TABLE A-1-6. TDC SHORT-TERM EMISSION RATE CALCULATIONS

Basis and Emissions Calculations:

a. Short-term (ST) emission rates were provided by the vendor in units of lb/hr. Emission rates were converted to units of g/s by the following equation:

Emissions (g/s) = (Emissions, lb/hr) x (454 g/lb) x (1 hr/60 min) x (1 min/60 s)

For pollutants that were indicated to be present but below a specified value, the specified value was used as the emission rate.

b. The maximum between the overpacks/rejects and energetics short-term emission rates will be modeled for the acute risk scenario.

c. The TDC has a combined process/building ventilation stack. Therefore, there is no separate emergency/accident scenario to add for the acute scenario.

d. TDC short-term emission rates represent the total emitted when processing in one TC-60 unit, which has two stacks. It is assumed that emissions will be equal from each stack. Therefore, the emission rate from each stack is equal to one-half the rate provided by the vendor.

e. To process all the required feeds within the 5-year operating period, two TDC units will be required at PCAPP. Therefore, one half of the maximum short-term emission rate will be emitted from each of four stacks (two for each TC-60 unit).

f. Congener-specific concentration data for dioxins and furans were provided separately by CH2M Hill. These data are used to calculate emission rates presented in Table A-1-7.

g. HD emissions are calculated as presented in Table A-1-13.

h. Chromium emissions are assumed to be half trivalent and half hexavalent.

Emissions Summary:

Name	CAS	TDC ST Emission Rates from one TC-60 unit						Maximum Modeled ST Emission Rates							
		Overpacks/Rejects		Energetics		Max		Unit 1 (stack 1)		Unit 1 (stack 2)		Unit 2 (stack 1)		Unit 2 (stack 2)	
		g/s	lb/hr	g/s	lb/hr	g/s	lb/hr	g/s	lb/hr	g/s	lb/hr	g/s	lb/hr	g/s	lb/hr
1,4-dioxane	123-91-1	1.51E-04	1.20E-03			1.51E-04	1.20E-03	7.57E-05	6.00E-04	7.57E-05	6.00E-04	7.57E-05	6.00E-04	7.57E-05	6.00E-04
2-butanone	78-93-3	2.90E-04	2.30E-03			2.90E-04	2.30E-03	1.45E-04	1.15E-03	1.45E-04	1.15E-03	1.45E-04	1.15E-03	1.45E-04	1.15E-03
2-ethyl 1,3-butadiene	3404-63-5			1.51E-05	1.20E-04	1.51E-05	1.20E-04	7.57E-06	6.00E-05	7.57E-06	6.00E-05	7.57E-06	6.00E-05	7.57E-06	6.00E-05
acetone	67-64-1	4.16E-03	3.30E-02			4.16E-03	3.30E-02	2.08E-03	1.65E-02	2.08E-03	1.65E-02	2.08E-03	1.65E-02	2.08E-03	1.65E-02
benzene	71-43-2	1.24E-04	9.80E-04	1.64E-03	1.30E-02	1.64E-03	1.30E-02	8.20E-04	6.50E-03	8.20E-04	6.50E-03	8.20E-04	6.50E-03	8.20E-04	6.50E-03
bis(2-ethylhexyl)-phthalate	117-81-7	5.55E-05	4.40E-04	1.01E-05	8.00E-05	5.55E-05	4.40E-04	2.77E-05	2.20E-04	2.77E-05	2.20E-04	2.77E-05	2.20E-04	2.77E-05	2.20E-04
chloromethane	74-87-3	3.15E-05	2.50E-04			3.15E-05	2.50E-04	1.58E-05	1.25E-04	1.58E-05	1.25E-04	1.58E-05	1.25E-04	1.58E-05	1.25E-04
dichlorodifluoromethane	75-71-8	3.66E-05	2.90E-04			3.66E-05	2.90E-04	1.83E-05	1.45E-04	1.83E-05	1.45E-04	1.83E-05	1.45E-04	1.83E-05	1.45E-04
di-n-butyl phthalate	84-74-2	4.04E-06	3.20E-05	2.77E-06	2.20E-05	4.04E-06	3.20E-05	2.02E-06	1.60E-05	2.02E-06	1.60E-05	2.02E-06	1.60E-05	2.02E-06	1.60E-05
di-n-octyl phthalate	117-84-0	5.55E-05	4.40E-04			5.55E-05	4.40E-04	2.77E-05	2.20E-04	2.77E-05	2.20E-04	2.77E-05	2.20E-04	2.77E-05	2.20E-04
ethane	74-84-0	4.79E-02	3.80E-01	6.68E-03	5.30E-02	4.79E-02	3.80E-01	2.40E-02	1.90E-01	2.40E-02	1.90E-01	2.40E-02	1.90E-01	2.40E-02	1.90E-01
HD	505-60-2	9.91E-06	7.86E-05			9.91E-06	7.86E-05	4.96E-06	3.93E-05	4.96E-06	3.93E-05	4.96E-06	3.93E-05	4.96E-06	3.93E-05
methane	74-82-8	2.02E-02	1.60E-01	1.51E-01	1.20E+00	1.51E-01	1.20E+00	7.57E-02	6.00E-01	7.57E-02	6.00E-01	7.57E-02	6.00E-01	7.57E-02	6.00E-01
naphthalene	91-20-3	5.55E-05	4.40E-04			5.55E-05	4.40E-04	2.77E-05	2.20E-04	2.77E-05	2.20E-04	2.77E-05	2.20E-04	2.77E-05	2.20E-04
propene	115-07-1			1.64E-03	1.30E-02	1.64E-03	1.30E-02	8.20E-04	6.50E-03	8.20E-04	6.50E-03	8.20E-04	6.50E-03	8.20E-04	6.50E-03
toluene	108-88-3	6.94E-04	5.50E-03	2.77E-04	2.20E-03	6.94E-04	5.50E-03	3.47E-04	2.75E-03	3.47E-04	2.75E-03	3.47E-04	2.75E-03	3.47E-04	2.75E-03
trichlorofluoromethane	75-69-4	1.64E-05	1.30E-04			1.64E-05	1.30E-04	8.20E-06	6.50E-05	8.20E-06	6.50E-05	8.20E-06	6.50E-05	8.20E-06	6.50E-05
xylenes	1330-20-7			1.01E-05	8.00E-05	1.01E-05	8.00E-05	5.04E-06	4.00E-05	5.04E-06	4.00E-05	5.04E-06	4.00E-05	5.04E-06	4.00E-05
1,2,3,4,6,7,8-HpCDD	35822-46-9	1.86E-11	1.47E-10			1.86E-11	1.47E-10	9.28E-12	7.36E-11	9.28E-12	7.36E-11	9.28E-12	7.36E-11	9.28E-12	7.36E-11
1,2,3,4,6,7,8,9-OCDD	3268-87-9	1.13E-10	9.00E-10			1.13E-10	9.00E-10	5.67E-11	4.50E-10	5.67E-11	4.50E-10	5.67E-11	4.50E-10	5.67E-11	4.50E-10
1,2,3,4,6,7,8-HpCDF	67562-39-4	1.08E-11	8.58E-11			1.08E-11	8.58E-11	5.41E-12	4.29E-11	5.41E-12	4.29E-11	5.41E-12	4.29E-11	5.41E-12	4.29E-11
1,2,3,4,6,7,8,9-OCDF	39001-02-0	3.68E-11	2.92E-10			3.68E-11	2.92E-10	1.84E-11	1.46E-10	1.84E-11	1.46E-10	1.84E-11	1.46E-10	1.84E-11	1.46E-10
ammonia	7664-41-7	1.26E-05	1.00E-04	1.26E-05	1.00E-04	1.26E-05	1.00E-04	6.31E-06	5.00E-05	6.31E-06	5.00E-05	6.31E-06	5.00E-05	6.31E-06	5.00E-05
aluminum	91728-14-2			4.79E-05	3.80E-04	4.79E-05	3.80E-04	2.40E-05	1.90E-04	2.40E-05	1.90E-04	2.40E-05	1.90E-04	2.40E-05	1.90E-04
antimony	7440-36-0	4.29E-06	3.40E-05			4.29E-06	3.40E-05	2.14E-06	1.70E-05	2.14E-06	1.70E-05	2.14E-06	1.70E-05	2.14E-06	1.70E-05
barium	7440-39-3	8.58E-07	6.80E-06			8.58E-07	6.80E-06	4.29E-07	3.40E-06	4.29E-07	3.40E-06	4.29E-07	3.40E-06	4.29E-07	3.40E-06
beryllium	7440-41-7	4.04E-07	3.20E-06			4.04E-07	3.20E-06	2.02E-07	1.60E-06	2.02E-07	1.60E-06	2.02E-07	1.60E-06	2.02E-07	1.60E-06
cadmium	7440-43-9	3.66E-06	2.90E-05	3.66E-07	2.90E-06	3.66E-06	2.90E-05	1.83E-06	1.45E-05	1.83E-06	1.45E-05	1.83E-06	1.45E-05	1.83E-06	1.45E-05
chlorine	7782-50-5	1.51E-04	1.20E-03	1.51E-04	1.20E-03	1.51E-04	1.20E-03	7.57E-05	6.00E-04	7.57E-05	6.00E-04	7.57E-05	6.00E-04	7.57E-05	6.00E-04
chromium (3+)	16065-83-1	4.79E-06	3.80E-05	1.01E-06	8.00E-06	4.79E-06	3.80E-05	2.40E-06	1.90E-05	2.40E-06	1.90E-05	2.40E-06	1.90E-05	2.40E-06	1.90E-05
chromium (6+)	18540-29-9	4.79E-06	3.80E-05	1.01E-06	8.00E-06	4.79E-06	3.80E-05	2.40E-06	1.90E-05	2.40E-06	1.90E-05	2.40E-06	1.90E-05	2.40E-06	1.90E-05
cobalt	7440-48-4	1.51E-06	1.20E-05			1.51E-06	1.20E-05	7.57E-07	6.00E-06	7.57E-07	6.00E-06	7.57E-07	6.00E-06	7.57E-07	6.00E-06

Emissions Summary:

Name	CAS	TDC ST Emission Rates from one TC-60 unit						Maximum Modeled ST Emission Rates							
		Overpacks/Rejects		Energetics		Max		Unit 1 (stack 1)		Unit 1 (stack 2)		Unit 2 (stack 1)		Unit 2 (stack 2)	
		g/s	lb/hr	g/s	lb/hr	g/s	lb/hr	g/s	lb/hr	g/s	lb/hr	g/s	lb/hr	g/s	lb/hr
copper	744-50-8	3.03E-06	2.40E-05	3.78E-05	3.00E-04	3.78E-05	3.00E-04	1.89E-05	1.50E-04	1.89E-05	1.50E-04	1.89E-05	1.50E-04	1.89E-05	1.50E-04
hydrogen chloride	7647-01-0	5.04E-04	4.00E-03	5.04E-04	4.00E-03	5.04E-04	4.00E-03	2.52E-04	2.00E-03	2.52E-04	2.00E-03	2.52E-04	2.00E-03	2.52E-04	2.00E-03
iron	7439-89-6	6.31E-03	5.00E-02	1.39E-04	1.10E-03	6.31E-03	5.00E-02	3.15E-03	2.50E-02	3.15E-03	2.50E-02	3.15E-03	2.50E-02	3.15E-03	2.50E-02
lead	7439-92-1	1.64E-06	1.30E-05	1.51E-06	1.20E-05	1.64E-06	1.30E-05	8.20E-07	6.50E-06	8.20E-07	6.50E-06	8.20E-07	6.50E-06	8.20E-07	6.50E-06
manganese	7439-96-5			1.77E-04	1.40E-03	1.77E-04	1.40E-03	8.83E-05	7.00E-04	8.83E-05	7.00E-04	8.83E-05	7.00E-04	8.83E-05	7.00E-04
total mercury	NA	1.64E-06	1.30E-05			1.64E-06	1.30E-05	8.20E-07	6.50E-06	8.20E-07	6.50E-06	8.20E-07	6.50E-06	8.20E-07	6.50E-06
nickel	7440-02-0	1.89E-06	1.50E-05	5.93E-07	4.70E-06	1.89E-06	1.50E-05	9.46E-07	7.50E-06	9.46E-07	7.50E-06	9.46E-07	7.50E-06	9.46E-07	7.50E-06
selenium	7782-49-2	1.19E-05	9.40E-05			1.19E-05	9.40E-05	5.93E-06	4.70E-05	5.93E-06	4.70E-05	5.93E-06	4.70E-05	5.93E-06	4.70E-05
silver	7440-22-4	1.05E-06	8.30E-06			1.05E-06	8.30E-06	5.23E-07	4.15E-06	5.23E-07	4.15E-06	5.23E-07	4.15E-06	5.23E-07	4.15E-06
vanadium	7440-62-2	8.07E-06	6.40E-05	1.89E-06	1.50E-05	8.07E-06	6.40E-05	4.04E-06	3.20E-05	4.04E-06	3.20E-05	4.04E-06	3.20E-05	4.04E-06	3.20E-05
zinc	7440-66-6	7.06E-05	5.60E-04	6.31E-05	5.00E-04	7.06E-05	5.60E-04	3.53E-05	2.80E-04	3.53E-05	2.80E-04	3.53E-05	2.80E-04	3.53E-05	2.80E-04

TABLE A-1-7. TDC DIOXIN/FURAN EMISSION CALCULATIONS

Basis:

a. Dioxin/furan samples were collected during testing at Porton Down, UK in 2006 with mustard-filled UK 25-pdr munitions. The results were provided by CH2M Hill and are presented belo

Congener	Measured Concentration, pg/m^3			
	Run 1	Run 2	Run 3	Average
2,3,7,8-TCDD	ND (0.269)	ND (0.324)	ND (0.383)	ND (0.383)
1,2,3,7,8-PeCDD	ND (0.391)	ND (0.382)	ND (0.528)	ND (0.528)
1,2,3,4,7,8-HxCDD	ND (0.441)	ND (0.607)	ND (0.607)	ND (0.607)
1,2,3,6,7,8-HxCDD	ND (0.398)	ND (0.546)	ND (0.548)	ND (0.548)
1,2,3,7,8,9-HxCDD	ND (0.410)	ND (0.562)	ND (0.561)	ND (0.562)
1,2,3,4,6,7,8-HpCDD	0.573 J	0.648 J	ND (1.24)	< 1.24
OCDD	ND (2.14)	5.49 J	7.59 J	< 5.07
2,3,7,8-TCDF	ND (0.504)	ND (0.322)	ND (0.574)	ND (0.574)
1,2,3,7,8-PeCDF	ND (1.04)	ND (0.439)	ND (0.571)	ND (1.04)
2,3,4,7,8-PeCDF	ND (0.974)	ND (0.413)	ND (0.535)	ND (0.974)
1,2,3,4,7,8-HxCDF	ND (0.131)	ND (0.213)	ND (0.204)	ND (0.213)
1,2,3,6,7,8-HxCDF	ND (0.121)	ND (0.195)	ND (0.187)	ND (0.195)
2,3,4,6,7,8-HxCDF	ND (0.133)	ND (0.216)	ND (0.207)	ND (0.216)
1,2,3,7,8,9-HxCDF	ND (0.146)	ND (0.236)	ND (0.226)	ND (0.236)
1,2,3,4,6,7,8-HpCDF	ND (0.163)	0.494 J	ND (0.802)	< 0.802
1,2,3,4,7,8,9-HpCDF	ND (0.196)	ND (0.195)	ND (0.237)	ND (0.237)
OCDF	1.78 J	ND (1.51)	ND (1.49)	< 1.59
Total TCDD	ND (0.269)	ND (0.324)	ND (0.383)	ND (0.383)
Total PeCDD	ND (0.391)	ND (0.382)	ND (0.528)	ND (0.528)
Total HxCDD	ND (0.751)	ND (0.573)	ND (0.571)	ND (0.751)
Total HpCDD	1.06	0.648	1.37	1.03
Total TCDF	ND (0.324)	0.345	ND (1.13)	< 1.13
Total PeCDF	ND (1.00)	ND (0.424)	ND (0.551)	ND (1.00)
Total HxCDF	ND (0.132)	ND (0.280)	ND (0.239)	ND (0.280)
Total HpCDF	ND (0.178)	0.494	ND (0.875)	< 0.875
Stack flow, dscfm	6,629.2	5,869.6	5,761.8	6,086.9

b. The concentration data presented were measured in only one of the two TDC stacks. The concentration of dioxins/furans is expected to be equivalent in each stack.

c. The concentration data presented represent maximum emissions based on the throughput of UK 25-pdr munitions (4.48 lb HD/hr). CH2M Hill advised that the concentration be increased by a factor of 4 to estimate peak emissions from US 155-mm HD-filled projectiles (15.6 lb HD/hr).

d. If a congener was not detected in all three runs, a 0.0 emission rate is used.

e. If a congener was detected in at least one run (J or non-J), the non-detect level is used for the non-detect runs to calculate an average concentration for that congener.

The table below presents the data to be used for determining emission rates at PCAPP.

Congener	Measured Concentration, pg/m^3			4 x Measured Concentration for PCAPP, pg/m^3		
	Run 1	Run 2	Run 3	Run 1	Run 2	Run 3
2,3,7,8-TCDD	ND	ND	ND	ND	ND	ND
1,2,3,7,8-PeCDD	ND	ND	ND	ND	ND	ND
1,2,3,4,7,8-HxCDD	ND	ND	ND	ND	ND	ND
1,2,3,6,7,8-HxCDD	ND	ND	ND	ND	ND	ND
1,2,3,7,8,9-HxCDD	ND	ND	ND	ND	ND	ND
1,2,3,4,6,7,8-HpCDD	0.57	0.65	1.24	2.29	2.59	4.96
OCDD	2.14	5.49	7.59	8.56	21.96	30.36
2,3,7,8-TCDF	ND	ND	ND	ND	ND	ND
1,2,3,7,8-PeCDF	ND	ND	ND	ND	ND	ND
2,3,4,7,8-PeCDF	ND	ND	ND	ND	ND	ND
1,2,3,4,7,8-HxCDF	ND	ND	ND	ND	ND	ND
1,2,3,6,7,8-HxCDF	ND	ND	ND	ND	ND	ND
2,3,4,6,7,8-HxCDF	ND	ND	ND	ND	ND	ND
1,2,3,7,8,9-HxCDF	ND	ND	ND	ND	ND	ND
1,2,3,4,6,7,8-HpCDF	0.16	0.49	0.80	0.65	1.98	3.21
1,2,3,4,7,8,9-HpCDF	ND	ND	ND	ND	ND	ND
OCDF	1.78	1.51	1.49	7.12	6.04	5.96

Emission Calculations:

Emission Rate per stack (g/s) = (concentration, pg/m^3) x (flow rate, dscfm) x (1 m^3/35.3145 ft^3) x (1 g/10^{12} pg) x (1 min/60 s)

Average Emission Rate per stack (g/s) = [(Run 1 emission rate, g/s) + (Run 2 emission rate, g/s) + (Run 3 emission rate, g/s)]/3

Emissions Summary:

Congener	4 x Measured Concentration for PCAPP, pg/m^3			Stack flow, dscfm			Overpack/Reject Emission Rate, g/s			Average Emission Rate per stack, g/s
	Run 1	Run 2	Run 3	Run 1	Run 2	Run 3	Run 1	Run 2	Run 3	
2,3,7,8-TCDD	ND	ND	ND	6,629.2	5,869.6	5,761.8	0	0.0	0	ND
1,2,3,7,8-PeCDD	ND	ND	ND	6,629.2	5,869.6	5,761.8	0	0.0	0	ND
1,2,3,4,7,8-HxCDD	ND	ND	ND	6,629.2	5,869.6	5,761.8	0	0.0	0	ND
1,2,3,6,7,8-HxCDD	ND	ND	ND	6,629.2	5,869.6	5,761.8	0	0.0	0	ND
1,2,3,7,8,9-HxCDD	ND	ND	ND	6,629.2	5,869.6	5,761.8	0	0.0	0	ND
1,2,3,4,6,7,8-HpCDD	2.29	2.6	4.96	6,629.2	5,869.6	5,761.8	7.17E-12	7.18E-12	1.35E-11	9.28E-12
OCDD	8.56	22.0	30.36	6,629.2	5,869.6	5,761.8	2.68E-11	6.08E-11	8.26E-11	5.67E-11
2,3,7,8-TCDF	ND	ND	ND	6,629.2	5,869.6	5,761.8	0	0.0	0	ND
1,2,3,7,8-PeCDF	ND	ND	ND	6,629.2	5,869.6	5,761.8	0	0.0	0	ND
2,3,4,7,8-PeCDF	ND	ND	ND	6,629.2	5,869.6	5,761.8	0	0.0	0	ND
1,2,3,4,7,8-HxCDF	ND	ND	ND	6,629.2	5,869.6	5,761.8	0	0.0	0	ND
1,2,3,6,7,8-HxCDF	ND	ND	ND	6,629.2	5,869.6	5,761.8	0	0.0	0	ND
2,3,4,6,7,8-HxCDF	ND	ND	ND	6,629.2	5,869.6	5,761.8	0	0.0	0	ND
1,2,3,7,8,9-HxCDF	ND	ND	ND	6,629.2	5,869.6	5,761.8	0	0.0	0	ND
1,2,3,4,6,7,8-HpCDF	0.652	2.0	3.208	6,629.2	5,869.6	5,761.8	2.04E-12	5.47E-12	8.72E-12	5.41E-12
1,2,3,4,7,8,9-HpCDF	ND	ND	ND	6,629.2	5,869.6	5,761.8	0	0.0	0	ND
OCDF	7.12	6.04	5.96	6,629.2	5,869.6	5,761.8	2.23E-11	1.67E-11	1.62E-11	1.84E-11

TABLE A-1-8. TDC PROCESSING SCHEDULE

Feed Type		Item	Quantity		TDC Processing Rate [a]		Energetic content		Operating Schedule (hr/day)	Time to Process with 1 unit			Time to Process with 2 units		
										days		years	days		years
Required	Overpacks/Rejects	155-mm projectile reject	4,600	items	0.75	item/hr			12	511	1,091	3.0	256	545	1.5
	Overpacks/Rejects	105-mm projectile reject	5,990	items	1.5	item/hr			12	333			166		
	Overpacks/Rejects	4.2-inch mortar reject	1,420	items	0.75	item/hr			12	158			79		
	Overpacks/Rejects	155-mm projectile overpack	400	items	0.75	item/hr			12	44			22		
	Overpacks/Rejects	105-mm projectile overpack	400	items	1.5	item/hr			12	22			11		
	Overpacks/Rejects	4.2-inch mortar overpack	200	items	0.75	item/hr			12	22			11		
Required	Energetics	155-mm projectiles bursters	299,554	items	14.4	lb energetic/hr	0.41	lb/burster	12	713	874	2.4	357	437	1.2
	Energetics	4.2-inch mortar bursters	97,106	items	9.8	lb energetic/hr	0.14	lb/burster	12	116			58		
	Energetics	105-mm projectile fuze/booster	28,376	items	52.5	items/hr			12	45			23		
Desired	Energetics	105-mm projectile burster	383,418	items	13.7	lb energetic/hr	0.26	lb/burster	12	609	1,185	3.2	304	592	1.6
	Energetics	105-mm projectile propellant	78,031	lb	19.3	lb/hr			12	338			169		
	Energetics	4.2-inch mortar propellant	60,011	lb	21	lb/hr			12	238			119		
									Total All Feeds		**3,149**	**8.6**		**1,574**	**4.3**

a. Processing rates are provided by CH2M Hill and reflect, but do not specify, equipment and facility availability factors.

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TABLE A-1-9. TDC LONG-TERM EMISSION RATE CALCULATIONS

Basis and Emission Calculations:

a. Total emissions from processing of overpack/rejects and energetics are calculated as follows.

Pollutant emissions from	=	(overpack/reject emission rate, lb/hr) x (operating hours, hr/day) x (operating days over 5 years with 2 units, days)
Overpacks/Rejects (lb)	=	(overpack/reject emission rate, lb/hr) x (12 hr/day) x (545 days/TDC unit) x (2 TDC units)
Pollutant emissions from	=	(energetics emission rate, lb/hr) x (operating hours, hr/day) x (operating days over 5 years with 2 units, days)
Energetics (lb)	=	(energetics emission rate, lb/hr) x (12 hr/day) x (1,029 days/TDC unit) x (2 TDC units)
Total Emissions (lb)	=	Emissions from Overpacks/Rejects (lb) + Emissions from Energetics (lb)

b. Total average long-term emission rates are calculated based on a 5-year operating period, with 12 hours of operation per day.

Average Long-term emissions (lb/hr)	=	(total emissions, lb) / (operating years, yr) / (operating hours, hr/yr)
	=	(total emissions, lb) / (5 yr) / (4,380 hr/yr)
Average Long-term Emissions (g/s)	=	(average long-term emission rate, lb/hr) x (454 g/lb) x (1 hr/60 min) x (1 min/60 s)

c. Average long-term emission rates by stack were calculated by dividing the total average long-term emission rate by 4.

Emissions Summary:

Compound	CAS Number	Overpacks/Rejects					Energetics					Total 5-yr Project Emissions	Total Operating Time		Total Average Long-term Emission Rate		Modeled (Average) Long-term Emission Rate by Stack							
		Emission Rate		Operating Schedule		Emissions	Emission Rate		Operating Schedule		Emissions						Unit 1 (stack 1)		Unit 1 (stack 2)		Unit 2 (stack 1)		Unit 2 (stack 2)	
		g/s	lb/hr	hr/day	days	lb	g/s	lb/hr	hr/day	days	lb	lb	yr	hr/yr	lb/hr	g/s	g/s	lb/hr	g/s	lb/hr	g/s	lb/hr	g/s	lb/hr
1,4-dioxane	123-91-1	1.51E-04	1.20E-03	12	545	1.57E+01	0	0	12	1,029	0.00E+00	1.57E+01	5	4,380	7.17E-04	9.04E-05	2.26E-05	1.79E-04	2.26E-05	1.79E-04	2.26E-05	1.79E-04	2.26E-05	1.79E-04
2-butanone	78-93-3	2.90E-04	2.30E-03	12	545	3.01E+01	0	0	12	1,029	0.00E+00	3.01E+01	5	4,380	1.37E-03	1.73E-04	4.33E-05	3.44E-04	4.33E-05	3.44E-04	4.33E-05	3.44E-04	4.33E-05	3.44E-04
2-ethyl 1,3-butadiene	3404-63-5	0	0	12	545	0.00E+00	1.51E-05	1.20E-04	12	1,029	2.96E+00	2.96E+00	5	4,380	1.35E-04	1.71E-05	4.27E-06	3.38E-05	4.27E-06	3.38E-05	4.27E-06	3.38E-05	4.27E-06	3.38E-05
acetone	67-64-1	4.16E-03	3.30E-02	12	545	4.32E+02	0	0	12	1,029	0.00E+00	4.32E+02	5	4,380	1.97E-02	2.49E-03	6.22E-04	4.93E-03	6.22E-04	4.93E-03	6.22E-04	4.93E-03	6.22E-04	4.93E-03
benzene	71-43-2	1.24E-04	9.80E-04	12	545	1.28E+01	1.64E-03	1.30E-02	12	1,029	3.21E+02	3.34E+02	5	4,380	1.52E-02	1.92E-03	4.81E-04	3.81E-03	4.81E-04	3.81E-03	4.81E-04	3.81E-03	4.81E-04	3.81E-03
bis(2-ethylhexyl)-phthalate	117-81-7	5.55E-05	4.40E-04	12	545	5.76E+00	1.01E-05	8.00E-05	12	1,029	1.98E+00	7.73E+00	5	4,380	3.53E-04	4.45E-05	1.11E-05	8.83E-05	1.11E-05	8.83E-05	1.11E-05	8.83E-05	1.11E-05	8.83E-05
chloromethane	74-87-3	3.15E-05	2.50E-04	12	545	3.27E+00	0	0	12	1,029	0.00E+00	3.27E+00	5	4,380	1.49E-04	1.88E-05	4.71E-06	3.73E-05	4.71E-06	3.73E-05	4.71E-06	3.73E-05	4.71E-06	3.73E-05
dichlorodifluoromethane	75-71-8	3.66E-05	2.90E-04	12	545	3.80E+00	0	0	12	1,029	0.00E+00	3.80E+00	5	4,380	1.73E-04	2.19E-05	5.46E-06	4.33E-05	5.46E-06	4.33E-05	5.46E-06	4.33E-05	5.46E-06	4.33E-05
di-n-butyl phthalate	84-74-2	4.04E-06	3.20E-05	12	545	4.19E-01	2.77E-06	2.20E-05	12	1,029	5.43E-01	9.62E-01	5	4,380	4.39E-05	5.54E-06	1.39E-06	1.10E-05	1.39E-06	1.10E-05	1.39E-06	1.10E-05	1.39E-06	1.10E-05
di-n-octyl phthalate	117-84-0	5.55E-05	4.40E-04	12	545	5.76E+00	0	0	12	1,029	0.00E+00	5.76E+00	5	4,380	2.63E-04	3.32E-05	8.29E-06	6.57E-05	8.29E-06	6.57E-05	8.29E-06	6.57E-05	8.29E-06	6.57E-05
ethane	74-84-0	4.79E-02	3.80E-01	12	545	4.97E+03	6.68E-03	5.30E-02	12	1,029	1.31E+03	6.28E+03	5	4,380	2.87E-01	3.62E-02	9.04E-03	7.17E-02	9.04E-03	7.17E-02	9.04E-03	7.17E-02	9.04E-03	7.17E-02
HD	505-60-2	9.91E-06	7.86E-05	12	545	1.03E+00	0	0	12	1,029	0.00E+00	1.03E+00	5	4,380	4.70E-05	5.92E-06	1.48E-06	1.17E-05	1.48E-06	1.17E-05	1.48E-06	1.17E-05	1.48E-06	1.17E-05
methane	74-82-8	2.02E-02	1.60E-01	12	545	2.09E+03	1.51E-01	1.20E+00	12	1,029	2.96E+04	3.17E+04	5	4,380	1.45E+00	1.83E-01	4.57E-02	3.62E-01	4.57E-02	3.62E-01	4.57E-02	3.62E-01	4.57E-02	3.62E-01
naphthalene	91-20-3	5.55E-05	4.40E-04	12	545	5.76E+00	0	0	12	1,029	0.00E+00	5.76E+00	5	4,380	2.63E-04	3.32E-05	8.29E-06	6.57E-05	8.29E-06	6.57E-05	8.29E-06	6.57E-05	8.29E-06	6.57E-05
propene	115-07-1	0	0	12	545	0.00E+00	1.64E-03	1.30E-02	12	1,029	3.21E+02	3.21E+02	5	4,380	1.47E-02	1.85E-03	4.62E-04	3.67E-03	4.62E-04	3.67E-03	4.62E-04	3.67E-03	4.62E-04	3.67E-03
toluene	108-88-3	6.94E-04	5.50E-03	12	545	7.20E+01	2.77E-04	2.20E-03	12	1,029	5.43E+01	1.26E+02	5	4,380	5.77E-03	7.27E-04	1.82E-04	1.44E-03	1.82E-04	1.44E-03	1.82E-04	1.44E-03	1.82E-04	1.44E-03
trichlorofluoromethane	75-69-4	1.64E-05	1.30E-04	12	545	1.70E+00	0	0	12	1,029	0.00E+00	1.70E+00	5	4,380	7.77E-05	9.80E-06	2.45E-06	1.94E-05	2.45E-06	1.94E-05	2.45E-06	1.94E-05	2.45E-06	1.94E-05
xylenes	1330-20-7	0	0	12	545	0.00E+00	1.01E-05	8.00E-05	12	1,029	1.98E+00	1.98E+00	5	4,380	9.02E-05	1.14E-05	2.84E-06	2.26E-05	2.84E-06	2.26E-05	2.84E-06	2.26E-05	2.84E-06	2.26E-05
1,2,3,4,6,7,8-HpCDD	35822-46-9	1.86E-11	1.47E-10	12	545	1.93E-06	0	0	12	1,029	0.00E+00	1.93E-06	5	4,380	8.79E-11	1.11E-11	2.77E-12	2.20E-11	2.77E-12	2.20E-11	2.77E-12	2.20E-11	2.77E-12	2.20E-11
1,2,3,4,6,7,8,9-OCDD	3268-87-9	1.13E-10	9.00E-10	12	545	1.18E-05	0	0	12	1,029	0.00E+00	1.18E-05	5	4,380	5.38E-10	6.78E-11	1.69E-11	1.34E-10	1.69E-11	1.34E-10	1.69E-11	1.34E-10	1.69E-11	1.34E-10
1,2,3,4,6,7,8-HpCDF	67562-39-4	1.08E-11	8.58E-11	12	545	1.12E-06	0	0	12	1,029	0.00E+00	1.12E-06	5	4,380	5.13E-11	6.47E-12	1.62E-12	1.28E-11	1.62E-12	1.28E-11	1.62E-12	1.28E-11	1.62E-12	1.28E-11
1,2,3,4,6,7,8,9-OCDF	39001-02-0	3.68E-11	2.92E-10	12	545	3.82E-06	0	0	12	1,029	0.00E+00	3.82E-06	5	4,380	1.74E-10	2.20E-11	5.50E-12	4.36E-11	5.50E-12	4.36E-11	5.50E-12	4.36E-11	5.50E-12	4.36E-11
ammonia	7664-41-7	1.26E-05	1.00E-04	12	545	1.31E+00	1.26E-05	1.00E-04	12	1,029	2.47E+00	3.78E+00	5	4,380	1.73E-04	2.18E-05	5.44E-06	4.31E-05	5.44E-06	4.31E-05	5.44E-06	4.31E-05	5.44E-06	4.31E-05
aluminum	91728-14-2	0	0	12	545	0.00E+00	4.79E-05	3.80E-04	12	1,029	9.39E+00	9.39E+00	5	4,380	4.29E-04	5.41E-05	1.35E-05	1.07E-04	1.35E-05	1.07E-04	1.35E-05	1.07E-04	1.35E-05	1.07E-04
antimony	7440-36-0	4.29E-06	3.40E-05	12	545	4.45E-01	0	0	12	1,029	0.00E+00	4.45E-01	5	4,380	2.03E-05	2.56E-06	6.41E-07	5.08E-06	6.41E-07	5.08E-06	6.41E-07	5.08E-06	6.41E-07	5.08E-06
barium	7440-39-3	8.58E-07	6.80E-06	12	545	8.90E-02	0	0	12	1,029	0.00E+00	8.90E-02	5	4,380	4.06E-06	5.12E-07	1.28E-07	1.02E-06	1.28E-07	1.02E-06	1.28E-07	1.02E-06	1.28E-07	1.02E-06
beryllium	7440-41-7	4.04E-07	3.20E-06	12	545	4.19E-02	0	0	12	1,029	0.00E+00	4.19E-02	5	4,380	1.91E-06	2.41E-07	6.03E-08	4.78E-07	6.03E-08	4.78E-07	6.03E-08	4.78E-07	6.03E-08	4.78E-07
cadmium	7440-43-9	3.66E-06	2.90E-05	12	545	3.80E-01	3.66E-07	2.90E-06	12	1,029	7.16E-02	4.51E-01	5	4,380	2.06E-05	2.60E-06	6.49E-07	5.15E-06	6.49E-07	5.15E-06	6.49E-07	5.15E-06	6.49E-07	5.15E-06
chlorine	7782-50-5	1.51E-04	1.20E-03	12	545	1.57E+01	1.51E-04	1.20E-03	12	1,029	2.96E+01	4.53E+01	5	4,380	2.07E-03	2.61E-04	6.53E-05	5.18E-04	6.53E-05	5.18E-04	6.53E-05	5.18E-04	6.53E-05	5.18E-04
chromium (3+)	16065-83-1	4.79E-06	3.80E-05	12	545	4.97E-01	1.01E-06	8.00E-06	12	1,029	1.98E-01	6.95E-01	5	4,380	3.17E-05	4.00E-06	1.00E-06	7.93E-06	1.00E-06	7.93E-06	1.00E-06	7.93E-06	1.00E-06	7.93E-06
chromium (6+)	18540-29-9	4.79E-06	3.80E-05	12	545	4.97E-01	1.01E-06	8.00E-06	12	1,029	1.98E-01	6.95E-01	5	4,380	3.17E-05	4.00E-06	1.00E-06	7.93E-06	1.00E-06	7.93E-06	1.00E-06	7.93E-06	1.00E-06	7.93E-06
cobalt	7440-48-4	1.51E-06	1.20E-05	12	545	1.57E-01	0	0	12	1,029	0.00E+00	1.57E-01	5	4,380	7.17E-06	9.04E-07	2.26E-07	1.79E-06	2.26E-07	1.79E-06	2.26E-07	1.79E-06	2.26E-07	1.79E-06
copper	744-50-8	3.03E-06	2.40E-05	12	545	3.14E-01	3.78E-05	3.00E-04	12	1,029	7.41E+00	7.72E+00	5	4,380	3.53E-04	4.45E-05	1.11E-05	8.82E-05	1.11E-05	8.82E-05	1.11E-05	8.82E-05	1.11E-05	8.82E-05
hydrogen chloride	7647-01-0	5.04E-04	4.00E-03	12	545	5.23E+01	5.04E-04	4.00E-03	12	1,029	9.88E+01	1.51E+02	5	4,380	6.90E-03	8.70E-04	2.18E-04	1.73E-03	2.18E-04	1.73E-03	2.18E-04	1.73E-03	2.18E-04	1.73E-03
iron	7439-89-6	6.31E-03	5.00E-02	12	545	6.54E+02	1.39E-04	1.10E-03	12	1,029	2.72E+01	6.82E+02	5	4,380	3.11E-02	3.92E-03	9.81E-04	7.78E-03	9.81E-04	7.78E-03	9.81E-04	7.78E-03	9.81E-04	7.78E-03
lead	7439-92-1	1.64E-06	1.30E-05	12	545	1.70E-01	1.51E-06	1.20E-05	12	1,029	2.96E-01	4.67E-01	5	4,380	2.13E-05	2.69E-06	6.72E-07	5.33E-06	6.72E-07	5.33E-06	6.72E-07	5.33E-06	6.72E-07	5.33E-06
manganese	7439-96-5	0	0	12	545	0.00E+00	1.77E-04	1.40E-03	12	1,029	3.46E+01	3.46E+01	5	4,380	1.58E-03	1.99E-04	4.98E-05	3.95E-04	4.98E-05	3.95E-04	4.98E-05	3.95E-04	4.98E-05	3.95E-04
total mercury	NA	1.64E-06	1.30E-05	12	545	1.70E-01	0	0	12	1,029	0.00E+00	1.70E-01	5	4,380	7.77E-06	9.80E-07	2.45E-07	1.94E-06	2.45E-07	1.94E-06	2.45E-07	1.94E-06	2.45E-07	1.94E-06

Emissions Summary:

Compound	CAS Number	Overpacks/Rejects					Energetics					Total 5-yr Project Emissions	Total Operating Time		Total Average Long-term Emission Rate		Modeled (Average) Long-term Emission Rate by Stack							
		Emission Rate		Operating Schedule		Emissions	Emission Rate		Operating Schedule		Emissions						Unit 1 (stack 1)		Unit 1 (stack 2)		Unit 2 (stack 1)		Unit 2 (stack 2)	
		g/s	lb/hr	hr/day	days	lb	g/s	lb/hr	hr/day	days	lb	lb	yr	hr/yr	lb/hr	g/s	g/s	lb/hr	g/s	lb/hr	g/s	lb/hr	g/s	lb/hr
nickel	7440-02-0	1.89E-06	1.50E-05	12	545	1.96E-01	5.93E-07	4.70E-06	12	1,029	1.16E-01	3.12E-01	5	4,380	1.43E-05	1.80E-06	4.50E-07	3.57E-06	4.50E-07	3.57E-06	4.50E-07	3.57E-06	4.50E-07	3.57E-06
selenium	7782-49-2	1.19E-05	9.40E-05	12	545	1.23E+00	0	0	12	1,029	0.00E+00	1.23E+00	5	4,380	5.62E-05	7.08E-06	1.77E-06	1.40E-05	1.77E-06	1.40E-05	1.77E-06	1.40E-05	1.77E-06	1.40E-05
silver	7440-22-4	1.05E-06	8.30E-06	12	545	1.09E-01	0	0	12	1,029	0.00E+00	1.09E-01	5	4,380	4.96E-06	6.25E-07	1.56E-07	1.24E-06	1.56E-07	1.24E-06	1.56E-07	1.24E-06	1.56E-07	1.24E-06
vanadium	7440-62-2	8.07E-06	6.40E-05	12	545	8.38E-01	1.89E-06	1.50E-05	12	1,029	3.71E-01	1.21E+00	5	4,380	5.52E-05	6.96E-06	1.74E-06	1.38E-05	1.74E-06	1.38E-05	1.74E-06	1.38E-05	1.74E-06	1.38E-05
zinc	7440-66-6	7.06E-05	5.60E-04	12	545	7.33E+00	6.31E-05	5.00E-04	12	1,029	1.24E+01	1.97E+01	5	4,380	8.99E-04	1.13E-04	2.83E-05	2.25E-04	2.83E-05	2.25E-04	2.83E-05	2.25E-04	2.83E-05	2.25E-04

TABLE A-1-10. DAVINCH SHORT-TERM EMISSION RATE CALCULATIONS

Basis and Emissions Calculations:

a. Short-term (ST) overpack/reject emission rates were provided by the vendor for most pollutants in units of lb/shot. A "shot" is one detonation event, and one detonation event occurs per hour. Therefore, the lb/shot emission rates are equal to lb/hr emission rates. Emission rates were converted to units of g/s by the following equation:

Emissions (g/s) = (Emissions, lb/hr) x (454 g/lb) x (1 hr/60 min) x (1 min/60 s)

b. ST energetics emission rates were not available for the DAVINCH system. Therefore, the maximum ST energetics emission rates for either SDC or the two TDC units was used to represent the upper bound of emissions for DAVINCH.

c. The maximum between the overpacks/rejects and energetics short-term emission rates will be modeled as the emissions from the process stack for the acute risk scenario.

d. The DAVINCH system has a combined process/building ventilation stack. Therefore, there is no separate emergency/accident scenario to add for the acute scenario.

e. HD emissions are calculated as presented in Table A-1-13.

f. Emission rates from DAVINCH were only provided for a few pollutants. Emissions of HD, 1,2-dichloroethane (1,2-DCA), and vinyl chloride contributed 97% of the cancer risk for PCAPP operations. The SDC and TDC data were reviewed to determine if 1,2-DCA and vinyl chloride emissions data could be used to estimate emissions of these pollutants for DAVINCH. 1,2-DCA is not emitted from either SDC or TDC, so no estimate could be made for DAVINCH. However, the ratio of vinyl chloride to HD emissions for SDC was used to estimate vinyl chloride emissions from DAVINCH using the following equation:

DAVINCH vinyl chloride emissions (g/s) = (SDC vinyl chloride emission rate, g/s) / (SDC HD emission rate, g/s) x (DAVINCH HD emission rate, g/s)

= (2.68E-07 g vinyl chloride/s) / (7.8E-07 g HD/s) x (3.5E-05 g HD/s)

= 1.20E-05

Emissions Summary:

Compound	CAS Number	ST Emission Rates				Maximum ST Emission Rate	
		Overpacks/ Rejects		Energetics			
		g/s	lb/hr	g/s	lb/hr	g/s	lb/hr
2-butanone	78-93-3			6.41E-07	5.08E-06	6.41E-07	5.08E-06
2-ethyl 1,3-butadiene	3404-63-5			3.03E-05	2.40E-04	3.03E-05	2.40E-04
acetone	67-64-1			1.15E-06	9.08E-06	1.15E-06	9.08E-06
benzene	71-43-2			3.28E-03	2.60E-02	3.28E-03	2.60E-02
benzyl alcohol	100-51-6			2.40E-06	1.90E-05	2.40E-06	1.90E-05
bis(2-ethylhexyl)-phthalate	117-81-7			2.02E-05	1.60E-04	2.02E-05	1.60E-04
bromodichloromethane	75-27-4			2.23E-07	1.77E-06	2.23E-07	1.77E-06
carbon disulfide	75-15-0			1.40E-06	1.11E-05	1.40E-06	1.11E-05
carbon tetrachloride	56-23-5			5.73E-08	4.54E-07	5.73E-08	4.54E-07
chlorobenzene	108-90-7			5.04E-08	4.00E-07	5.04E-08	4.00E-07
chloroform	67-66-3			1.48E-07	1.18E-06	1.48E-07	1.18E-06
chloromethane	74-87-3			1.35E-06	1.07E-05	1.35E-06	1.07E-05
dibromochloromethane	124-48-1			2.75E-07	2.18E-06	2.75E-07	2.18E-06
dimethyl phthalate	131-11-3			2.38E-06	1.89E-05	2.38E-06	1.89E-05
di-n-butyl phthalate	84-74-2			5.55E-06	4.40E-05	5.55E-06	4.40E-05
ethane	74-84-0			1.34E-02	1.06E-01	1.34E-02	1.06E-01
ethylbenzene	100-41-4			4.44E-08	3.52E-07	4.44E-08	3.52E-07
HD	505-60-2	1.68E-05	1.34E-04			1.68E-05	1.34E-04
hexane	110-54-3			1.25E-07	9.90E-07	1.25E-07	9.90E-07
methane	74-82-8			3.03E-01	2.40E+00	3.03E-01	2.40E+00
methylene chloride	75-09-2			1.93E-07	1.53E-06	1.93E-07	1.53E-06
propene	115-07-1			3.28E-03	2.60E-02	3.28E-03	2.60E-02
styrene	100-42-5			4.92E-07	3.90E-06	4.92E-07	3.90E-06
tetrachloroethene	127-18-4			5.22E-08	4.14E-07	5.22E-08	4.14E-07
toluene	108-88-3			5.55E-04	4.40E-03	5.55E-04	4.40E-03
trichloroethene	79-01-6			6.63E-08	5.26E-07	6.63E-08	5.26E-07
vinyl chloride	75-01-4	1.20E-05	9.52E-05			1.20E-05	9.52E-05

Emissions Summary:

Compound	CAS Number	ST Emission Rates				Maximum ST Emission Rate	
		Overpacks/ Rejects		Energetics			
		g/s	lb/hr	g/s	lb/hr	g/s	lb/hr
xylenes	1330-20-7			2.02E-05	1.60E-04	2.02E-05	1.60E-04
3,3',4,4'-TCB (PCB 77)	32598-13-3	6.67E-14	5.29E-13			6.67E-14	5.29E-13
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	1.67E-13	1.32E-12			1.67E-13	1.32E-12
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	6.67E-14	5.29E-13			6.67E-14	5.29E-13
ammonia	7664-41-7			2.52E-05	2.00E-04	2.52E-05	2.00E-04
aluminum	91728-14-2			9.58E-05	7.60E-04	9.58E-05	7.60E-04
cadmium	7440-43-9			7.31E-07	5.80E-06	7.31E-07	5.80E-06
chlorine	7782-50-5			3.03E-04	2.40E-03	3.03E-04	2.40E-03
chromium (3+)	16065-83-1			2.02E-06	1.60E-05	2.02E-06	1.60E-05
chromium (6+)	18540-29-9			2.02E-06	1.60E-05	2.02E-06	1.60E-05
copper	744-50-8	2.77E-09	2.20E-08	7.57E-05	6.00E-04	7.57E-05	6.00E-04
hydrogen chloride	7647-01-0	1.11E-03	8.80E-03	1.01E-03	8.00E-03	1.11E-03	8.80E-03
iron	7439-89-6			2.77E-04	2.20E-03	2.77E-04	2.20E-03
lead	7439-92-1	3.91E-11	3.10E-10	3.03E-06	2.40E-05	3.03E-06	2.40E-05
manganese	7439-96-5			3.53E-04	2.80E-03	3.53E-04	2.80E-03
total mercury	NA	8.32E-10	6.60E-09			8.32E-10	6.60E-09
nickel	7440-02-0			1.19E-06	9.40E-06	1.19E-06	9.40E-06
vanadium	7440-62-2			3.78E-06	3.00E-05	3.78E-06	3.00E-05
zinc	7440-66-6			1.26E-04	1.00E-03	1.26E-04	1.00E-03

TABLE A-1-11. DAVINCH OPERATING SCHEDULE

Feed Type		Item	Quantity		DAVINCH Processing Rate		Availability	Cycles per 12-hr day	Operating Schedule (hr/day)	Time to Process days		Time to Process years
Required	Overpacks/Rejects	155-mm projectile reject	4,600	items	2	item/cycle	0.58	10		397	782	2.1
	Overpacks/Rejects	105-mm projectile reject	5,990	items	6	item/cycle	0.58	10		172		
	Overpacks/Rejects	4.2-inch mortar reject	1,420	items	6	item/cycle	0.58	10		41		
	Overpacks/Rejects	155-mm projectile overpack	400	items	1	item/cycle	0.58	10		69		
	Overpacks/Rejects	105-mm projectile overpack	400	items	1	item/cycle	0.58	10		69		
	Overpacks/Rejects	4.2-inch mortar overpack	200	items	1	item/cycle	0.58	10		34		
Required	Energetics	155-mm projectiles bursters	299,554	items	200	item/cycle	0.58	10		258	347	1.0
	Energetics	4.2-inch mortar bursters	97,106	items	200	item/cycle	0.58	10		84		
	Energetics	105-mm projectile fuze/booster	28,376	items	773	items/hr	0.58		12	5		
Desired	Energetics	105-mm projectile burster	383,418	items	200	item/cycle	0.58	10		331	601	1.6
	Energetics	105-mm projectile propellant	78,031	lb	73.4	lb/hr	0.58		12	153		
	Energetics	4.2-inch mortar propellant	60,011	lb	73.4	lb/hr	0.58		12	117		
										Total All Feeds	**1,730**	**4.7**

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TABLE A-1-12. DAVINCH LONG-TERM EMISSION RATE CALCULATIONS

Basis and Emission Calculations:

a. Total emissions from processing of overpack/rejects and energetics were calculated as follows.

Pollutant emissions from	=	(overpack/reject emission rate, lb/hr) x (operating hours, hr/day) x (operating days over 5 years, days)
Overpacks/Rejects (lb)	=	(overpack/reject emission rate, lb/hr) x (12 hr/day) x (782 days)
Pollutant emissions from	=	(energetics emission rate, lb/hr) x (operating hours, hr/day) x (operating days over 5 years, days)
Energetics (lb)	=	(energetics emission rate, lb/hr) x (12 hr/day) x (948 days)
Total Emissions (lb)	=	Emissions from Overpacks/Rejects (lb) + Emissions from Energetics (lb)

b. Total average long-term emission rates were calculated based on a 5-year operating period, with 12 hours of operation per day.

Average Long-term emissions	=	(total emissions, lb) / (operating years, yr) / (operating hours, hr/yr)
(lb/hr)	=	(total emissions, lb) / (5 yr) / (4,380 hr/yr)
Average Long-term Emissions (g/s)	=	(average long-term emission rate, lb/hr) x (454 g/lb) x (1 hr/60 min) x (1 min/60 s)

Emissions Summary:

Compound	CAS Number	Overpacks/Rejects					Energetics					Total 5-yr Project Emissions	Total Operating Time		Modeled (Average) Long-term Emission Rate	
		Emission Rate		Operating Schedule		Emissions	Emission Rate		Operating Schedule		Emissions					
		g/s	lb/hr	hr/day	days/5-yr project	lb/5-yr project	g/s	controlled lb/hr	hr/day	days/5-yr project	lb/5-yr project	lb	yr	hr/yr	lb/hr	g/s
2-butanone	78-93-3	0	0	12	782	0.00E+00	6.41E-07	5.08E-06	12	948	5.78E-02	5.78E-02	5	4,380	2.64E-06	3.33E-07
2-ethyl 1,3-butadiene	3404-63-5	0	0	12	782	0.00E+00	3.03E-05	2.40E-04	12	948	2.73E+00	2.73E+00	5	4,380	1.25E-04	1.57E-05
acetone	67-64-1	0	0	12	782	0.00E+00	1.15E-06	9.08E-06	12	948	1.03E-01	1.03E-01	5	4,380	4.72E-06	5.95E-07
benzene	71-43-2	0	0	12	782	0.00E+00	3.28E-03	2.60E-02	12	948	2.96E+02	2.96E+02	5	4,380	1.35E-02	1.70E-03
benzyl alcohol	100-51-6	0	0	12	782	0.00E+00	2.40E-06	1.90E-05	12	948	2.16E-01	2.16E-01	5	4,380	9.89E-06	1.25E-06
bis(2-ethylhexyl)-phthalate	117-81-7	0	0	12	782	0.00E+00	2.02E-05	1.60E-04	12	948	1.82E+00	1.82E+00	5	4,380	8.31E-05	1.05E-05
bromodichloromethane	75-27-4	0	0	12	782	0.00E+00	2.23E-07	1.77E-06	12	948	2.01E-02	2.01E-02	5	4,380	9.19E-07	1.16E-07
carbon disulfide	75-15-0	0	0	12	782	0.00E+00	1.40E-06	1.11E-05	12	948	1.27E-01	1.27E-01	5	4,380	5.78E-06	7.29E-07
carbon tetrachloride	56-23-5	0	0	12	782	0.00E+00	5.73E-08	4.54E-07	12	948	5.17E-03	5.17E-03	5	4,380	2.36E-07	2.98E-08
chlorobenzene	108-90-7	0	0	12	782	0.00E+00	5.04E-08	4.00E-07	12	948	4.55E-03	4.55E-03	5	4,380	2.08E-07	2.62E-08
chloroform	67-66-3	0	0	12	782	0.00E+00	1.48E-07	1.18E-06	12	948	1.34E-02	1.34E-02	5	4,380	6.10E-07	7.70E-08
chloromethane	74-87-3	0	0	12	782	0.00E+00	1.35E-06	1.07E-05	12	948	1.21E-01	1.21E-01	5	4,380	5.54E-06	6.99E-07
dibromochloromethane	124-48-1	0	0	12	782	0.00E+00	2.75E-07	2.18E-06	12	948	2.48E-02	2.48E-02	5	4,380	1.13E-06	1.43E-07
dimethyl phthalate	131-11-3	0	0	12	782	0.00E+00	2.38E-06	1.89E-05	12	948	2.15E-01	2.15E-01	5	4,380	9.80E-06	1.24E-06
di-n-butyl phthalate	84-74-2	0	0	12	782	0.00E+00	5.55E-06	4.40E-05	12	948	5.01E-01	5.01E-01	5	4,380	2.29E-05	2.88E-06
ethane	74-84-0	0	0	12	782	0.00E+00	1.34E-02	1.06E-01	12	948	1.21E+03	1.21E+03	5	4,380	5.51E-02	6.94E-03
ethylbenzene	100-41-4	0	0	12	782	0.00E+00	4.44E-08	3.52E-07	12	948	4.01E-03	4.01E-03	5	4,380	1.83E-07	2.31E-08
HD	505-60-2	1.68E-05	1.34E-04	12	782	1.25E+00	0	0	12	948	0.00E+00	1.25E+00	5	4,380	5.72E-05	7.22E-06
hexane	110-54-3	0	0	12	782	0.00E+00	1.25E-07	9.90E-07	12	948	1.13E-02	1.13E-02	5	4,380	5.14E-07	6.48E-08
methane	74-82-8	0	0	12	782	0.00E+00	3.03E-01	2.40E+00	12	948	2.73E+04	2.73E+04	5	4,380	1.25E+00	1.57E-01
methylene chloride	75-09-2	0	0	12	782	0.00E+00	1.93E-07	1.53E-06	12	948	1.74E-02	1.74E-02	5	4,380	7.96E-07	1.00E-07
propene	115-07-1	0	0	12	782	0.00E+00	3.28E-03	2.60E-02	12	948	2.96E+02	2.96E+02	5	4,380	1.35E-02	1.70E-03
styrene	100-42-5	0	0	12	782	0.00E+00	4.92E-07	3.90E-06	12	948	4.44E-02	4.44E-02	5	4,380	2.03E-06	2.56E-07
tetrachloroethene	127-18-4	0	0	12	782	0.00E+00	5.22E-08	4.14E-07	12	948	4.71E-03	4.71E-03	5	4,380	2.15E-07	2.71E-08
toluene	108-88-3	0	0	12	782	0.00E+00	5.55E-04	4.40E-03	12	948	5.01E+01	5.01E+01	5	4,380	2.29E-03	2.88E-04
trichloroethene	79-01-6	0	0	12	782	0.00E+00	6.63E-08	5.26E-07	12	948	5.98E-03	5.98E-03	5	4,380	2.73E-07	3.44E-08
vinyl chloride	75-01-4	1.20E-05	9.52E-05	12	782	8.93E-01	0	0	12	948	0.00E+00	8.93E-01	5	4,380	4.08E-05	5.14E-06
xylenes	1330-20-7	0	0	12	782	0.00E+00	2.02E-05	1.60E-04	12	948	1.82E+00	1.82E+00	5	4,380	8.31E-05	1.05E-05
3,3',4,4'-TCB (PCB 77)	32598-13-3	6.67E-14	5.29E-13	12	782	4.96E-09	0	0	12	948	0.00E+00	4.96E-09	5	4,380	2.26E-13	2.86E-14

Emissions Summary:

Compound	CAS Number	Overpacks/Rejects					Energetics					Total 5-yr Project Emissions	Total Operating Time		Modeled (Average) Long-term Emission Rate	
		Emission Rate		Operating Schedule		Emissions	Emission Rate		Operating Schedule		Emissions					
		g/s	lb/hr	hr/day	days/5-yr project	lb/5-yr project	g/s	controlled lb/hr	hr/day	days/5-yr project	lb/5-yr project	lb	yr	hr/yr	lb/hr	g/s
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	1.67E-13	1.32E-12	12	782	1.24E-08	0	0	12	948	0.00E+00	1.24E-08	5	4,380	5.66E-13	7.14E-14
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	6.67E-14	5.29E-13	12	782	4.96E-09	0	0	12	948	0.00E+00	4.96E-09	5	4,380	2.26E-13	2.86E-14
ammonia	7664-41-7	0	0	12	782	0.00E+00	2.52E-05	2.00E-04	12	948	2.28E+00	2.28E+00	5	4,380	1.04E-04	1.31E-05
aluminum	91728-14-2	0	0	12	782	0.00E+00	9.58E-05	7.60E-04	12	948	8.65E+00	8.65E+00	5	4,380	3.95E-04	4.98E-05
cadmium	7440-43-9	0	0	12	782	0.00E+00	7.31E-07	5.80E-06	12	948	6.60E-02	6.60E-02	5	4,380	3.01E-06	3.80E-07
chlorine	7782-50-5	0	0	12	782	0.00E+00	3.03E-04	2.40E-03	12	948	2.73E+01	2.73E+01	5	4,380	1.25E-03	1.57E-04
chromium (3+)	16065-83-1	0	0	12	782	0.00E+00	2.02E-06	1.60E-05	12	948	1.82E-01	1.82E-01	5	4,380	8.31E-06	1.05E-06
chromium (6+)	18540-29-9	0	0	12	782	0.00E+00	2.02E-06	1.60E-05	12	948	1.82E-01	1.82E-01	5	4,380	8.31E-06	1.05E-06
copper	744-50-8	2.77E-09	2.20E-08	12	782	2.06E-04	7.57E-05	6.00E-04	12	948	6.83E+00	6.83E+00	5	4,380	3.12E-04	3.93E-05
hydrogen chloride	7647-01-0	1.11E-03	8.80E-03	12	782	8.26E+01	1.01E-03	8.00E-03	12	948	9.10E+01	1.74E+02	5	4,380	7.93E-03	1.00E-03
iron	7439-89-6	0	0	12	782	0.00E+00	2.77E-04	2.20E-03	12	948	2.50E+01	2.50E+01	5	4,380	1.14E-03	1.44E-04
lead	7439-92-1	3.91E-11	3.10E-10	12	782	2.91E-06	3.03E-06	2.40E-05	12	948	2.73E-01	2.73E-01	5	4,380	1.25E-05	1.57E-06
manganese	7439-96-5	0	0	12	782	0.00E+00	3.53E-04	2.80E-03	12	948	3.19E+01	3.19E+01	5	4,380	1.45E-03	1.83E-04
total mercury	NA	8.32E-10	6.60E-09	12	782	6.19E-05	0	0	12	948	0.00E+00	6.19E-05	5	4,380	2.83E-09	3.57E-10
nickel	7440-02-0	0	0	12	782	0.00E+00	1.19E-06	9.40E-06	12	948	1.07E-01	1.07E-01	5	4,380	4.88E-06	6.16E-07
vanadium	7440-62-2	0	0	12	782	0.00E+00	3.78E-06	3.00E-05	12	948	3.41E-01	3.41E-01	5	4,380	1.56E-05	1.97E-06
zinc	7440-66-6	0	0	12	782	0.00E+00	1.26E-04	1.00E-03	12	948	1.14E+01	1.14E+01	5	4,380	5.19E-04	6.55E-05

TABLE A-1-13. HD EMISSION RATE CALCULATIONS

Basis:

a. It is assumed that agent (HD) will be emitted from each EDT process stack at 0.7 times the Vapor Screening Level (VSL) when the system is in operation.

VSL	0.003	mg/m^3
	3.0E-06	g/m^3
0.7 VSL	2.1E-06	g/m^3

b. Under normal operating conditions, HD will only be emitted from the SDC process stack, not the building ventilation stack.

c. The process emissions and building ventilation are exhausted through the same emission point for the TDC and DAVINCH systems. Therefore, the emission rates for the normal operating condition are the same as for the emergency/accident scenario.

Emission Calculations:

Flow Rate (m^3/s) = (flow rate, ft^3/min) x (1 min/60 s) x (1 m^3/35.3145 ft^3)

Emission Rate (g/s) = (flow rate, m^3/s) x (0.7 x VSL, g/m^3)
= (flow rate, m^3/s) x (0.7 x 3.0 E-06 g/m^3)
= (flow rate, m^3/s) x (2.1 E-06 g/m^3)

Emissions Summary:

Normal Operating Conditions:

EDT	Flow Rate		Emission Rate	Total Emission Rate
	ft^3/min	m^3/s	g/s	g/s
SDC (process)	786	0.37	7.8E-07	7.8E-07
TDC-1 (stack 1)	5,000	2.36	5.0E-06	2.0E-05
TDC-1 (stack 2)	5,000	2.36	5.0E-06	
TDC-2 (stack 1)	5,000	2.36	5.0E-06	
TDC-2 (stack 2)	5,000	2.36	5.0E-06	
DAVINCH	17,000	8.02	1.7E-05	1.7E-05

Emergency/Accident Scenario:

EDT	Flow Rate		Emission Rate	Total Emission Rate
	ft^3/min	m^3/s	g/s	g/s
SDC (process)	786	0.37	7.8E-07	1.7E-05
SDC (bldg. vent.)	16,000	7.55	1.6E-05	
TDC-1 (stack 1)	5,000	2.36	5.0E-06	2.0E-05
TDC-1 (stack 2)	5,000	2.36	5.0E-06	
TDC-2 (stack 1)	5,000	2.36	5.0E-06	
TDC-2 (stack 2)	5,000	2.36	5.0E-06	
DAVINCH	17,000	8.02	1.7E-05	1.7E-05

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APPENDIX A-2

EMISSIONS AND MODEL INPUT DOCUMENTATION FOR EDS

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FORWARD

Appendix A-2 presents emission rates for the U.S. Army's Explosive Destruction System (EDS) when processing various munition types for 1 year at a time, the methodology used to develop the emission rates, a sample calculation demonstrating the emission rate methodology, and the calculation methodology used to develop short-term and long-term average emission rates for use in the Explosive Destruction Technology (EDT) Multiple Pathway Health Risk Assessment (MPHRA). The information presented in this Appendix was developed by SAIC and provided to Battelle for use in this EDT MPHRA report. The material was formatted, edited, and summarized in Table A3-1; Table A3-2 through Table A3-5 were developed by Battelle. Tables identified with an "A1-," "A2-," and "A3-" followed by a number can be found in Attachment 1, Attachment 2, and Attachment 3 of this appendix, respectively. All other tables (those without the "A") are in the Appendix A-2 front matter.

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Acronyms and Abbreviations

Acronym/ Abbreviation	Definition
AFU	air filtration unit
cfm	cubic feet per minute
ºC	degree Centigrade
BKW	Becker-Kistiakowsky-Wilson
BKWS	Becker-Kistiakowsky-Wilson-Sandia
EDS	Explosive Destruction System
EDT	explosive destruction technology
ft	feet
ft^3	cubic feet
g	gram
g/mg	gram per milligram
gal	gallon
H	sulfur mustard
HD	distilled mustard
He	helium
HEPA	high efficiency particulate air (filter)
HT	mixture of approximately 60 percent HD and 40 percent Agent T
hr	hour
in	inch
kg	kilogram
ℓ	liter
lb	pound
m^3/sec	cubic meter per second
MEA	monoethanolamine
MEK	methyl ethyl ketone, also known as 2-butanone
MPHRA	Multiple Pathway Health Risk Assessment
mg/kg	milligram per kilogram
mg/ℓ	milligram per liter
mg/m^3	milligram per cubic meter
mm	millimeter
mm-Hg	millimeters of mercury
MW	molecular weight
NEW	net explosive weight
PCAPP	Pueblo Chemical Agent-destruction Pilot Plant
PCD	Pueblo Chemical Depot
PM	particulate matter
psia	pounds per square inch absolute
psig	pounds per square inch gauge
ºR	degree Rankine
RCRA	Resource Conservation and Recovery Act
scf	standard cubic foot
TNT	trinitrotoluene
VP	vapor pressure
WTS	Waste Transfer System
wt %	weight percent
yr	year

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EDS EMISSIONS FOR EDT MPHRA

1 BACKGROUND

Emissions calculations were performed for potential EDS operations at the Pueblo Chemical Depot's (PCD) Pueblo Chemical Agent-destruction Pilot Plant (PCAPP). The EDS is being considered to destroy 13,010 mustard (HD) filled munitions as well as 137,952 pounds (lb) of downloaded bursters. The downloaded bursters are assumed to be free of chemical agent contamination. Table 1 contains a list of items to be destroyed and summarizes the number of years needed to treat/destroy the required items. As presented in Table 1, nine EDS units would be required to process all of the required feed in 4.7 years (yr) leaving 0.3 yr for processing of desired feed items. Table 2 shows a similar calculation for the desired feed and indicates that 19 percent of the desired feed can also be processed by the nine EDSs in the 5 total years of processing time. The following assumptions were made concerning EDS operations:

1) Munition/mortar assumptions:
   - Nine EDS units are used
   - 155-millimeter (mm) projectiles are processed as a three-pack shot
   - 105-mm projectiles and 4.2-inch mortars are processed as a six-pack shot
   - Each shot processing takes 2 days
   - Six operational days (three shots) per week
   - One maintenance day per week
   - 90% availability applied
   - Overpacked items are unpacked and processed "bare"
2) Burster assumptions:
   - The downloaded bursters are not contaminated with chemical agent; therefore no reagent treatment is required
   - Nine EDS units are used; net explosive weight (NEW) capacity is 4.8 lbs; 4 lb NEW of bursters will be processed per shot (0.8 lb NEW needed for donor charge)
   - Each shot processing takes 2 hours (hr) (six shots per day)
   - Six operational days per week (36 shots per week)
   - One maintenance day per week
   - 90% availability applied

Table 1. EDS Data for EDT MPHRA Input (Required Feed)

Description	Quantity (number of Items)	Type	Items per Shot	Shots per Day	Shots per Week (2-day operation per shot; 6-day operational week)	Raw Weeks	Availability	Weeks w/ Availability	Total Years
Overpacks	400	155-mm	3	N/A	3	44	90%	49	0.9
Overpacks	400	105-mm	6	N/A	3	22	90%	24	0.5
Overpacks	200	4.2-inch	6	N/A	3	11	90%	12	0.2
Rejects	4,600	155-mm	3	N/A	3	511	90%	562	10.8
Rejects	5,990	105-mm	6	N/A	3	333	90%	366	7.0
Rejects	1,420	4.2-inch	6	N/A	3	79	90%	87	1.7
Subtotal	13,010								*21.2*
Description	**Quantity (lb)**	**Type**	**lb per Shot**	**Shots per Day**	**Shots per Week (lb per week)**	**Raw Weeks**	**Availability**	**Weeks w/ Availability**	**Total Years**
Bursters	122,877	155-mm	4	6	36 (144)	853	90%	939	18.1
Bursters	13,594	4.2-inch	4	6	36 (144)	94	90%	104	2.0
Fuze-boosters	1,481	105-mm	4	6	36 (144)	41	90%	46	0.9
Subtotal	*137,952*								*21.0*
Total years (one EDS unit operating)									42.2
Years mandated to complete effort									5
Number of EDS units required									8.4
Number of years needed assuming nine EDSs									**4.7**
Years remaining out of 5-yr time frame for treating additional feed									0.3

Note: N/A = not applicable (processing HD-filled munitions is a 2-day operation)

Table 2. EDS Data for EDT MPHRA Input (Desired Feed)

Description	Quantity (lb)	Type	lb per Shot	Shots per day	Shots per Week (lb per week)	Raw Weeks	Availability	Weeks w/ Availability	Total Years
Bursters	98,577	105-mm	4	6	36 (144)	685	90%	761	14.6
Subtotal	*98,577*								*14.6*
Total years (one EDS unit operating)									14.6
Total years assuming nine EDSs									1.6
Years available for treating desired feed									0.3
Percent of desired feed that can be treated in time remaining									**19%**

2 EMISSION CALCULATIONS – HD TREATMENT

Emission calculations were performed using templates developed for Resource Conservation and Recovery Act (RCRA) permit applications at Dugway Proving Ground and Deseret Chemical Depot and the Clean Air Act Notice of Intent for Deseret Chemical Depot. Attachment 1 to this appendix provides additional background and supplemental information about the EDS and the calculation methods. Attachment 2 provides an example calculation using methyl ethyl ketone (MEK), also referred to as 2-butanone in the main body of this report.

Emissions from the EDS during treatment of chemical warfare material are generated by operation of the Waste Transfer System (WTS). During each EDS deployment, neutralent and rinsate wastes are drained from the EDS vessel into the WTS. Samples of these wastes are analyzed for RCRA characteristics to ensure appropriate waste codes are applied and to verify that the wastes are acceptable to the treatment storage and disposal facility that will ultimately receive the waste. Air emissions consist of chemicals evaporating from these liquid wastes. Historical values from the RCRA waste characterization analyses of neutralent and rinsate wastes were used herein as the basis for determining the types and quantities of gases and vapors expelled from the WTS during EDS operations.

Gases expelled from the WTS occur when liquid is added to the system and when the helium (He) purge of the EDS vessel is performed. Typically during HD operations, neutralent wastes are drained from the EDS vessel in the early afternoon of Day 1 of the 2-day operation. Rinsate wastes are drained from the EDS vessel and the He purge is performed on the morning of the Day 2. Because no induced air flow occurs through the WTS, the emission duration is very short. Emission durations are approximately 10 minutes on Day 1 and approximately 35 minutes on Day 2 (Day 2 consisting of 10 minutes for each of two rinses and 15 minutes for the He purge). Gases expelled from the WTS exit through duct work that connects the EDS WTS to the Air Filtration Unit (AFU) that services the environmental enclosure surrounding the EDS workspace. The WTS exhaust duct includes a canister filter that contains silica gel and activated carbon. The canister filter is replaced with each batch of munitions processed.

Tables 3 through 5 summarize EDS emissions during treatment of the three types of HD-filled munitions at PCAPP on a per EDS basis. Each of the nine EDSs is in a separate environmental enclosure, and each enclosure is equipped with a separate AFU and AFU stack. Controlled emissions exit each enclosure AFU in an exhaust flow of 5,600 cubic feet per minute (cfm, or 2.64 cubic meters per second (m^3/sec)).

All EDSs were assumed to process munitions Monday through Saturday with Sunday being the maintenance day. Based on this scenario, Mondays, Wednesdays and Fridays would be Day-1 of HD processing in all EDSs while Tuesdays, Thursdays, and Saturdays would be Day-2 of processing in all EDSs. No EDS emissions occur on Sundays. Munitions were assumed to be processed in campaigns. Each campaign consists of a single type of munition. At the end of a campaign, operations transition to another type of munition for the next campaign. All EDSs were also assumed to process the same type of munitions at the same time. For example, if the first campaign is 4.2-inch mortars, all EDSs start with 4.2-inch HD-filled mortars. If the second campaign is 105-mm projectiles, then when the 4.2-inch mortars are completed all EDSs transition to the 105-mm projectiles.

Table 3. Maximum and Annual Emissions from Treatment of 4.2-inch HD-filled Mortars (each EDS)

Compound	Day 1 Maximum Emission (lb/hr)	Day 2 Maximum Emission (lb/hr)	Controlled Day 1 Annual Emission (ton/yr)	Controlled Day 2 Annual Emission (ton/yr)
mercury	1.54E-16	1.68E-16	2.25E-18	6.19E-18
methyl ethyl ketone	4.52E-07	4.94E-07	6.60E-09	1.74E-08
2,4-dinitrotoluene	3.18E-11	3.48E-11	4.64E-13	1.22E-12
nitrobenzene	6.23E-11	6.80E-11	9.09E-13	2.39E-12
1,1-dichloroethene	8.75E-07	9.56E-07	1.28E-08	3.37E-08
1,2-dichloroethane	0.00E+00	6.08E-10	0.00E+00	1.42E-11
1,4-dichlorobenzene	2.17E-09	2.37E-09	3.17E-11	8.34E-11
benzene	2.62E-09	2.86E-09	3.83E-11	1.01E-10
chlorobenzene	3.65E-09	3.99E-09	5.33E-11	1.40E-10
chloroform	3.35E-07	3.66E-07	4.89E-09	1.33E-08
tetrachloroethene	8.51E-08	9.29E-08	1.24E-09	3.27E-09
trichloroethene	1.05E-06	1.15E-06	1.53E-08	4.03E-08
vinyl chloride	8.52E-04	9.31E-04	1.24E-05	3.28E-05
1,4-dithiane	2.46E-07	2.69E-07	3.59E-09	9.46E-09
1,4-thioxane	5.20E-07	5.68E-07	7.60E-09	2.00E-08
HD	2.52E-13	2.76E-13	3.69E-15	9.70E-15
monoethanolamine	1.07E-03	1.17E-03	1.57E-05	4.12E-05
carbon monoxide	3.55E+00	6.78E-01	2.83E-02	4.03E-02
carbon (particulate (PM))	1.73E-04	3.31E-05	1.38E-06	1.96E-06
nitrogen oxides	3.24E-04	6.18E-05	2.58E-06	3.67E-06
methane	1.39E-02	2.66E-03	1.11E-04	1.58E-04
ammonia	2.43E-02	4.63E-03	1.93E-04	2.75E-04
hydrogen cyanide	8.61E-03	1.64E-03	6.58E-05	9.75E-05
acetylene	2.86E-02	5.45E-03	2.27E-04	3.24E-04
ethane	1.27E-03	2.42E-04	1.01E-05	1.44E-05

Table 4. Maximum and Annual Emissions from Treatment of 105-mm HD-filled Projectiles (each EDS)

Compound	Day 1 Maximum Emission (lb/hr)	Day 2 Maximum Emission (lb/hr)	Controlled Day 1 Annual Emission (ton/yr)	Controlled Day 2 Annual Emission (ton/yr)
mercury	3.59E-16	3.02E-16	2.26E-18	6.20E-18
methyl ethyl ketone	1.05E-06	8.87E-07	6.62E-09	1.75E-08
2,4-dinitrotoluene	7.41E-11	6.24E-11	4.65E-13	1.23E-12
nitrobenzene	1.45E-10	1.22E-10	9.11E-13	2.40E-12
1,1-dichloroethene	2.04E-06	1.72E-06	1.28E-08	3.37E-08
1,2-dichloroethane	0.00E+00	6.08E-09	0.00E+00	1.42E-11
1,4-dichlorobenzene	5.05E-09	4.26E-09	3.18E-11	8.37E-11
benzene	6.10E-09	5.14E-09	3.83E-11	1.01E-10
chlorobenzene	8.51E-09	7.17E-09	5.36E-11	1.41E-10
chloroform	7.80E-07	6.57E-07	4.90E-09	1.33E-08
tetrachloroethene	1.98E-07	1.67E-07	1.25E-09	3.28E-09
trichloroethene	2.44E-06	2.06E-06	1.54E-08	4.05E-08
vinyl chloride	1.98E-03	1.67E-03	1.25E-05	3.28E-05
1,4-dithiane	5.73E-07	4.38E-07	3.60E-09	9.48E-09
1,4-thioxane	1.21E-06	1.02E-06	7.62E-09	2.01E-08
HD	5.88E-13	4.95E-13	3.69E-15	9.73E-15
monoethanolamine	2.74E-03	2.31E-03	1.57E-05	4.13E-05
carbon monoxide	1.01E+01	8.52E+00	3.25E-02	3.62E-02
carbon (PM)	4.73E-04	3.99E-04	1.59E-06	1.76E-06
nitrogen oxides	1.13E-03	9.56E-04	2.97E-06	3.29E-06
methane	3.26E-02	2.74E-02	1.28E-04	1.42E-04
ammonia	5.66E-02	4.77E-02	2.23E-04	2.47E-04
hydrogen cyanide	2.01E-02	1.69E-02	7.89E-05	8.77E-05
acetylene	6.67E-02	5.62E-02	2.61E-04	2.91E-04
ethane	2.96E-03	2.49E-03	1.16E-05	1.29E-05

Table 5. Maximum and Annual Emissions from Treatment of 155-mm HD-filled Projectiles (each EDS)

Compound	Day 1 Maximum Emission (lb/hr)	Day 2 Maximum Emission (lb/hr)	Controlled Day 1 Annual Emission (ton/yr)	Controlled Day 2 Annual Emission (ton/yr)
mercury	1.55E-16	3.41E-16	2.24E-18	6.23E-18
methyl ethyl ketone	1.04E-06	9.99E-07	6.58E-09	1.75E-08
2,4-dinitrotoluene	7.32E-11	7.03E-11	4.63E-13	1.23E-12
nitrobenzene	1.43E-10	1.38E-10	9.06E-13	2.41E-12
1,1-dichloroethene	2.02E-06	1.93E-06	1.27E-08	3.40E-08
1,2-dichloroethane	0.00E-00	6.08E-09	0.00E+00	1.42E-11
1,4-dichlorobenzene	5.00E-09	4.80E-09	3.16E-11	8.41E-11
benzene	6.03E-09	5.79E-09	3.81E-11	1.02E-10
chlorobenzene	8.41E-09	8.07E-09	5.32E-11	1.42E-10
chloroform	7.71E-07	7.40E-07	4.87E-09	1.34E-08
tetrachloroethene	1.96E-07	1.77E-07	1.24E-09	3.29E-09
trichloroethene	2.42E-06	2.32E-06	1.53E-08	4.07E-08
vinyl chloride	1.96E-03	1.88E-03	1.24E-05	3.32E-05
1,4-dithiane	5.66E-07	5.44E-07	3.58E-09	9.54E-09
1,4-thioxane	1.20E-06	1.15E-06	7.57E-09	2.01E-08
HD	5.81E-13	5.58E-13	3.67E-15	9.79E-15
monoethanolamine	2.34E-03	2.24E-03	1.48E-05	3.94E-05
carbon monoxide	8.00E+00	7.69E+00	3.37E-02	3.56E-02
carbon (PM)	4.81E-04	4.62E-04	2.03E-06	2.15E-06
nitrogen oxides	4.97E-04	4.77E-04	2.09E-06	2.21E-06
methane	4.69E-02	4.50E-02	1.98E-04	2.09E-04
ammonia	6.55E-02	6.29E-02	2.75E-04	2.92E-04
hydrogen cyanide	2.89E-02	2.78E-02	1.22E-04	1.29E-04
acetylene	9.60E-02	9.22E-02	4.05E-04	4.27E-04
ethane	4.26E-03	4.09E-03	1.79E-05	1.90E-05

3 EMISSIONS CALCULATIONS – BURSTER DESTRUCTION

Destruction of the downloaded bursters is a much less involved process than destruction and treatment of HD-filled munitions. Burster destruction involves placing the bursters in the EDS vessel with a donor charge to initiate destruction. After detonation of the donor charge, the EDS vessel is rinsed with water. Treatment with a neutralent is unnecessary because chemical agent is not present. Therefore, instead of requiring 2 days per batch, burster destruction can be accomplished in approximately 2 hours, allowing for six batches of bursters to be destroyed per day. Emissions from destruction of downloaded bursters were based on the following assumptions:

- Six batches of bursters per day per EDS
- Six operational days per week for a total of 36 batches per week per EDS
- All EDSs process the same type of burster at the same time
- Emissions occur six times per operational day at 2-hour intervals (assume first emission is at 8:00 am)
- Each emission period lasts 10 minutes for a total of 60 minutes per day, plus 10 minutes for gas expansion
- No emissions from burster destruction occur on Sundays

Tables 6 through 9 summarize controlled emissions from treatment of downloaded bursters. The definitions of controlled emissions are the same as previously described. The calculated results for 105-mm fuze/booster combinations and 105-mm bursters are the same as that for the 4.2-inch mortar bursters because all three items contain the same explosives and all are being treated at the same rate of 4 lb NEW of explosive per batch.

Table 6. Controlled Emissions from Treatment of Downloaded 155-mm Bursters (each EDS)

Compound	Maximum Emission (lb/hr)	Controlled Annual Emissions (ton/yr)
carbon monoxide	1.06E+01	1.60E+00
carbon (PM)	7.64E-04	1.15E-04
nitrogen oxides	1.41E-03	2.13E-04
methane	4.81E-02	7.27E-03
ammonia	3.83E-02	5.78E-03
hydrogen cyanide	2.97E-02	4.49E-03
acetylene	9.86E-02	1.49E-02
ethane	4.37E-03	6.61E-04

Table 7. Controlled Emissions from Treatment of Downloaded 4.2-inch Mortar Bursters (each EDS)

Compound	Maximum Emission (lb/hr)	Controlled Annual Emissions (ton/yr)
carbon monoxide	1.12E+01	1.12E+00
carbon (PM)	5.21E-04	5.20E-05
nitrogen oxides	2.02E-03	2.02E-04
methane	1.02E-02	1.02E-03
ammonia	1.77E-02	1.77E-03
hydrogen cyanide	6.27E-03	6.27E-04
acetylene	2.08E-02	2.08E-03
ethane	9.24E-04	9.24E-05

Table 8. Controlled Emissions from Treatment of Downloaded 105-mm Fuze/booster Combinations (each EDS)

Compound	Maximum Emission (lb/hr)	Controlled Annual Emissions (ton/yr)
carbon monoxide	1.12E+01	1.12E+00
carbon (PM)	5.21E-04	5.20E-05
nitrogen oxides	2.02E-03	2.02E-04
methane	1.02E-02	1.02E-03
ammonia	1.77E-02	1.77E-03
hydrogen cyanide	6.27E-03	6.27E-04
acetylene	2.08E-02	2.08E-03
ethane	9.24E-04	9.24E-05

Table 9. Controlled Emissions from Treatment of Downloaded 105-mm Bursters (each EDS)

Compound	Maximum Emission (lb/hr)	Controlled Annual Emissions (ton/yr)
carbon monoxide	1.12E+01	1.12E+00
carbon (PM)	5.21E-04	5.20E-05
nitrogen oxides	2.02E-03	2.02E-04
methane	1.02E-02	1.02E-03
ammonia	1.77E-02	1.77E-03
hydrogen cyanide	6.27E-03	6.27E-04
acetylene	2.08E-02	2.08E-03
ethane	9.24E-04	9.24E-05

APPENDIX A-2

ATTACHMENT 1

BACKGROUND AND SUPPLEMENTAL DATA

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APPENDIX A-2
ATTACHMENT 1
BACKGROUND AND SUPPLEMENTAL DATA

A1-1 TYPICAL EDS SETUP ASSUMPTIONS:

- Nine identical EDSs, one EDS per enclosure
- The enclosure is for worker safety: protection from rain, snow, etc
- Enclosure dimensions: 29.5 feet (ft) wide, 66 ft long, and 15 ft high at the peak
- Each enclosure is equipped with an AFU rated at 6,000 cfm
- Assumed AFU flow rate was 5,600 cfm to account for inefficiencies due to ductwork and buildup of resistance in filters over time
- AFU includes: pre-filter, high efficiency particulate air (HEPA) filter, two activated carbon beds, and final HEPA filter
- Enclosure provides containment if an agent vapor leaks from a munition into the work area before the EDS vessel can be sealed

A1-2 EDS ASSUMPTIONS:

- Each EDS has a WTS that receives liquid and gaseous wastes from the EDS
- The WTS has a canister filter on the vent pipe that leads from the surge drum
- The canister filter contains silica gel and activated carbon
- The canister filter is changed after each shot
- Emissions from the WTS canister filter are ducted to the AFU where it mixes with enclosure air before passing through the AFU
- Each EDS operates 7 days per week, including 1 day for maintenance
- 90% availability was applied to calculate the number of treatment years required

A1-3 HD TREATMENT ASSUMPTIONS:

- HD treatment is a 2-day process
- Day 1 consists of loading the EDS, accessing the fill material, neutralizing the fill material, draining the neutralent, and adding the first rinse to remain overnight
- Day 2 treatment consists draining of the first rinse, adding and draining the second rinse, performing the He purge, and cleaning solid debris from the EDS
- Gaseous EDS emissions include vapors expelled from the WTS when liquids drain from the EDS vessel or gases enter the waste drums. These include:
  - The neutralent drain lasts 10 minutes
  - Gas expansion from detonation encompasses 8.25 minutes, which produces an equivalent molar equivalent gas flow rate to the He purge.
  - The first rinse drain lasts 10 minutes
  - The second rinse drain lasts 10 minutes
  - The He purge lasts 15 minutes
- Given a 7-day work week, three shots (batches) of munitions will be processed in each EDS per week
- 4.2-inch mortars and 105-mm projectiles will be treated in batches of six munitions per shot
- 155-mm projectiles will be treated in batches of three munitions per shot
- Rate (lb/hr) and concentration (mg/m^3) calculations were based on the maximum (not average) values obtained for various processes

- Annual calculations (ton/yr) were based on processing the same material for an entire year. This was adjusted for fractional years by multiplying the calculated annual tonnage by the portion of the year that that material was processed

A1-4 DOWNLOADED BUSTER DESTRUCTION ASSUMPTIONS:

- Bursters are destroyed in batches containing 4 lb trinitrotoluene (TNT)-equivalent NEW. An additional 0.8 lb NEW of donor charge is added to initiate the bursters.
- Burster destruction takes approximately 2 hr so there will be six batches of bursters destroyed per day, 6 days per week.
- Burster destruction does not entail neutralization, rinsing, or helium purge, therefore emissions are due to gas expansion upon detonation of the charges.
- Rate (lb/hr) and concentration (mg/m^3) calculations were based on the maximum (not average) values obtained for various processes.
- Annual calculations (ton/yr) were based on processing the same material for an entire year. This was adjusted for fractional years by multiplying the calculated annual tonnage by the portion of the year that that material was processed.

A1-5 EMISSION CALCULATION METHOD:

- Emissions were calculated based on the gases/vapors expected to exit the WTS during the various stages in the EDS process.
- Potential pollutants were identified in RCRA characterization analyses of neutralent and rinsate wastes during past EDS operations involving sulfur mustard agents. Initial concentrations for neutralent and rinsate wastes were set at historical average concentrations. Table A1-1 lists components of neutralent and rinsate liquids along with historical concentrations. These liquid concentrations were used to calculate vapor emissions as described in the example calculation presented in Attachment 2 to this appendix.
- In addition to vapors produced from treatment of HD, gases are generated from detonation of the donor charges as well as the bursters contained within the munitions being treated. Table A1-2 and Table A1-3 list the gaseous chemical concentrations used to calculate emissions as described in the example calculation presented in Attachment 2 to this appendix for various munitions and donor charges.
- Emissions generated when treating downloaded bursters are due to detonation of the bursters plus the donor charges.
- Vapor pressures for the various constituents were used in conjunction with initial liquid concentrations, quantities of reagent and rinse water, system volumes, expected temperatures, and pressures, and process durations to calculate expected vaporous emissions from the EDS.
- The main calculation yielded grams (g) of constituent per batch from which hourly and annual mass emission rates were calculated based on assumed emission durations, gas flow rate, and number of batches processed in a year.
- Calculations (on a per-EDS basis) assumed constant conditions throughout the entire year. Individual EDS emission rates were adjusted to account for multiple EDSs by multiplying by the number of EDSs.
- Annual rates were calculated from the total mass emissions and adjusted for the portion of the processing schedule that emissions are assumed to occur (12 hours per day and 6 days per week for the 5 years of operation).

Table A1-1. Analyte Concentrations in Neutralent and Rinsate

Analyte	Neutralent (mg/ℓ)	Rinsate (mg/ℓ)
arsenic	0.28	0.116
barium	0.758	0.2302
cadmium	1.825	0.054
chromium	0.176	0.0553
lead	0.213	0.228
selenium	0.747	0.222
silver	0.123	0.0353
mercury	0.00224	0.00307
methyl ethyl ketone	1.83	0
2,4-dinitrotoluene	0.193	0
nitrobenzene	0.0983	0
1,1-dichloroethene	0.273	0
1,2-dichloroethane	0	0.0512
1,4-dichlorobenzene	0.255	0
benzene	4.08	0.115
chlorobenzene	0.223	0
chloroform	0.703	0.72
tetrachloroethene	4.88	0.029
trichloroethene	8.89	0.0612
vinyl chloride	19.03	1.13
1,4-dithiane	25.483	0
1,4-thioxane	8.962	0
HD	0.074	0

A1-6 EMERGENCY OPERATIONS ASSUMPTIONS:

- Emergency operations are implemented when an unexpected release of chemical agent occurs within the environmental enclosure. Such a release may be either agent vapors or liquid agent.
- The most likely location for an unplanned release to occur is at the work table where munitions are prepared for placement into the EDS vessel.
- A near real-time agent monitor located at the work table will alarm if agent vapors are detected above the alarm level of 0.7 vapor screening level (0.003 mg/m^3).
- Local ventilation at the work table captures vapors and directs them to the AFU.
- Upon activation of an agent alarm workers respond according to an Standing Operating Procedure and Emergency Response Plan to identify the source of the release, contain the release, and clean up of any residual contamination
- Normal operations continue as directed by the Supervisor and Safety Officer after the release is contained and cleaned up.
- The activated carbon filters in the AFU have sufficient excess capacity to control vapors generated without breaking through the first carbon filter bed in the event that the entire contents of the largest item in the environmental enclosure were to be released.

Table A1-2. Explosives Emission Components Mole Fractions for 4.2-inch Mortars

Explosive Type	TNT-equivalent	Actual Explosive (lb/batch)	Emissions from Explosives (lb/batch)												
			N_2	H_2O	CO	C (PM)	NO_x	CH_4	NH_3	HCN	C_2H_2	C_2H_6	Total	Total Gas	Total Dry Gas
tetryl [1]	1.21	0.84	0.205	0.132	0.451	0.0527	8.74E-05	0	0	0	0	0	0.840	0.787	0.656
donor charge [2]	1.13	1.44	0.433	0.324	0.576	0.1066	0	0.004	0.028	0.008	0.035	3.46E-04	1.515	1.408	1.084
	Total	2.28	0.638	0.456	1.026	0.1593	8.74E-05	0.004	0.028	0.008	0.035	3.46E-04	2.355	2.195	1.739
	Total NEW	2.6436													
atmospheric pressure (psia)		12.5													
gas temperature (°C)		60													
gas density (lb/ft^3) at STP			0.075	0.047	0.075	solid	0.075	0.043	0.045	0.074	0.073	0.076	0.049	0.046	0.052
volume (ft^3) at ATP			12.21	13.92	19.63	0	0.0017	0.135	0.881	0.156	0.679	0.007	47.62	47.62	33.70
dry gas volume mole fraction			0.222	0	0.356	0	3.03E-05	0.002	0.016	0.003	0.012	1.18E-04	NA	NA	0.612

Table A1-3. Emission Component Mole Fractions by Scenario

Scenario	Dry Gas Volume Fraction (mole fraction)										Total Dry Gas
	N_2	H_2O	CO	C (PM)	NO_x	CH_4	NH_3	HCN	C_2H_2	C_2H_6	
4.2-in mortar	0.22000	0.00000	0.36000	0.00000	0.00003	0.00244	0.01600	0.00284	0.01233	0.00012	0.61169
105mm projectile	0.23091	0.00000	0.39015	0.00000	0.00004	0.00219	0.01436	0.00255	0.01107	0.00011	0.65137
155mm projectile	0.22268	0.00000	0.35322	0.00000	0.00002	0.00361	0.01902	0.00420	0.01823	0.00018	0.62115
4.2-in downloaded burster-fuze	0.24165	0.00000	0.48218	0.00000	0.00008	0.00092	0.00603	0.00107	0.00465	0.00004	0.73662
105mm downloaded burster	0.24165	0.00000	0.48218	0.00000	0.00008	0.00092	0.00603	0.00107	0.00465	0.00004	0.73662
155mm downloaded burster	0.23113	0.00000	0.46433	0.00000	0.00006	0.00374	0.01184	0.00435	0.01890	0.00018	0.73454
4.2-in downloaded burster	0.24165	0.00000	0.48218	0.00000	0.00008	0.00092	0.00603	0.00107	0.00465	0.00004	0.73662

Notes: STP = standard temperature and pressure; ATP = actual temperature and pressure.

References:

1. Cheetah Thermochemical Code (version 6).
2. EPA, AP-42, Fifth Edition, Volume 1, Section 13.3, Explosive Detonation, Table 13.3-1, January 1995.

APPENDIX A-2
ATTACHMENT 2
DESCRIPTION OF CALCULATIONS

Because the EDS process for treating chemical agent produces liquid wastes rather than vaporous wastes, vaporous emissions other than chemical agents have never been monitored. This attachment describes calculations performed to estimate vaporous emissions based on analysis of liquid neutralent and rinsate samples plus assumed or modeled emissions from detonation of explosives.

The EDT project consists of the following seven scenarios:

- 4.2-inch HD-filled mortars
- 105-mm HD-filled projectiles
- 155-mm HD-filled projectiles
- Downloaded uncontaminated 4.2-inch mortar bursters
- Downloaded uncontaminated 155-mm projectile bursters
- Downloaded uncontaminated 105-mm projectile fuze/booster combos
- Downloaded uncontaminated 105-mm projectile bursters

This attachment uses inputs for the 4.2-inch mortar scenario to demonstrate the calculation methodology. The example shows calculations in scientific notation rounded to 2 decimal places.

The EDS detonation capacity is 4.8 lb of TNT-equivalent NEW. The volume of the EDS vessel is 606 liters (ℓ) with a working capacity of 424 ℓ. Therefore, even if NEW is not limiting, the quantity of fill in a batch plus the volume of treatment reagent never exceeds 424 ℓ and is typically much lower. The amount of agent fill treated at PCAPP is 36 lb. To treat this amount of agent, 204 ℓ of 90 weight-percent (wt %) monoethanolamine (MEA) in water would be used. The EDS vessel is heated to 60°C during the treatment process. After treatment of the mustard agent, the EDS vessel is rinsed twice; first with 100°C water and second with ambient temperature water.

A2-1 CALCULATION METHOD OVERVIEW

The process used to calculate emissions is outlined in the following steps:

1. Calculate volumes and capacities.
   a. Calculate volumes and capacities for system components.
   b. Calculate quantity of liquid neutralent waste, rinsate waste, and amount of He purge.
   c. Calculate system volume.
   d. Calculate quantity of vapor vented from WTS when liquid is added to waste drum, when gas expansion takes place from EDS compressed gases, and during He purge.
2. Calculate vapor composition.
   a. Calculate total mass of components in liquid neutralent waste.
   b. Calculate gram moles (g-moles) of components in liquid neutralent waste.
   c. Calculate mole fractions of components in liquid neutralent waste.
   d. Calculate component partial pressures using Raoult's law.
   e. Calculate EDS gases (He and explosive burning gases) partial pressures.

f. Calculate mole fractions of components in vapor (in equilibrium with liquid).
g. Calculate lb-moles of components in vapor per batch.
h. Calculate lb of components in vapor per batch.
i. Calculate component emission rate (lb-moles/hr and lb/hr).

3. Calculate vapor emissions from WTS after drum filter.
   a. Calculate g/batch in expelled air.
   b. Calculate lb/hr emission rate.

4. Repeat above calculations for rinsate.

5. Repeat above calculations for EDS gas expansion.

6. Repeat above calculations for He purge.

7. Calculate emissions (in terms of g/batch and lb/hr) from surge drum filter by adding all the emissions from neutralent drain, rinsate drain, EDS gas expansion, and He purge operations.

8. Calculate controlled emissions from enclosure AFU.
   a. Calculate batch controlled emission rate (g/batch).
   b. Calculate hourly controlled emission rate (lb/hr).
   c. Calculate annual controlled emission rate (ton/year).

A2-2 CALCULATION BASES AND ASSUMPTIONS

Most items treated in the EDS have incomplete provenance because they are recovered items rather than stockpile items. Therefore, it is generally not possible to know if the sulfur mustard agent is sulfur mustard, distilled mustard, or a mixture of approximately 60 percent distilled mustard and Agent T (H, HD, or HT, respectively). The analytical results used in these calculations were based on sulfur mustard agent filled items with no attempt to distinguish between results from H, HD, or HT. Recovered items also are often covered in rust and soil that may introduce contaminants to the neutralent waste stream that would not be present when pristine munitions are treated. Recovered items may be older than stockpile items, the mustard may have been manufactured by different processes than the typical stockpile item, and the munitions have likely experienced environmental conditions (temperature, humidity, exposure to water) that stockpile items are unlikely to have experienced. All of these differences mean that emissions calculated herein are likely greater than would be expected from treatment of stockpile items.

Neutralent and rinsate waste concentrations used in these calculations are average concentrations of all historical analytical results available at the time of the calculation. For example, if historical data contained analytical results from five samples of mustard agent treated with 90 wt % MEA, the values for each component were averaged to obtain the initial concentrations used in these calculations. A value of half the detection or reporting limit (whichever was recorded) was used for non-detects in order to arrive at an average value. For example, if 4 out of 5 samples were non-detect at 0.1 milligram/liter (mg/ℓ) and one had a reported concentration of 0.2 mg/ℓ, the average value would be (4 x 0.1 mg/ℓ/2 + 0.2 mg/ℓ)/5 = 0.08 mg/ℓ. Because non-detect values were often given at a reporting limit rather than the method detection limit, it is possible for detected concentrations to actually be below the reporting limit. This can result in the average value used in the calculations being higher than the maximum reported concentration. If all historical samples were non-detect for a particular analyte, then that analyte was assumed to have a concentration of 0 mg/./ℓ.

Input values for explosives, (those contained in the munition burster and donor charges) are based on U.S. Environmental Protection Agency, AP-42, Table 13.3-1, Emissions Factors for Detonation of Explosives, 1995 and from stoichiometric calculations. (Emissions factors for tetryl are not included in AP-42. Therefore, they were modeled with the Cheetah computer code (version 6), using the Becker-Kistiakowsky-Wilson-Sandia (BKWS) product library and the Becker Kistiakowsky-Wilson (BKW) equation-of-state. Cheetah was developed by Lawrence Livermore National Laboratory for use in predicting the detonation performance of energetic materials. The products are based on the thermodynamics of the system and model a complete detonation or combustion.

A2-2.1 EDS Volume and Capacity Assumptions

Capacities (NSCMP, 2007):

EDS vessel	160 gallon (gal) capacity; 112 gal working capacity
Neutralent waste drum	55 gal capacity (two needed)
Rinsate waste drum	55 gal capacity (two needed)
Surge drum	55 gal capacity
Plumbing	+1% of total capacity

Reagent (NSCMP, 2007):

Reagent	90 wt % MEA; 10 wt % water
Volume of reagent	204 ℓ for >30 lb HD
Composition	183.60 ℓ MEA; 20.40 ℓ water
Density MEA	1.02 kilograms (kg) per liter (kg/ℓ)
Mass of MEA	183.60 ℓ × 1.02 kg/ℓ (= 187.27 kg) of MEA
Mass of water in reagent	20.40 ℓ × 1.00 kg/ℓ (= 20.40 kg) of water

Additional water:

Plumbing rinse	10 ℓ = 10 kg of water

Total water:

Mass of water in reagent	20.40 kg
Mass of water in plumbing rinse	10.00 kg
Total mass of water	30.40 kg

A2-2.2 Other Assumptions

1. When a volume of liquid is drained from the EDS, an equal volume of vapor is expelled from the WTS.
2. Temperature of neutralent waste at time of transfer is 60°C.
3. Temperature of the rinsate at time of transfer is 60°C.
4. Temperatures of liquid and vapor in the neutralent waste drum and rinsate waste drum are equal to the neutralent/rinsate waste at the time it is drained. No credit is taken for cooling in the waste drum, and no credit is taken for the second rinse being at ambient temperature.
5. Temperature of the vapor in the surge drum is equal to that of the waste drums. No credit is taken for potential condensation of vapors in the surge drum.
6. Vapor is in equilibrium with liquid and Raoult's law applies.
7. Time to drain neutralent or rinsate wastes from the EDS is 10 minutes.
8. Vapors expelled from the waste treatment system are expelled at a constant rate over the duration of the 10 minutes. Duration for the He purge is 15 minutes. Duration for gas expansion is selected such that it provides the same molar gas flow rate as the He purge.

9. Gas expansion and He purge gases pass through the neutralent waste drum before entering the surge drum.
10. Total mass of liquid neutralent waste equals mass of reagent plus mass of munition fill plus 10 ℓ of water used to flush plumbing.
11. Ambient pressure is 12.5 lb per square inch absolute (psia) (based on 1 atmosphere at 4,500-ft elevation).
12. The pressure in the WTS is 12.5 psia.
13. One batch of munitions is destroyed in a 2-day process; three times per week; therefore, each EDS can process 140 batches per year with an assumed system availability of 90%.
14. Gas flow is assumed to be plug flow during displacement of gases by liquid drain, gas expansion, and He purge.

A2-3 NEUTRALENT WASTE CALCULATIONS

A2-3.1 Calculate Volumes and Capacities of System Components

When the volume of neutralent is greater than the capacity of a single 55-gal drum, two drums are used to collect the waste with approximately half of the neutralent going into each drum. Likewise, when the total volume of rinsate is greater than the volume of a single 55-gal drum, two rinsate waste drums are used.

When neutralent is being drained into the WTS, only the neutralent waste drum is open to the system. When rinsate is being drained from the EDS vessel, only the rinsate waste drum is open to the system. Therefore, the active volume of the WTS at any one time (112 gal) is comprised of one waste drum (55 gal), the surge drum (55 gal), and the plumbing (2 gal). However, because two 55-gal drums are used to collect neutralent (or rinsate) the calculation sets the effective volume of the WTS equal to the volume of two waste drums (110 gal), plus the surge drum (55 gal) plus the plumbing (2 gal) giving a total effective volume of 167 gal. The volume of the total system (327 gal) consists of the volume of the WTS (167 gal) plus the volume of the EDS vessel (160 gal).

Vessel	Volume (gal)
Neutralent waste drum	55
Rinsate waste drum	55
Surge drum	55
1% for plumbing	2
WTS active volume	112 (only 1 waste drum is open to the system at a time)
WTS effective volume	167 (assumes 2 neutralent or 2 rinsate waste drums per batch)
EDS vessel	160
Total system (effective volume)	327
Total system (volume)	327
Volume of agent in six 4.2-inch mortars	12.86 ℓ
Volume of neutralent waste	= (reagent) + (agent fill) + (plumbing rinse)
Volume	= 204 ℓ + 12.86 ℓ + 10 ℓ (= 227 ℓ)
	= 227 ℓ × 0.03531 ft^3/ℓ (= 8.01 ft^3).

A2-3.2 Calculate MEA and Water Concentrations in Liquid Neutralent Waste

a. MEA concentration in neutralent waste
= (MEA mass in reagent) / (volume of neutralent waste)

MEA Concentration
= (187.27 kg / 227 ℓ) (1.00E+06 mg/kg)
= 8.26+05 mg/ℓ

b. Water concentration in neutralent waste
= [(water mass in reagent) + (plumbing rinse)]
/ (volume of neutralent waste)

Water concentration
= (20.4 kg + 10 kg) / (227 ℓ) (1.00E+06 mg/kg)
= 1.34E+05 mg/ℓ

c. Use ideal gas law to calculate lb-moles of vapor vented from WTS when neutralent waste liquid is added.

$n = PV/RT$

where:
$P = 12.5$ psia
$R = 10.73$ psia-ft^3./lb-mole-°Rankine
$T = 60°C = 600°R$
$V = 8.01$ ft^3
$n = 12.5 \text{ psia} \times 8.01 \text{ ft}^3 / (10.73 \text{ psia-ft}^3\text{/lb-mole-°Rankine}) (600°R)$
$n = 0.016$ lbmoles

A2-3.3 Calculate Vapor Composition in Neutralent Waste Drum

The remainder of this example shows calculations using physical and chemical properties of MEK. The properties of MEK along with the concentration of MEK in the neutralent and rinsate are listed in Table A2-1. The concentrations of water and MEA in the neutralent waste are those previously calculated (see paragraph A2-3.2).

Table A2-1. Concentrations and Properties of MEK

Component	Conc. in Neutralent (mg/ℓ)	Conc. in Rinsate (mg/ℓ)	Molecular Weight	VP at 60°C (mm-Hg)	VP at 60°C (psia)
Methyl ethyl ketone (MEK)	1.83	0.00	72.1	3.83E+02	7.41E+00

Note: VP = vapor pressure

a. Component mass in liquid neutralent waste
= (component concentration) (volume of neutralent waste)

MEK mass in liquid
= (1.83 mg/ℓ) (227 ℓ)
= 4.15E+02 mg

b. Component g-moles in liquid neutralent waste
= (component mass) / (component molecular weight (MW))

MEK g-moles
= (4.15E+02 mg) (0.001 g/mg) / (72.1 g/g-mole)
= 5.76E-03 g-moles

Note: Using this same calculation for each component in the neutralent waste and summing the results yielded a sum of g-moles of all components in the neutralent waste liquid as 4.75E+03 g-moles.

c. Component mole fraction in liquid neutralent waste
= (moles of component) / (sum of moles of all components)

MEK mole fraction
= (5.76E-03 g-moles) / (4.75E+03 g-moles)
= 1.21E-06

d. Component partial pressure (using Raoult's Law)
= (component mole fraction) (component vapor pressure)

MEK partial pressure
= (1.21E-06) (7.41E+00 psia)
= 8.97E-06 psia

e. Component mole fraction in vapor
= (component partial pressure) / (system pressure)

MEK mole fraction in vapor
= (8.97E-06 psia) / (12.5 psia)
= 7.18E-07

f. Component lb-moles in vapor
= (component mole fraction) (total lb-moles of vapor)

Note: Refer to paragraph A2-3.2.c for derivation of total lb-moles of vapor.

MEK lb-moles in vapor
= (7.18E-07) (1.6E-02 lb-moles)
= 1.12E-08 lb-moles/batch

g. Component mass in vapor
= (component lb-moles) (component MW)

MEK mass
= (1.12E-08 lb-moles) (72.1 lb/lb-mole)
= 8.05E-07 lb
= 8.05E-07 lb $\times$ 454 g/lb
= 3.65E-04 g/batch

A2-3.4 Calculate Mass Emissions Rate from WTS

a. Vapor flow rate exiting WTS
= (volume of displaced vapors) / (duration)

Vapor flow rate
= (8.01 ft^3) / (10 minutes)
= 0.801 cfm

b. Molar gas flow rate
= (60 minutes/hr) (total moles of vapor) / (duration)

Molar gas flow rate
= (60 minutes/hr) (1.60E-02 lb-moles) / (10 minutes)
= 9.60E-02 lb-moles/hr

Note: Model carried this value as 9.30E-02 lb-mole/hr due to rounding differences between model and example.

c. Component molar emission rate
= (60 minutes/hr) (moles of component) / (duration)

MEK emission rate
= (60 minutes/hr) (1.12E-08 lb-moles) / (10 minutes)
= 6.70E-08 lb-moles/hr

d. Mass emission rate from surge drum
= (molar rate) (lb-lb-mole)

MEK mass emission rate
= (6.70E-08 lb-moles MEK/hr) (72.1 lb MEK/lb-mole)
= 4.83E-06 lb/hr (represents uncontrolled maximum hourly emission rate)

e. Component mass exiting the WTS filter
= (component mass entering filter) (1 – filter efficiency)

MEK mass exiting WTS filter
= (3.65E-04 g/batch) (1 - 0.85)
= 5.48E-05 g/batch
= 5.48E-05 g/batch × 1 kg/1,000 g
= 5.48E-08 kg/batch

f. Gas mass rate exiting WTS filter
= (mass rate entering filter) (1 – filter efficiency)

MEK mass rate exiting WTS filter
= (4.83E-06 lb/hr) (1 - 0.85)
= 7.24E-07 lb/hr

A2-4 RINSATE EMISSIONS

Calculation of rinsate emissions was performed in an identical manner to the neutralent emissions though rinsate starting values were used rather than neutralent starting values. The starting concentrations for rinsate emissions are the component rinsate concentrations rather than the neutralent concentrations (see table A1-1 for the MEK concentration). Component concentration enters the calculation at step a in paragraph A2-3.3.

The volume of rinsate is two rinses at 133 ℓ per rinse. The plumbing is not flushed between rinses therefore the total volume of rinsate is 266 ℓ or 9.39 ft^3 compared to 8.01 ft^3 used in the neutralent calculations. This value (9.39 ft^3) enters the calculation in step c in paragraph A2-3.2 and again in step a in paragraph A2-3.4.

Because MEK has never been detected in the rinsate, the starting concentration for MEK in the rinsate calculation is 0.00E+00 mg/ℓ compared to 1.83 mg/ℓ of the neutralent (see step a in paragraph A2-3.3). Therefore, there are no MEK emissions from the rinsate.

A2-5 EDS GAS EXPANSION EMISSION

The same equations (starting in paragraph A2-3.3) used to calculate MEK emissions from draining the neutralent were used to calculate MEK emissions due to gas expansion. However, in order to estimate emissions due to gas expansion, the calculations had to be performed twice. The first calculation estimated emissions due to gases already in the system that are displaced by gas expansion. These emissions were based on neutralent vapor concentrations (because expansion gases exit through the neutralent waste drum) and did not include gases generated by detonation of the explosives. The second calculation estimated emissions due to

gas expansion itself and included neutralent waste vapors as well as gases generated by detonation of the explosives.

A2-5.1 Calculation of Gas Expansion Volumes

The first calculation of the volume of gases already in the system was performed based on the effective volume of the WTS, the amount of reagent used, and the fact that two waste drums may have been used to collect neutralent waste but only one would be open to the system at a time.

a. First volume of displaced gas
= (volume of WTS) – (volume of reagent) – (number of waste drums – 1) x [(volume of waste drum) – [0.5 x volume of neutralent)]

First volume of displaced gas
= (22.33 ft^3) – (8.01 ft^3) – [(2-1) x (7.35 ft^3) – (0.5 x 8.01ft^3)]
= 11.0 ft^3

In the second calculation, the volume of EDS gas through the surge drum due to gas expansion itself was set equal to the volume of gases generated by the detonation minus the volume used to displace the gases already in the system.

b. Second volume of EDS gas (through surge drum)
= (gas volume generated by detonation) – (first volume of displaced gas)

Second volume of EDS gas
= 33.7 ft^3 – 11.0 ft^3
= 22.7 ft^3

The composition of the first volume of gas was assumed to be neutralent component vapors, while the composition of the second volume of gas included neutralent component vapors plus gases generated by detonation of the explosives. The molar flow rate for the gas expansion calculation was set to be equal to that of the He purge.

A2-5.2 First Volume of Gas Expansion

The following values were obtained for the gas expansion emissions calculations in the MEK example:

a. Component mole fraction in vapor
= (component partial pressure) / (system pressure)

MEK mole fraction in vapor
= (8.97E-06 psia) / (12.5 psia)
= 7.90E-07

Note: See step d paragraph A2-3.3 for derivation of partial pressure of MEK (8.97E-06 psia). The value for mole fraction of MEK (7.90E-07) obtained in the hand calculation of this example is high due to accumulated rounding error. The value for mole fraction carried in the model is 7.18E-07.

b. Component lb-moles in Vapor
= (component mole fraction) (total lb-moles of vapor)

Note: Refer to step c paragraph A2-3.2 for methodology for calculating total lb-moles of vapor. For calculation of the first volume of gas expansion, the total lb-moles of vapor was 2.13E-02 lb-moles.

MEK lb-moles in vapor

= (7.18E-07) (2.13E-02 lb-moles)
= 1.53E-08 lb-moles/batch

c. Component mass in vapor
= (component lb-moles) (component MW)

MEK mass in vapor
= (1.53E-08 lb-moles MEK) (72.1 lb MEK/lb-mole)
= 1.10E-06 lb/batch
= 1.10E-06 lb/batch × 454 g/lb
= 5.00E-04 g/batch

d. Molar gas flow rate
= (60 minutes/hr) (total moles of vapor) [(displaced gas volume) / (total volume of gas expansion)] / (duration)

Molar gas flow rate
= (60 minutes/hr) (1.53E-08 lb-moles) [(11.0 ft^3/33.7 ft^3) / (4.6 minutes)]
= 6.49E-08 lb-moles/hr

e. Mass emission rate from surge drum
= (molar rate) (lb/lb-mole)

MEK emission rate
= (6.49E-08 lb-moles MEK/hr) (72.1 lb MEK/lb-mole)
= 4.68E-06 lb/hr

f. Component mass exiting the WTS filter
= (component mass entering filter) (1 – filter efficiency)

MEK mass exiting WTS filter
= (5.00E-04 g/batch) (1 - 0.85)
= 7.51E-05 g/batch

g. Mass rate of gas exiting WTS filter
= (mass rate entering filter) (1 – filter efficiency)

MEK mass rate exiting WTS Filter
= (4.68E-06 lb/hr) (1 - 0.85)
= 7.02E-07 lb/hr

A2-5.3 Second Volume of Gas Expansion

a. Component mole fraction in vapor
= (component partial pressure) / (system pressure)

MEK mole fraction in vapor
= (8.97E-06 psia) / (12.5 psia)
= 7.18E-07

b. Component lb-moles in vapor
= (component MEK mole fraction) (total lb-moles of vapor)

Note: Total lb-moles of vapor in the second volume of gas is the sum of the lb-moles of each component (4.41E-02 lb-moles)

MEK lb-moles in vapor
= (7.18E-07) (4.41E-02 lb-moles)
= 3.17E-08 lb-moles/batch

c. Component mass in vapor = (component lb-moles) (component MW)

MEK mass
= (3.17E-08 lb-moles/batch) (72.1 lb MEK/lb-mole)
= 2.28E-06 lb/batch
= 2.28E-06 lb/batch × 454 g/lb = 1.04E-03 g/batch

d. Molar gas flow rate
= (60 minutes/hr) (total moles of vapor) [(displaced gas volume) / (total volume of gas expansion)] / (duration)

Molar gas flow rate
= (60 minutes/hr) (3.17E-08 lb-moles) [(22.7 ft^3) / (33.7 ft^3) / (4.6 minutes)]
= 2.79E-07 lb-moles/hr

e. Mass emission rate from surge drum
= (molar rate) (lb/lb-mole)

MEK mass emission rate
= (2.79E-07 lb/hr) (72.1 lb/lb-mole)
= 2.01E-05 lb/hr

f. Component mass exiting the WTS filter
= (Component mass entering filter) (1 – filter efficiency)

MEK mass exiting WTS filter
= (1.04E-03 g/batch) (1 - 0.85)
= 1.56E-04 g/batch

g. Mass rate of gas exiting WTS filter
= (mass rate entering filter) (1 – filter efficiency)

MEK mass rate exiting WTS filter
= (2.01E-05 lb/hr) (1 - 0.85)
= 3.01E-06 lb/hr

A2-5.4 Total Gas Expansion Volumes Results

The total gas expansion volume calculations yielded results needed for subsequent calculations. The mass values for the first and second gas volume calculations were summed to produce the total g/batch produced by gas expansion.

a. Total gas expansion emission
= g/batch first volume + g/batch second volume

Total gas expansion emission entering WTS filter
= 5.00E-04 g/batch + 1.04E-03 g/batch
= 1.54E-03 g/batch

Total gas expansion emissions exiting WTS filter
= 7.51E-05 g/batch + 1.56E-04 g/batch
= 2.31E-04 g/batch

The hourly emission rate for gas expansion was taken as the larger of the two emission rates.

b. Maximum gas expansion emission rate
= larger of first and second gas expansion volumes

Maximum gas expansion emission rate entering WTS filter
= larger of 4.86E-06 lb/hr and 2.01E-05 lb/hr
= 2.01E-05 lb/hr

Maximum gas expansion emission rate exiting the WTS filter
= larger of 7.02E-07lb/hr and 3.01E-06 lb/hr
= 3.01E-06 lb/hr

A2-6 He PURGE EMISSIONS

He purge calculations followed the same example as the gas expansion calculation. The calculation was performed in two parts. The first part accounted for the gases in the WTS at the time the He purge begins, and the second part accounted for gases leaving the WTS due to the He purge itself. Looked at another way, the first part of the calculation concerned gases left over from the rinsate drain, while the second part of the calculation accounted for vapors sparged from the neutralent as the He bubbled through.

The same equations used to calculate emissions from draining the neutralent were used to calculate emissions in the two parts of the He purge calculation. However, in order to estimate He purge emissions, the total moles of gas in the system had to be adjusted to account for the He added via the purge.

A2-6.1 Calculation of He Purge Volume

The He purge uses the amount of helium equal to a 500 pound per square inch gauge (psig) drop in pressure in the He supply tank. Therefore, using the ideal gas law relationship of final volume equals initial volume times final pressure divided by initial pressure ($V_2 = V_1 \times P_2/P_1$) and assuming the He tank was full at the beginning of the purge, a 200 standard cubic foot (scf) tank at 1200 psig, and an ambient air pressure of 12.5 psia, the volume of He remaining in the tank after the purge would be 117.5 scf therefore, 82.5 scf (200 scf - 117.5 scf = 82.5 scf which equates to 109.8 acf) of He used for the purge. This is equivalent to 0.21 lb-moles of He. The duration of the He purge was 15 minutes.

The first gas volume was equal to the EDS vessel volume plus the gas volume in the WTS at the start of the purge:

a. First gas volume at the start of the He purge
= (EDS volume) + (gas volume left in WTS until after rinsate drain)

First gas volume at the start of the He purge
= (21.39 ft^3) + (11.0 ft^3)
= 32.4 ft^3

The second gas volume was equal to the volume of He used in the purge minus the first gas volume:

b. Second gas volume
= (volume of He) - (first gas volume at the start of the He purge)

Second gas volume
= (109.8 ft^3) – 32.4 ft^3)
= 77.4 ft^3

A2-6.2 First Part of He Purge Calculation

The following values were obtained for the He purge emissions calculations:

a. Component mole fraction in vapor
= (component partial pressure) / (system pressure)

MEK mole fraction in vapor
= (8.97E-06 psia) / (12.5 psia)
= 7.90E-07

Note: This value was carried as 7.18E-07 in the model. The difference is due to rounding.

b. Component lb-moles in vapor
= (component mole fraction) (total lb-moles of vapor)

Note: Refer to paragraph A2-3.2.c for methodology used to calculate total lb-moles of vapor.

MEK lb-moles in vapor
= (7.18E-07) (6.28E-02 lb-moles)
= 4.51E-08 lb-moles/batch

c. Component mass in vapor
= (component lb-moles) (component MW)

MEK mass
= (4.51E-08 lb-moles) (72.1 lb MEK/lb-mole)
= 3.25E-06 lb/batch
= 3.25E-06 lb/batch × 454 g/lb
= 1.48E-03 g/batch

d. Gas molar flow rate
= (60 minutes/hr) (total moles of vapor) [(volume of displaced gas) / (total volume of gas expansion)] / (duration)

Gas molar flow rate
= (60 minutes/hr) (4.51E-08 lb-moles) (32.4 ft^3) / (109.8 ft^3) / 15 minutes
= 5.32E-08 lb-moles/hr

e. Mass emission rate from surge drum
= (gas molar flow rate) (lb/lb-mole.)

MEK mass emission r
= (5.32E-08 lb-moles/hr) (72.1 lb/lb-mole)
= 3.83E-06 lb/hr

f. Component mass exiting the WTS filter
= (component mass entering filter) (1 – filter efficiency)

MEK mass exiting WTS filter
= (1.48E-03 g/batch) (1 - 0.85)
= 2.21E-04 g/batch

g. Gas mass rate exiting WTS filter
= (gas mass rate entering filter) (1 – filter efficiency)

MEK mass rate exiting WTS filter
= (3.83E-06 lb/hr) (1 - 0.85)
= 5.75E-07 lb/hr

A2-6.3 Second Part of He Purge Calculation

a. Component mole fraction in vapor
= (component partial pressure) / (system pressure)

MEK mole fraction in vapor
= (8.97E-06 psia) / (12.5 psia)
= 7.18E-07

b. Component lb-moles in vapor
= (component mole fraction) (total lb-moles of vapor)

Note: Total lb-moles of vapor for the second part of the He purge calculation is equal to the volume of the system multiplied by pressure and divided by gas constant times temperature and is equal to 1.50E-01 lb-moles.

MEK lb-moles in vapor
= (7.18E-07) (1.50E-01 lb-moles)
= 1.08E-07 lb-moles/batch

c. Component mass in vapor
= (component lb-moles) (component MW)

MEK mass
= (1.08E-07 lb-moles/batch) (72.1 lb MEK/lb-mole)
= 7.79E-06 lb/batch
= 7.78E-06 lb/batch × 454 g/lb
= 3.53E-03 g/batch

d. Gas molar flow rate

= (60 minutes/hr) (total moles of vapor) [(volume of displaced gas) / (total volume of gas expansion)] / (duration)

Gas molar flow rate
= (60 minutes/hr) (1.08E-07 lb-moles) (77.5 ft^3) / (109.8 ft^3) / 15 minutes
= 3.04E-07 lb-moles/hr

e. Mass emission rate from surge drum
= (molar rate) (lb/lb-mole)

MEK mass rate
= (3.04E-07 lb/hr) (72.1 lb/lb-mole)
= 2.19E-05 lb/hr

f. Component mass exiting WTS filter
= (component mass entering filter) (1 – filter efficiency)

MEK mass exiting WTS filter
= (3.53E-03 g/batch) (1 - 0.85)
= 5.30E-04 g/batch

g. Gas mass rate exiting WTS filter
= (mass rate entering filter) (1 – filter efficiency)

MEK mass rate exiting WTS filter
= (2.19E-05 lb/hr) × (1 - 0.85)
= 3.29E-06 lb/hr

A2-6.4 He Purge Results (Combining First and Second Parts of the Calculation)

As with the gas expansion calculations, the results of the two parts of the He purge calculation provided the values used in later calculations. The g/batch of emissions during the two parts of the He purge were summed to give the g/batch of the entire He purge, while the larger of the two hourly emission rates was used as the hourly emission rate for the entire He purge.

a. MEK mass of MEK in He purge
= (emission mass from the first volume calculation)
+ (emission mass from the second volume calculation)

MEK mass of MEK in He Purge entering WTS filter
= (1.48E-03 g/batch) + (3.53E-03 g/batch)
= 5.01E-03 g/batch

MEK mass leaving WTS filter
= (2.21E-04 g/batch) + (5.30E-04 g/batch)
= 7.51E-04 g/batch

b. Hourly He purge MEK emission rate
= larger of (hourly rate from first volume calculation)
and (hourly rate from second volume calculation)

Hourly He purge MEK emission rate entering WTS filter
= larger of (3.83E-06 lb/hr) and (2.19E-05 lb/hr)
= 2.19E-05 lb/hr

Hourly MEK emission rate leaving WTS filter
= larger of (5.75E-07 lb/hr) and (3.29E-06 lb/hr)
= 3.29E-06 lb/hr

A2-7 CALCULATE ENCLOSURE AFU EMISSIONS

Gases exiting the surge drum filter are directed via ductwork to the enclosure AFU. Therefore, the mass of components entering the enclosure AFU is the same as the mass exiting the surge drum filter.

a. Component mass entering enclosure AFU
= (component mass exiting WTS canister filter)

MEK mass entering AFU
= 5.48E-05 g/batch from neutralent drain
= 0.00E+00 g/batch from rinsate drain
= 2.31E-04 g/batch from gas expansion
= 7.51E-04 g/batch from He purge

b. Component mass exiting enclosure AFU
= (component mass entering AFU) (1 - filter efficiency)

MEK mass exiting enclosure AFU
= (5.48E-05 g/batch) (1 - 0.85)
= 8.22E-06 g/batch for neutralent drain

MEK mass exiting enclosure AFU
= (0.00E+00 g/batch) (1 - 0.85)
=0.00E+00 g/batch for rinsate drain

MEK mass exiting enclosure AFU
= (2.31E-04 g/batch) (1 - 0.85)
=3.47E-05 g/batch for gas expansion

Note: this value is carried as 3.46E-05 in the model. The difference is rounding error.

MEK mass exiting enclosure AFU
= (7.51E-04 g/batch) (1 - 0.85)
= 1.13E-04 g/batch for He purge

c. Hourly enclosure AFU component emission rate
= (hourly component rate entering enclosure AFU) (1 - filter efficiency)

Hourly enclosure AFU MEK emission rate
= (7.24E-07 lb/hr) (1 - 0.85)
= 1.09E-07 lb/hr for neutralent drain

Hourly enclosure AFU MEK emission rate
= (0.00E+00 lb/hr) (1 - 0.85)
= 0.00E+00 lb/hr for rinsate drain

Hourly enclosure AFU MEK emission rate
= (3.01E-06 lb/hr) (1 - 0.85)
= 4.52E-07 lb/hr for gas expansion

Hourly enclosure AFU MEK emission rate
= (3.29E-06 lb/hr) (1 - 0.85)
= 4.94E-07 lb/hr for He purge

A2-7.1 Maximum Hourly Emission Rate from the Enclosure AFU

Because the EDS procedure for HD is a 2-day process, emissions were divided between Day 1 and Day 2. Day 1 included emissions from neutralent drain and gas expansion. Emissions on Day 2 included emissions from rinsate drain and He purge. Therefore, continuing with the MEK example, the maximum hourly emission rate for Day 1 was 4.52E-07 lb/hr, the emission rate derived from gas expansion. The maximum hourly emission rate for Day 2 was 4.94E-07 lb/hr, the rate calculated for the He purge. The Day 1 emissions are sustained for a period of less than 20 minutes while emissions for Day 2 are sustained for less than 25 minutes. At all other times EDS emissions are zero because there is no material movement through the WTS.

A2-7.2 Average Annual Emission Rate from the Enclosure AFU

Each EDS processes three batches of munitions per week, and each EDS processes 140 batches/yr.

a. Annual component emission rate
= (sum of component emission per batch) (140 batches/yr)

Day 1 annual MEK mass emission
= (8.22E-06 g/batch from neutralent drain
+ 3.46E-05 g/batch from EDS gas expansion) (140 batches/yr)
= 5.98E-03 g/yr
= 5.98E-03 g/yr × 1.10E-06 ton/g
= 6.58E-09 ton/yr

Note: This value is shown as 6.60E-09 ton/yr in Table 2 in the body of the report. The difference is due to the accumulation of rounding error through the course of the example calculation.

Day 2 annual MEK mass emission
= (0.00 g/batch from rinsate drain
+ 1.13E-04 g/batch from He purge) (140 batches/yr)
= 1.58E-02 g/yr
= 1.58E-02 g/yr × 1.10E-06 ton/g
= 1.74E-08 ton/yr

A2.8 REFERENCES

U.S. Environmental Protection Agency, 1995. *AP-42 Compilation of Air Pollutant Emission Factors, Volume I: Stationary Point Sources,* Fifth Edition, Office of Air Quality, Planning and Standards, Research Triangle Park, NC.

Non-stockpile Chemical Materiel Program (NSCMP), 2007. EDS Field Operations Guide.

APPENDIX A-2
ATTACHMENT 3
EDS EMISSION CALCULATIONS

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TABLE A3-1. EDS EMISSION RATE DATA FROM SAIC

Compound	Maximum Short-term Emission Rate (lb/hr)									
	4.2-inch mortar		105-mm projectile		155-mm projectile		155-mm projectile bursters	4.2-inch mortar bursters	105-mm projectile fuze/boosters	105-mm projectile bursters
	Day 1	Day 2	Day 1	Day 2	Day 1	Day 2				
Organic Compounds										
1,1-dichloroethene	8.75E-07	9.56E-07	2.04E-06	1.72E-06	2.02E-06	1.93E-06				
1,2-dichloroethane	0.00E+00	6.08E-10	0.00E+00	6.08E-09	0.00E+00	6.08E-09				
1,4-dichlorobenzene	2.17E-09	2.37E-09	5.05E-09	4.26E-09	5.00E-09	4.80E-09				
1,4-dithiane	2.46E-07	2.69E-07	5.73E-07	4.38E-07	5.66E-07	5.44E-07				
1,4-oxathiane	5.20E-07	5.68E-07	1.21E-06	1.02E-06	1.20E-06	1.15E-06				
2,4-dinitrotoluene	3.18E-11	3.48E-11	7.41E-11	6.24E-11	7.32E-11	7.03E-11				
2-butanone	4.52E-07	4.94E-07	1.05E-06	8.87E-07	1.04E-06	9.99E-07				
acetylene	2.86E-02	5.45E-03	6.67E-02	5.62E-02	9.60E-02	9.22E-02	9.86E-02	2.08E-02	2.08E-02	2.08E-02
benzene	2.62E-09	2.86E-09	6.10E-09	5.14E-09	6.03E-09	5.79E-09				
chlorobenzene	3.65E-09	3.99E-09	8.51E-09	7.17E-09	8.41E-09	8.07E-09				
chloroform	3.35E-07	3.66E-07	7.80E-07	6.57E-07	7.71E-07	7.40E-07				
ethane	1.27E-03	2.42E-04	2.96E-03	2.49E-03	4.26E-03	4.09E-03	4.37E-03	9.24E-04	9.24E-04	9.24E-04
HD	2.52E-13	2.76E-13	5.88E-13	4.95E-13	5.81E-13	5.58E-13				
methane	1.39E-02	2.66E-03	3.26E-02	2.74E-02	4.69E-02	4.50E-02	4.81E-02	1.02E-02	1.02E-02	1.02E-02
monoethanolamine	1.07E-03	1.17E-03	2.74E-03	2.31E-03	2.34E-03	2.24E-03				
nitrobenzene	6.23E-11	6.80E-11	1.45E-10	1.22E-10	1.43E-10	1.38E-10				
tetrachloroethene	8.51E-08	9.29E-08	1.98E-07	1.67E-07	1.96E-07	1.77E-07				
trichloroethene	1.05E-06	1.15E-06	2.44E-06	2.06E-06	2.42E-06	2.32E-06				
vinyl chloride	8.52E-04	9.31E-04	1.98E-03	1.67E-03	1.96E-03	1.88E-03				
Criteria Pollutants										
carbon monoxide	3.55E+00	6.78E-01	1.01E+01	8.52E+00	8.00E+00	7.69E+00	1.06E+01	1.12E+01	1.12E+01	1.12E+01
carbon (particulate)	1.73E-04	3.31E-05	4.73E-04	3.99E-04	4.81E-04	4.62E-04	7.64E-04	5.21E-04	5.21E-04	5.21E-04
nitrogen oxides	3.24E-04	6.18E-05	1.13E-03	9.56E-04	4.97E-04	4.77E-04	1.41E-03	2.02E-03	2.02E-03	2.02E-03
Inorganic Compounds										
ammonia	2.43E-02	4.63E-03	5.66E-02	4.77E-02	6.55E-02	6.29E-02	3.83E-02	1.77E-02	1.77E-02	1.77E-02
hydrogen cyanide	8.61E-03	1.64E-03	2.01E-02	1.69E-02	2.89E-02	2.78E-02	2.97E-02	6.27E-03	6.27E-03	6.27E-03
mercury	1.54E-16	1.68E-16	3.59E-16	3.02E-16	1.55E-16	3.41E-16				

Compound	Annual Emission Rate (ton/yr/EDS)									
	4.2-inch mortar		105-mm projectile		155-mm projectile		155-mm projectile bursters	4.2-inch mortar bursters	105-mm projectile fuze/boosters	105-mm projectile bursters
	Day 1	Day 2	Day 1	Day 2	Day 1	Day 2				
Organic Compounds										
1,1-dichloroethene	1.28E-08	3.37E-08	1.28E-08	3.37E-08	1.27E-08	3.40E-08				
1,2-dichloroethane	0.00E+00	1.42E-11	0.00E+00	1.42E-11	0.00E+00	1.42E-11				
1,4-dichlorobenzene	3.17E-11	8.34E-11	3.18E-11	8.37E-11	3.16E-11	8.41E-11				
1,4-dithiane	3.59E-09	9.46E-09	3.60E-09	9.48E-09	3.58E-09	9.54E-09				
1,4-oxathiane	7.60E-09	2.00E-08	7.62E-09	2.01E-08	7.57E-09	2.01E-08				
2,4-dinitrotoluene	4.64E-13	1.22E-12	4.65E-13	1.23E-12	4.63E-13	1.23E-12				
2-butanone	6.60E-09	1.74E-08	6.62E-09	1.75E-08	6.58E-09	1.75E-08				
acetylene	2.27E-04	3.24E-04	2.61E-04	2.91E-04	4.05E-04	4.27E-04	1.49E-02	2.08E-03	2.08E-03	2.08E-03
benzene	3.83E-11	1.01E-10	3.83E-11	1.01E-10	3.81E-11	1.02E-10				
chlorobenzene	5.33E-11	1.40E-10	5.36E-11	1.41E-10	5.32E-11	1.42E-10				
chloroform	4.89E-09	1.33E-08	4.90E-09	1.33E-08	4.87E-09	1.34E-08				
ethane	1.01E-05	1.44E-05	1.16E-05	1.29E-05	1.79E-05	1.90E-05	6.61E-04	9.24E-05	9.24E-05	9.24E-05
HD	3.69E-15	9.70E-15	3.69E-15	9.73E-15	3.67E-15	9.79E-15				
methane	1.11E-04	1.58E-04	1.28E-04	1.42E-04	1.98E-04	2.09E-04	7.27E-03	1.02E-03	1.02E-03	1.02E-03
monoethanolamine	1.57E-05	4.12E-05	1.57E-05	4.13E-05	1.48E-05	3.94E-05				
nitrobenzene	9.09E-13	2.39E-12	9.11E-13	2.40E-12	9.06E-13	2.41E-12				
tetrachloroethene	1.24E-09	3.27E-09	1.25E-09	3.28E-09	1.24E-09	3.29E-09				
trichloroethene	1.53E-08	4.03E-08	1.54E-08	4.05E-08	1.53E-08	4.07E-08				
vinyl chloride	1.24E-05	3.28E-05	1.25E-05	3.28E-05	1.24E-05	3.32E-05				
Criteria Pollutants										
carbon monoxide	2.83E-02	4.03E-02	3.25E-02	3.62E-02	3.37E-02	3.56E-02	1.60E+00	1.12E+00	1.12E+00	1.12E+00
carbon (particulate)	1.38E-06	1.96E-06	1.59E-06	1.76E-06	2.03E-06	2.15E-06	1.15E-04	5.20E-05	5.20E-05	5.20E-05
nitrogen oxides	2.58E-06	3.67E-06	2.97E-06	3.29E-06	2.09E-06	2.21E-06	2.13E-04	2.02E-04	2.02E-04	2.02E-04
Inorganic Compounds										
ammonia	1.93E-04	2.75E-04	2.23E-04	2.47E-04	2.75E-04	2.92E-04	5.78E-03	1.77E-03	1.77E-03	1.77E-03
hydrogen cyanide	6.58E-05	9.75E-05	7.89E-05	8.77E-05	1.22E-04	1.29E-04	4.49E-03	6.27E-04	6.27E-04	6.27E-04
mercury	2.25E-18	6.19E-18	2.26E-18	6.20E-18	2.24E-18	6.23E-18				

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TABLE A3-2. EDS SHORT-TERM EMISSION RATE CALCULATIONS

a. Calculated short-term (ST) emission rates were provided by SAIC in units of lb/hr. The maximum emission rate for each pollutant was converted from lb/hr to g/s by the following equation:

Emissions (g/s) = (Emissions, lb/hr) x (454 g/lb) x (1 hr/60 min) x (1 min/60 s)

b. Each EDS unit has its own environmental enclosure. Gases from the environmental enclosure and EDS waste transfer system are vented together through the same final air filtration unit and stack.

Name	CAS	Calculated ST Emission Rate per EDS unit (lb/hr)										Maximum Modeled ST Emission Rates per EDS	
		4.2-inch mortar		105-mm projectile		155-mm projectile		155-mm projectile bursters	4.2-inch mortar bursters	105-mm projectile fuze/boosters	105-mm projectile bursters		
		Day 1	Day 2	Day 1	Day 2	Day 1	Day 2					lb/hr	g/s
1,1-dichloroethene	75-35-4	8.75E-07	9.56E-07	2.04E-06	1.72E-06	2.02E-06	1.93E-06					2.04E-06	2.57E-07
1,2-dichloroethane	107-06-2	0.00E+00	6.08E-10	0.00E+00	6.08E-09	0.00E+00	6.08E-09					6.08E-09	7.67E-10
1,4-dichlorobenzene	106-46-7	2.17E-09	2.37E-09	5.05E-09	4.26E-09	5.00E-09	4.80E-09					5.05E-09	6.37E-10
1,4-dithiane	505-29-3	2.46E-07	2.69E-07	5.73E-07	4.38E-07	5.66E-07	5.44E-07					5.73E-07	7.23E-08
1,4-oxathiane	15980-15-1	5.20E-07	5.68E-07	1.21E-06	1.02E-06	1.20E-06	1.15E-06					1.21E-06	1.53E-07
2,4-dinitrotoluene	121-14-2	3.18E-11	3.48E-11	7.41E-11	6.24E-11	7.32E-11	7.03E-11					7.41E-11	9.34E-12
2-butanone	78-93-3	4.52E-07	4.94E-07	1.05E-06	8.87E-07	1.04E-06	9.99E-07					1.05E-06	1.32E-07
acetylene	74-86-2	2.86E-02	5.45E-03	6.67E-02	5.62E-02	9.60E-02	9.22E-02	9.86E-02	2.08E-02	2.08E-02	2.08E-02	9.86E-02	1.24E-02
benzene	71-43-2	2.62E-09	2.86E-09	6.10E-09	5.14E-09	6.03E-09	5.79E-09					6.10E-09	7.69E-10
chlorobenzene	108-90-7	3.65E-09	3.99E-09	8.51E-09	7.17E-09	8.41E-09	8.07E-09					8.51E-09	1.07E-09
chloroform	67-66-3	3.35E-07	3.66E-07	7.80E-07	6.57E-07	7.71E-07	7.40E-07					7.80E-07	9.84E-08
ethane	74-84-0	1.27E-03	2.42E-04	2.96E-03	2.49E-03	4.26E-03	4.09E-03	4.37E-03	9.24E-04	9.24E-04	9.24E-04	4.37E-03	5.51E-04
HD	505-60-2											4.69E-05	5.92E-06
methane	74-82-8	1.39E-02	2.66E-03	3.26E-02	2.74E-02	4.69E-02	4.50E-02	4.81E-02	1.02E-02	1.02E-02	1.02E-02	4.81E-02	6.07E-03
monoethanolamine	141-43-5	1.07E-03	1.17E-03	2.74E-03	2.31E-03	2.34E-03	2.24E-03					2.74E-03	3.46E-04
nitrobenzene	98-95-3	6.23E-11	6.80E-11	1.45E-10	1.22E-10	1.43E-10	1.38E-10					1.45E-10	1.83E-11
tetrachloroethene	127-18-4	8.51E-08	9.29E-08	1.98E-07	1.67E-07	1.96E-07	1.77E-07					1.98E-07	2.50E-08
trichloroethene	79-01-6	1.05E-06	1.15E-06	2.44E-06	2.06E-06	2.42E-06	2.32E-06					2.44E-06	3.08E-07
vinyl chloride	75-01-4	8.52E-04	9.31E-04	1.98E-03	1.67E-03	1.96E-03	1.88E-03					1.98E-03	2.50E-04
ammonia	7664-41-7	2.43E-02	4.63E-03	5.66E-02	4.77E-02	6.55E-02	6.29E-02	3.83E-02	1.77E-02	1.77E-02	1.77E-02	6.55E-02	8.26E-03
hydrogen cyanide	74-90-8	8.61E-03	1.64E-03	2.01E-02	1.69E-02	2.89E-02	2.78E-02	2.97E-02	6.27E-03	6.27E-03	6.27E-03	2.97E-02	3.75E-03
total mercury	NA	1.54E-16	1.68E-16	3.59E-16	3.02E-16	1.55E-16	3.41E-16					3.59E-16	4.53E-17

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TABLE A3-3. EDS OPERATING SCHEDULE

Feed Type		Item	Quantity		NEW [a] (lb NEW/ item)	% of Feed Processed	EDS: Processing Rate		Shots per day	Shots per 6-day week (2-day operation per shot for overpacks/rejects)	Raw Weeks	Availability	Weeks with availability	Time to Process: years	Time to Process: years per EDS
Required	Overpacks/Rejects	155-mm projectile reject	4,600	items		100%	3	items/shot	N/A	3	511	0.9	568	10.9	1.22
	Overpacks/Rejects	105-mm projectile reject	5,990	items			6	items/shot	N/A	3	333	0.9	370	7.1	0.79
	Overpacks/Rejects	4.2-inch mortar reject	1,420	items			6	items/shot	N/A	3	79	0.9	88	1.7	0.19
	Overpacks/Rejects	155-mm projectile overpack	400	items			3	items/shot	N/A	3	44	0.9	49	0.9	0.11
	Overpacks/Rejects	105-mm projectile overpack	400	items			6	items/shot	N/A	3	22	0.9	25	0.5	0.05
	Overpacks/Rejects	4.2-inch mortar overpack	200	items			6	items/shot	N/A	3	11	0.9	12	0.2	0.03
Required	Energetics	155-mm projectiles bursters	299,554	items	0.4143	100%	4	lb NEW/shot	6	36	862	0.9	958	18.4	2.05
	Energetics	4.2-inch mortar bursters	97,106	items	0.1433		4	lb NEW/shot	6	36	97	0.9	107	2.1	0.23
	Energetics	105-mm projectile fuze/booster	28,376	items	0.0522	100%	4	lb NEW/shot	6	36	10	0.9	11	0.2	0.02
Desired	Energetics	105-mm projectile burster	383,418	items	0.2571	19%	4	lb NEW/shot	6	36	130	0.9	145	2.8	0.31
													Total for 1 EDS	**44.9**	**5.0**
													Years available	**5**	
													Total EDSs required	**9**	

a. NEW = net expolsive weight

Average Emission Period for Modeling Purposes:

Although processing of the overpacks and rejects will occur 24 hours per day, 6 days per week, it is assumed for modeling purposes that all emissions will occur over a 12-hour work day. Therefore, the average emission period is 3,744 hours per year per EDS.

Feed Type		Item	Emission Period per EDS: years	day/week	days	hours/day	hours	
Required	Overpacks/Rejects	155-mm projectile reject	1.22	6	379.8	12	4,557.5	8,921.9
	Overpacks/Rejects	105-mm projectile reject	0.79	6	247.3	12	2,967.3	
	Overpacks/Rejects	4.2-inch mortar reject	0.19	6	58.6	12	703.4	
	Overpacks/Rejects	155-mm projectile overpack	0.11	6	33.0	12	396.3	
	Overpacks/Rejects	105-mm projectile overpack	0.05	6	16.5	12	198.2	
	Overpacks/Rejects	4.2-inch mortar overpack	0.03	6	8.3	12	99.1	
Required	Energetics	155-mm projectiles bursters	2.05	6	640.4	12	7,685.0	9,798.1
	Energetics	4.2-inch mortar bursters	0.23	6	71.8	12	861.7	
	Energetics	105-mm projectile fuze/booster	0.02	6	7.6	12	91.7	
Desired	Energetics	105-mm projectile burster	0.31	6	96.6	12	1,159.8	
		Total	**5.0**		**1,560.0**		**18,720.0**	
			Average hr/yr per EDS			**3,744.0**		

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TABLE A3-4. EDS LONG-TERM EMISSION RATE CALCULATIONS

Basis and Emission Calculations:

a. Annual emission rates were by provided by SAIC for each type of munition, assuming that the munition type is processed for an entire year.

b. Total emissions from processing of overpack/rejects and energetics were calculated as follows.

Pollutant emissions from overpacks/rejects	=	(overpack/reject emission rate, ton/yr/EDS) x (operating years, yr/EDS/5-yr project)
4.2-inch mortars (ton/EDS/5-yr project)	=	(4.2-inch mortar overpack/reject emission rate, ton/yr/EDS) x (0.03 yr/EDS/5-yr project for overpacks + 0.19 yr/EDS/5-yr project for rejects)
	=	(4.2-inch mortar overpack/reject emission rate, ton/yr/EDS) x (0.21 yr/EDS/5-yr project for overpacks + rejects)
105-mm projectiles (ton/EDS/5-yr project)	=	(105-mm projectile overpack/reject emission rate, ton/yr/EDS) x (0.05 yr/EDS/5-yr project for overpacks + 0.79 yr/EDS/5-yr project for rejects)
	=	(105-mm projectile overpack/reject emission rate, ton/yr/EDS) x (0.84 yr/EDS/5-yr project for overpacks + rejects)
155-mm projectiles (ton/EDS/5-yr project)	=	(155-mm projectile overpack/reject emission rate, ton/yr/EDS) x (0.11 yr/EDS/5-yr project for overpacks + 1.22 yr/EDS/5-yr project for rejects)
	=	(155-mm projectile overpack/reject emission rate, ton/yr/EDS) x (1.33 yr/EDS/5-yr project for overpacks + rejects)
Pollutant emissions from energetics	=	(energetics emission rate, ton/yr/EDS) x (operating years, yr/EDS/5-yr project)
155-mm proj. bursters (ton/EDS/5-yr project)	=	(energetics emission rate, ton/yr/EDS) x (2.03 yr/EDS/5-yr project)
4.2-inch mortar bursters (ton/EDS/5-yr project)	=	(energetics emission rate, ton/yr/EDS) x (0.22 yr/EDS/5-yr project)
105-mm projectile fuze/booster (ton/EDS/5-yr project)	=	(energetics emission rate, ton/yr/EDS) x (0.02 yr/EDS/5-yr project)
105-mm projectile bursters (ton/EDS/5-yr project)	=	(energetics emission rate, ton/yr/EDS) x (0.31 yr/EDS/5-yr project)
Total Emissions per EDS per 5-yr project (ton)	=	Emissions from Overpacks/Rejects (ton) + Emissions from Energetics (ton)
Total Emissions per EDS per 5-yr project (lb)	=	(Total Emissions per EDS per 5-yr project, ton) x (2,000 lb/ton)

c. Total average long-term emission rates were calculated based on a 5-year operating period, with an hourly operation schedule as described in Table A3-3.

Average Long-term emissions (lb/hr)	=	(Total Emissions per EDS per 5-yr project, lb) / (operating years, yr) / (operating hours, hr/yr)
	=	(Total Emissions per EDS per 5-yr project, lb) / (5 yr) / (3,744 hr/yr)
Average Long-term Emissions (g/s)	=	(average long-term emission rate, lb/hr) x (454 g/lb) x (1 hr/60 min) x (1 min/60 s)

d. The average long-term HD emission rate is calculated as follows:

Average Long-term HD emission rate (lb/hr/EDS)	=	(HD ST emission rate, g/s) x (60 s/min) x (60 min/hr) x (1 lb/454 g) x (total emitting hours when processing overpacks and rejects, hr) / (total emitting hours, hr)
	=	(5.9E-06 g HD/s/EDS) x (60) x (60) / (454) x (8,921.9 hr) / (18,720.0 hr)
	=	2.24E-05 lb HD/hr/EDS
Average Long-term HD emission rate (g/s/EDS)	=	(Average Long-term HD emission rate, lb/hr/EDS) x (454 g/1 lb) x (1 hr/60 min) x (1 min/60 s)
	=	(2.23E-05 lb/hr/EDS) x (454) / (60 / (60)
	=	2.82E-06 g HD/s/EDS

Emissions Summary:

Name	CAS	4.2-inch mortar overpacks and rejects					105-mm projectile overpacks and rejects					155-mm projectile overpacks and rejects					155-mm projectile bursters			4.2-inch mortar bursters			105-mm projectile fuze/boosters			105-mm projectile bursters			Total 5-yr Project Emissions		Total Operating Time		Modeled (Average) Long-term Emission Rate	
		Emissions (ton/yr/EDS)		years/ EDS/5-yr project	Emissions (ton/EDS/5-yr project)		Emissions (ton/yr/EDS)		years/ EDS/5-yr project	Emissions (ton/EDS/5-yr project)		Emissions (ton/yr/EDS)		years/ EDS/5-yr project	Emissions (ton/EDS/5-yr project)		Emissions (ton/yr/EDS)	years/ EDS/5-yr project	Emissions (ton/EDS/5-yr project)	Emissions (ton/yr/EDS)	years/ EDS/5-yr project	Emissions (ton/EDS/5-yr project)	Emissions (ton/yr/EDS)	years/ EDS/5-yr project	Emissions (ton/EDS/5-yr project)	Emissions (ton/yr/EDS)	years/ EDS/5-yr project	Emissions (ton/EDS/5-yr project)						
		Day 1	Day 2		Day 1	Day 2	Day 1	Day 2		Day 1	Day 2	Day 1	Day 2		Day 1	Day 2													ton	lb	yr	hr/yr	lb/hr	g/s
1,1-dichloroethene	75-35-4	1.28E-08	3.37E-08	0.21	2.74E-09	7.22E-09	1.28E-08	3.37E-08	0.85	1.08E-08	2.85E-08	1.27E-08	3.40E-08	1.32	1.68E-08	4.50E-08		2.05	0.00E+00		0.23	0.00E+00		0.02	0.00E+00		0.31	0.00E+00	1.11E-07	2.22E-04	5	3,744	1.19E-08	1.50E-09
1,2-dichloroethane	107-06-2	0.00E+00	1.42E-11	0.21	0.00E+00	3.04E-12	0.00E+00	1.42E-11	0.85	0.00E+00	1.20E-11	0.00E+00	1.42E-11	1.32	0.00E+00	1.88E-11		2.05	0.00E+00		0.23	0.00E+00		0.02	0.00E+00		0.31	0.00E+00	3.38E-11	6.77E-08	5	3,744	3.62E-12	4.56E-13
1,4-dichlorobenzene	106-46-7	3.17E-11	8.34E-11	0.21	6.79E-12	1.79E-11	3.18E-11	8.37E-11	0.85	2.69E-11	7.08E-11	3.16E-11	8.41E-11	1.32	4.18E-11	1.11E-10		2.05	0.00E+00		0.23	0.00E+00		0.02	0.00E+00		0.31	0.00E+00	2.75E-10	5.51E-07	5	3,744	2.94E-11	3.71E-12
1,4-dithiane	505-29-3	3.59E-09	9.46E-09	0.21	7.70E-10	2.03E-09	3.60E-09	9.48E-09	0.85	3.04E-09	8.02E-09	3.58E-09	9.54E-09	1.32	4.74E-09	1.26E-08		2.05	0.00E+00		0.23	0.00E+00		0.02	0.00E+00		0.31	0.00E+00	3.12E-08	6.24E-05	5	3,744	3.34E-09	4.21E-10
1,4-oxathiane	15980-15-1	7.60E-09	2.00E-08	0.21	1.63E-09	4.29E-09	7.62E-09	2.01E-08	0.85	6.44E-09	1.70E-08	7.57E-09	2.01E-08	1.32	1.00E-08	2.66E-08		2.05	0.00E+00		0.23	0.00E+00		0.02	0.00E+00		0.31	0.00E+00	6.60E-08	1.32E-04	5	3,744	7.05E-09	8.89E-10
2,4-dinitrotoluene	121-14-2	4.64E-13	1.22E-12	0.21	9.95E-14	2.62E-13	4.65E-13	1.23E-12	0.85	3.93E-13	1.04E-12	4.63E-13	1.23E-12	1.32	6.13E-13	1.63E-12		2.05	0.00E+00		0.23	0.00E+00		0.02	0.00E+00		0.31	0.00E+00	4.03E-12	8.07E-09	5	3,744	4.31E-13	5.44E-14
2-butanone	78-93-3	6.60E-09	1.74E-08	0.21	1.41E-09	3.73E-09	6.62E-09	1.75E-08	0.85	5.60E-09	1.48E-08	6.58E-09	1.75E-08	1.32	8.71E-09	2.32E-08		2.05	0.00E+00		0.23	0.00E+00		0.02	0.00E+00		0.31	0.00E+00	5.74E-08	1.15E-04	5	3,744	6.13E-09	7.73E-10
acetylene	74-86-2	2.27E-04	3.24E-04	0.21	4.87E-05	6.94E-05	2.61E-04	2.91E-04	0.85	2.21E-04	2.46E-04	4.05E-04	4.27E-04	1.32	5.36E-04	5.65E-04	1.49E-02	2.05	3.06E-02	2.08E-03	0.23	4.79E-04	2.08E-03	0.02	5.10E-05	2.08E-03	0.31	6.44E-04	3.34E-02	6.69E+01	5	3,744	3.57E-03	4.51E-04
benzene	71-43-2	3.83E-11	1.01E-10	0.21	8.21E-12	2.16E-11	3.83E-11	1.01E-10	0.85	3.24E-11	8.54E-11	3.81E-11	1.02E-10	1.32	5.04E-11	1.35E-10		2.05	0.00E+00		0.23	0.00E+00		0.02	0.00E+00		0.31	0.00E+00	3.33E-10	6.66E-07	5	3,744	3.56E-11	4.49E-12
chlorobenzene	108-90-7	5.33E-11	1.40E-10	0.21	1.14E-11	3.00E-11	5.36E-11	1.41E-10	0.85	4.53E-11	1.19E-10	5.32E-11	1.42E-10	1.32	7.04E-11	1.88E-10		2.05	0.00E+00		0.23	0.00E+00		0.02	0.00E+00		0.31	0.00E+00	4.64E-10	9.28E-07	5	3,744	4.96E-11	6.25E-12
chloroform	67-66-3	4.89E-09	1.33E-08	0.21	1.05E-09	2.85E-09	4.90E-09	1.33E-08	0.85	4.14E-09	1.12E-08	4.87E-09	1.34E-08	1.32	6.44E-09	1.77E-08		2.05	0.00E+00		0.23	0.00E+00		0.02	0.00E+00		0.31	0.00E+00	4.35E-08	8.69E-05	5	3,744	4.64E-09	5.86E-10
ethane	74-84-0	1.01E-05	1.44E-05	0.21	2.16E-06	3.09E-06	1.16E-05	1.29E-05	0.85	9.81E-06	1.09E-05	1.79E-05	1.90E-05	1.32	2.37E-05	2.51E-05	6.61E-04	2.05	1.36E-03	9.24E-05	0.23	2.13E-05	9.24E-05	0.02	2.26E-06	9.24E-05	0.31	2.86E-05	1.48E-03	2.97E+00	5	3,744	1.59E-04	2.00E-05
HD	505-60-2			0.21	0.00E+00	0.00E+00			0.85	0.00E+00	0.00E+00			1.32	0.00E+00	0.00E+00		2.05	0.00E+00		0.23	0.00E+00		0.02	0.00E+00		0.31	0.00E+00			5	3,744	2.24E-05	2.82E-06
methane	74-82-8	1.11E-04	1.58E-04	0.21	2.38E-05	3.39E-05	1.28E-04	1.42E-04	0.85	1.08E-04	1.20E-04	1.98E-04	2.09E-04	1.32	2.62E-04	2.77E-04	7.27E-03	2.05	1.49E-02	1.02E-03	0.23	2.35E-04	1.02E-03	0.02	2.50E-05	1.02E-03	0.31	3.16E-04	1.63E-02	3.26E+01	5	3,744	1.74E-03	2.20E-04
monoethanolamine	141-43-5	1.57E-05	4.12E-05	0.21	3.37E-06	8.83E-06	1.57E-05	4.13E-05	0.85	1.33E-05	3.49E-05	1.48E-05	3.94E-05	1.32	1.96E-05	5.21E-05		2.05	0.00E+00		0.23	0.00E+00		0.02	0.00E+00		0.31	0.00E+00	1.32E-04	2.64E-01	5	3,744	1.41E-05	1.78E-06
nitrobenzene	98-95-3	9.09E-13	2.39E-12	0.21	1.95E-13	5.12E-13	9.11E-13	2.40E-12	0.85	7.70E-13	2.03E-12	9.06E-13	2.41E-12	1.32	1.20E-12	3.19E-12		2.05	0.00E+00		0.23	0.00E+00		0.02	0.00E+00		0.31	0.00E+00	7.89E-12	1.58E-08	5	3,744	8.43E-13	1.06E-13
tetrachloroethene	127-18-4	1.24E-09	3.27E-09	0.21	2.66E-10	7.01E-10	1.25E-09	3.28E-09	0.85	1.06E-09	2.77E-09	1.24E-09	3.29E-09	1.32	1.64E-09	4.35E-09		2.05	0.00E+00		0.23	0.00E+00		0.02	0.00E+00		0.31	0.00E+00	1.08E-08	2.16E-05	5	3,744	1.15E-09	1.45E-10
trichloroethene	79-01-6	1.53E-08	4.03E-08	0.21	3.28E-09	8.64E-09	1.54E-08	4.05E-08	0.85	1.30E-08	3.42E-08	1.53E-08	4.07E-08	1.32	2.02E-08	5.39E-08		2.05	0.00E+00		0.23	0.00E+00		0.02	0.00E+00		0.31	0.00E+00	1.33E-07	2.67E-04	5	3,744	1.42E-08	1.80E-09
vinyl chloride	75-01-4	1.24E-05	3.28E-05	0.21	2.66E-06	7.03E-06	1.25E-05	3.28E-05	0.85	1.06E-05	2.77E-05	1.24E-05	3.32E-05	1.32	1.64E-05	4.39E-05		2.05	0.00E+00		0.23	0.00E+00		0.02	0.00E+00		0.31	0.00E+00	1.08E-04	2.17E-01	5	3,744	1.16E-05	1.46E-06
ammonia	7664-41-7	1.93E-04	2.75E-04	0.21	4.14E-05	5.89E-05	2.23E-04	2.47E-04	0.85	1.89E-04	2.09E-04	2.75E-04	2.92E-04	1.32	3.64E-04	3.86E-04	5.78E-03	2.05	1.19E-02	1.77E-03	0.23	4.07E-04	1.77E-03	0.02	4.34E-05	1.77E-03	0.31	5.48E-04	1.41E-02	2.82E+01	5	3,744	1.51E-03	1.90E-04
hydrogen cyanide	74-90-8	6.58E-05	9.75E-05	0.21	1.41E-05	2.09E-05	7.89E-05	8.77E-05	0.85	6.67E-05	7.41E-05	1.22E-04	1.29E-04	1.32	1.61E-04	1.71E-04	4.49E-03	2.05	9.22E-03	6.27E-04	0.23	1.44E-04	6.27E-04	0.02	1.54E-05	6.27E-04	0.31	1.94E-04	1.01E-02	2.02E+01	5	3,744	1.08E-03	1.36E-04
total mercury	NA	2.25E-18	6.19E-18	0.21	4.82E-19	1.33E-18	2.26E-18	6.20E-18	0.85	1.91E-18	5.24E-18	2.24E-18	6.23E-18	1.32	2.96E-18	8.24E-18		2.05	0.00E+00		0.23	0.00E+00		0.02	0.00E+00		0.31	0.00E+00	2.02E-17	4.03E-14	5	3,744	2.15E-18	2.72E-19

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TABLE A3-5. HD EMISSION RATE CALCULATIONS

Basis:

a. It is assumed that agent (HD) will be emitted from each EDS enclosure stack at 0.7 times the Vapor Screening Level (VSL) when the system is in operation.

VSL	0.003	mg/m^3
	3.0E-06	g/m^3
0.7 VSL	2.1E-06	g/m^3

b. The process emissions and enclosure ventilation are exhausted through the same emission point. Therefore, the emission rates for the normal operating condition are the same as for the emergency/accident scenario.

Emission Calculations:

Flow Rate (m^3/s) = (flow rate, ft^3/min) x (1 min/60 s) x (1 m^3/35.3145 ft^3)

Emission Rate (g/s) = (flow rate, m^3/s) x (0.7 x VSL, g/m^3)
= (flow rate, m^3/s) x (0.7 x 3.0 E-06 g/m^3)
= (flow rate, m^3/s) x (2.1 E-06 g/m^3)

Emissions Summary:

Normal Operating Conditions:

EDT	Flow Rate		Emission Rate	Total Emission Rate
	ft^3/min	m^3/s	g/s	g/s
EDS-1	5,969	2.82	5.9E-06	5.3E-05
EDS-2	5,969	2.82	5.9E-06	
EDS-3	5,969	2.82	5.9E-06	
EDS-4	5,969	2.82	5.9E-06	
EDS-5	5,969	2.82	5.9E-06	
EDS-6	5,969	2.82	5.9E-06	
EDS-7	5,969	2.82	5.9E-06	
EDS-8	5,969	2.82	5.9E-06	
EDS-9	5,969	2.82	5.9E-06	

Emergency/Accident Scenario:

EDT	Flow Rate		Emission Rate	Total Emission Rate
	ft^3/min	m^3/s	g/s	g/s
EDS-1	5,969	2.82	5.9E-06	5.3E-05
EDS-2	5,969	2.82	5.9E-06	
EDS-3	5,969	2.82	5.9E-06	
EDS-4	5,969	2.82	5.9E-06	
EDS-5	5,969	2.82	5.9E-06	
EDS-6	5,969	2.82	5.9E-06	
EDS-7	5,969	2.82	5.9E-06	
EDS-8	5,969	2.82	5.9E-06	
EDS-9	5,969	2.82	5.9E-06	

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APPENDIX B

COPC-SPECIFIC FORMULAE AND PROCEDURES FOR ESTIMATING MEDIA CONCENTRATIONS AND QUANTIFYING EXPOSURE, RISK, AND HAZARD

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Acronym/ Abbreviation	Definition
2,3,7,8-TCDD	2,3,7,8-tetrachlorodibenzo(p)dioxin
θ_{bs}	bed sediment porosity
ρ_a	density of air
A_I	impervious watershed area receiving chemical deposition
A_w	water body surface area
$BSAF_{fish}$	biota-to-sediment accumulation factor
BD	soil bulk density
BEHP	bis(2-ethylhexyl)phthalate
Bv_{ag}	air-to-plant biotransfer factor
C_{BS}	bed sediment concentration
C_{dw}	chemical concentration in the dissolved water phase
$C_{dw(mercury)}$	total mercury concentration in the dissolved water phase
$C_{dw(Hg2+)}$	mercuric chloride concentration in the dissolved water phase
$C_{dw(MHg)}$	methyl mercury concentration in the dissolved water phase
$C_{dw(Hg0)}$	elemental mercury concentration in the dissolved water phase
C_{fish}	chemical concentration in fish
$C_{a(Hg0)}$	air concentration of elemental mercury
$C_{a(Hg2+)}$	air concentration of mercuric chloride
COPC	chemical of potential concern
C_{sb}	concentration of chemical sorbed to bed sediments
C_{wtot}	total water concentration, including water column and bed sediment
Cyp	particle-phase air concentration
Cyv	vapor-phase air concentration
$Cywv$	watershed vapor phase air concentration
DA_{event}	dermally absorbed dose per event
d_{bs}	depth of upper benthic layer
$Ds_{(mercury)}$	total mercury deposition term
$Ds_{(Hg2+)}$	mercuric chloride deposition term
$Ds_{(MHg)}$	methyl mercury deposition term
$Ds_{(Hg0)}$	elemental mercury deposition term
d_{wc}	depth of water column
$Dydp$	yearly dry deposition from particle phase
$Dydv$	yearly dry deposition from vapor phase
$Dytwp$	yearly watershed total deposition from particle phase
$Dytwv$	yearly watershed total deposition from vapor phase
$Dywdp$	yearly watershed dry deposition from particle phase
$Dywdv$	yearly watershed dry deposition from vapor phase
$Dywp$	yearly wet deposition from particle phase

Acronym/ Abbreviation	Definition
Dywv	yearly wet deposition from vapor phase
Dywwp	yearly watershed wet deposition from particle phase
Dywwv	yearly watershed wet deposition from vapor phase
EDT	Explosive Destruction Technology
f_{bs}	fraction of total water body chemical concentration that occurs in benthic sediment
f_{lipid}	fish lipid content
$F_{v(Hg0)}$	fraction of elemental mercury air concentration in vapor phase
$F_{v(Hg2+)}$	fraction of mercuric chloride air concentration in vapor phase
Fw	fraction of wet deposition that adheres to plant
g	gram(s)
H	Henry's Law constant
HHRAP	Human Health Risk Assessment Protocol
IRIS	Integrated Risk Information System
K	Kelvin
Kd_{bs}	bed sediment/sediment pore water partition coefficient
kp	plant surface loss coefficient
kg	kilogram(s)
K_p	dermal permeability coefficient of chemical in water
K_v	overall transfer rate
ℓ	liter(s)
$L_{Dep(mercury)}$	total mercury direct deposition load to water body (g/yr)
$L_{Dif(mercury)}$	vapor phase total mercury diffusion load to water body (g/yr)
$L_{E(Hg2+)}$	mercuric chloride soil erosion load to water body (g/yr)
$L_{E(MHg)}$	methyl mercury soil erosion load to water body (g/yr)
$L_{R(Hg2+)}$	mercuric chloride pervious surface runoff load to water body (g/yr)
$L_{R(MHg)}$	methyl mercury pervious surface runoff load to water body (g/yr)
$L_{RI(mercury)}$	total mercury impervious surface runoff load to water body (g/yr)
$L_{T(mercury)}$	total chemical load of total mercury to water body
m^2	square meter(s)
m^3	cubic meter(s)
MF	metabolism factor
mg	milligram(s)
MPHRA	Multiple Pathway Health Risk Assessment
NCEA	National Center for Environmental Assessment
OC_{sed}	fraction of organic carbon in bed sediment
PCAPP	Pueblo Chemical Agent-destruction Pilot Plant
PCB	polychlorinated biphenyl

Acronym/ Abbreviation	Definition
PCDD	polychlorinated dibenzo(p)dioxin
PCDF	polychlorinated dibenzofuran
$Pd_{(mercury)}$	total mercury concentration in plant due to direct deposition
$Pd_{(Hg2+)}$	mercuric chloride concentration in plant due to direct deposition
$Pd_{(MHg)}$	methyl mercury concentration in plant due to direct deposition
pg	picogram
$Pv_{(mercury)}$	total mercury concentration in the plant due to air-to-plant transfer
$Pv_{(Hg2+)}$	mercuric chloride concentration in the plant due to air-to-plant transfer
$Pv_{(MHg)}$	methyl mercury concentration in the plant due to air-to-plant transfer
$Q_{(total)}$	total mercury stack emission rate
R	universal gas constant
RAGS	Risk Assessment Guidance for Superfund
Rp	interception fraction of edible portion of plant
s	second(s)
TEF	toxicity equivalency factor
TEQ	toxic equivalent
t_{event}	duration of the swimming event
Tp	length of plant exposure to deposition of edible portion of plant, per harvest
T_{wk}	water body temperature
USEPA	United States Environmental Protection Agency
VG_{ag}	above-ground fruit/vegetable correction factor
Yp	yield or standing crop biomass of the edible portion of the plant
yr	year
Z_s	soil mixing depth

B COPC-SPECIFIC FORMULAE AND DETAILED PROCEDURES FOR ESTIMATING MEDIA CONCENTRATIONS AND QUANTIFYING EXPOSURE, RISK, AND HAZARD

The Explosive Destruction Technology (EDT) Multiple Pathway Health Risk Assessment (MPHRA) includes additional chemicals of potential concern (COPC) (beyond those addressed in the Pueblo Chemical Agent-destruction Pilot Plant [PCAPP] MPHRA) which require COPC-specific calculation methodologies and equations. These compounds include:

- mercury compounds (i.e., elemental mercury, methyl mercury, and mercuric chloride)
- inorganic compounds
- bis(2-ethylhexyl)phthalate (BEHP)
- polychlorinated dibenzo(p)dioxins (PCDD), polychlorinated dibenzofurans (PCDF), and coplanar polychlorinated biphenyls (PCB)

The methodology used to perform the EDT and PCAPP MPHRAs follows the procedures presented in the Human Health Risk Assessment Protocol (HHRAP). (USEPA, 2005) This appendix provides a detailed outline of the methodologies used and calculations performed in this EDT MPHRA to quantify the concentrations of and estimate exposures to the specific COPCs listed above in various media. Unless noted in this appendix, all other methodologies and calculations used in the EDT MPHRA are identical to those described in Appendix D of the PCAPP MPHRA Report.

All default values and exposure-scenario-specific values used in the EDT MPHRA are identical to those used in the PCAPP MPHRA. The post-processor output provided in Appendixes C, D, E, and F (for SDC, TDC, DAVINCH, and EDS, respectively) of this EDT MPHRA Report includes tabulations of these default and exposure-scenario-specific values. The values can be found in the appendix sections entitled “Parameters Used in the Multiple Pathway Health Risk Assessment.” The default and exposure-scenario-specific values are not unique to the EDTs and are therefore identical in each of the EDT-specific appendixes. However, the COPCs emitted by each EDT are different; therefore, the COPC-specific values will differ in the appendix sections for each EDT.

This remainder of this appendix is arranged by COPC (or COPC class) to describe in detail the methodologies and calculations used in the EDT MPHRA.

B.1 MERCURY-SPECIFIC PROCEDURES

Mercury compounds were included in the EDT MPHRA but not the PCAPP MPHRA. Mercury compounds are treated differently than other COPCs in that calculated media concentrations of total mercury are separated into specific mercury compounds (speciated) before calculating risk or hazard. (USEPA, 2005) Specific calculation methods used to account for mercury compounds are described in the following subsections.

B.1.1 Mercury Compound Concentrations in Soil

Concentrations of mercuric chloride, methyl mercury, and elemental mercury in soil were evaluated using the procedures described in Appendix D of the PCAPP MPHRA Report except as described in the following subsection.

B.1.1.1 Deposition Term

COPCs emitted from EDT emission sources ultimately deposit onto nearby soils. This process occurs through both wet and dry deposition of vapor- and particle-phase COPCs. The deposition term represents the annual loading of COPC into 1 kilogram (kg) of soil prior to subsequent soil loss processes such as leaching, erosion, runoff, biotic and abiotic degradation,

and COPC volatilization. The maximum yearly wet and dry deposition rates determined through air dispersion modeling were used to calculate the deposition term for total mercury using equations presented in Table B-1-1 of the HHRAP (USEPA, 2005) and below:

$$Ds_{(mercury)} = \frac{100 \cdot \lfloor 0.48 Q_{(total)} \rfloor}{Z_s \cdot BD} \cdot [F_{v(Hg2+)}(Dydv + Dyww) + (Dydp + Dywp) \cdot (1 - F_{v(Hg2+)})] \quad \text{Eq. B-1}$$

where

$Ds_{(mercury)}$	=	total mercury deposition term (mg/kg-yr)
$Dydp$	=	normalized yearly dry deposition from particle phase (g/m^2-yr per g/s), (modeled value)
$Dywp$	=	normalized yearly wet deposition from particle phase (g/m^2-yr per g/s), (modeled value)
$Dydv$	=	normalized yearly dry deposition from vapor phase (g/m^2-yr per g/s), (modeled value)
$Dywv$	=	normalized yearly wet deposition from vapor phase (g/m^2-yr per g/s), (modeled value)
100	=	unit conversion factor ([mg-m^2]/[kg-cm^2])
Z_s	=	soil mixing depth (2 cm), (default value)
BD	=	soil bulk density (1.5 g/cm^3), (default value)
$Q_{(total)}$	=	total mercury stack emission rate (g/s) (chemical-specific value)
$F_{v(Hg2+)}$	=	fraction of mercuric chloride air concentration in vapor phase (dimensionless), (chemical-specific value)

The fraction of mercuric chloride air concentration in the vapor phase is a chemical-specific parameter that is correlated with vapor pressure and was obtained from the HHRAP Companion Database.

Table B-1-1 of the HHRAP describes the procedure to apportion the calculated total mercury deposition term into the divalent and methyl mercury forms based on an assumed 98 percent mercuric chloride and 2 percent methyl mercury speciation split in soils. Elemental mercury occurs in very small amounts in the vapor phase and does not exist in the particle or particle-bound phase. Therefore, elemental mercury deposition onto soils was assumed negligible or zero as described in the HHRAP. The speciation of total mercury deposition into mercuric chloride, methyl mercury, and elemental mercury deposition is described in Table B-1-1 of the HHRAP (USEPA, 2005) and below:

$$Ds_{(Hg2+)} = 0.98 Ds_{(mercury)} \quad \text{Eq. B-2}$$

$$Ds_{(MHg)} = 0.02 Ds_{(mercury)} \quad \text{Eq. B-3}$$

$$Ds_{(Hg0)} = 0.0 \quad \text{Eq. B-4}$$

where

$Ds_{(Hg2+)}$	=	mercuric chloride deposition term (mg/kg-yr)
$Ds_{(MHg)}$	=	methyl mercury deposition term (mg/kg-yr)
$Ds_{(Hg0)}$	=	elemental mercury deposition term (mg/kg-yr)
$Ds_{(mercury)}$	=	total mercury deposition term (mg/kg-yr)

B.1.2 Mercury Compound Concentrations in Above-ground Produce and Animal Feed

Concentrations of mercuric chloride, methyl mercury, and elemental mercury in above-ground produce and animal feed were evaluated using the procedures described in Appendix D of the PCAPP MPHRA Report except as described in the following subsections.

B.1.2.1 Mercury Compound Concentrations Due to Direct Deposition

Chemical concentrations of methyl mercury and mercuric chloride in above-ground produce and animal feed due to direct deposition were calculated using equations presented in Table B-2-7 (human) and Table B-3-7 (animal) of the HHRAP (USEPA, 2005) and presented below.

$$Pd_{(mercury)} = \frac{1000 \cdot 0.48 Q_{(total)} \cdot (1.0 - F_{v(Hg2+)}) \cdot [Dydp + (Fw \cdot Dywp)] \cdot Rp \cdot [1.0 - exp(-kp \cdot Tp)]}{Yp \cdot kp} \quad \text{Eq. B-5}$$

where

$Pd_{(mercury)}$	=	total mercury concentration in plant due to direct deposition (mg/kg)
1000	=	unit conversion factor (mg/g)
$Q_{(total)}$	=	total mercury stack emission rate (g/s), (chemical-specific value)
$Dydp$	=	normalized yearly dry deposition from particle phase (g/m^2-yr per g/s), (modeled value)
Fw	=	fraction of wet deposition that adheres to plant (dimensionless), (chemical-specific value)
$F_{v(Hg2+)}$	=	fraction of mercuric chloride air concentration in vapor phase (dimensionless), (chemical-specific value)
$Dywp$	=	normalized yearly wet deposition from particle phase (g/m^2-yr per g/s), (modeled value)
Rp	=	interception fraction of edible portion of plant (dimensionless), (0.39 for human consumption; 0.5 for forage; 0.46 for silage), (default value)
kp	=	plant surface loss coefficient (18 yr^{-1}), (default value)
Tp	=	length of plant exposure to deposition of edible portion of plant, per harvest (0.16 yr for human consumption; 0.12 yr for forage; 0.16 yr for silage), (default value)
Yp	=	yield or standing crop biomass of the edible portion of the plant (2.24 kg/m^2 for human consumption; 0,24 kg/m^2 for forage; 0.8 kg/m^2 for silage), (default value)

Table B-2-7 (human) and Table B-3-7 (animal) of the HHRAP (USEPA, 2005) describe the procedure to apportion the calculated total mercury concentration in the plant due to direct deposition into the divalent and methyl mercury forms based on an assumed 78 percent mercuric chloride and 22 percent methyl mercury speciation split. The equations are presented below:

$$Pd_{(Hg2+)} = 0.78 Pd_{(mercury)} \quad \text{Eq. B-6}$$

$$Pd_{(MHg)} = 0.22 Pd_{(mercury)} \quad \text{Eq. B-7}$$

where

$Pd_{(Hg2+)}$	=	mercuric chloride concentration in plant due to direct deposition (mg/kg)
$Pd_{(MHg)}$	=	methyl mercury concentration in plant due to direct deposition (mg/kg)
$Pd_{(mercury)}$	=	total mercury concentration in plant due to direct deposition (mg/kg)

B.1.2.2 Mercury Compound Concentrations in Above-ground Produce and Animal Feed Due to Air-to-Plant Transfer

Mercury compound concentrations in above-ground produce and animal feed due to air-to-plant transfer were calculated using equations presented in Table B-2-8 (human) and Table B-3-8 (animal) of the HHRAP (USEPA, 2005) and below:

$$Pv_{(mercury)} = \left(0.48Q_{total}\right) \cdot F_{v(Hg2+)} \cdot \frac{Cyv \cdot Bv_{ag} \cdot VG_{ag}}{\rho_a} \qquad \text{Eq. B-8}$$

where

$Pv_{(mercury)}$	=	total mercury concentration in the plant due to air-to-plant transfer (mg/kg)
Q_{total}	=	total mercury stack emission rate (g/s), (chemical-specific value)
$F_{v(Hg2+)}$	=	fraction of mercuric chloride air concentration in vapor phase (dimensionless), (chemical-specific value)
Cyv	=	normalized vapor phase air concentration (µg/m^3 per g/s), (modeled value)
VG_{ag}	=	above-ground fruit/vegetable correction factor (dimensionless), (0.01 for log K_{ow} > 4 and 1.0 for log K_{ow} < 4 for human consumption; 1.0 for forage; 0.5 for silage), (default value)
Bv_{ag}	=	air-to-plant biotransfer factor ([mg chemical/g plant tissue]/[mg chemical/g air]), (chemical-specific value)
ρ_a	=	density of air (1,200 g/m^3), (default value)

Table B-2-8 (human) and Table B-3-8 (animal) of the HHRAP (USEPA, 2005) describe the procedure to apportion the calculated total mercury concentration in the plant due to air-to-plant into the divalent and methyl mercury forms based on an assumed 78 percent mercuric chloride and 22 percent methyl mercury speciation split. The equations are presented below:

$$Pv_{(Hg2+)} = 0.78 Pv_{(mercury)} \qquad \text{Eq. B-9}$$

$$Pv_{(MHg)} = 0.22 Pv_{(mercury)} \qquad \text{Eq. B-10}$$

where

$Pv_{(Hg2+)}$	=	mercuric chloride concentration in plant due to air-to-plant transfer (mg/kg)
$Pv_{(MHg)}$	=	methyl mercury concentration in plant due to air-to-plant transfer (mg/kg)
$Pv_{(mercury)}$	=	total mercury concentration in plant due to air-to-plant transfer (mg/kg)

B.1.2.3 Mercury Compound Concentrations in Above-ground Produce and Animal Feed Due to Root Uptake

As directed by Table B-2-9 (human) and Table B-3-9 (animal) of the HHRAP (USEPA, 2005), concentrations of mercuric chloride and methyl mercury in above-ground produce were calculated based on the concentration of these individual compounds in soil. This methodology is equivalent to the calculation methodology described in Appendix D to the PCAPP MPHRA Report. Elemental mercury concentrations in above-ground plants due to root uptake were not calculated because, as described in Section B.1.1.1, deposition of elemental mercury onto soils is assumed to be zero.

B.1.3 Mercury Compound Concentrations in Below-ground Produce

As directed by Table B-2-10 of the HHRAP (USEPA, 2005), concentrations of mercuric chloride and methyl mercury in below-ground produce were calculated based on the concentration of these individual compounds in soil. This methodology is equivalent to the calculation methodology described in Appendix D to the PCAPP MPHRA Report. Elemental mercury concentrations in above-ground produce were not calculated because, as described in Section B.1.1.1, deposition of elemental mercury onto soils is assumed to be zero.

B.1.4 Mercury Compound Concentrations in Surface Water

The HHRAP (USEPA, 2005) recommends that mercuric chloride and methyl mercury concentrations in the dissolved phase of a waterbody be determined by apportioning the dissolved water concentration of total mercury into the divalent and methyl mercury forms based on an 85 percent divalent and 15 percent methyl mercury speciation split. The HHRAP (USEPA, 2005) recommends that the dissolved-phase water concentration of total mercury be determined using the fate and transport parameters specified for mercuric chloride.

The following subsections describe the calculation and methodologies used in the EDT MPHRA to determine the mercuric chloride and methyl mercury concentrations in the dissolved phase based on this recommendation. All other equations used to develop these estimates (beyond those identified in the following subsections) are the same as those presented in Appendix D of the PCAPP MPHRA Report.

B.1.4.1 Direct Deposition Loading

Particles and gaseous species in the air can be deposited into bodies of water by dry and wet deposition. The area of the water body and the modeled deposition rates at the water body receptor location of maximum impact determine the magnitude of the deposition load to water bodies. The total mercury load to water bodies from direct deposition ($L_{Dep(merucyr)}$) was calculated using the equation presented in Table B-4-8 of the HHRAP (USEPA, 2005) and below:

$$L_{Dep(mercury)} = 0.48 Q_{total} \cdot \left[F_{v(Hg2+)} \cdot Dytwv + (1 - F_{v(Hg2+)}) \cdot Dytwp \right] \cdot A_w \qquad \text{Eq. B-11}$$

where

$L_{Dep(mercury)}$	=	total mercury direct deposition load to water body (g/yr)
Q_{total}	=	total mercury stack emission rate (g/s), (chemical-specific value)
$F_{v(Hg2+)}$	=	fraction of mercuric chloride air concentration in vapor phase (dimensionless), (chemical-specific value)
Dytwv	=	normalized yearly watershed total deposition rate from vapor phase (g/m^2-yr per g/s), (*Dywwv* + *Dywdv*, modeled value)
Dytwp	=	normalized yearly watershed total deposition rate from particle phase (g/m^2-yr per g/s), (*Dywwp* + *Dywdp*, modeled value)
A_w	=	water body surface area (10,000 m^2), (site-specific value)

B.1.4.2 Impervious Surface Runoff Load

Precipitation events within the watershed lead to some runoff from impervious surfaces into the water body. The impervious surface area and modeled deposition rates determine the magnitude of this load. The impervious surface runoff load of total mercury to water bodies ($L_{RI(mercury)}$) was calculated using the equation presented in Table B-4-9 of the HHRAP (USEPA, 2005) and below:

$$L_{RI(mercury)} = Q_{total} \cdot \left[F_{v(Hg2+)} \cdot Dytwv + (1 - F_{v(Hg2+)}) \cdot Dytwp \right] \cdot A_I \qquad \text{Eq. B-12}$$

where

$L_{RI(mercury)}$	=	total mercury impervious surface runoff load to water body (g/yr)
Q_{total}	=	total mercury stack emission rate (g/s), (chemical-specific value)
$F_{v(Hg2+)}$	=	fraction of mercuric chloride air concentration in vapor phase (dimensionless), (chemical-specific value)
Dytwv	=	normalized yearly watershed total deposition from vapor phase (g/m^2-yr per g/s), (*Dywwv* + *Dywdv*, modeled value)
Dytwp	=	normalized yearly watershed dry deposition from particle phase (g/m^2-yr per g/s), (*Dywwp* + *Dywdp*, modeled value)
A_I	=	impervious watershed area receiving chemical deposition (12,320 m^2), (site-specific value)

B.1.4.3 Pervious Surface Runoff Load

The pervious surface runoff load of mercuric chloride ($L_{R(Hg2+)}$) and methyl mercury ($L_{R(MHg)}$) to the water body was calculated using the formula presented in Table B-4-10 of the HHRAP (USEPA, 2005) and Appendix D of the PCAPP MPHRA Report. Table B-4-10 does not specify that the previous surface runoff load to the water body be calculated for total mercury only. Rather, the equation is presented for use on individual COPCs. Because the deposition rate, and ultimately, the soil concentration of mercuric chloride and methyl mercury are known, these concentrations were used to estimate the pervious surface runoff load to the water body for each of these compounds. The pervious surface runoff load for each of these compounds is used to estimate the total load of total mercury to the water body.

B.1.4.4 Soil Erosion Load

Like the pervious surface runoff load, the soil erosion load of mercuric chloride ($L_{E(Hg2+)}$) and methyl mercury ($L_{E(MHg)}$) to the water body was calculated using the formula presented in Table B-4-11 of the HHRAP (USEPA, 2005) and Appendix D of the PCAPP MPHRA Report. Table B-4-11 does not specify that the soil erosion load to the water body be calculated for total mercury only. Rather, the equation is presented for use on individual COPCs. Because the deposition rate, and ultimately, the soil concentration of mercuric chloride and methyl mercury are known, these concentrations were used to estimate the soil erosion load to the water body for each of these compounds. The soil erosion load for each of these compounds is used to estimate the total load of total mercury to the water body.

B.1.4.5 Diffusive Load from Atmospheric COPCs

The load to a water body due to diffusion of total mercury in the atmosphere into the surface water (L_{Dif}) was calculated using the equation presented in Table B-4-12 in the HHRAP (USEPA, 2005) and below:

$$L_{Dif(mercury)} = \frac{K_v \cdot Q_{total} \cdot F_{v(Hg2+)} \cdot Cywv \cdot A_w \cdot 10^{-6}}{\frac{H}{R \cdot T_{wk}}} \qquad \text{Eq. B-13}$$

where

$L_{Dif(mercury)}$	=	vapor phase total mercury diffusion load to water body (g/yr)
Q_{total}	=	total mercury stack emission rate (g/s), (chemical-specific value)
$F_{v(Hg2+)}$	=	fraction of mercuric chloride air concentration in vapor phase (dimensionless), (chemical-specific value)
K_v	=	overall transfer rate (m/yr),
Cywv	=	normalized yearly watershed vapor phase air concentration (µg/m^3 per g/s), (modeled value)

A_w	=	water body surface area (10,000 m^2), (site-specific value)
H	=	Henry's Law constant (atm-m^3/mol), (chemical-specific value)
R	=	universal gas constant (8.205 x 10^{-5} atm-m^3/mol-K)
T_{wk}	=	water body temperature (298 K), (default value)
10^{-6}	=	units conversion factor (g/µg)

B.1.4.6 Total COPC Load

The total COPC load to the water body from wet and dry deposition, pervious and impervious surface runoff, erosion, and diffusion processes was calculated using the a slightly modified version of the equation presented in Table B-4-7 of the HHRAP (USEPA, 2005) and below. The modification made to the equation was to include the pervious surface runoff and erosion loads of mercuric chloride and methyl mercury.

$$L_{T(mercury)} = L_{Dep(mercury)} + L_{Dif(mercury)} + L_{RI(mercury)} + L_{R(Hg2+)} + L_{R(MHg)} + L_{E(Hg2+)} + L_{E(MHg)} \quad \text{Eq. B-14}$$

where

$L_{T(mercury)}$	=	total chemical load of total mercury to water body (g/yr)
$L_{Dep(mercury)}$	=	total mercury direct deposition load to water body (g/yr), (calculated by Eq. B-11)
$L_{Dif(mercury)}$	=	vapor phase total mercury diffusion load to water body (g/yr), (calculated by Eq. B-13)
$L_{RI(mercury)}$	=	total mercury impervious surface runoff load to water body (g/yr), (calculated by Eq. B-12)
$L_{R(Hg2+)}$	=	mercuric chloride pervious surface runoff load to water body (g/yr), (calculation described in Section B.1.4.3)
$L_{R(MHg)}$	=	methyl mercury pervious surface runoff load to water body (g/yr), (calculation described in Section B.1.4.3)
$L_{E(Hg2+)}$	=	mercuric chloride soil erosion load to water body (g/yr), (calculation described in Section B.1.4.4)
$L_{E(MHg)}$	=	methyl mercury soil erosion load to water body (g/yr), (calculation described in Section B.1.4.4)

B.1.4.7 Mercury Compound Concentrations in the Dissolved Water Phase

The concentration of total mercury dissolved in the water column (C_{dw}) was calculated using the equation presented in Table B-4-24 of the HHRAP (USEPA, 2005) and Appendix D of the PCAPP MPHRA Report. As directed in Table B-4-24, chemical, physical, and transport properties used for total mercury in this equation were set equal to those of mercuric chloride.

Table B-4-24 of the HHRAP (USEPA, 2005) describes the procedure to apportion the calculated total mercury dissolved water-phase concentration into the divalent and methyl mercury forms based on an assumed 85 percent mercuric chloride and 15 percent methyl mercury speciation split. Elemental mercury occurs in very small amounts in the vapor phase and does not exist in the particle or particle-bound phase. Therefore, elemental mercury in the water body was assumed to be zero, as previously described. The speciation of total mercury dissolved water-phase concentration into mercuric chloride, methyl mercury, and elemental mercury is described in Table B-4-24 of the HHRAP (USEPA, 2005) and below:

$$C_{dw(Hg2+)} = 0.85 C_{dw(mercury)} \quad \text{Eq. B-15}$$

$$C_{dw(MHg)} = 0.15 C_{dw(mercury)} \quad \text{Eq. B-16}$$

$$C_{dw(Hg0)} = 0.0 \quad \text{Eq. B-17}$$

where

$C_{dw(mercury)}$	=	total mercury concentration in the dissolved water phase (mg/ℓ)
$C_{dw(Hg2+)}$	=	mercuric chloride concentration in the dissolved water phase (mg/ℓ)
$C_{dw(MHg)}$	=	methyl mercury concentration in the dissolved water phase (mg/ℓ)
$C_{dw(Hg0)}$	=	elemental mercury concentration in the dissolved water phase (mg/ℓ)

B.1.5 Mercury Compound Concentrations in Fish

The concentration of mercury compounds in fish (C_{fish}) is calculated using the dissolved water concentration of divalent mercury and methyl mercury separately with their chemical-specific bioaccumulation factors as described in Table B-4-27 of the HHRAP (USEPA, 2005). Once taken up into fish, all mercury (i.e., mercuric chloride and methyl mercury) is assumed to be in the methyl mercury form as directed by Appendix A-2 of the HHRAP(USEPA, 2005). This is accomplished in this EDT MPHRA by adding the concentration of mercuric chloride and methyl mercury in the fish to yield a total mercury concentration which is assumed to exist entirely as methyl mercury.

B.1.6 Mercury Compound Concentrations in Air

The concentration of mercury compounds (elemental mercury and mercuric chloride) in air was calculated using the AERMOD-modeled concentration of total mercury and the equations described in Table B-5-1 of the HHRAP (USEPA, 2005) and below:

$$C_{a(Hg0)} = 0.002Q_{total} \cdot \left[F_{v(Hg0)} \cdot Cyv + \left(1 - F_{v(Hg0)}\right) \cdot Cyp\right] \qquad \text{Eq. B-18}$$

$$C_{a(Hg2+)} = 0.002Q_{total} \cdot \left[F_{v(Hg2+)} \cdot Cyv + \left(1 - F_{v(Hg2+)}\right) \cdot Cyp\right] \qquad \text{Eq. B-19}$$

where

$C_{a(Hg0)}$	=	air concentration of elemental mercury (*μg/m³)*
$C_{a(Hg2+)}$	=	air concentration of mercuric chloride (*μg/m³)*
Q_{total}	=	total mercury stack emission rate (g/s), (chemical-specific value)
$F_{v(Hg0)}$	=	fraction of elemental mercury air concentration in vapor phase (dimensionless), (chemical-specific value)
$F_{v(Hg2+)}$	=	fraction of mercuric chloride air concentration in vapor phase (dimensionless), (chemical-specific value)
Cyv	=	normalized yearly air concentration from vapor phase (μg/m^3 per g/s), (modeled value)
Cyp	=	normalized yearly air concentration from particle phase (μg/m^3 per g/s), (modeled value)

B.2 INORGANIC COMPOUND-SPECIFIC PROCEDURES

Inorganic and organic compounds were included in the EDT MPHRA but only organic compounds were included in the PCAPP MPHRA. Dermal exposure to inorganic compounds (including mercury compounds) are treated differently in the HHRAP than exposure to organic compounds in that intake from dermal exposure to inorganic compounds while swimming is a much simpler process. Equation 3.4 of *Risk Assessment Guidance for Superfund Volume 1: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment*) (RAGS, Part E, USEPA, 2004) was used to calculate the dermally absorbed dose of inorganics per event and is presented below:

$$DA_{event} = K_p \cdot C_{dw} \cdot t_{event} \qquad \text{Eq. B-20}$$

where

DA_{event}	=	dermally absorbed dose per event (mg/cm^2-event)
K_p	=	dermal permeability coefficient of chemical in water (cm/hr), (chemical-specific value)
C_{dw}	=	chemical concentration in the dissolved water phase (mg/cm^3), (calculated value, see Section B.1.5.7 or Appendix D to the PCAPP MPHRA Report)
t_{event}	=	duration of the swimming event (hr/event), (site-specific value)

B.3 PHTHALATE-SPECIFIC PROCEDURES

Calculations used in the PCAPP MPHRA for COPC concentrations in beef, pork, and dairy milk are presented in Appendix D to the PCAPP MPHRA Report. These same calculations were used to perform the EDT MPHRA without change. However, the process used while performing the PCAPP MPHRA employed a default factor of 1 for the metabolism factor (MF) of all COPCs. The EDT MPHRA included BEHP as a COPC while the PCAPP MPHRA did not. BEHP is more readily metabolized and excreted by mammalian species than other COPCs. Thus, the methodology used for the EDT MPHRA defined a default value of 0.01 for the MF of BEHP; the MF for all other COPCs remained 1.

B.4 PCDD-, PCDF-, and COPLANAR PCB-SPECIFIC PROCEDURES

PCDD, PCDF, and coplanar PCB compounds were included in the EDT MPHRA but not in the PCAPP MPHRA. These lipophilic compounds are treated differently in the HHRAP in that calculated media concentrations are dependent on accumulation in sediments (i.e., lipophilic COPCs are sorbed to bed sediments), which also affects the COPC concentrations in fish. Beyond this mechanism, media concentrations of individual congeners are calculated and then an equivalent toxicity factor is applied to each to obtain the risk value. Specific procedures for these compounds are described in the following subsections.

B.4.1 Fate and Transport Parameters

Fate and transport parameters for PCDDs, PCDFs, and coplanar PCBs were collected from various sources. Excluding transport parameters specific to the breast-milk pathway, fate and transport parameters for PCDD and PCDF congeners and PCB Aroclor 1254 were obtained from the HHRAP Companion Database. The HHRAP (USEPA, 2005) recommends using the fate and transport properties of Aroclor 1254 when assessing PCBs, so these data were used for all coplanar PCBs.

The calculation methodology for COPCs in the breast milk pathway employed the same methodology as was used in the PCAPP MPHRA Report, which was based on the methodology presented in the National Center for Environmental Assessment (NCEA) report entitled *Methodology for Assessing Health Risks Associated with Multiple Pathways of Exposure to Combustor Emissions* (USEPA, 1998). However, fate and transport parameters for these lipophilic compounds were estimated based on limited information provided in the NECA report.

The NCEA report (USEPA, 1998) indicates that “lipophilic chemicals with half lives of several years may take more than 20 years to reach steady state. Thus, the half-life is an important consideration in estimating chemical concentration in maternal fat. For PCDDs, the half life is 7 to 10 years.” PCDFs were not addressed in the NCEA report. Therefore, for this EDT MPHRA, a half life of 10 years was selected to conservatively estimate the half life of all PCDDs and PCDFs based on the range presented in the NCEA report.

The NCEA report also indicates that the median half life of PCB Aroclor 1254 is 4.8 years in workers occupationally exposed to PCBs during the manufacture of electrical equipment, but

that the half life of PCB congeners may vary greatly. Due the lack of available data, and based on the fact that the HHRAP recommends using the fate and transport properties of Aroclor 1254 when evaluating coplanar PCBs, the 4.8-year half life of Aroclor 1254 was selected as a conservative estimate of the half life of all coplanar PCB congeners.

Finally, the NCEA report indicates that "for most lipophilic organics, absorption is high and most of the adsorbed contaminant is stored in deep compartments, such as adipose tissue. For these compounds, the fraction of ingested contaminant may be greater than 90%." Thus, in the absence of additional data, 90 percent was selected to represent the fraction stored in maternal fat for all lipophilic compounds (i.e., PCDDs, PCDFs, and coplanar PCBs).

B.4.2 PCDD, PCDF, and Coplanar PCB Concentrations in Bed Sediment and Fish

The EDT MPHRA includes lipophilic COPCs (i.e., PCDDs, PCDFs, and coplanar PCBs) that were not included in the PCAPP MPHRA. Thus, the EDT MPHRA required inclusion of the calculation methodology presented in the HHRAP (USEPA, 2005) to estimate the concentration of these compounds in bed sediment and fish.

The concentration of individual PCDD, PCDF, and coplanar PCBs sorbed to bed sediments (C_{sb}) was calculated using an equation presented in Table B-4-25 of the HHRAP (USEPA, 2005) and below:

$$C_{sb} = f_{bs} \cdot C_{wtot} \cdot \frac{Kd_{bs}}{\theta_{bs} + Kd_{bs} \cdot C_{BS}} \cdot \frac{d_{wc} + d_{bs}}{d_{bs}} \qquad \text{Eq. B-21}$$

where

C_{sb}	=	concentration of chemical sorbed to bed sediments (mg/kg)
f_{bs}	=	fraction of total waterbody chemical concentration that occurs in the bed sediment (unitless, see Appendix D to PCAPP MPHRA)
C_{wtot}	=	total water concentration in surface water system, including water column and bed sediment (mg/ℓ, see Appendix D to PCAPP MPHRA)
d_{wc}	=	total depth of water column (m)
d_{bs}	=	depth of upper benthic layer (default value= 0.03 m)
θ_{bs}	=	bed sediment porosity (unitless, default value= 0.6)
Kd_{bs}	=	bed sediment/sediment pore water partition coefficient (ℓ/kg)
C_{BS}	=	bed sediment concentration (default value = 1.0 kg/ℓ).

Sediment concentrations of COPCs were used to calculate the uptake of chemicals using a biota-to-sediment accumulation factor ($BSAF_{fish}$). The $BSAF_{fish}$ accounts for transfer of contaminants from the bottom sediment to the lipid in fish. Accumulation of chemicals by fish from the sediment was calculated only for bioaccumulative COPCs with a lipophilic nature. Accumulation of chemicals from the sediment was calculated using an equation presented in Table B-4-28 of the HHRAP (USEPA, 2005) and below:

$$C_{fish} = \frac{C_{sb} \cdot f_{lipid} \cdot BSAF_{fish}}{OC_{sed}} \qquad \text{Eq. B-22}$$

where

C_{fish}	=	fish tissue concentration (mg/kg);
C_{sb}	=	concentration of chemical sorbed to bed sediment (mg/kg, calculated using Eq. B-21)
f_{lipid}	=	fish lipid content (fraction), (default value = 0.07)
$BSAF_{fish}$	=	biota-to-sediment accumulation factor (unitless, chemical-specific value)

OC_{sed} = fraction of organic carbon in bed sediment (unitless, default value = 0.04).

B.4.3 Calculations of PCDD, PCDF and Coplanar PCBs on Both a Congener-specific and Toxicity Equivalency Basis

The HHRAP (USEPA, 2005) recommends that media concentrations and uptake of PCDDs, PCDFs, and coplanar PCBs be calculated on a toxic equivalent (TEQ) basis for carcinogenic effects and on a congener-specific basis for noncarcinogenic effects. (Note that the HHRAP also recommends that the assessor perform a qualitative assessment for hazard from PCDDs and PCDFs using the TEQ basis. This aspect of the TEQ methodology is discussed in Subsection B.4.4.2.) For the congener-specific basis, media concentrations are estimated for each individual PCDD, PCDF, and coplanar PCB. For the TEQ basis, media concentrations are calculated for total PCDDs and PCDFs as well as total coplanar PCBs. All of these approaches were used to perform the EDT MPHRA.

The congener-specific media concentrations were determined using the fate and transport properties of the individual congeners, the stack emission rate of the individual congener, and the specific media concentration calculations identified elsewhere in this EDT MPHRA Report. The methodology for the TEQ basis first calculated the same congener-specific media concentrations and then multiplied each concentration by a congener-specific toxicity equivalency factor (TEF) to obtain a TEQ for the congener. TEFs for each PCDD, PCDF, and coplanar PCBs are values assigned to individual congeners that compare toxicity to that of 2,3,7,8-tetrachlorodibenzo(p)dioxin (2,3,7,8-TCDD). The TCDD isomer is the most toxic of all PCDDs/PCDFs, and the 2,3,7,8 congener is generally the most toxic conger within the isomer group. Thus, 2,3,7,8-TCDD (being the most toxic of all PCDDs/PCDFs) has been assigned a TEF of 1.0, and all other congeners have TEFs between 0.0 and 1.0. TEF values for PCDD, PCDF, and coplanar PCBs are presented in Table 5-12 in the body of this EDT MPHRA Report.

After applying the TEF to each congener to obtain a TEQ, the congener-specific TEQs are summed for each compound class (i.e., PCDD/PCDF or PCB) to yield an equivalent media concentration (on a TEQ basis) for each of the two classes. For example, all congener-specific PCDD and PCDF TEQs are summed to yield a 2,3,7,8-TCDD-equivalent media concentration for PCDD/PCDF. Similarly, the TEQs for all congener-specific coplanar PCBs are summed to yield a 2,3,7,8-TCDD-equivalent concentration for coplanar PCBs. The next step in the risk assessment methodology depends on whether the cancer risk or hazard (noncancer risk) is to be calculated. These two procedures are discussed below.

B.4.4 Calculating PCDD, PCDF, and Coplanar Cancer Risk and Hazard

Cancer risk and hazard due to direct and indirect exposure to PCDDs, PCDFs, and coplanar PCBs were evaluated in the EDT MPHRA using the quantitative methodologies described in the HHRAP (USEPA, 2005). The following subsections detail these methodologies.

B.4.4.1 Cancer Risk

The lifetime average cancer risks from PCDDs/PCDFs and coplanar PCBs were calculated by applying the inhalation and oral cancer slope factors for 2,3,7,8-TCDD to the dose derived on a TEQ basis. Direct and indirect exposure to total PCDDs/PCDFs on a TEQ basis and cancer risk were evaluated for each exposure scenario. Appendix D of the PCAPP MPHRA Report provides details on calculating the cancer risk from exposure to COPCs.

B.4.4.2 Hazard

The HHRAP (USEPA, 2005) recommends assessing the PCDD/PCDF hazard qualitatively by comparing oral exposure estimates for PCDDs/PCDFs to national average background PCDD/PCDF exposure levels. USEPA recommended the qualitative approach due to the absence of USEPA-developed noncancer benchmarks for any of the PCDD or PCDF congeners or for TEQ concentrations/doses. However, an inhalation noncancer benchmark for 2,3,7-8-TCDD was identified using the toxicity hierarchy described in Section 6 of this EDT MPHRA Report. In addition, on February 17, 2012, USEPA, through its Integrated Risk Information System (IRIS) program, finalized an oral noncancer benchmark for 2,3,7-8-TCDD. (USEPA, 2012) Therefore, noncancer hazards from PCDDs/PCDFs were calculated by applying the reference concentration and oral reference dose factors for 2,3,7,8-TCDD to the dose derived on a TEQ basis. Appendix D of the PCAPP MPHRA Report provides details on calculating the noncancer hazard from exposure to COPCs.

In addition, noncancer hazard from coplanar PCBs was quantitatively evaluated in this EDT MPHRA on a congener-specific basis for those coplanar PCBs with inhalation and/or oral reference dose values. This is the recommended approach presented in the HHRAP (USEPA, 2005) and is the same approach for evaluating noncancer hazard from all other COPCs, as described in Appendix D of the PCAPP MPHRA Report.

B.5 REFERENCES

USEPA, 1998. *Methodology for Assessing Health Risks Associated with Multiple Pathways of Exposure to Combustor Emissions*. National Center for Environmental Assessment, Washington, DC. EPA 600/R-98/137.

USEPA, 2004. *Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment)*. Office of Superfund Remediation and Technology Innovation, Washington, DC. EPA/540/R/99/005.

USEPA, 2005. *Human Health Risk Assessment Protocol for Hazardous Waste Combustion Facilities*. Office of Solid Waste and Emergency Response, Washington, DC. EPA530-R-05-006, September 2005.

USEPA, 2012. Integrated Risk Information System, 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) Assessment Summary, http://www.epa.gov/IRIS/subst/1024.htm, February 17, 2012, accessed February 17, 2012.

APPENDIX C

OUTPUT TABLES FROM THE CHRONIC RISK CALCULATOR SPREADSHEETS FOR SDC

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OVERVIEW OF RECEPTOR-PATHWAY CARCINOGENIC RISK AND NONCARCINOGENIC HEALTH HAZARD

OVERVIEW OF RECEPTOR-PATHWAY CARCINOGENIC RISK AND NONCARCINOGENIC HEALTH HAZARDS

Carcinogenic Risks from Receptor-Pathway Combinations										
	Pathway									
Receptor	Inhalation	Dermal Contact with Surface Water	Dermal Contact with Soil	Incidental Ingestion of Soil	Incidental Ingestion of Surface Water	Ingestion of Produce	Ingestion of Terrestrial Animal Products	Ingestion of Fish	Ingestion of Breast Milk	All Pathways
Adult Resident	9.40E-12	3.85E-15	3.24E-17	2.25E-16	8.99E-16	3.44E-12	9.31E-11	3.31E-13	n/a	1.06E-10
Adult Subsistence Fisher	9.40E-12	3.85E-15	3.24E-17	2.25E-16	8.99E-16	3.44E-12	9.31E-11	8.28E-13	n/a	1.07E-10
Adult Subsistence Farmer	9.40E-12	5.07E-15	3.70E-17	2.63E-16	1.20E-15	1.10E-11	3.08E-10	4.36E-13	n/a	3.29E-10
Adult Worker	2.24E-12	n/a	3.48E-17	7.16E-17	n/a	n/a	n/a	n/a	n/a	2.24E-12
Child Resident	2.64E-11	1.32E-15	7.59E-17	4.83E-16	9.76E-16	2.94E-12	6.13E-11	1.40E-13	n/a	9.08E-11
Child Subsistence Fisher	2.64E-11	1.32E-15	7.59E-17	4.83E-16	9.76E-16	2.94E-12	6.13E-11	3.49E-13	n/a	9.10E-11
Child Subsistence Farmer	2.64E-11	1.32E-15	7.59E-17	4.83E-16	9.76E-16	7.35E-12	1.53E-10	1.40E-13	n/a	1.87E-10
Infant Resident	3.03E-12	n/a	2.14E-17	1.45E-16	n/a	7.23E-13	4.13E-11	5.03E-14	2.07E-09	2.11E-09
Infant Subsistence Fisher	3.03E-12	n/a	2.14E-17	1.45E-16	n/a	7.23E-13	4.13E-11	1.26E-13	2.07E-09	2.11E-09
Infant Subsistence Farmer	3.03E-12	n/a	2.14E-17	1.45E-16	n/a	1.81E-12	1.03E-10	5.03E-14	5.16E-09	5.27E-09
Resident Lifetime (I)[1]	2.41E-11	4.40E-15	1.23E-16	8.08E-16	1.69E-15	6.41E-12	1.77E-10	4.48E-13	2.07E-09	2.27E-09
Resident Lifetime (II)[2]	2.64E-11	4.53E-15	1.03E-16	6.71E-16	1.72E-15	5.81E-12	1.39E-10	4.15E-13	n/a	1.71E-10
Subsistence Fisher Lifetime (I)[1]	2.41E-11	4.40E-15	1.23E-16	8.08E-16	1.69E-15	6.41E-12	1.77E-10	1.12E-12	2.07E-09	2.28E-09
Subsistence Fisher Lifetime (II)[2]	2.64E-11	4.53E-15	1.03E-16	6.71E-16	1.72E-15	5.81E-12	1.39E-10	1.04E-12	n/a	1.72E-10
Subsistence Farmer Lifetime (I)[3]	2.41E-11	5.63E-15	1.29E-16	8.52E-16	1.99E-15	1.85E-11	5.18E-10	5.53E-13	5.16E-09	5.72E-09
Subsistence Farmer Lifetime (II)[4]	2.64E-11	5.76E-15	1.08E-16	7.14E-16	2.02E-15	1.70E-11	4.23E-10	5.21E-13	n/a	4.67E-10

1. Lifetime exposure consists of: 1 year of inhalation exposure as an infant and 4 years of inhalation exposure as a child (5 years of total inhalation exposure); 1 year of indirect exposure as an infant, 5 years of indirect exposure as a child, and 24 years of indirect exposure as an adult (30 years of total indirect exposure)

2. Lifetime exposure consists of: 5 years of inhalation exposure as a child (5 years of total inhalation exposure); 5 years of indirect exposure as a child and 25 years of indirect exposure as an adult (30 years of total indirect exposure)

3. Lifetime exposure consists of: 1 year of inhalation exposure as an infant and 4 years of inhalation exposure as a child (5 years of total inhalation exposure); 1 year of indirect exposure as an infant, 5 years of indirect exposure as a child, and 34 years of indirect exposure as an adult (40 years of total indirect exposure)

4. Lifetime exposure consists of: 5 years of inhalation exposure as a child (5 years of total inhalation exposure); 5 years of indirect exposure as a child and 35 years of indirect exposure as an adult (40 years of total indirect exposure)

OVERVIEW OF RECEPTOR-PATHWAY CARCINOGENIC RISK AND NONCARCINOGENIC HEALTH HAZARDS

Noncarcinogenic Hazards from Receptor-Pathway Combinations										
	Pathway									
Receptor	Inhalation	Dermal Contact with Surface Water	Dermal Contact with Soil	Incidental Ingestion of Soil	Incidental Ingestion of Surface Water	Ingestion of Produce	Ingestion of Terrestrial Animal Products	Ingestion of Fish	Ingestion of Breast Milk	All Pathways
Adult Resident	9.13E-07	1.11E-10	2.80E-12	1.40E-11	3.34E-11	5.82E-07	4.97E-06	1.36E-08	n/a	6.48E-06
Adult Subsistence Fisher	9.13E-07	1.11E-10	2.80E-12	1.40E-11	3.34E-11	5.82E-07	4.97E-06	3.41E-08	n/a	6.50E-06
Adult Subsistence Farmer	9.13E-07	1.11E-10	2.80E-12	1.40E-11	3.34E-11	1.46E-06	1.24E-05	1.36E-08	n/a	1.48E-05
Adult Worker	2.17E-07	n/a	3.97E-12	5.98E-12	n/a	n/a	n/a	n/a	n/a	2.17E-07
Child Resident	2.56E-06	1.90E-10	1.83E-11	1.30E-10	1.56E-10	1.40E-06	1.94E-05	3.33E-08	n/a	2.34E-05
Child Subsistence Fisher	2.56E-06	1.90E-10	1.83E-11	1.30E-10	1.56E-10	1.40E-06	1.94E-05	8.33E-08	n/a	2.35E-05
Child Subsistence Farmer	2.56E-06	1.90E-10	1.83E-11	1.30E-10	1.56E-10	3.50E-06	4.86E-05	3.33E-08	n/a	5.46E-05
Infant Resident	1.44E-06	n/a	2.58E-11	1.95E-10	n/a	1.60E-06	6.71E-05	5.00E-08	1.59E-03	1.66E-03
Infant Subsistence Fisher	1.44E-06	n/a	2.58E-11	1.95E-10	n/a	1.60E-06	6.71E-05	1.25E-07	1.59E-03	1.66E-03
Infant Subsistence Farmer	1.44E-06	n/a	2.58E-11	1.95E-10	n/a	4.01E-06	1.68E-04	5.00E-08	3.97E-03	4.14E-03
Resident Lifetime (I)[1]	3.48E-06	3.01E-10	4.69E-11	3.40E-10	1.89E-10	3.59E-06	9.15E-05	9.70E-08	1.59E-03	1.69E-03
Resident Lifetime (II)[2]	2.56E-06	3.01E-10	2.11E-11	1.44E-10	1.89E-10	1.98E-06	2.44E-05	4.70E-08	n/a	2.90E-05
Subsistence Fisher Lifetime (I)[1]	3.48E-06	3.01E-10	4.69E-11	3.40E-10	1.89E-10	3.59E-06	9.15E-05	2.42E-07	1.59E-03	1.69E-03
Subsistence Fisher Lifetime (II)[2]	2.56E-06	3.01E-10	2.11E-11	1.44E-10	1.89E-10	1.98E-06	2.44E-05	1.17E-07	n/a	2.91E-05
Subsistence Farmer Lifetime (I)[3]	3.48E-06	3.01E-10	4.69E-11	3.40E-10	1.89E-10	8.97E-06	2.29E-04	9.70E-08	3.97E-03	4.21E-03
Subsistence Farmer Lifetime (II)[4]	2.56E-06	3.01E-10	2.11E-11	1.44E-10	1.89E-10	4.96E-06	6.10E-05	4.70E-08	n/a	6.85E-05

1. Lifetime exposure consists of: 1 year of inhalation exposure as an infant and 4 years of inhalation exposure as a child (5 years of total inhalation exposure); 1 year of indirect exposure as an infant, 5 years of indirect exposure as a child, and 24 years of indirect exposure as an adult (30 years of total indirect exposure)

2. Lifetime exposure consists of: 5 years of inhalation exposure as a child (5 years of total inhalation exposure); 5 years of indirect exposure as a child and 25 years of indirect exposure as an adult (30 years of total indirect exposure)

3. Lifetime exposure consists of: 1 year of inhalation exposure as an infant and 4 years of inhalation exposure as a child (5 years of total inhalation exposure); 1 year of indirect exposure as an infant, 5 years of indirect exposure as a child, and 34 years of indirect exposure as an adult (40 years of total indirect exposure)

4. Lifetime exposure consists of: 5 years of inhalation exposure as a child (5 years of total inhalation exposure); 5 years of indirect exposure as a child and 35 years of indirect exposure as an adult (40 years of total indirect exposure)

PARAMETERS USED IN THE MULTIPLE PATHWAY HEALTH RISK ASSESSMENT

MODELED VALUES:

During Years of PCAPP Operation (0 to tD)																					
									Air Modeling Results						Watershed Modeling						
COPC	CAS No.	Carcinogen?	PCDD and PCDF Group Identifier	PCDD and PCDF Compound Identifier	Coplanar PCB Group Identifier	Coplanar PCB Compound Identifier	Stack emissions (g/sec) Q	Fraction of air conc. that is in the vapor phase (unitless) F_v	Adjusted Vapor Phase Air Concentration ($\mu g/m^3$) Cyv	Adjusted Particle Phase Air Concentration ($\mu g/m^3$) Cyp	Adjusted Dry Deposition from Vapor Phase (g/m^2) Dydv	Adjusted Wet Deposition from Vapor Phase (g/m^2) Dywv	Adjusted Dry Deposition from Particle Phase (g/m^2) Dydp	Adjusted Wet Deposition from Particle Phase (g/m^2) Dywp	Adjusted Vapor Phase Air Concentration ($\mu g/m^3$) Cywv	Adjusted Particle Phase Air Concentration ($\mu g/m^3$) Cywp	Adjusted Dry Deposition from Vapor Phase (g/m^2) Dydv	Adjusted Wet Deposition from Vapor Phase (g/m^2) Dywwv	Adjusted Dry Deposition from Particle Phase (g/m^2) Dywdp	Adjusted Wet Deposition from Particle Phase (g/m^2) Dywwp
1,1,1-trichloroethane	71-55-6	No data	N	N	N	N	1	1	1.45E-08	0.00E+00	1.63E-09	1.29E-11	0.00E+00	0.00E+00	4.31E-09	0.00E+00	3.67E-10	2.15E-12	0.00E+00	0.00E+00
1,1-dichloroethane	75-34-3	Yes	N	N	N	N	1	1	6.89E-09	0.00E+00	7.72E-10	6.11E-12	0.00E+00	0.00E+00	2.04E-09	0.00E+00	1.74E-10	1.02E-12	0.00E+00	0.00E+00
1,1-dichloroethene	75-35-4	No data	N	N	N	N	1	1	6.32E-09	0.00E+00	7.09E-10	5.61E-12	0.00E+00	0.00E+00	1.88E-09	0.00E+00	1.60E-10	9.35E-13	0.00E+00	0.00E+00
1,2-dichloroethane	107-06-2	Yes	N	N	N	N	1	1	6.98E-09	0.00E+00	7.82E-10	6.19E-12	0.00E+00	0.00E+00	2.07E-09	0.00E+00	1.77E-10	1.03E-12	0.00E+00	0.00E+00
1,2-dichloropropane	78-87-5	Yes	N	N	N	N	1	1	8.41E-09	0.00E+00	9.43E-10	7.46E-12	0.00E+00	0.00E+00	2.50E-09	0.00E+00	2.13E-10	1.24E-12	0.00E+00	0.00E+00
1,3-butadiene	106-99-0	Yes	N	N	N	N	1	1	6.04E-09	0.00E+00	6.78E-10	5.36E-12	0.00E+00	0.00E+00	1.79E-09	0.00E+00	1.53E-10	8.94E-13	0.00E+00	0.00E+00
2-butanone	78-93-3	Not a known carc.	N	N	N	N	1	1	1.03E-07	0.00E+00	1.16E-08	9.18E-11	0.00E+00	0.00E+00	3.07E-08	0.00E+00	2.62E-09	1.53E-11	0.00E+00	0.00E+00
acetone	67-64-1	Not a known carc.	N	N	N	N	1	1	1.63E-07	0.00E+00	1.83E-08	1.45E-10	0.00E+00	0.00E+00	4.85E-08	0.00E+00	4.13E-09	2.42E-11	0.00E+00	0.00E+00
benzene	71-43-2	Yes	N	N	N	N	1	1	1.20E-07	0.00E+00	1.34E-08	1.06E-10	0.00E+00	0.00E+00	3.55E-08	0.00E+00	3.03E-09	1.77E-11	0.00E+00	0.00E+00
benzoic acid	65-85-0	No data	N	N	N	N	1	1	3.55E-07	0.00E+00	3.98E-08	3.15E-10	0.00E+00	0.00E+00	1.05E-07	0.00E+00	8.99E-09	5.26E-11	0.00E+00	0.00E+00
benzyl alcohol	100-51-6	No data	N	N	N	N	1	1	1.51E-07	0.00E+00	1.70E-08	1.34E-10	0.00E+00	0.00E+00	4.49E-08	0.00E+00	3.83E-09	2.24E-11	0.00E+00	0.00E+00
bis(2-ethylhexyl)-phthalate	117-81-7	Yes	N	N	N	N	1	0.131	0.00E+00	5.38E-08	0.00E+00	0.00E+00	2.62E-09	0.00E+00	0.00E+00	1.60E-08	0.00E+00	0.00E+00	9.08E-10	0.00E+00
bromodichloromethane	75-27-4	Yes	N	N	N	N	1	1	2.98E-08	0.00E+00	3.34E-09	2.65E-11	0.00E+00	0.00E+00	8.86E-09	0.00E+00	7.55E-10	4.41E-12	0.00E+00	0.00E+00
bromomethane	74-83-9	No data	N	N	N	N	1	1	3.52E-08	0.00E+00	3.94E-09	3.12E-11	0.00E+00	0.00E+00	1.04E-08	0.00E+00	8.90E-10	5.20E-12	0.00E+00	0.00E+00
carbon disulfide	75-15-0	Not a known carc.	N	N	N	N	1	1	8.25E-08	0.00E+00	9.26E-09	7.33E-11	0.00E+00	0.00E+00	2.45E-08	0.00E+00	2.09E-09	1.22E-11	0.00E+00	0.00E+00
carbon tetrachloride	56-23-5	Yes	N	N	N	N	1	1	4.05E-08	0.00E+00	4.55E-09	3.60E-11	0.00E+00	0.00E+00	1.20E-08	0.00E+00	1.03E-09	6.00E-12	0.00E+00	0.00E+00
chlorobenzene	108-90-7	No data	N	N	N	N	1	1	9.47E-09	0.00E+00	1.06E-09	8.41E-12	0.00E+00	0.00E+00	2.81E-09	0.00E+00	2.40E-10	1.40E-12	0.00E+00	0.00E+00
chloroform	67-66-3	Yes	N	N	N	N	1	1	1.17E-07	0.00E+00	1.31E-08	1.04E-10	0.00E+00	0.00E+00	3.48E-08	0.00E+00	2.96E-09	1.73E-11	0.00E+00	0.00E+00
chloromethane	74-87-3	Not a known carc.	N	N	N	N	1	1	1.04E-07	0.00E+00	1.16E-08	9.20E-11	0.00E+00	0.00E+00	3.08E-08	0.00E+00	2.62E-09	1.53E-11	0.00E+00	0.00E+00
cis-1,3-dichloropropene	10061-01-5	Yes	N	N	N	N	1	1	8.44E-09	0.00E+00	9.47E-10	7.49E-12	0.00E+00	0.00E+00	2.51E-09	0.00E+00	2.14E-10	1.25E-12	0.00E+00	0.00E+00
dibromochloromethane	124-48-1	Yes	N	N	N	N	1	1	2.73E-08	0.00E+00	3.06E-09	2.42E-11	0.00E+00	0.00E+00	8.11E-09	0.00E+00	6.91E-10	4.04E-12	0.00E+00	0.00E+00
dichlorodifluoromethane	75-71-8	No data	N	N	N	N	1	1	1.79E-08	0.00E+00	2.00E-09	1.59E-11	0.00E+00	0.00E+00	5.31E-09	0.00E+00	4.52E-10	2.64E-12	0.00E+00	0.00E+00
dimethyl phthalate	131-11-3	No data	N	N	N	N	1	1	1.17E-07	0.00E+00	1.31E-08	1.04E-10	0.00E+00	0.00E+00	3.47E-08	0.00E+00	2.96E-09	1.73E-11	0.00E+00	0.00E+00
di-n-butyl phthalate	84-74-2	No data	N	N	N	N	1	1	1.79E-07	0.00E+00	2.01E-08	1.59E-10	0.00E+00	0.00E+00	5.32E-08	0.00E+00	4.53E-09	2.65E-11	0.00E+00	0.00E+00
ethylbenzene	100-41-4	Yes	N	N	N	N	1	1	1.11E-08	0.00E+00	1.24E-09	9.85E-12	0.00E+00	0.00E+00	3.30E-09	0.00E+00	2.81E-10	1.64E-12	0.00E+00	0.00E+00
Freon 113	76-13-1	No data	N	N	N	N	1	1	1.85E-08	0.00E+00	2.07E-09	1.64E-11	0.00E+00	0.00E+00	5.49E-09	0.00E+00	4.68E-10	2.74E-12	0.00E+00	0.00E+00
HD	505-60-2	Yes	N	N	N	N	1	1	1.43E-08	0.00E+00	1.60E-09	1.27E-11	0.00E+00	0.00E+00	4.24E-09	0.00E+00	3.61E-10	2.11E-12	0.00E+00	0.00E+00
hexane	110-54-3	Not a known carc.	N	N	N	N	1	1	2.18E-08	0.00E+00	2.44E-09	1.93E-11	0.00E+00	0.00E+00	6.46E-09	0.00E+00	5.50E-10	3.22E-12	0.00E+00	0.00E+00
methylene chloride	75-09-2	Yes	N	N	N	N	1	1	9.81E-08	0.00E+00	1.10E-08	8.71E-11	0.00E+00	0.00E+00	2.91E-08	0.00E+00	2.48E-09	1.45E-11	0.00E+00	0.00E+00
styrene	100-42-5	No data	N	N	N	N	1	1	3.05E-08	0.00E+00	3.42E-09	2.71E-11	0.00E+00	0.00E+00	9.06E-09	0.00E+00	7.72E-10	4.52E-12	0.00E+00	0.00E+00
tetrachloroethene	127-18-4	Yes	N	N	N	N	1	1	1.07E-08	0.00E+00	1.20E-09	9.49E-12	0.00E+00	0.00E+00	3.18E-09	0.00E+00	2.71E-10	1.58E-12	0.00E+00	0.00E+00
toluene	108-88-3	Not a known carc.	N	N	N	N	1	1	1.36E-08	0.00E+00	1.53E-09	1.21E-11	0.00E+00	0.00E+00	4.04E-09	0.00E+00	3.44E-10	2.01E-12	0.00E+00	0.00E+00
trans-1,3-dichloropropene	10061-02-6	Yes	N	N	N	N	1	1	8.95E-09	0.00E+00	1.00E-09	7.95E-12	0.00E+00	0.00E+00	2.66E-09	0.00E+00	2.27E-10	1.32E-12	0.00E+00	0.00E+00
trichloroethene	79-01-6	Yes	N	N	N	N	1	1	1.13E-08	0.00E+00	1.27E-09	1.01E-11	0.00E+00	0.00E+00	3.37E-09	0.00E+00	2.87E-10	1.68E-12	0.00E+00	0.00E+00
trichlorofluoromethane	75-69-4	No data	N	N	N	N	1	1	9.32E-09	0.00E+00	1.05E-09	8.27E-12	0.00E+00	0.00E+00	2.77E-09	0.00E+00	2.36E-10	1.38E-12	0.00E+00	0.00E+00
vinyl chloride	75-01-4	Yes	N	N	N	N	1	1	1.04E-08	0.00E+00	1.17E-09	9.25E-12	0.00E+00	0.00E+00	3.09E-09	0.00E+00	2.64E-10	1.54E-12	0.00E+00	0.00E+00
xylenes	1330-20-7	Not a known carc.	N	N	N	N	1	1	2.75E-08	0.00E+00	3.08E-09	2.44E-11	0.00E+00	0.00E+00	8.16E-09	0.00E+00	6.95E-10	4.06E-12	0.00E+00	0.00E+00
2,3,7,8-TCDF	51207-31-9	Yes	N	Y	N	N	1	0.77	0.00E+00	2.30E-14	0.00E+00	0.00E+00	1.12E-15	0.00E+00	0.00E+00	6.83E-15	0.00E+00	0.00E+00	3.88E-16	0.00E+00
Total PCDDs and PCDFs	NA	Yes	Y	N	N	N	1	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
antimony	7440-36-0	No data	N	N	N	N	1	0.009	0.00E+00	1.19E-10	0.00E+00	0.00E+00	5.78E-12	0.00E+00	0.00E+00	3.53E-11	0.00E+00	0.00E+00	2.00E-12	0.00E+00
cadmium	7440-43-9	Yes	N	N	N	N	1	0.009	0.00E+00	6.22E-10	0.00E+00	0.00E+00	3.03E-11	0.00E+00	0.00E+00	1.85E-10	0.00E+00	0.00E+00	1.05E-11	0.00E+00
chromium (3+)	16065-83-1	No data	N	N	N	N	1	0.009	0.00E+00	5.72E-09	0.00E+00	0.00E+00	2.78E-10	0.00E+00	0.00E+00	1.70E-09	0.00E+00	0.00E+00	9.64E-11	0.00E+00
chromium (6+)	18540-29-9	Yes	N	N	N	N	1	0.009	0.00E+00	5.72E-09	0.00E+00	0.00E+00	2.78E-10	0.00E+00	0.00E+00	1.70E-09	0.00E+00	0.00E+00	9.64E-11	0.00E+00
copper	744-50-8	No data	N	N	N	N	1	0.009	0.00E+00	8.51E-09	0.00E+00	0.00E+00	4.14E-10	0.00E+00	0.00E+00	2.53E-09	0.00E+00	0.00E+00	1.44E-10	0.00E+00
lead	7439-92-1	Yes	N	N	N	N	1	0.007	0.00E+00	2.85E-09	0.00E+00	0.00E+00	1.39E-10	0.00E+00	0.00E+00	8.45E-10	0.00E+00	0.00E+00	4.80E-11	0.00E+00
nickel	7440-02-0	Yes	N	N	N	N	1	0.009	0.00E+00	1.19E-08	0.00E+00	0.00E+00	5.77E-10	0.00E+00	0.00E+00	3.52E-09	0.00E+00	0.00E+00	2.00E-10	0.00E+00
zinc	7440-66-6	No data	N	N	N	N	1	0.008	0.00E+00	1.15E-07	0.00E+00	0.00E+00	5.61E-09	0.00E+00	0.00E+00	3.42E-08	0.00E+00	0.00E+00	1.95E-09	0.00E+00

MODELED VALUES (TEQ BASIS):

					During Years of PCAPP Operation (0 to tD)											
					Air Modeling Results						Watershed Modeling					
COPC	CAS No.	Carcinogen?	Stack emissions (g/sec) Q	Fraction of air conc. that is in the vapor phase (unitless) F_v	Adjusted Vapor Phase Air Concentration (µg TEQ/m^3) Cyv	Adjusted Particle Phase Air Concentration (µg TEQ/m^3) Cyp	Adjusted Dry Deposition from Vapor Phase (g TEQ/m^2) Dydv	Adjusted Wet Deposition from Vapor Phase (g TEQ/m^2) Dywv	Adjusted Dry Deposition from Particle Phase (g TEQ/m^2) Dydp	Adjusted Wet Deposition from Particle Phase (g TEQ/m^2) Dywp	Adjusted Vapor Phase Air Concentration (µg TEQ/m^3) Cywv	Adjusted Particle Phase Air Concentration (µg/m^3) Cywp	Adjusted Dry Deposition from Vapor Phase (g TEQ/m^2) Dydv	Adjusted Wet Deposition from Vapor Phase (g TEQ/m^2) Dywwv	Adjusted Dry Deposition from Particle Phase (g TEQ/m^2) Dywdp	Adjusted Wet Deposition from Particle Phase (g TEQ/m^2) Dywwp
1,1,1-trichloroethane	71-55-6	No data	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,1-dichloroethane	75-34-3	Yes	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,1-dichloroethene	75-35-4	No data	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2-dichloroethane	107-06-2	Yes	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2-dichloropropane	78-87-5	Yes	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,3-butadiene	106-99-0	Yes	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-butanone	78-93-3	Not a known carc.	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
acetone	67-64-1	Not a known carc.	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzene	71-43-2	Yes	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzoic acid	65-85-0	No data	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzyl alcohol	100-51-6	No data	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bis(2-ethylhexyl)-phthalate	117-81-7	Yes	1	0.131	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bromodichloromethane	75-27-4	Yes	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bromomethane	74-83-9	No data	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
carbon disulfide	75-15-0	Not a known carc.	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
carbon tetrachloride	56-23-5	Yes	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chlorobenzene	108-90-7	No data	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloroform	67-66-3	Yes	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloromethane	74-87-3	Not a known carc.	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cis-1,3-dichloropropene	10061-01-5	Yes	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dibromochloromethane	124-48-1	Yes	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dichlorodifluoromethane	75-71-8	No data	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dimethyl phthalate	131-11-3	No data	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
di-n-butyl phthalate	84-74-2	No data	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ethylbenzene	100-41-4	Yes	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Freon 113	76-13-1	No data	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
HD	505-60-2	Yes	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
hexane	110-54-3	Not a known carc.	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methylene chloride	75-09-2	Yes	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
styrene	100-42-5	No data	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
tetrachloroethene	127-18-4	Yes	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
toluene	108-88-3	Not a known carc.	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trans-1,3-dichloropropene	10061-02-6	Yes	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trichloroethene	79-01-6	Yes	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trichlorofluoromethane	75-69-4	No data	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
vinyl chloride	75-01-4	Yes	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
xylenes	1330-20-7	Not a known carc.	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2,3,7,8-TCDF	51207-31-9	Yes	1	0.77	0.00E+00	2.30E-15	0.00E+00	0.00E+00	1.12E-16	0.00E+00	0.00E+00	6.83E-16	0.00E+00	0.00E+00	3.88E-17	0.00E+00
Total PCDDs and PCDFs	NA	Yes	1		0.00E+00	2.30E-15	0.00E+00	0.00E+00	1.12E-16	0.00E+00	0.00E+00	6.83E-16	0.00E+00	0.00E+00	3.88E-17	0.00E+00
antimony	7440-36-0	No data	1	0.009	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cadmium	7440-43-9	Yes	1	0.009	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (3+)	16065-83-1	No data	1	0.009	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (6+)	18540-29-9	Yes	1	0.009	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
copper	744-50-8	No data	1	0.009	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
lead	7439-92-1	Yes	1	0.007	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	Yes	1	0.009	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
zinc	7440-66-6	No data	1	0.008	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

a. With the exception of stack emission rates, all units for individual PCDDs and PCDFs congeners and coplanar PCBs are presented in terms of toxic equivalent (TEQ). The units for total PCDDs and PCDFs as well as the units for total coplanar PCBs are also presented in terms of TEQ and are calculated as the sum of the values of all individual PCDD and PCDF congeners and the values of all coplanar PCBs for the parameter of interest, respectively.

DEFAULT AND SITE-SPECIFIC VALUES

Parameter	Variable	Value	Units	Type	References
Average annual precipitation	P	31.5	cm/yr	Site-specific	NOAA, 2004
Average annual irrigation	I	0	cm/yr	Site-specific	na
Average annual runoff	RO	1.27	cm/yr	Site-specific	Miller, 1963
Average annual evapo-transpiration	E_v	121.9	cm/yr	Site-specific	Miller, 1963
Soil volumetric water content	θ_{sw}	0.2	mℓ water/cm^3 soil	Default	USEPA, 2005
Soil mixing depth	Z_s	2	cm	Default	USEPA, 2005
Soil bulk density	BD	1.5	g soil/cm^3 soil	Default	USEPA, 2005
Loss constant due to erosion	kse	0	yr^{-1}	Default	USEPA, 2005
Universal gas constant	R	8.205E-05	atm m^3/mol K	Default	USEPA, 2005
Ambient air temperature	T_a	298	K	Default	USEPA, 2005
Solids particulate density	ρ_{soil}	2.7	g/cm^3	Default	USEPA, 2005
Time period over which deposition occurs	tD	5	yr	Site-specific	na
Density of air	ρ_a	0.0012	g/cm^3	Default	USEPA, 2005
Fraction of chemical wet deposition that adheres to plant surfaces	Fw	0.6	dimensionless	Default	USEPA, 2005
Interception fraction of the edible portion of plant	Rp	0.39	dimensionless	Default	USEPA, 2005
Plant surface loss coefficient	kp	18	yr^{-1}	Default	USEPA, 2005
Length of plant exposure to deposition per harvest of edible portion of plant	Tp	0.16	yr	Default	USEPA, 2005
Yield or standing crop biomass of edible portion of plant	Yp	2.24	kg dry weight/m^2	Default	USEPA, 2005
Interception fraction of the edible portion of plant for forage	Rp_{forage}	0.5	dimensionless	Default	USEPA, 2005
Interception fraction of the edible portio nof plant for silage	Rp_{silage}	0.46	dimensionless	Default	USEPA, 2005
Length of plant exposure to deposition per harvest of edible portion of plant for forage	Tp_{forage}	0.12	yr	Default	USEPA, 2005
Length of plant exposure to deposition per harvest of edible portion of plant for silage	Tp_{silage}	0.16	yr	Default	USEPA, 2005
Yield or standing crop biomass of edible portion of plant for forage	Yp_{forage}	0.24	kg dry weight/m^2	Default	USEPA, 2005
Yield or standing crop biomass of edible portion of plant for silage	Yp_{silage}	0.8	kg dry weight/m^2	Default	USEPA, 2005
Empirical correction factor for forage	VG_{forage}	1	dimensionless	Default	USEPA, 2005
Empirical correction factor for silage	VG_{silage}	0.5	dimensionless	Default	USEPA, 2005
Beef cattle consumption rate of forage	$Qp_{forage(beef)}$	8.8	kg/day	Default	USEPA, 2005
Beef cattle consumption rate of silage	$Qp_{silage(beef)}$	2.5	kg/day	Default	USEPA, 2005
Beef cattle consumption rate of grain	$Qp_{grain(beef)}$	0.47	kg/day	Default	USEPA, 2005
Beef cattle consumption rate of soil	Qs_{beef}	0.5	kg/day	Default	USEPA, 2005
Dairy cattle consumption rate of forage	$Qp_{forage(dairy)}$	13.2	kg/day	Default	USEPA, 2005
Dairy cattle consumption rate of silage	$Qp_{silage(dairy)}$	4.1	kg/day	Default	USEPA, 2005
Dairy cattle consumption rate of grain	$Qp_{grain(dairy)}$	3	kg/day	Default	USEPA, 2005
Dairy cattle consumption rate of soil	Qs_{dairy}	0.4	kg/day	Default	USEPA, 2005
Swine consumption rate of forage	$Qp_{forage(pork)}$	0	kg/day	Default	USEPA, 2005
Swine consumption rate of silage	$Qp_{silage(pork)}$	1.4	kg/day	Default	USEPA, 2005
Swine consumption rate of grain	$Qp_{grain(pork)}$	3.3	kg/day	Default	USEPA, 2005
Swine consumption rate of soil	Qs_{pork}	0.37	kg/day	Default	USEPA, 2005
Poultry consumption rate of forage	$Qp_{forage(poultry)}$	0	kg/day	Default	USEPA, 2005
Poultry consumption rate of silage	$Qp_{silage(poultry)}$	0	kg/day	Default	USEPA, 2005
Poultry consumption rate of grain	$Qp_{grain(poultry)}$	0.2	kg/day	Default	USEPA, 2005
Poultry consumption rate of soil	$Qs_{poultry}$	0.022	kg/day	Default	USEPA, 2005
Fraction of plant that is grown on contaminated soil	F	1	dimensionless	Default	USEPA, 2005
Soil bioavailability factor	Bs	1	dimensionless	Default	USEPA, 2005
Total waterbody depth	d_z	5.03	m	Site-specific	na
Depth of water column	d_{wc}	5	m	Site-specific	na
Depth of upper benthic layer	d_{bs}	0.03	m	Default	USEPA, 2005
Drag coefficient	C_d	0.0011	dimensionless	Default	USEPA, 2005
Wind speed	W	3.9	m/s	Default	USEPA, 2005
Density of water	ρ_w	1	g/cm^3	Default	USEPA, 2005
von Karman's constant	k	0.4	dimensionless	Default	USEPA, 2005
Dimensionless viscous sublayer thickness	λ_z	4	dimensionless	Default	USEPA, 2005
Viscosity of water corresponding to water temperature	μ_w	0.0169	g/cm-s	Default	USEPA, 2005
Viscosity of air corresponding to air temperature	μ_a	0.000181	g/cm-s	Default	USEPA, 2005
Water body temperature	T_{wk}	298	K	Default	USEPA, 2005
Temperature correction factor	θ	1.026	dimensionless	Default	USEPA, 2005
Water body surface area	A_w	10,000	m^2	Site-specific	USGS
Impervious watershed area receiving chemical deposition	A_i	12,320	m^2	Site-specific	USGS
Total watershed area receiving chemical deposition	A_L	616,000	m^2	Site-specific	USGS
USLE rainfall factor	RF	31	yr^{-1}	Site-specific	NRCS, 2006
USLE erodibility factor	K	0.37	ton/acre	Site-specific	NRCS, 2006
USLE length-slope factor	LS	1.5	dimensionless	Default	USEPA, 2005
USLE cover management factor	C	0.1	dimensionless	Default	USEPA, 2005
USLE supporting practice factor	PF	1	dimensionless	Default	USEPA, 2005
Empirical intercept coefficient	a	1.9	dimensionless	Default	USEPA, 2005
Empirical slope coefficient	b	0.125	dimensionless	Default	USEPA, 2005
Soil enrichment ratio	ER	3	dimensionless	Default	USEPA, 2005
Total suspended solids	TSS	10	mg/ℓ	Default	USEPA, 2005
Bed sediment porosity	θ_{bs}	0.6	ℓwater/ℓsediment	Default	USEPA, 2005
Bed sediment concentration	C_{BS}	1	g/cm^3	Default	USEPA, 2005
Average volumetric flow rate through water body	Vf_x	2,680,560	m^3/yr	Calculated	USEPA, 2005
Fish lipid content	f_{lipid}	0.07	dimensionless	Default	USEPA, 2005
Fraction of organic content in bottom sediment	OC_{sed}	0.04	dimensionless	Default	USEPA, 2005
Thickness of stratum corneum	l_{sc}	0.001	cm	Default	USEPA, 2004
Duration of swimming event	t_{event}	3	hr	Site-specific	na

na Not available. These site-specific values are further discussed in Section F.2 of Appendix F.

EXPOSURE SCENARIO-SPECIFIC VALUES

Parameter	Variable	Adult Exposure Scenarios				Child Exposure Scenarios			Infant Exposure Scenarios		
		Resident	Subsistence Fisher	Subsistence Farmer	Worker	Resident	Subsistence Fisher	Subsistence Farmer	Resident	Subsistence Fisher	Subsistence Farmer
Body weight (kg)	BW	70	70	70	70	15	15	15	10	10	10
Body surface area exposed during swimming (cm^2)	SA	18,000	18,000	18,000	18,000	6,600	6,600	6,600			
Body surface area exposed to soil (cm^2)	SA	5,700	5,700	5,700	3,300	2,800	2,800	2,800	2,625	2,625	2,625
Soil adherence factor (mg/cm^2-event)	AF	0.07	0.07	0.07	0.20	0.20	0.20	0.20	0.20	0.20	0.20
Exposure duration for indirect pathways (yr)	Ed_{ind} (T_2)	30	30	40	25	5	5	5	1	1	1
Exposure duration for direct pathways (yr)	ED_{dir}	5	5	5	5	5	5	5	1	1	1
Exposure frequency (day/yr)	EF	350	350	350	250	350	350	350	350	350	350
Exposure frequency - dermal (day/yr)	EF_{dermal}	12	12	12	0	12	12	12	0	0	0
Event Frequency - dermal (events/day)	EV_{dermal}	1	1	1	1	1	1	1	1	1	1
Duration of swimming event (hrs/day)	t_{event}	3	3	3	3	3	3	3	3	3	3
Exposure time (hr/day)	ET	24	24	24	8	24	24	24	24	24	24
Averaging time for carcinogenic effects (yr)	AT_{carc}	70	70	70	70	70	70	70	70	70	70
Averaging time for noncarcinogenic direct pathways (yr)	$AT_{non\ carc,\ direct}$	5	5	5	5	5	5	5	1	1	1
Averaging time for noncarcinogenic indirect pathways (yr)	$AT_{noncarc,\ indirect}$	30	30	40	25	5	5	5	1	1	1
Consumption rate:											
soil (kg/day)	CR_{soil}	0.0001	0.0001	0.0001	0.00005	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
exposed fruit (kg/day)	$CR_{exposed\ fruit}$	0.425	0.425	0.425	n/a	0.434	0.434	0.434	0.388	0.388	0.388
protected fruit (kg/day)	$CR_{protected\ fruit}$	0.47	0.47	0.47	n/a	0.299	0.299	0.299	0.083	0.083	0.083
exposed vegetables (kg/day)	$CR_{exposed\ veg}$	0.316	0.316	0.316	n/a	0.109	0.109	0.109	0.074	0.074	0.074
protected vegetables (kg/day)	$CR_{protect\ veg}$	0.115	0.115	0.115	n/a	0.091	0.091	0.091	0.078	0.078	0.078
below-ground vegetables (kg/day)	CR_{bg}	0.282	0.282	0.282	n/a	0.114	0.114	0.114	0.096	0.096	0.096
beef (kg/day)	CR_{beef}	0.163	0.163	0.163	n/a	0.054	0.054	0.054	0.032	0.032	0.032
milk (kg/day)	CR_{milk}	0.836	0.836	0.836	n/a	0.728	0.728	0.728	1.709	1.709	1.709
eggs (kg/day)	CR_{egg}	0.1	0.1	0.1	n/a	0.061	0.061	0.061	0.033	0.033	0.033
poultry (kg/day)	$Cr_{poultry}$	0.142	0.142	0.142	n/a	0.057	0.057	0.057	0.035	0.035	0.035
pork (kg/day)	CR_{pork}	0.08	0.08	0.08	n/a	0.037	0.037	0.037	0.017	0.017	0.017
fish (kg/day)	CR_{fish}	0.256	0.256	0.256	n/a	0.134	0.134	0.134	0.134	0.134	0.134
breast milk (kg/day)	IR_{milk}	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.98	0.98	0.98
incidental surface water (mℓ/hr)	CR_{sw}	50	50	50	n/a	50	50	50	n/a	n/a	n/a
Inhalation Rate (m3/hr)	IR	0.83	0.83	0.83	0.83	0.5	0.5	0.5	0.1875	0.1875	0.1875
Soil Fraction Contaminated	F_{soil}	1	1	1	1	1	1	1	1	1	1
Produce Fraction Contaminated	F_p	0.4	0.4	1	n/a	0.4	0.4	1	0.4	0.4	1
Beef Fraction Contaminated	F_{beef}	0.4	0.4	1	n/a	0.4	0.4	1	0.4	0.4	1
Poultry Fraction Contaminated	$F_{poultry}$	0.4	0.4	1	n/a	0.4	0.4	1	0.4	0.4	1
Egg Fraction Contaminated	F_{egg}	0.4	0.4	1	n/a	0.4	0.4	1	0.4	0.4	1
Milk Fraction Contaminated	F_{milk}	0.4	0.4	1	n/a	0.4	0.4	1	0.4	0.4	1
Pork Fraction Contaminated	F_{pork}	0.4	0.4	1	n/a	0.4	0.4	1	0.4	0.4	1
Fish Fraction Contaminated	F_{fish}	0.4	1	0.4	n/a	0.4	1	0.4	0.4	1	0.4

n/a not applicable. The value is not applicable to this exposure scenario.

CHEMICAL-SPECIFIC VALUES

		Chemical/Physical Properties									Biotransfer Factors				
		Molecular Weight	Loss Constant Due To Degradation	Soil-Water Partition Coefficient	Bed Sediment/ Sediment Pore Water Partition Coefficient	Suspended Sediment/ Surface Water Partition Coefficient	Log Octanol-Water Partition Coefficient	Henry's Law Constant	Diffusivity of Chemical in Air	Diffusivity of Chemical in Water	Air-to-Plant Biotransfer Factor	Plant-to-Soil Bioconcentration Factor for Aboveground Produce	Root Concentration Factor	Biotransfer Factor for Beef	Biotransfer Factor for Milk
		(g/mol)	(yr^{-1})	(cm^3 water/g soil)	(cm^3/g/kg)	(ℓ/kg)	(dimensionless)	(atm-m^3/mol)	(cm^2/s)	(cm^2/s)	(mg/kg)/(µg/g)	(mg/kg)/(µg/g)	(dimensionless)	(day/kg)	(day/kg)
COPC	CAS Number	MW	ksg	Kd_s	Kd_{bs}	Kd_{sw}	log K_{ow}	H	D_a	D_w	Bv_{ag}	Br_{ag}	RCF	Ba_{beef}	Ba_{milk}
1,1,1-trichloroethane	71-55-6	133.37	0.93 [c]	0.22 [c]	5.4 [c]	10.13 [c]	2.5 [c]	0.01700 [c]	0.078 [c]	0.0000088 [c]	0.00151 [c]	1.39 [c]	19.5 [c]	5.95667 [c]	1.2540 [c]
1,1-dichloroethane	75-34-3	98.9596	1.64 [c]	0.06 [c]	2.14 [c]	4.01 [c]	1.8 [c]	0.00560 [c]	0.0742 [c]	0.0000105 [c]	0.000825 [c]	3.53 [c]	12 [c]	0.00211 [c]	0.0004 [c]
1,1-dichloroethene	75-35-4	98.96	1.41 [c]	0.12 [c]	2.6 [c]	4.88 [c]	2.1 [c]	0.02600 [c]	0.09 [c]	0.0000104 [c]	0.000371 [c]	2.37 [c]	9.62 [c]	3.38192 [c]	0.0007 [c]
1,2-dichloroethane	107-06-2	98.9596	1.41 [c]	0.035 [c]	1.52 [c]	2.85 [c]	1.5 [c]	0.00098 [c]	0.104 [c]	0.0000099 [c]	0.00226 [c]	5.26 [c]	9.63 [c]	0.00126 [c]	0.0003 [c]
1,2-dichloropropane	78-87-5	113	0.2 [c]	0.09 [c]	1.88 [c]	3.53 [c]	2.0 [c]	0.00280 [c]	0.0782 [c]	0.0000087 [c]	0.00269 [c]	2.7 [c]	8.05 [c]	0.00290 [c]	0.0006 [c]
1,3-butadiene	106-99-0	54.09	9.03 [a]	0.45 [e]	1.80 [e]	3.38 [e]	2.0 [f]	0.07360 [f]	0.1328 [e]	0.0000154 [e]	0.146 [e]	2.74 [e]	1.85 [e]	0.00286 [e]	0.00060 [e]
2-butanone	78-93-3	72.1066	36.14 [c]	0.29 [c]	0.08 [c]	0.14 [c]	0.3 [c]	0.00006 [c]	0.0808 [c]	0.0000098 [c]	0.00203 [c]	8.38 [c]	6.7 [c]	0.00011 [c]	0.00002 [c]
acetone	67-64-1	58.0798	36.14 [c]	0.087 [c]	0.02 [c]	0.04 [c]	-0.2 [c]	0.00004 [c]	0.124 [c]	0.0000114 [c]	0.000796 [c]	8.38 [c]	6.46 [c]	0.00003 [c]	0.00001 [c]
benzene	71-43-2	78.1134	15.81 [c]	0.12 [c]	2.47 [c]	4.63 [c]	2.1 [c]	0.00560 [c]	0.088 [c]	0.0000102 [c]	0.00172 [c]	2.37 [c]	9.62 [c]	0.00338 [c]	0.00071 [c]
benzoic acid	65-85-0	122.12	0 [c]	0.006 [c]	0.024 [c]	0.05 [c]	1.9 [c]	0.00000 [c]	0.001 [c]	0.0000080 [c]	1.91 [c]	3.21 [c]	12.7 [c]	0.00006 [c]	0.00001 [c]
benzyl alcohol	100-51-6	108.14	0 [c]	0.12 [c]	0.48 [c]	0.90 [c]	1.1 [c]	0.00000 [c]	0.001 [c]	0.0000100 [c]	2.46 [c]	8.38 [c]	7.94 [c]	0.00060 [c]	0.00013 [c]
bis(2-ethylhexyl)-phthalate	117-81-7	390.56	11.04 [c]	2300000 [c]	4440 [c]	8330.00 [c]	5.1 [c]	0.00000 [c]	0.0351 [c]	0.0000037 [c]	151000 [c]	0.0437 [c]	1960 [c]	3.98810 [c]	8.39600 [c]
bromodichloromethane	75-27-4	163.83	0 [c]	0.11 [c]	2.21 [c]	4.13 [c]	2.1 [c]	0.00160 [c]	0.001 [c]	0.0000100 [c]	0.00602 [c]	2.37 [c]	9.62 [c]	3.38190 [c]	0.00071 [c]
bromomethane	74-83-9	94.91	9.03 [c]	0.09 [c]	0.36 [c]	0.68 [c]	1.2 [c]	0.00624 [c]	0.0728 [c]	0.0000121 [c]	1.66E-04 [c]	7.95 [c]	8.22 [c]	0.00071 [c]	0.00071 [c]
carbon disulfide	75-15-0	76.1	0 [c]	0.091 [c]	2.65 [c]	4.96 [c]	2.2 [c]	0.03000 [c]	0.104 [c]	0.0000100 [c]	0.00041 [c]	2.07 [c]	11.5 [c]	0.00392 [c]	0.00083 [c]
carbon tetrachloride	56-23-5	153.82	0.7 [c]	0.35 [c]	6.08 [c]	11.40 [c]	2.8 [c]	0.03000 [c]	0.078 [c]	0.0000088 [c]	0.00179 [c]	0.932 [c]	33.3 [c]	8.68150 [c]	1.82770 [c]
chlorobenzene	108-90-7	112.56	1.69 [c]	0.44 [c]	8.96 [c]	16.80 [c]	2.8 [c]	0.00370 [c]	0.073 [c]	0.0000087 [c]	0.0145 [c]	0.932 [c]	33.3 [c]	8.68150 [c]	1.82770 [c]
chloroform	67-66-3	119.3779	1.41 [c]	0.08 [c]	2.1 [c]	3.94 [c]	2.0 [c]	0.00370 [c]	0.104 [c]	0.0000100 [c]	0.00204 [c]	2.7 [c]	8.05 [c]	0.00290 [c]	0.00061 [c]
chloromethane	74-87-3	50.4877	9.03 [c]	0.06 [c]	0.25 [c]	0.47 [c]	0.9 [c]	0.00882 [c]	0.126 [c]	0.0000065 [c]	0.000059 [c]	8.38 [c]	7.47 [c]	0.00041 [c]	0.00009 [c]
cis-1,3-dichloropropene	10061-01-5	110.971	22.4 [c]	0.091 [c]	1.08 [c]	2.03 [c]	1.6 [c]	0.01800 [c]	0.0626 [c]	0.0000100 [c]	0.000157 [c]	4.6 [c]	10.3 [c]	1.50420 [c]	0.00032 [c]
dibromochloromethane	124-48-1	208.29	1.41 [c]	0.7 [c]	2.8 [c]	5.24 [c]	2.2 [c]	0.00078 [c]	0.001 [c]	0.0000100 [c]	0.0169 [c]	1.99 [c]	12.1 [c]	4.09770 [c]	0.00086 [c]
dichlorodifluoromethane	75-71-8	120.91	1.41 [c]	0.62 [c]	2.46 [c]	4.61 [c]	2.2 [c]	0.34300 [c]	0.001 [c]	0.0000100 [c]	0.0000325 [c]	2.19 [c]	10.7 [c]	0.00370 [c]	0.00078 [c]
dimethyl phthalate	131-11-3	194.19	36.14 [c]	0.34 [c]	1.37 [c]	2.56 [c]	1.6 [c]	0.00000 [c]	0.0568 [c]	0.0000063 [c]	24.4 [c]	4.86 [c]	10 [c]	1.40290 [c]	0.00030 [c]
di-n-butyl phthalate	84-74-2	278.35	11 [c]	5200 [c]	62.8 [c]	117.75 [c]	4.7 [c]	0.00000 [c]	0.0438 [c]	0.0000079 [c]	3150 [c]	0.074 [c]	966 [c]	3.63780 [c]	7.65860 [c]
ethylbenzene	100-41-4	106.2	25.29 [c]	0.73 [c]	8.16 [c]	15.30 [c]	3.1 [c]	0.00790 [c]	0.075 [c]	0.0000078 [c]	0.0142 [c]	0.625 [c]	56.6 [c]	0.01210 [c]	0.00256 [c]
Freon 113	76-13-1	187.38	0.70 [a]	3.81 [e]	15.24 [e]	28.57 [e]	3.2 [f]	0.52600 [f]	0.0580 [e]	0.0000067 [e]	1.739 [e]	0.58 [e]	8.19 [e]	0.01292 [e]	0.00272 [e]
HD	505-60-2	159.0732	23349 [a, e]	2.34 [e]	9.36 [e]	17.55 [e]	2.4 [f]	0.00003 [h]	0.065 [e]	0.0000075 [e]	0.624 [e]	1.57 [e]	16.66 [e]	0.00528 [e]	0.00111 [e]
hexane	110-54-3	86.2	0 [b]	14.68 [e]	58.73 [e]	110.12 [e]	3.9 [f]	1.80000 [f]	0.097 [e]	0.0000113 [e]	0.000 [e]	0.22 [e]	233.91 [e]	0.02430 [e]	0.00512 [e]
methylene chloride	75-09-2	84.9328	9.03 [c]	0.024 [c]	0.4 [c]	0.75 [c]	1.3 [c]	0.00220 [c]	0.101 [c]	0.0000117 [c]	0.001 [c]	6.86 [c]	8.64 [c]	0.00088 [c]	0.00018 [c]
styrene	100-42-5	104.16	9.03 [c]	120 [c]	36.48 [c]	68.40 [c]	3.0 [c]	0.00270 [c]	0.071 [c]	0.0000080 [c]	0.0324 [c]	0.714 [c]	47.4 [c]	1.09080 [c]	2.29650 [c]
tetrachloroethene	127-18-4	165.834	0.7 [c]	0.31 [c]	10.6 [c]	19.88 [c]	3.4 [c]	0.01800 [c]	0.072 [c]	0.0000082 [c]	0.013 [c]	0.42 [c]	96.4 [c]	0.01630 [c]	0.00343 [c]
toluene	108-88-3	92.1402	11.5 [c]	0.36 [c]	5.6 [c]	10.50 [c]	2.7 [c]	0.00660 [c]	0.087 [c]	0.0000086 [c]	0.00636 [c]	1.07 [c]	27.9 [c]	0.00769 [c]	0.00162 [c]
trans-1,3-dichloropropene	10061-02-6	110.97	0 [b]	0.78 [e]	3.12 [e]	5.85 [e]	2.3 [k]	0.00355 [k]	0.082278 [e]	0.0000095 [e]	0.0043 [e]	1.84 [e]	13.47 [e]	0.00447 [e]	0.00094 [e]
trichloroethene	79-01-6	131.3889	0.7 [c]	0.33 [c]	3.77 [c]	7.07 [c]	2.4 [c]	0.01000 [c]	0.079 [c]	0.0000091 [c]	0.00201 [c]	1.59 [c]	16.4 [c]	0.00521 [c]	0.00110 [c]
trichlorofluoromethane	75-69-4	137.36	0.7 [c]	0.24 [c]	4.57 [c]	8.57 [c]	2.5 [c]	0.09700 [c]	0.087 [c]	0.0000097 [c]	0.000265 [c]	1.39 [c]	19.5 [c]	5.95670 [c]	1.25400 [c]
vinyl chloride	75-01-4	62.4987	1.41 [c]	0.037 [c]	0.62 [c]	1.15 [c]	1.4 [c]	0.02700 [c]	0.106 [c]	0.0000123 [c]	0.0000641 [c]	6.01 [c]	9.09 [c]	0.00105 [c]	0.00022 [c]
xylenes	1330-20-7	106.16	9.03 [a, e]	3.81 [e]	15.24 [e]	28.57 [e]	3.2 [f]	0.00663 [f]	0.085 [e]	0.0000098 [e]	0.0195 [e]	0.578 [e]	62.99 [e]	0.01290 [e]	0.00272 [e]
2,3,7,8-TCDF	51207-31-9	305.96	0.03 [c]	7760 [c]	31000 [c]	58200.00 [c]	6.1 [c]	0.00001 [c]	0.0235 [c]	0.0000061 [c]	45700 [c]	0.0115 [c]	11600 [c]	3.64720 [c]	7.67840 [c]
Total PCDDs and PCDFs	NA	321.96	0.03 [c]	38900 [c]	156000 [c]	292000.00 [c]	6.8 [c]	0.00003 [c]	0.104 [c]	0.0000056 [c]					
antimony	7440-36-0	121.8	0 [c]	45 [c]	45 [c]	45.00 [c]	0.7 [c]	0.02500 [c]	0.0772 [c]	0.0000096 [c]	0 [q, q]	0.0319 [c]	1.35 [e, p]	0.00100 [c]	0.00010 [c]
cadmium	7440-43-9	112.4	0 [c]	75 [c]	75 [c]	75.00 [c]	-0.1 [c]	0.03100 [c]	0.0775 [c]	0.0000096 [c]	0 [q, q]	0.125 [c]	11.25 [e, p]	0.00012 [c]	0.00001 [c]
chromium (3+)	7440-47-3	52	0 [c]	19 [c]	19 [c]	19.00 [c]	0.2 [c]	0.02450 [k]	0.1265 [c]	0.0000141 [c]	0 [q, q]	0.00488 [c]	0.0855 [e, p]	0.00550 [c]	0.00150 [c]
chromium (6+)	18540-29-9	52	0 [c]	19 [c]	19 [c]	19.00 [c]	0.2 [c]	0.02450 [k]	0.1265 [c]	0.0000141 [c]	0 [q, q]	0.00488 [c]	0.0855 [e, p]	0.00550 [c]	0.00150 [c]
copper	7440-50-8	63.5	0 [b]	430 [e]	430 [e]	430.00 [e]	-0.6 [k]	0.02450 [k]	0.119373 [e]	0.0000138 [e]	0 [q, q]	2.69E-01 [e, p]	107.5 [e, p]	0.01000 [e, p]	0.00150 [e, p]
lead	7439-92-1	207.2	0 [c]	900 [c]	900 [c]	900.00 [c]	0.7 [c]	0.02500 [c]	0.0772 [c]	0.0000096 [c]	0 [q, q]	0.0136 [c]	8.1 [e, p]	0.00030 [c]	0.0003 [c]
nickel	7440-02-0	58.7	0 [c]	65 [c]	65 [c]	65.00 [c]	-0.6 [c]	0.02500 [c]	0.0772 [c]	0.0000096 [c]	0 [q, q]	0.00931 [c]	3.9 [e, p]	0.00600 [c]	0.0010 [c]
zinc	7440-66-6	65.4	0 [c]	62 [c]	62 [c]	62.00 [c]	-0.5 [c]	0.02500 [c]	0.0772 [c]	0.0000096 [c]	0 [q, q]	0.097 [c]	55.8 [e, p]	0.00009 [c]	0.0000 [c]

NA No data available

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b. No data available, ksg set to 0 as a conservative assumption.
c. Human Health Risk Assessment Protocol for Hazardous Waste Combustion Facilities, Companion Database. USEPA, 2005.
d. Human Health Risk Assessment Protocol for Hazardous Waste Combustion Facilities. USEPA, 2005.
e. Calculated using guidance from Human Health Risk Assessment Protocol for Hazardous Waste Combustion Facilities, Appendix A-2. USEPA, 2005.
f. PHYSPROP Database. Syracuse Research Corporation.
g. Air Emission Models for Waste and Wastewater. USEPA, 1994.
h. CHEMFATE Database. Syracuse Research Corporation.
i. http://www.inchem.org/documents/icsc/icsc/eics0163.htm
j. CRC Handbook of Chemistry and Physics
k. EPI Software Program. Syracuse Research Corporation.
l. Measured value from RAGS Part E. USEPA, 2004.
m. Estimated value from RAGS Part E. USEPA, 2004.
n. Calculated using guidance provided in RAGS Part E. USEPA, 2004.
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p. Baes, C.F. et al. 1984. "Review and Analysis of Parameters and Assessing Transport of Environmentally Released Radionuclides through Agriculture." Oak Ridge National Laboratory. Oak Ridge, Tennessee
q. No data. Value set equal to zero

CHEMICAL-SPECIFIC VALUES

COPC	CAS Number	Biotransfer Factors (continued)							Dermal		Breast Milk Pathway Data			
		Biotransfer Factor for Eggs	Biotransfer Factor for Pork	Biotransfer Factor for Chicken	Metabolism Factor	Bio-Concentration Factor	Bio-Accumulation Factor	Biota-to Sediment Accumulation Factor	Dermal Permeability Coefficient from Water	Dermal Absorption Fraction	Fraction Stored in Maternal Fat	Biological Half-Life	Red Blood Cells-Blood Plasma Partition Coefficient	Blood Plasma-Breast Milk Partition Coefficient
		(day/kg)	(day/kg)	(day/kg)	(dimensionless)	(ℓ/kg)	(ℓ/kg)	(ℓ/kg)	(cm/hr)	(dimensionless)	(dimensionless)	(days)	(dimensionless)	(dimensionless)
		Ba_{eggs}	Ba_{pork}	$Ba_{poultry}$	MF	BCF_{fish}	BAF_{fish}	$BSAF_{fish}$	K_p	ABS_d	f_1	h	Pc_{RBC}	Pc_{bm}
1,1,1-trichloroethane	71-55-6	2.50807 [c]	0.0072 [c]	4.38910 [c]	1 [d]	16.8 [c]	NA	NA	0.013 [m]	0.1	0.5 [g]	5 [g]	1 [g]	1 [g]
1,1-dichloroethane	75-34-3	0.00089 [c]	0.0026 [c]	0.00155 [c]	1 [d]	4.85 [c]	NA	NA	0.0067 [m]	0.1	0.5 [g]	5 [g]	1 [g]	1 [g]
1,1-dichloroethene	75-35-4	1.42400 [c]	4.0939 [c]	2.49190 [c]	1 [d]	8.26 [c]	NA	NA	0.012 [m]	0.0	0.5 [g]	5 [g]	1 [g]	1 [g]
1,2-dichloroethane	107-06-2	0.00053 [c]	0.0015 [c]	0.00093 [c]	1 [d]	2.85 [c]	NA	NA	0.0042 [m]	0.1	0.5 [g]	5 [g]	1 [g]	1 [g]
1,2-dichloropropane	78-87-5	0.00122 [c]	0.0035 [c]	0.00214 [c]	1 [d]	6.92 [c]	NA	NA	0.0078 [m]	0.1	0.5 [g]	5 [g]	1 [g]	1 [g]
1,3-butadiene	106-99-0	0.00120 [e]	0.00346 [e]	0.00211 [e]	1 [d]	6.80 [e]	NA	NA	1.60E-02 [m]	0.1	0.5 [g]	5 [g]	1 [g]	1 [g]
2-butanone	78-93-3	0.00004 [c]	0.0001 [c]	0.00008 [c]	1 [d]	3.16 [c]	NA	NA	0.00096 [m]	0.1	0.5 [g]	5 [g]	1 [g]	1 [g]
acetone	67-64-1	0.00001 [c]	0.0000 [c]	0.00002 [c]	1 [d]	3.16 [c]	NA	NA	0.000520419 [n]	0.1	0.5 [g]	5 [g]	1 [g]	1 [g]
benzene	71-43-2	0.00142 [c]	0.0041 [c]	0.00249 [c]	1 [d]	8.26 [c]	NA	NA	0.015 [m]	0.1	0.5 [g]	5 [g]	1 [g]	1 [g]
benzoic acid	65-85-0	0.00002 [c]	0.0001 [c]	0.00004 [c]	1 [d]	3.16 [c]	NA	NA	0.0057 [m]	0.0	0.5 [g]	5 [g]	1 [g]	1 [g]
benzyl alcohol	100-51-6	0.00025 [c]	0.0007 [c]	0.00044 [c]	1 [d]	0.314 [c]	NA	NA	0.002091298 [n]	0.0	0.5 [g]	5 [g]	1 [g]	1 [g]
bis(2-ethylhexyl)-phthalate	117-81-7	1.67920 [c]	4.8277 [c]	2.93860 [c]	0.01 [d]	53.3 [c]	194.3	NA	0.023925664 [n]	0.2	0.5 [g]	5 [g]	1 [g]	1 [g]
bromodichloromethane	75-27-4	1.42397 [c]	4.0939 [c]	2.49194 [c]	1 [d]	8.26 [c]	NA	NA	0.0046 [l]	0.0	0.5 [g]	5 [g]	1 [g]	1 [g]
bromomethane	74-83-9	0.00030 [c]	0.0009 [c]	0.00052 [c]	1 [d]	1.65 [c]	NA	NA	2.80E-03 [m]	0.1	0.5 [g]	5 [g]	1 [g]	1 [g]
carbon disulfide	75-15-0	0.00165 [c]	0.0048 [c]	0.00289 [c]	1 [d]	9.86 [c]	NA	NA	0.017 [m]	0.1	0.5 [g]	5 [g]	1 [g]	1 [g]
carbon tetrachloride	56-23-5	3.65540 [c]	1.0509 [c]	6.39690 [c]	1 [d]	28.6 [c]	NA	NA	0.016 [m]	0.1	0.5 [g]	5 [g]	1 [g]	1 [g]
chlorobenzene	108-90-7	3.65540 [c]	1.0509 [c]	6.39690 [c]	1 [d]	28.6 [c]	NA	NA	0.028 [m]	0.1	0.5 [g]	5 [g]	1 [g]	1 [g]
chloroform	67-66-3	0.00122 [c]	0.0035 [c]	0.00214 [c]	1 [d]	6.92 [c]	NA	NA	0.0068 [m]	0.1	0.5 [g]	5 [g]	1 [g]	1 [g]
chloromethane	74-87-3	0.00017 [c]	0.0005 [c]	0.00030 [c]	1 [d]	3.16 [c]	NA	NA	0.0033 [m]	0.1	0.5 [g]	5 [g]	1 [g]	1 [g]
cis-1,3-dichloropropene	10061-01-5	0.00063 [c]	1.8209 [c]	1.10840 [c]	1 [d]	3.4 [c]	NA	NA	0.0043 [m]	0.0	0.5 [g]	5 [g]	1 [g]	1 [g]
dibromochloromethane	124-48-1	1.72533 [c]	4.9603 [c]	3.01930 [c]	1 [d]	10.4 [c]	NA	NA	0.0032 [m]	0.0	0.5 [g]	5 [g]	1 [g]	1 [g]
dichlorodifluoromethane	75-71-8	1.55740 [c]	4.4775 [c]	2.72540 [c]	1 [d]	9.19 [c]	NA	NA	0.009 [m]	0.0	0.5 [g]	5 [g]	1 [g]	1 [g]
dimethyl phthalate	131-11-3	0.00059 [c]	1.6982 [c]	1.03370 [c]	1 [d]	3.17 [c]	NA	NA	0.0014 [m]	0.0	0.5 [g]	5 [g]	1 [g]	1 [g]
di-n-butyl phthalate	84-74-2	1.53170 [c]	4.4037 [c]	0.02681 [c]	1 [d]	830 [c]	1800	NA	0.055365599 [n]	0.4	0.5 [g]	5 [g]	1 [g]	1 [g]
ethylbenzene	100-41-4	0.00511 [c]	0.0147 [c]	0.00895 [c]	1 [d]	48.6 [c]	NA	NA	0.049 [m]	0.1	0.5 [g]	5 [g]	1 [g]	1 [g]
Freon 113	76-13-1	0.00544 [e]	0.01564 [e]	0.00952 [e]	1 [d]	54.10 [e]	NA	NA	1.72E-02 [n]	0.1	0.5 [g]	5 [g]	1 [g]	1 [g]
HD	505-60-2	0.00222 [e]	0.0064 [e]	0.00389 [e]	1 [d]	14.31 [e]	NA	NA	0.0045 [m]	0.1	0.5 [g]	5 [g]	1 [g]	1 [g]
hexane	110-54-3	0.01020 [e]	0.0294 [e]	0.01790 [e]	1 [d]	200.91 [e]	NA	NA	0.195559987 [n]	0.1	0.5 [g]	5 [g]	1 [g]	1 [g]
methylene chloride	75-09-2	0.00037 [c]	0.0011 [c]	0.00065 [c]	1 [d]	2 [c]	NA	NA	0.0035 [m]	0.1	0.5 [g]	5 [g]	1 [g]	1 [g]
styrene	100-42-5	4.59290 [c]	1.3205 [c]	8.03760 [c]	1 [d]	40.7 [c]	NA	NA	0.037 [m]	0.1	0.5 [g]	5 [g]	1 [g]	1 [g]
tetrachloroethene	127-18-4	0.00686 [c]	0.0197 [c]	0.01200 [c]	1 [d]	82.8 [c]	NA	NA	0.033 [m]	0.1	0.5 [g]	5 [g]	1 [g]	1 [g]
toluene	108-88-3	0.00324 [c]	0.0093 [c]	0.00567 [c]	1 [d]	23.9 [c]	NA	NA	0.031 [m]	0.1	0.5 [g]	5 [g]	1 [g]	1 [g]
trans-1,3-dichloropropene	10061-02-6	0.00188 [e]	0.0054 [e]	0.00329 [e]	1 [d]	11.56911132 [e]	NA	NA	0.012301781 [n]	0.0	0.5 [g]	5 [g]	1 [g]	1 [g]
trichloroethene	79-01-6	0.00219 [c]	0.0063 [c]	0.00384 [c]	1 [d]	14.1 [c]	NA	NA	0.012 [m]	0.1	0.5 [g]	5 [g]	1 [g]	1 [g]
trichlorofluoromethane	75-69-4	2.50810 [c]	0.0072 [c]	4.38910 [c]	1 [d]	16.8 [c]	NA	NA	0.013 [m]	0.1	0.5 [g]	5 [g]	1 [g]	1 [g]
vinyl chloride	75-01-4	0.00044 [c]	0.0013 [c]	0.00078 [c]	1 [d]	2.39 [c]	NA	NA	0.0056 [m]	0.1	0.5 [g]	5 [g]	1 [g]	1 [g]
xylenes	1330-20-7	0.00544 [e]	0.0156 [e]	0.00952 [e]	1 [d]	54.1 [e]	NA	NA	0.053 [m]	0.1	0.5 [g]	5 [g]	1 [g]	1 [g]
2,3,7,8-TCDF	51207-31-9	1.53570 [c]	4.4151 [c]	2.68740 [c]	1 [d]	9930 [c]	NA	0.09	0.325554723 [n]	0.0	0.9 [g]	3650 [g]	1 [g]	1 [g]
Total PCDDs and PCDFs	NA				1 [d]				0.767403896	0.0	0.9 [g]	3650 [g]	1 [g]	1 [g]
antimony	7440-36-0	0 [d, q]	0 [d, q]	0 [d, q]	1 [d]	40 [c]	NA	NA	0.001 [m]	0.0042	0.5 [g]	5 [g]	1 [g]	1 [g]
cadmium	7440-43-9	0.00250 [c]	0.0002 [c]	0.10625 [c]	1 [d]	907 [c]	NA	NA	0.001 [m]	0.0010	0.5 [g]	5 [g]	1 [g]	1 [g]
chromium (3+)	7440-47-3	0 [d, q]	0 [d, q]	0 [d, q]	1 [d]	3.16 [c]	NA	NA	0.002 [m]	0.0055	0.5 [g]	5 [g]	1 [g]	1 [g]
chromium (6+)	18540-29-9	0 [d, q]	0 [d, q]	0 [d, q]	1 [d]	3.16 [c]	NA	NA	0.002 [m]	0.0055	0.5 [g]	5 [g]	1 [g]	1 [g]
copper	7440-50-8	0 [d, q]	0 [d, q]	0 [d, q]	1 [d]	3.16 [e]	NA	NA	0.001 [m]	0.0031	0.5 [g]	5 [g]	1 [g]	1 [g]
lead	7439-92-1	0 [d, q]	0 [d, q]	0 [d, q]	1 [d]	0.09 [c]	NA	NA	0.000332261 [n]	0.0018	0.5 [g]	5 [g]	1 [g]	1 [g]
nickel	7440-02-0	0 [d, q]	0 [d, q]	0 [d, q]	1 [d]	78 [c]	NA	NA	0.002 [l]	0.0059	0.5 [g]	5 [g]	1 [g]	1 [g]
zinc	7440-66-6	0.00875 [c]	0.0001 [c]	0.00875 [c]	1 [d]	2060 [c]	NA	NA	0.0006 [l]	0.0019	0.5 [g]	5 [g]	1 [g]	1 [g]

NA No data available

a. Howard, P.H. et al., 1991. Handbook of Environmental Degradation Rates. Lewis Publishers. Chelsea, Michigan.
b. No data available, ksg set to 0 as a conservative assumption.
c. Human Health Risk Assessment Protocol for Hazardous Waste Combustion Facilities, Companion Database. USEPA, 2005.
d. Human Health Risk Assessment Protocol for Hazardous Waste Combustion Facilities. USEPA, 2005.
e. Calculated using guidance from Human Health Risk Assessment Protocol for Hazardous Waste Combustion Facilities, Appendix A-2. USEPA, 2005.
f. PHYSPROP Database. Syracuse Research Corporation.
g. Air Emission Models for Waste and Wastewater. USEPA, 1994.
h. CHEMFATE Database. Syracuse Research Corporation.
i. http://www.inchem.org/documents/icsc/icsc/eics0163.htm
j. CRC Handbook of Chemistry and Physics
k. EPI Software Program. Syracuse Research Corporation.
l. Measured value from RAGS Part E. USEPA, 2004.
m. Estimated value from RAGS Part E. USEPA, 2004.
n. Calculated using guidance provided in RAGS Part E. USEPA, 2004.
o. http://www.atsdr.cdc.gov/toxprofiles/tp11-c4.pdf
p. Baes, C.F. et al. 1984. "Review and Analysis of Parameters and Assessing Transport of Environmentally Released Radionuclides through Agriculture." Oak Ridge National Laboratory. Oak Ridge, Tennessee
q. No data. Value set equal to zero

CHEMICAL-SPECIFIC VALUES

COPC	CAS Number	Toxicity Data									Chemical Types and Breast Milk Pathway Identifiers							
		Early-Life Sensitivity	Cancer Slope Factor				Reference Dose				Inorganic Compound Identifier (Y/N)	PCDD and PCDF Group Identifier (Y/N)	PCDD and PCDF Compound Identifier (Y/N)	Coplanar PCB Group Identifier (Y/N)	Coplanar PCB Compound Identifier (Y/N)	Non-coplanar PCB Compound Identifier (Y/N)	Evaluate Compound in Breast Milk Pathway for Infant ?	
			Inhalation		Oral		Inhalation		Oral								Carcinogenic (Y/N)	Noncarcinogenic (Y/N)
			(mg/kg/day)$^{-1}$	Reference	(mg/kg/day)$^{-1}$	Reference	(mg/kg/day)	Reference	(mg/kg/day)	Reference								
1,1,1-trichloroethane	71-55-6	n/a	No data	No data	No data	No data	1.43E+00	IRIS	2.00E+00	IRIS	N	N	N	N	N	N	N	N
1,1-dichloroethane	75-34-3	n/a	5.70E-03	Cal/EPA	5.70E-03	Cal/EPA	1.40E-01	Reg. 9 PRG	1.00E-01	Reg. 9 PRG	N	N	N	N	N	N	N	N
1,1-dichloroethene	75-35-4	n/a	No data	No data	No data	No data	5.71E-02	RSL	5.00E-02	IRIS	N	N	N	N	N	N	N	N
1,2-dichloroethane	107-06-2	n/a	9.10E-02	IRIS	9.10E-02	IRIS	1.40E-03	Reg. 9 PRG	2.00E-02	Reg. 9 PRG	N	N	N	N	N	N	Y	Y
1,2-dichloropropane	78-87-5	n/a	0.068	Reg. 9 PRG	0.068	Reg. 9 PRG	0.0011	IRIS	0.09	ATSDR MRL	N	N	N	N	N	N	N	N
1,3-butadiene	106-99-0	n/a	1.05E-01	IRIS	3.40E+00	RSL	5.71E-04	IRIS	No data	No data	N	N	N	N	N	N	N	N
2-butanone	78-93-3	n/a	not a known carc.		not a known carc.		1.4	IRIS	0.6	IRIS	N	N	N	N	N	N	N	Y
acetone	67-64-1	n/a	not a known carc.		not a known carc.		9.00E-01	Reg. 9 PRG	9.00E-01	IRIS	N	N	N	N	N	N	N	Y
benzene	71-43-2	n/a	2.70E-02	IRIS	5.50E-02	IRIS	8.60E-03	IRIS	4.00E-03	IRIS	N	N	N	N	N	N	Y	Y
benzoic acid	65-85-0	n/a	No data	No data	No data	No data	No data	No data	4	IRIS	N	N	N	N	N	N	N	N
benzyl alcohol	100-51-6	n/a	No data	No data	No data	No data	No data	No data	0.1	RSL	N	N	N	N	N	N	N	N
bis(2-ethylhexyl)-phthalate	117-81-7	n/a	8.40E-03	RSL	1.40E-02	IRIS	No data	No data	2.00E-02	IRIS	N	N	N	N	N	N	N	N
bromodichloromethane	75-27-4	n/a	1.30E-01	RSL	6.20E-02	IRIS	No data	No data	2.00E-02	IRIS	N	N	N	N	N	N	N	N
bromomethane	74-83-9	n/a	No data	No data	No data	No data	1.43E-03	IRIS	1.40E-03	IRIS	N	N	N	N	N	N	N	N
carbon disulfide	75-15-0	n/a	not a known carc.		not a known carc.		2.00E-01	IRIS	1.00E-01	IRIS	N	N	N	N	N	N	N	Y
carbon tetrachloride	56-23-5	n/a	2.10E-02	IRIS	7.00E-02	IRIS	2.86E-02	IRIS	4.00E-03	IRIS	N	N	N	N	N	N	N	N
chlorobenzene	108-90-7	n/a	No data	No data	No data	No data	0.014285714	RSL	0.02	IRIS	N	N	N	N	N	N	N	N
chloroform	67-66-3	n/a	8.10E-02	IRIS	3.10E-02	Cal/EPA	1.40E-02	Reg. 9 PRG	1.00E-02	IRIS	N	N	N	N	N	N	Y	Y
chloromethane	74-87-3	n/a	not a known carc.		not a known carc.		2.60E-02	IRIS	2.60E-02	Reg. 9 PRG	N	N	N	N	N	N	N	Y
cis-1,3-dichloropropene	10061-01-5	n/a	0.014	IRIS	0.1	IRIS	5.71E-03	IRIS	0.03	IRIS	N	N	N	N	N	N	Y	Y
dibromochloromethane	124-48-1	n/a	9.40E-02	Cal EPA	8.40E-02	IRIS	No data	No data	2.00E-02	IRIS	N	N	N	N	N	N	N	N
dichlorodifluoromethane	75-71-8	n/a	No data	No data	No data	No data	0.028571429	RSL	0.2	IRIS	N	N	N	N	N	N	N	Y
dimethyl phthalate	131-11-3	n/a	No data	No data	No data	No data	No data	No data	No data	No data	N	N	N	N	N	N	N	N
di-n-butyl phthalate	84-74-2	n/a	No data	No data	No data	No data	No data	No data	1.00E-01	IRIS	N	N	N	N	N	N	N	N
ethylbenzene	100-41-4	n/a	8.87E-02	Cal/EPA	1.10E-02	Cal/EPA	2.90E-01	IRIS	1.00E-01	IRIS	N	N	N	N	N	N	Y	Y
Freon 113	76-13-1	n/a	No data	No data	No data	No data	8.57E+00	RSL	3.00E+01	IRIS	N	N	N	N	N	N	N	Y
HD	505-60-2	n/a	1.40E+01	CHPPM	7.70E+00	CHPPM	6.00E-06	CHPPM	7.00E-06	CHPPM	N	N	N	N	N	N	N	N
hexane	110-54-3	n/a	not a known carc.		not a known carc.		2.00E-01	IRIS	1.10E+01	Reg. 9 PRG	N	N	N	N	N	N	N	Y
methylene chloride	75-09-2	n/a	1.60E-03	IRIS	7.50E-03	IRIS	1.10E-01	Cal/EPA	6.00E-02	IRIS	N	N	N	N	N	N	Y	Y
styrene	100-42-5	n/a	No data	No data	No data	No data	2.86E-01	IRIS	2.00E-01	IRIS	N	N	N	N	N	N	N	Y
tetrachloroethene	127-18-4	n/a	2.10E-02	Reg. 9 PRG	5.40E-01	Reg. 9 PRG	1.00E-02	Reg. 9 PRG	1.00E-02	IRIS	N	N	N	N	N	N	Y	Y
toluene	108-88-3	n/a	not a known carc.		not a known carc.		1.40E+00	IRIS	8.00E-02	IRIS	N	N	N	N	N	N	N	Y
trans-1,3-dichloropropene	10061-02-6	n/a	1.40E-02	IRIS	1.00E-01	IRIS	3.06E-02	ASTDR	3.00E-02	IRIS	N	N	N	N	N	N	Y	Y
trichloroethene	79-01-6	n/a	4.00E-01	Reg. 9 PRG	4.00E-01	Reg. 9 PRG	1.00E-02	Reg. 9 PRG	3.00E-04	Reg. 9 PRG	N	N	N	N	N	N	Y	Y
trichlorofluoromethane	75-69-4	n/a	No data	No data	No data	No data	2.00E-01	RSL	3.00E-01	IRIS	N	N	N	N	N	N	N	Y
vinyl chloride	75-01-4	Yes	1.50E-02	IRIS	7.20E-01	IRIS	2.90E-02	IRIS	3.00E-03	IRIS	N	N	N	N	N	N	N	N
xylenes	1330-20-7	n/a	not a known carc.		not a known carc.		2.90E-02	IRIS	2.00E-01	IRIS	N	N	N	N	N	N	N	Y
2,3,7,8-TCDF	51207-31-9	n/a	TEQ Basis	TEQ Basis	TEQ Basis	TEQ Basis	No data	No data	No data	No data	N	N	Y	N	N	N	Y	Y
Total PCDDs and PCDFs	NA	n/a	1.33E+05	RSL	1.30E+05	RSL	1.14E-08	RSL	7.00E-10	IRIS	N	Y	N	N	N	N	Y	Y
antimony	7440-36-0	n/a	No data	No data	No data	No data	No data	No data	4.00E-04	IRIS	Y	N	N	N	N	N	N	Y
cadmium	7440-43-9	n/a	6.30E+00	IRIS	No data	No data	2.86E-06	ASTDR	5.00E-04	IRIS	Y	N	N	N	N	N	N	Y
chromium (3+)	7440-47-3	n/a	No data	No data	No data	No data	No data	No data	1.50E+00	IRIS	Y	N	N	N	N	N	N	Y
chromium (6+)	18540-29-9	n/a	4.20E+01	IRIS	5.00E-01	RSL	2.86E-05	IRIS	3.00E-03	IRIS	Y	N	N	N	N	N	Y	Y
copper	7440-50-8	n/a	No data	No data	No data	No data	No data	No data	4.00E-02	RSL	Y	N	N	N	N	N	N	Y
lead	7439-92-1	n/a	4.20E-02	Cal EPA	8.50E-03	Cal EPA	No data	No data	No data	No data	Y	N	N	N	N	N	Y	N
nickel	7440-02-0	n/a	8.40E-01	IRIS	No data	No data	2.57E-05	ASTDR	2.00E-02	IRIS	Y	N	N	N	N	N	N	Y
zinc	7440-66-6	n/a	No data	No data	No data	No data	No data	No data	3.00E-01	IRIS	Y	N	N	N	N	N	N	Y

a. From the EPA Region 9 Preliminary Remediation Goals (PRG) table,
b. From the on-line EPA Integrated Risk Information System (IRIS) Database, http://www.epa.gov/iris.
c. From the US EPA document entitled "Upper-Bound Quantitative Cancer Risk Estimate for Populations Adjacent to Sulfur

TOXICITY EQUIVALENCY FACTORS

COPC				
Name	Alternative Name	CAS Number	Chemical Type	Toxicity Equivalency Factor (dimensionless)
3,3',4,4'-tetrachlorobiphenyl	3,3',4,4'-TCB (PCB 77)	32598-13-3	Coplanar PCB	0.0001 [a]
3,4,4',5-tetrachlorobiphenyl	3,4,4,5'-TCB (PCB 81)	70362-50-4	Coplanar PCB	0.0003 [a]
2,3,3',4,4'-pentachlorobiphenyl	2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	Coplanar PCB	0.00003 [a]
2,3,4,4',5-pentachlorobiphenyl	2,3,4,4',5-PeCB (PCB 114)	74472-37-0	Coplanar PCB	0.00003 [a]
2,3',4,4',5-pentachlorobiphenyl	2,3',4,4',5-PeCB (PCB 118)	31508-00-6	Coplanar PCB	0.00003 [a]
2',3,4,4',5-pentachlorobiphenyl	2',3,4,4',5-PeCB (PCB 123)	65510-44-3	Coplanar PCB	0.00003 [a]
3,3',4,4',5-pentachlorobiphenyl	3,3',4,4',5-PeCB (PCB 126)	57465-28-8	Coplanar PCB	0.1 [a]
2,3,3',4,4',5-hexachlorobiphenyl	2,3,3',4,4',5-HxCB (PCB 156)	38380-08-4	Coplanar PCB	0.00003 [a]
2,3,3',4,4',5'-hexachlorobiphenyl	2,3,3',4,4',5'-HxCB (PCB 157)	69782-90-7	Coplanar PCB	0.00003 [a]
2,3',4,4',5,5'-hexachlorobiphenyl	2,3',4,4',5,5'-HxCB (PCB 167)	52663-72-6	Coplanar PCB	0.00003 [a]
3,3',4,4',5,5'-hexachlorobiphenyl	3,3',4,4',5,5'-HxCB (PCB 169)	32774-16-6	Coplanar PCB	0.03 [a]
2,3,3',4,4',5,5'-heptachlorobiphenyl	2,3,3',4,4',5,5'-HpCB (PCB 189)	39635-31-9	Coplanar PCB	0.00003 [a]
2,3,7,8-tetrachlorodibenzo(p)dioxin	2,3,7,8-TCDD	1746-01-6	PCDD	1 [a]
1,2,3,7,8-pentachlorodibenzo(p)dioxin	1,2,3,7,8-PeCDD	40321-76-4	PCDD	1 [a]
1,2,3,4,7,8-hexachlorodibenzo(p)dioxin	1,2,3,4,7,8-HxCDD	39227-28-6	PCDD	0.1 [a]
1,2,3,6,7,8-hexachlorodibenzo(p)dioxin	1,2,3,6,7,8-HxCDD	57653-85-7	PCDD	0.1 [a]
1,2,3,7,8,9-hexachlorodibenzo(p)dioxin	1,2,3,7,8,9-HxCDD	19408-74-3	PCDD	0.1 [a]
1,2,3,4,6,7,8-heptachlorodibenzo(p)dioxin	1,2,3,4,6,7,8-HpCDD	35822-46-9	PCDD	0.01 [a]
1,2,3,4,6,7,8,9-octachlorodibenzo(p)dioxin	1,2,3,4,6,7,8,9-OCDD	3268-87-9	PCDD	0.0003 [a]
2,3,7,8-tetrachlorodibenzofuran	2,3,7,8-TCDF	51207-31-9	PCDF	0.1 [a]
1,2,3,7,8-pentachlorodibenzofuran	1,2,3,7,8-PeCDF	57117-31-4	PCDF	0.03 [a]
2,3,4,7,8-pentachlorodibenzofuran	2,3,4,7,8-PeCDF	57117-31-4	PCDF	0.3 [a]
1,2,3,4,7,8-hexachlorodibenzofuran	1,2,3,4,7,8-HxCDF	70648-26-9	PCDF	0.1 [a]
1,2,3,6,7,8-hexachlorodibenzofuran	1,2,3,6,7,8-HxCDF	57117-44-9	PCDF	0.1 [a]
1,2,3,7,8,9-hexachlorodibenzofuran	1,2,3,7,8,9-HxCDF	72918-21-9	PCDF	0.1 [a]
2,3,4,6,7,8-hexachlorodibenzofuran	2,3,4,6,7,8-HxCDF	60851-34-5	PCDF	0.1 [a]
1,2,3,4,6,7,8-heptachlorodibenzofuran	1,2,3,4,6,7,8-HpCDF	67562-39-4	PCDF	0.01 [a]
1,2,3,4,7,8,9-heptachlorodibenzofuran	1,2,3,4,7,8,9-HpCDF	55673-89-7	PCDF	0.01 [a]
1,2,3,4,6,7,8,9-octachlorodibenzofuran	1,2,3,4,6,7,8,9-OCDF	39001-02-0	PCDF	0.0003 [a]

a. Recommended Toxicity Equivalence Factors (TEFs) for Human Health Risk Assessments of 2,3,7,8-Tetrachlorodinezo-p-dioxin and Dioxin-Like Compounds. EPA/100/R 10/005. USEPA, 2010.

RISK AND HAZARD FROM DIRECT AND INDIRECT COPC EXPOSURE

OVERVIEW OF DIRECT AND INDIRECT CARCINOGENIC RISK AND NONCARCINOGENIC HEALTH HAZARD FOR RESIDENT EXPOSURE SCENARIOS

Resident Exposure Scenarios - Carcinogenic Effects							
		Adult		Child		Infant	
COPC	CAS Number	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)
1,1,1-trichloroethane	71-55-6						
1,1-dichloroethane	75-34-3	7.68E-16	2.41E-17	2.15E-15	2.52E-17	2.42E-16	6.46E-18
1,1-dichloroethene	75-35-4						
1,2-dichloroethane	107-06-2	1.24E-14	6.63E-16	3.48E-14	1.10E-15	3.91E-15	1.23E-14
1,2-dichloropropane	78-87-5	1.12E-14	5.04E-16	3.13E-14	5.21E-16	3.52E-15	1.33E-16
1,3-butadiene	106-99-0	1.24E-14	1.39E-14	3.48E-14	6.68E-15	3.91E-15	1.82E-15
2-butanone	78-93-3						
acetone	67-64-1						
benzene	71-43-2	6.32E-14	5.30E-15	1.77E-13	4.07E-15	1.99E-14	1.22E-13
benzoic acid	65-85-0						
benzyl alcohol	100-51-6						
bis(2-ethylhexyl)-phthalate	117-81-7	7.69E-15	8.76E-12	2.15E-14	5.69E-12	2.42E-15	3.81E-12
bromodichloromethane	75-27-4	7.59E-14	1.70E-13	2.12E-13	3.20E-13	2.39E-14	6.93E-14
bromomethane	74-83-9						
carbon disulfide	75-15-0						
carbon tetrachloride	56-23-5	1.67E-14	7.50E-15	4.66E-14	5.12E-15	5.25E-15	2.09E-15
chlorobenzene	108-90-7						
chloroform	67-66-3	1.86E-13	2.59E-15	5.20E-13	2.17E-15	5.85E-14	6.75E-14
chloromethane	74-87-3						
cis-1,3-dichloropropene	10061-01-5	2.31E-15	3.24E-16	6.48E-15	2.97E-16	7.29E-16	1.55E-14
dibromochloromethane	124-48-1	5.02E-14	1.54E-12	1.41E-13	2.87E-12	1.58E-14	5.44E-13
dichlorodifluoromethane	75-71-8						
dimethyl phthalate	131-11-3						
di-n-butyl phthalate	84-74-2						
ethylbenzene	100-41-4	1.93E-14	5.73E-16	5.39E-14	3.80E-16	6.07E-15	2.49E-15
Freon 113	76-13-1						
HD	505-60-2	3.91E-12	3.38E-13	1.09E-11	2.17E-13	1.23E-12	5.71E-14
hexane	110-54-3						
methylene chloride	75-09-2	3.07E-15	3.58E-16	8.60E-15	5.40E-16	9.68E-16	1.38E-14
styrene	100-42-5						
tetrachloroethene	127-18-4	4.40E-15	4.08E-14	1.23E-14	2.17E-14	1.38E-15	1.20E-13
toluene	108-88-3						
trans-1,3-dichloropropene	10061-02-6	2.45E-15	1.29E-15	6.87E-15	1.49E-15	7.73E-16	1.72E-14
trichloroethene	79-01-6	8.87E-14	5.78E-15	2.48E-13	3.78E-15	2.79E-14	8.50E-14
trichlorofluoromethane	75-69-4						
vinyl chloride	75-01-4	3.06E-15	1.52E-15	8.56E-15	9.64E-16	9.63E-16	2.54E-16
xylenes	1330-20-7						
2,3,7,8-TCDF	51207-31-9						
Total PCDDs and PCDFs	NA	1.38E-15	8.28E-11	3.85E-15	5.35E-11	4.34E-16	2.10E-09
antimony	7440-36-0						
cadmium	7440-43-9	7.60E-14		2.13E-13		2.39E-14	
chromium (3+)	7440-47-3						
chromium (6+)	18540-29-9	4.66E-12	3.07E-12	1.30E-11	1.73E-12	1.47E-12	1.14E-12
copper	7440-50-8						
lead	7439-92-1	2.32E-15	1.96E-14	6.50E-15	1.12E-14	7.32E-16	6.58E-15
nickel	7440-02-0	1.93E-13		5.41E-13		6.09E-14	
zinc	7440-66-6						
Total Cancer Risk - Pathway (dimensionless)		9.40E-12	9.68E-11	2.63E-11	6.43E-11	2.96E-12	2.11E-09
Overall excess lifetime cancer risk via all routes of exposure (dimensionless)		**1.06E-10**		**9.07E-11**		**2.11E-09**	

OVERVIEW OF DIRECT AND INDIRECT CARCINOGENIC RISK AND NONCARCINOGENIC HEALTH HAZARD FOR RESIDENT EXPOSURE SCENARIOS

Resident Exposure Scenarios - Noncarcinogenic Effects							
		Adult		Child		Infant	
COPC	CAS Number	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)
1,1,1-trichloroethane	71-55-6	2.78E-12	5.81E-14	7.80E-12	1.53E-13	4.39E-12	3.36E-13
1,1-dichloroethane	75-34-3	1.35E-11	2.97E-13	3.77E-11	6.20E-13	2.12E-11	7.94E-13
1,1-dichloroethene	75-35-4	3.03E-11	2.99E-13	8.48E-11	6.64E-13	4.77E-11	8.80E-13
1,2-dichloroethane	107-06-2	1.37E-09	4.17E-12	3.82E-09	8.43E-12	2.15E-09	4.74E-10
1,2-dichloropropane	78-87-5	2.09E-09	5.55E-13	5.86E-09	1.19E-12	3.30E-09	1.52E-12
1,3-butadiene	106-99-0	2.90E-09		8.12E-09		4.57E-09	
2-butanone	78-93-3	2.02E-11	7.34E-11	5.67E-11	2.03E-10	3.19E-11	7.77E-10
acetone	67-64-1	4.97E-11	4.08E-11	1.39E-10	9.67E-11	7.83E-11	5.30E-10
benzene	71-43-2	3.81E-09	1.18E-10	1.07E-08	2.59E-10	6.00E-09	3.89E-08
benzoic acid	65-85-0		3.91E-08		7.42E-08		9.35E-08
benzyl alcohol	100-51-6		5.12E-07		1.23E-06		1.40E-06
bis(2-ethylhexyl)-phthalate	117-81-7		7.33E-08		2.85E-07		9.52E-07
bromodichloromethane	75-27-4		1.91E-09		3.62E-09		3.91E-09
bromomethane	74-83-9	6.74E-09	7.83E-11	1.89E-08	1.81E-10	1.06E-08	2.15E-10
carbon disulfide	75-15-0	1.13E-10	1.80E-12	3.17E-10	4.22E-12	1.78E-10	1.06E-09
carbon tetrachloride	56-23-5	3.88E-10	9.95E-11	1.09E-09	2.56E-10	6.12E-10	5.23E-10
chlorobenzene	108-90-7	1.82E-10	2.46E-11	5.09E-10	6.76E-11	2.86E-10	1.72E-10
chloroform	67-66-3	2.29E-09	4.50E-11	6.42E-09	9.78E-11	3.61E-09	1.52E-08
chloromethane	74-87-3	1.09E-09	6.40E-12	3.06E-09	1.48E-11	1.72E-09	5.12E-09
cis-1,3-dichloropropene	10061-01-5	4.05E-10	6.60E-13	1.13E-09	1.38E-12	6.38E-10	3.63E-10
dibromochloromethane	124-48-1		1.28E-08		2.40E-08		2.27E-08
dichlorodifluoromethane	75-71-8	1.71E-10	8.98E-13	4.80E-10	2.10E-12	2.70E-10	1.20E-10
dimethyl phthalate	131-11-3						
di-n-butyl phthalate	84-74-2		2.72E-06		1.06E-05		3.68E-05
ethylbenzene	100-41-4	1.05E-11	2.23E-12	2.94E-11	4.84E-12	1.65E-11	1.58E-10
Freon 113	76-13-1	5.91E-13	1.03E-14	1.66E-12	2.89E-14	9.31E-13	8.74E-13
HD	505-60-2	6.51E-07	2.08E-08	1.82E-06	5.64E-08	1.03E-06	7.41E-08
hexane	110-54-3	2.98E-11	6.64E-14	8.34E-11	1.61E-13	4.69E-11	3.06E-12
methylene chloride	75-09-2	2.44E-10	8.25E-12	6.84E-10	1.68E-11	3.85E-10	2.14E-09
styrene	100-42-5	2.92E-11	1.08E-09	8.19E-11	4.19E-09	4.61E-11	1.93E-08
tetrachloroethene	127-18-4	2.93E-10	2.50E-11	8.20E-10	5.62E-11	4.62E-10	1.56E-09
toluene	108-88-3	2.66E-12	1.73E-12	7.46E-12	3.75E-12	4.20E-12	2.30E-10
trans-1,3-dichloropropene	10061-02-6	8.02E-11	2.93E-12	2.25E-10	6.95E-12	1.26E-10	4.02E-10
trichloroethene	79-01-6	3.10E-10	1.96E-10	8.69E-10	4.41E-10	4.89E-10	4.96E-08
trichlorofluoromethane	75-69-4	1.28E-11	1.17E-13	3.58E-11	2.94E-13	2.01E-11	4.06E-11
vinyl chloride	75-01-4	9.84E-11	2.78E-12	2.76E-10	6.25E-12	1.55E-10	8.24E-12
xylenes	1330-20-7	2.60E-10	3.31E-12	7.27E-10	7.38E-12	4.09E-10	2.00E-10
2,3,7,8-TCDF	51207-31-9						
Total PCDDs and PCDFs	NA	1.27E-11	2.17E-06	3.55E-11	8.49E-06	2.00E-11	1.62E-03
antimony	7440-36-0		5.55E-10		1.88E-09		5.43E-09
cadmium	7440-43-9	5.91E-08	2.36E-09	1.65E-07	7.95E-09	9.30E-08	2.28E-08
chromium (3+)	7440-47-3		9.56E-12		3.22E-11		1.07E-10
chromium (6+)	18540-29-9	5.43E-08	4.78E-09	1.52E-07	1.61E-08	8.55E-08	5.34E-08
copper	7440-50-8		5.76E-10		1.87E-09		6.22E-09
lead	7439-92-1						
nickel	7440-02-0	1.25E-07	1.41E-09	3.51E-07	4.66E-09	1.97E-07	1.49E-08
zinc	7440-66-6		7.84E-10		2.59E-09		7.52E-09
Total Hazard Quotient - Pathway (dimensionless)		9.13E-07	5.57E-06	2.56E-06	2.09E-05	1.44E-06	1.66E-03
Total Hazard Index (dimensionless)		**6.48E-06**		**2.34E-05**		**1.66E-03**	

OVERVIEW OF DIRECT AND INDIRECT CARCINOGENIC RISK AND NONCARCINOGENIC HEALTH HAZARD FOR SUBSISTENCE FISHER EXPOSURE SCENARIOS

Subsistence Fisher Exposure Scenarios - Carcinogenic Effects							
		Adult		Child		Infant	
COPC	CAS Number	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)
1,1,1-trichloroethane	71-55-6						
1,1-dichloroethane	75-34-3	7.68E-16	4.47E-17	2.15E-15	3.36E-17	2.42E-16	8.98E-18
1,1-dichloroethene	75-35-4						
1,2-dichloroethane	107-06-2	1.24E-14	8.66E-16	3.48E-14	1.18E-15	3.91E-15	1.24E-14
1,2-dichloropropane	78-87-5	1.12E-14	9.57E-16	3.13E-14	7.05E-16	3.52E-15	1.88E-16
1,3-butadiene	106-99-0	1.24E-14	2.72E-14	3.48E-14	1.21E-14	3.91E-15	3.45E-15
2-butanone	78-93-3						
acetone	67-64-1						
benzene	71-43-2	6.32E-14	1.12E-14	1.77E-13	6.49E-15	1.99E-14	1.24E-13
benzoic acid	65-85-0						
benzyl alcohol	100-51-6						
bis(2-ethylhexyl)-phthalate	117-81-7	7.69E-15	8.78E-12	2.15E-14	5.70E-12	2.42E-15	3.81E-12
bromodichloromethane	75-27-4	7.59E-14	1.72E-13	2.12E-13	3.21E-13	2.39E-14	6.96E-14
bromomethane	74-83-9						
carbon disulfide	75-15-0						
carbon tetrachloride	56-23-5	1.67E-14	1.67E-14	4.66E-14	8.87E-15	5.25E-15	3.21E-15
chlorobenzene	108-90-7						
chloroform	67-66-3	1.86E-13	5.35E-15	5.20E-13	3.29E-15	5.85E-14	6.83E-14
chloromethane	74-87-3						
cis-1,3-dichloropropene	10061-01-5	2.31E-15	6.38E-16	6.48E-15	4.24E-16	7.29E-16	1.56E-14
dibromochloromethane	124-48-1	5.02E-14	1.55E-12	1.41E-13	2.87E-12	1.58E-14	5.45E-13
dichlorodifluoromethane	75-71-8						
dimethyl phthalate	131-11-3						
di-n-butyl phthalate	84-74-2						
ethylbenzene	100-41-4	1.93E-14	1.27E-15	5.39E-14	6.63E-16	6.07E-15	2.68E-15
Freon 113	76-13-1						
HD	505-60-2	3.91E-12	6.44E-13	1.09E-11	3.42E-13	1.23E-12	9.45E-14
hexane	110-54-3						
methylene chloride	75-09-2	3.07E-15	5.13E-16	8.60E-15	6.03E-16	9.68E-16	1.38E-14
styrene	100-42-5						
tetrachloroethene	127-18-4	4.40E-15	9.60E-14	1.23E-14	4.42E-14	1.38E-15	1.35E-13
toluene	108-88-3						
trans-1,3-dichloropropene	10061-02-6	2.45E-15	2.45E-15	6.87E-15	1.96E-15	7.73E-16	1.75E-14
trichloroethene	79-01-6	8.87E-14	1.30E-14	2.48E-13	6.71E-15	2.79E-14	8.70E-14
trichlorofluoromethane	75-69-4						
vinyl chloride	75-01-4	3.06E-15	3.36E-15	8.56E-15	1.71E-15	9.63E-16	4.79E-16
xylenes	1330-20-7						
2,3,7,8-TCDF	51207-31-9						
Total PCDDs and PCDFs	NA	1.38E-15	8.29E-11	3.85E-15	5.35E-11	4.34E-16	2.10E-09
antimony	7440-36-0						
cadmium	7440-43-9	7.60E-14		2.13E-13		2.39E-14	
chromium (3+)	7440-47-3						
chromium (6+)	18540-29-9	4.66E-12	3.07E-12	1.30E-11	1.73E-12	1.47E-12	1.14E-12
copper	7440-50-8						
lead	7439-92-1	2.32E-15	1.96E-14	6.50E-15	1.12E-14	7.32E-16	6.58E-15
nickel	7440-02-0	1.93E-13		5.41E-13		6.09E-14	
zinc	7440-66-6						
Total Cancer Risk - Pathway (dimensionless)		9.40E-12	9.73E-11	2.63E-11	6.45E-11	2.96E-12	2.11E-09
Overall excess lifetime cancer risk via all routes of exposure (dimensionless)		**1.07E-10**		**9.09E-11**		**2.11E-09**	

OVERVIEW OF DIRECT AND INDIRECT CARCINOGENIC RISK AND NONCARCINOGENIC HEALTH HAZARD FOR SUBSISTENCE FISHER EXPOSURE SCENARIOS

Subsistence Fisher Exposure Scenarios - Noncarcinogenic Effects							
		Adult		Child		Infant	
COPC	CAS Number	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)
1,1,1-trichloroethane	71-55-6	2.78E-12	9.03E-14	7.80E-12	2.32E-13	4.39E-12	4.54E-13
1,1-dichloroethane	75-34-3	1.35E-11	3.82E-13	3.77E-11	8.26E-13	2.12E-11	1.10E-12
1,1-dichloroethene	75-35-4	3.03E-11	5.62E-13	8.48E-11	1.31E-12	4.77E-11	1.84E-12
1,2-dichloroethane	107-06-2	1.37E-09	4.43E-12	3.82E-09	9.07E-12	2.15E-09	4.76E-10
1,2-dichloropropane	78-87-5	2.09E-09	7.28E-13	5.86E-09	1.61E-12	3.30E-09	2.15E-12
1,3-butadiene	106-99-0	2.90E-09		8.12E-09		4.57E-09	
2-butanone	78-93-3	2.02E-11	7.36E-11	5.67E-11	2.04E-10	3.19E-11	7.79E-10
acetone	67-64-1	4.97E-11	4.10E-11	1.39E-10	9.73E-11	7.83E-11	5.33E-10
benzene	71-43-2	3.81E-09	1.81E-10	1.07E-08	4.13E-10	6.00E-09	3.95E-08
benzoic acid	65-85-0		3.91E-08		7.42E-08		9.35E-08
benzyl alcohol	100-51-6		5.12E-07		1.23E-06		1.40E-06
bis(2-ethylhexyl)-phthalate	117-81-7		7.34E-08		2.85E-07		9.52E-07
bromodichloromethane	75-27-4		1.92E-09		3.63E-09		3.93E-09
bromomethane	74-83-9	6.74E-09	8.83E-11	1.89E-08	2.06E-10	1.06E-08	2.52E-10
carbon disulfide	75-15-0	1.13E-10	3.88E-12	3.17E-10	9.29E-12	1.78E-10	1.08E-09
carbon tetrachloride	56-23-5	3.88E-10	1.76E-10	1.09E-09	4.43E-10	6.12E-10	8.03E-10
chlorobenzene	108-90-7	1.82E-10	2.82E-11	5.09E-10	7.64E-11	2.86E-10	1.85E-10
chloroform	67-66-3	2.29E-09	6.58E-11	6.42E-09	1.49E-10	3.61E-09	1.54E-08
chloromethane	74-87-3	1.09E-09	1.00E-11	3.06E-09	2.36E-11	1.72E-09	5.15E-09
cis-1,3-dichloropropene	10061-01-5	4.05E-10	9.04E-13	1.13E-09	1.98E-12	6.38E-10	3.65E-10
dibromochloromethane	124-48-1		1.29E-08		2.40E-08		2.28E-08
dichlorodifluoromethane	75-71-8	1.71E-10	1.11E-12	4.80E-10	2.62E-12	2.70E-10	1.22E-10
dimethyl phthalate	131-11-3						
di-n-butyl phthalate	84-74-2		2.73E-06		1.07E-05		3.68E-05
ethylbenzene	100-41-4	1.05E-11	3.71E-12	2.94E-11	8.44E-12	1.65E-11	1.70E-10
Freon 113	76-13-1	5.91E-13	1.98E-14	1.66E-12	5.20E-14	9.31E-13	9.52E-13
HD	505-60-2	6.51E-07	3.41E-08	1.82E-06	8.87E-08	1.03E-06	1.23E-07
hexane	110-54-3	2.98E-11	1.64E-13	8.34E-11	3.99E-13	4.69E-11	3.87E-12
methylene chloride	75-09-2	2.44E-10	9.06E-12	6.84E-10	1.88E-11	3.85E-10	2.15E-09
styrene	100-42-5	2.92E-11	1.08E-09	8.19E-11	4.19E-09	4.61E-11	1.93E-08
tetrachloroethene	127-18-4	2.93E-10	4.89E-11	8.20E-10	1.15E-10	4.62E-10	1.75E-09
toluene	108-88-3	2.66E-12	2.81E-12	7.46E-12	6.41E-12	4.20E-12	2.39E-10
trans-1,3-dichloropropene	10061-02-6	8.02E-11	3.83E-12	2.25E-10	9.15E-12	1.26E-10	4.09E-10
trichloroethene	79-01-6	3.10E-10	3.36E-10	8.69E-10	7.83E-10	4.89E-10	5.07E-08
trichlorofluoromethane	75-69-4	1.28E-11	2.51E-13	3.58E-11	6.22E-13	2.01E-11	4.17E-11
vinyl chloride	75-01-4	9.84E-11	4.77E-12	2.76E-10	1.11E-11	1.55E-10	1.55E-11
xylenes	1330-20-7	2.60E-10	5.22E-12	7.27E-10	1.21E-11	4.09E-10	2.16E-10
2,3,7,8-TCDF	51207-31-9						
Total PCDDs and PCDFs	NA	1.27E-11	2.18E-06	3.55E-11	8.50E-06	2.00E-11	1.62E-03
antimony	7440-36-0		5.57E-10		1.88E-09		5.45E-09
cadmium	7440-43-9	5.91E-08	2.55E-09	1.65E-07	8.41E-09	9.30E-08	2.44E-08
chromium (3+)	7440-47-3		9.56E-12		3.22E-11		1.07E-10
chromium (6+)	18540-29-9	5.43E-08	4.78E-09	1.52E-07	1.61E-08	8.55E-08	5.34E-08
copper	7440-50-8		5.76E-10		1.87E-09		6.22E-09
lead	7439-92-1						
nickel	7440-02-0	1.25E-07	1.42E-09	3.51E-07	4.68E-09	1.97E-07	1.50E-08
zinc	7440-66-6		9.18E-10		2.92E-09		8.63E-09
Total Hazard Quotient - Pathway (dimensionless)		9.13E-07	5.59E-06	2.56E-06	2.09E-05	1.44E-06	1.66E-03
Total Hazard Index (dimensionless)		**6.50E-06**		**2.35E-05**		**1.66E-03**	

OVERVIEW OF DIRECT AND INDIRECT CARCINOGENIC RISK AND NONCARCINOGENIC HEALTH HAZARD FOR SUBSISTENCE FARMER EXPOSURE SCENARIOS

Subsistence Farmer Exposure Scenarios - Carcinogenic Effects							
		Adult		Child		Infant	
COPC	CAS Number	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)
1,1,1-trichloroethane	71-55-6						
1,1-dichloroethane	75-34-3	7.68E-16	4.35E-17	2.15E-15	5.44E-17	2.42E-16	1.36E-17
1,1-dichloroethene	75-35-4						
1,2-dichloroethane	107-06-2	1.24E-14	1.49E-15	3.48E-14	2.65E-15	3.91E-15	1.34E-14
1,2-dichloropropane	78-87-5	1.12E-14	8.99E-16	3.13E-14	1.11E-15	3.52E-15	2.76E-16
1,3-butadiene	106-99-0	1.24E-14	2.75E-14	3.48E-14	1.10E-14	3.91E-15	2.92E-15
2-butanone	78-93-3						
acetone	67-64-1						
benzene	71-43-2	6.32E-14	8.46E-15	1.77E-13	7.67E-15	1.99E-14	1.25E-13
benzoic acid	65-85-0						
benzyl alcohol	100-51-6						
bis(2-ethylhexyl)-phthalate	117-81-7	7.69E-15	2.92E-11	2.15E-14	1.42E-11	2.42E-15	9.51E-12
bromodichloromethane	75-27-4	7.59E-14	4.25E-13	2.12E-13	8.00E-13	2.39E-14	1.73E-13
bromomethane	74-83-9						
carbon disulfide	75-15-0						
carbon tetrachloride	56-23-5	1.67E-14	1.18E-14	4.66E-14	9.01E-15	5.25E-15	4.10E-15
chlorobenzene	108-90-7						
chloroform	67-66-3	1.86E-13	4.26E-15	5.20E-13	4.26E-15	5.85E-14	6.89E-14
chloromethane	74-87-3						
cis-1,3-dichloropropene	10061-01-5	2.31E-15	5.56E-16	6.48E-15	6.08E-16	7.29E-16	1.58E-14
dibromochloromethane	124-48-1	5.02E-14	3.86E-12	1.41E-13	7.16E-12	1.58E-14	1.36E-12
dichlorodifluoromethane	75-71-8						
dimethyl phthalate	131-11-3						
di-n-butyl phthalate	84-74-2						
ethylbenzene	100-41-4	1.93E-14	8.81E-16	5.39E-14	6.61E-16	6.07E-15	2.69E-15
Freon 113	76-13-1						
HD	505-60-2	3.91E-12	6.89E-13	1.09E-11	4.16E-13	1.23E-12	1.05E-13
hexane	110-54-3						
methylene chloride	75-09-2	3.07E-15	7.66E-16	8.60E-15	1.28E-15	9.68E-16	1.43E-14
styrene	100-42-5						
tetrachloroethene	127-18-4	4.40E-15	5.86E-14	1.23E-14	3.15E-14	1.38E-15	1.27E-13
toluene	108-88-3						
trans-1,3-dichloropropene	10061-02-6	2.45E-15	2.31E-15	6.87E-15	3.24E-15	7.73E-16	1.83E-14
trichloroethene	79-01-6	8.87E-14	8.74E-15	2.48E-13	6.47E-15	2.79E-14	8.68E-14
trichlorofluoromethane	75-69-4						
vinyl chloride	75-01-4	3.06E-15	2.28E-15	8.56E-15	1.61E-15	9.63E-16	4.11E-16
xylenes	1330-20-7						
2,3,7,8-TCDF	51207-31-9						
Total PCDDs and PCDFs	NA	1.38E-15	2.75E-10	3.85E-15	1.34E-10	4.34E-16	5.25E-09
antimony	7440-36-0						
cadmium	7440-43-9	7.60E-14		2.13E-13		2.39E-14	
chromium (3+)	7440-47-3						
chromium (6+)	18540-29-9	4.66E-12	1.02E-11	1.30E-11	4.32E-12	1.47E-12	2.78E-12
copper	7440-50-8						
lead	7439-92-1	2.32E-15	6.52E-14	6.50E-15	2.80E-14	7.32E-16	1.58E-14
nickel	7440-02-0	1.93E-13		5.41E-13		6.09E-14	
zinc	7440-66-6						
Total Cancer Risk - Pathway (dimensionless)		9.40E-12	3.19E-10	2.63E-11	1.61E-10	2.96E-12	5.27E-09
Overall excess lifetime cancer risk via all routes of exposure (dimensionless)		**3.29E-10**		**1.87E-10**		**5.27E-09**	

OVERVIEW OF DIRECT AND INDIRECT CARCINOGENIC RISK AND NONCARCINOGENIC HEALTH HAZARD FOR SUBSISTENCE FARMER EXPOSURE SCENARIOS

Subsistence Farmer Exposure Scenarios - Noncarcinogenic Effects							
		Adult		Child		Infant	
COPC	CAS Number	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)
1,1,1-trichloroethane	71-55-6	2.78E-12	1.12E-13	7.80E-12	3.02E-13	4.39E-12	7.22E-13
1,1-dichloroethane	75-34-3	1.35E-11	6.56E-13	3.77E-11	1.34E-12	2.12E-11	1.68E-12
1,1-dichloroethene	75-35-4	3.03E-11	4.75E-13	8.48E-11	9.96E-13	4.77E-11	1.24E-12
1,2-dichloroethane	107-06-2	1.37E-09	1.01E-11	3.82E-09	2.04E-11	2.15E-09	5.16E-10
1,2-dichloropropane	78-87-5	2.09E-09	1.21E-12	5.86E-09	2.54E-12	3.30E-09	3.16E-12
1,3-butadiene	106-99-0	2.90E-09		8.12E-09		4.57E-09	
2-butanone	78-93-3	2.02E-11	1.83E-10	5.67E-11	5.07E-10	3.19E-11	1.61E-09
acetone	67-64-1	4.97E-11	1.02E-10	1.39E-10	2.41E-10	7.83E-11	9.77E-10
benzene	71-43-2	3.81E-09	2.29E-10	1.07E-08	4.88E-10	6.00E-09	3.97E-08
benzoic acid	65-85-0		9.78E-08		1.86E-07		2.34E-07
benzyl alcohol	100-51-6		1.28E-06		3.08E-06		3.49E-06
bis(2-ethylhexyl)-phthalate	117-81-7		1.83E-07		7.11E-07		2.38E-06
bromodichloromethane	75-27-4		4.78E-09		9.03E-09		9.77E-09
bromomethane	74-83-9	6.74E-09	1.85E-10	1.89E-08	4.26E-10	1.06E-08	5.01E-10
carbon disulfide	75-15-0	1.13E-10	2.35E-12	3.17E-10	5.31E-12	1.78E-10	1.07E-09
carbon tetrachloride	56-23-5	3.88E-10	1.71E-10	1.09E-09	4.51E-10	6.12E-10	1.03E-09
chlorobenzene	108-90-7	1.82E-10	5.78E-11	5.09E-10	1.60E-10	2.86E-10	4.16E-10
chloroform	67-66-3	2.29E-09	9.11E-11	6.42E-09	1.92E-10	3.61E-09	1.56E-08
chloromethane	74-87-3	1.09E-09	1.23E-11	3.06E-09	2.79E-11	1.72E-09	5.16E-09
cis-1,3-dichloropropene	10061-01-5	4.05E-10	1.39E-12	1.13E-09	2.84E-12	6.38E-10	3.68E-10
dibromochloromethane	124-48-1		3.21E-08		5.99E-08		5.68E-08
dichlorodifluoromethane	75-71-8	1.71E-10	2.03E-12	4.80E-10	4.74E-12	2.70E-10	1.28E-10
dimethyl phthalate	131-11-3						
di-n-butyl phthalate	84-74-2		6.80E-06		2.66E-05		9.20E-05
ethylbenzene	100-41-4	1.05E-11	4.07E-12	2.94E-11	8.42E-12	1.65E-11	1.71E-10
Freon 113	76-13-1	5.91E-13	1.62E-14	1.66E-12	4.90E-14	9.31E-13	9.29E-13
HD	505-60-2	6.51E-07	3.86E-08	1.82E-06	1.08E-07	1.03E-06	1.37E-07
hexane	110-54-3	2.98E-11	6.68E-14	8.34E-11	1.62E-13	4.69E-11	3.07E-12
methylene chloride	75-09-2	2.44E-10	1.98E-11	6.84E-10	3.99E-11	3.85E-10	2.22E-09
styrene	100-42-5	2.92E-11	2.71E-09	8.19E-11	1.05E-08	4.61E-11	4.80E-08
tetrachloroethene	127-18-4	2.93E-10	3.84E-11	8.20E-10	8.17E-11	4.62E-10	1.65E-09
toluene	108-88-3	2.66E-12	3.20E-12	7.46E-12	6.67E-12	4.20E-12	2.40E-10
trans-1,3-dichloropropene	10061-02-6	8.02E-11	6.39E-12	2.25E-10	1.51E-11	1.26E-10	4.27E-10
trichloroethene	79-01-6	3.10E-10	3.47E-10	8.69E-10	7.54E-10	4.89E-10	5.06E-08
trichlorofluoromethane	75-69-4	1.28E-11	1.56E-13	3.58E-11	4.01E-13	2.01E-11	4.10E-11
vinyl chloride	75-01-4	9.84E-11	4.83E-12	2.76E-10	1.04E-11	1.55E-10	1.33E-11
xylenes	1330-20-7	2.60E-10	6.32E-12	7.27E-10	1.37E-11	4.09E-10	2.22E-10
2,3,7,8-TCDF	51207-31-9						
Total PCDDs and PCDFs	NA	1.27E-11	5.43E-06	3.55E-11	2.12E-05	2.00E-11	4.04E-03
antimony	7440-36-0		1.39E-09		4.69E-09		1.30E-08
cadmium	7440-43-9	5.91E-08	5.72E-09	1.65E-07	1.94E-08	9.30E-08	5.30E-08
chromium (3+)	7440-47-3		2.39E-11		8.06E-11		2.60E-10
chromium (6+)	18540-29-9	5.43E-08	1.20E-08	1.52E-07	4.03E-08	8.55E-08	1.30E-07
copper	7440-50-8		1.44E-09		4.67E-09		1.52E-08
lead	7439-92-1						
nickel	7440-02-0	1.25E-07	3.51E-09	3.51E-07	1.16E-08	1.97E-07	3.61E-08
zinc	7440-66-6		1.83E-09		6.15E-09		1.70E-08
Total Hazard Quotient - Pathway (dimensionless)		9.13E-07	1.39E-05	2.56E-06	5.21E-05	1.44E-06	4.14E-03
Total Hazard Index (dimensionless)		**1.48E-05**		**5.46E-05**		**4.14E-03**	

OVERVIEW OF DIRECT AND INDIRECT CARCINOGENIC RISK AND NONCARCINOGENIC HEALTH HAZARD FOR THE ADULT WORKER EXPOSURE SCENARIO

Adult Worker Exposure Scenario					
		Carcinogenic Effects		Noncarcinogenic Effects	
COPC	CAS Number	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)
1,1,1-trichloroethane	71-55-6			6.63E-13	6.92E-20
1,1-dichloroethane	75-34-3	1.83E-16	3.29E-23	3.21E-12	7.66E-19
1,1-dichloroethene	75-35-4			7.21E-12	3.37E-19
1,2-dichloroethane	107-06-2	2.96E-15	1.27E-21	3.25E-10	9.22E-18
1,2-dichloropropane	78-87-5	2.66E-15	1.37E-21	4.98E-10	2.96E-18
1,3-butadiene	106-99-0	2.96E-15	5.51E-21	6.90E-10	
2-butanone	78-93-3			4.82E-12	8.14E-16
acetone	67-64-1			1.18E-11	2.48E-16
benzene	71-43-2	1.51E-14	9.32E-21	9.08E-10	5.61E-16
benzoic acid	65-85-0				6.94E-15
benzyl alcohol	100-51-6				1.51E-12
bis(2-ethylhexyl)-phthalate	117-81-7	1.83E-15	1.14E-17		5.51E-13
bromodichloromethane	75-27-4	1.81E-14	4.13E-19		4.21E-15
bromomethane	74-83-9			1.60E-09	3.83E-16
carbon disulfide	75-15-0			2.69E-11	1.85E-18
carbon tetrachloride	56-23-5	3.97E-15	2.14E-21	9.25E-11	1.00E-16
chlorobenzene	108-90-7			4.32E-11	6.45E-17
chloroform	67-66-3	4.42E-14	4.39E-21	5.46E-10	1.88E-16
chloromethane	74-87-3			2.60E-10	1.66E-17
cis-1,3-dichloropropene	10061-01-5	5.51E-16	2.10E-22	9.64E-11	8.81E-19
dibromochloromethane	124-48-1	1.20E-14	6.14E-18		4.60E-14
dichlorodifluoromethane	75-71-8			4.08E-11	7.80E-18
dimethyl phthalate	131-11-3				
di-n-butyl phthalate	84-74-2				1.67E-12
ethylbenzene	100-41-4	4.59E-15	8.74E-22	2.50E-12	1.05E-17
Freon 113	76-13-1			1.41E-13	5.92E-21
HD	505-60-2	9.31E-13	1.43E-18	1.55E-07	3.52E-13
hexane	110-54-3			7.09E-12	1.28E-20
methylene chloride	75-09-2	7.32E-16	4.62E-22	5.82E-11	1.36E-17
styrene	100-42-5			6.96E-12	8.45E-15
tetrachloroethene	127-18-4	1.05E-15	8.03E-21	6.98E-11	1.97E-17
toluene	108-88-3			6.34E-13	8.21E-18
trans-1,3-dichloropropene	10061-02-6	5.84E-16	9.93E-21	1.91E-11	4.28E-17
trichloroethene	79-01-6	2.11E-14	1.10E-20	7.39E-11	1.22E-15
trichlorofluoromethane	75-69-4			3.04E-12	5.11E-20
vinyl chloride	75-01-4	7.28E-16	5.64E-22	2.34E-11	3.46E-18
xylenes	1330-20-7			6.18E-11	7.14E-17
2,3,7,8-TCDF	51207-31-9				
Total PCDDs and PCDFs	NA	3.28E-16	8.69E-17	3.02E-12	3.52E-12
antimony	7440-36-0				9.66E-17
cadmium	7440-43-9	1.81E-14		1.41E-08	5.17E-16
chromium (3+)	7440-47-3				3.32E-19
chromium (6+)	18540-29-9	1.11E-12	2.01E-20	1.29E-08	1.66E-16
copper	7440-50-8				4.29E-16
lead	7439-92-1	5.53E-16	1.24E-20		
nickel	7440-02-0	4.60E-14		2.98E-08	2.85E-16
zinc	7440-66-6				1.67E-16
Total Cancer Risk - Pathway (dimensionless)		2.24E-12	1.06E-16		
Overall excess lifetime cancer risk via all routes of exposure (dimensionless)		**2.24E-12**			
Total Hazard Quotient - Pathway (dimensionless)				2.17E-07	7.67E-12
Total Hazard Index (dimensionless)				**2.17E-07**	

RISK AND HAZARD BY PATHWAY FOR RESIDENT EXPOSURE SCENARIOS

CARCINOGENIC EFFECTS: Adult Resident Exposure Scenario															
COPC	CAS Number	PCDD and PCDF Group Identifier	PCDD and PCDF Compound Identifier	Coplanar PCB Group Identifier	Coplanar PCB Compound Identifier	Risk from Inhalation	Risk from Dermal Water Contact	Risk from Dermal Soil Contact	Risk from Incidental Soil Ingestion	Risk from Incidental Surface Water Ingestion	Risk from Ingestion of Produce	Risk from Ingestion of Terrestrial Animal Products	Risk from Ingestion of Fish	Risk from Ingestion of Breast Milk	Total Risk from Individual Chemical
1,1,1-trichloroethane	71-55-6	N	N	N	N									n/a	**0.00E+00**
1,1-dichloroethane	75-34-3	N	N	N	N	7.68E-16	4.23E-19	1.59E-23	3.98E-23	1.36E-19	9.76E-18	7.73E-21	1.37E-17	n/a	**7.92E-16**
1,1-dichloroethene	75-35-4	N	N	N	N									n/a	**0.00E+00**
1,2-dichloroethane	107-06-2	N	N	N	N	1.24E-14	4.49E-18	6.10E-22	1.53E-21	2.30E-18	5.20E-16	2.60E-19	1.36E-16	n/a	**1.31E-14**
1,2-dichloropropane	78-87-5	N	N	N	N	1.12E-14	7.88E-18	6.58E-22	1.65E-21	2.10E-18	1.92E-16	3.51E-19	3.02E-16	n/a	**1.17E-14**
1,3-butadiene	106-99-0	N	N	N	N	1.24E-14	4.17E-16	2.65E-21	6.65E-21	6.29E-17	4.47E-15	7.48E-17	8.88E-15	n/a	**2.63E-14**
2-butanone	78-93-3	N	N	N	N									n/a	**0.00E+00**
acetone	67-64-1	N	N	N	N									n/a	**0.00E+00**
benzene	71-43-2	N	N	N	N	6.32E-14	1.50E-16	4.49E-21	1.12E-20	2.31E-17	1.17E-15	2.51E-18	3.95E-15	n/a	**6.85E-14**
benzoic acid	65-85-0	N	N	N	N									n/a	**0.00E+00**
benzyl alcohol	100-51-6	N	N	N	N									n/a	**0.00E+00**
bis(2-ethylhexyl)-phthalate	117-81-7	N	N	N	N	7.69E-15	1.32E-16	6.83E-18	9.42E-18	2.49E-18	5.09E-13	8.24E-12	9.27E-15	n/a	**8.77E-12**
bromodichloromethane	75-27-4	N	N	N	N	7.59E-14	1.94E-17	8.04E-20	8.90E-19	7.16E-18	9.90E-14	7.02E-14	1.23E-15	n/a	**2.46E-13**
bromomethane	74-83-9	N	N	N	N									n/a	**0.00E+00**
carbon disulfide	75-15-0	N	N	N	N									n/a	**0.00E+00**
carbon tetrachloride	56-23-5	N	N	N	N	1.67E-14	9.15E-17	9.07E-22	2.98E-21	1.03E-17	3.42E-16	9.26E-16	6.13E-15	n/a	**2.42E-14**
chlorobenzene	108-90-7	N	N	N	N									n/a	**0.00E+00**
chloroform	67-66-3	N	N	N	N	1.86E-13	4.28E-17	2.11E-21	5.30E-21	1.28E-17	6.88E-16	1.19E-18	1.84E-15	n/a	**1.88E-13**
chloromethane	74-87-3	N	N	N	N									n/a	**0.00E+00**
cis-1,3-dichloropropene	10061-01-5	N	N	N	N	2.31E-15	6.13E-18	3.32E-23	4.78E-22	2.96E-18	7.29E-17	3.28E-17	2.09E-16	n/a	**2.64E-15**
dibromochloromethane	124-48-1	N	N	N	N	5.02E-14	2.48E-17	9.88E-19	1.39E-17	1.04E-17	4.19E-13	1.12E-12	2.25E-15	n/a	**1.59E-12**
dichlorodifluoromethane	75-71-8	N	N	N	N									n/a	**0.00E+00**
dimethyl phthalate	131-11-3	N	N	N	N									n/a	**0.00E+00**
di-n-butyl phthalate	84-74-2	N	N	N	N									n/a	**0.00E+00**
ethylbenzene	100-41-4	N	N	N	N	1.93E-14	9.85E-18	4.21E-22	1.05E-21	4.60E-19	9.83E-17	3.82E-19	4.64E-16	n/a	**1.98E-14**
Freon 113	76-13-1	N	N	N	N									n/a	**0.00E+00**
HD	505-60-2	N	N	N	N	3.91E-12	1.78E-15	6.91E-19	1.73E-18	6.87E-16	1.28E-13	3.46E-15	2.04E-13	n/a	**4.25E-12**
hexane	110-54-3	N	N	N	N									n/a	**0.00E+00**
methylene chloride	75-09-2	N	N	N	N	3.07E-15	3.94E-18	2.23E-22	5.58E-22	2.50E-18	2.47E-16	8.38E-20	1.04E-16	n/a	**3.43E-15**
styrene	100-42-5	N	N	N	N									n/a	**0.00E+00**
tetrachloroethene	127-18-4	N	N	N	N	4.40E-15	4.11E-16	3.87E-21	9.69E-21	2.14E-17	3.53E-15	1.22E-17	3.68E-14	n/a	**4.52E-14**
toluene	108-88-3	N	N	N	N									n/a	**0.00E+00**
trans-1,3-dichloropropene	10061-02-6	N	N	N	N	2.45E-15	1.87E-17	3.33E-21	1.68E-20	3.21E-18	4.96E-16	3.50E-18	7.71E-16	n/a	**3.75E-15**
trichloroethene	79-01-6	N	N	N	N	8.87E-14	9.96E-17	5.30E-21	1.33E-20	1.64E-17	8.70E-16	3.10E-18	4.79E-15	n/a	**9.45E-14**
trichlorofluoromethane	75-69-4	N	N	N	N									n/a	**0.00E+00**
vinyl chloride	75-01-4	N	N	N	N	3.06E-15	5.94E-17	2.72E-22	6.80E-22	2.47E-17	2.11E-16	1.08E-19	1.23E-15	n/a	**4.58E-15**
xylenes	1330-20-7	N	N	N	N									n/a	**0.00E+00**
2,3,7,8-TCDF	51207-31-9	N	Y	N	N									n/a	
Total PCDDs and PCDFs	NA	Y	N	N	N	1.38E-15	5.66E-16	2.38E-17	1.99E-16	7.53E-19	6.86E-14	8.27E-11	4.83E-14	n/a	**8.28E-11**
antimony	7440-36-0	N	N	N	N									n/a	**0.00E+00**
cadmium	7440-43-9	N	N	N	N	7.60E-14								n/a	**7.60E-14**
chromium (3+)	7440-47-3	N	N	N	N									n/a	**0.00E+00**
chromium (6+)	18540-29-9	N	N	N	N	4.66E-12	4.44E-18	1.16E-21	5.25E-20	5.92E-18	2.19E-12	8.82E-13	3.88E-16	n/a	**7.73E-12**
copper	7440-50-8	N	N	N	N									n/a	**0.00E+00**
lead	7439-92-1	N	N	N	N	2.32E-15	6.94E-21	2.48E-22	3.38E-20	5.62E-20	1.86E-14	9.78E-16	1.04E-19	n/a	**2.19E-14**
nickel	7440-02-0	N	N	N	N	1.93E-13								n/a	**1.93E-13**
zinc	7440-66-6	N	N	N	N									n/a	**0.00E+00**
Total Pathway Risk	**All Chemicals**					**9.40E-12**	**3.85E-15**	**3.24E-17**	**2.25E-16**	**8.99E-16**	**3.44E-12**	**9.31E-11**	**3.31E-13**	**0.00E+00**	**1.06E-10**

RISK AND HAZARD BY PATHWAY FOR RESIDENT EXPOSURE SCENARIOS

NONCARCINOGENIC EFFECTS: Adult Resident Exposure Scenario											
COPC	CAS Number	Hazard from Inhalation	Hazard from Dermal Water Contact	Hazard from Dermal Soil Contact	Hazard from Incidental Soil Ingestion	Hazard from Incidental Surface Water Ingestion	Hazard from Ingestion of Produce	Hazard from Ingestion of Terrestrial Animal Products	Hazard from Ingestion of Fish	Hazard from Ingestion of Breast Milk	Total Hazard from Individual Chemical
1,1,1-trichloroethane	71-55-6	2.78E-12	4.09E-16	2.73E-20	1.18E-19	6.17E-17	1.27E-14	2.34E-14	2.15E-14	n/a	**2.84E-12**
1,1-dichloroethane	75-34-3	1.35E-11	1.73E-15	3.90E-19	9.77E-19	5.58E-16	2.39E-13	1.78E-16	5.62E-14	n/a	**1.38E-11**
1,1-dichloroethene	75-35-4	3.03E-11	5.61E-15	1.17E-19	6.36E-19	1.02E-15	6.57E-14	5.14E-14	1.75E-13	n/a	**3.06E-11**
1,2-dichloroethane	107-06-2	1.37E-09	5.77E-15	4.69E-18	1.18E-17	2.95E-15	3.98E-12	1.90E-15	1.75E-13	n/a	**1.37E-09**
1,2-dichloropropane	78-87-5	2.09E-09	3.01E-15	1.50E-18	3.77E-18	8.02E-16	4.35E-13	7.29E-16	1.15E-13	n/a	**2.09E-09**
1,3-butadiene	106-99-0	2.90E-09								n/a	**2.90E-09**
2-butanone	78-93-3	2.02E-11	9.81E-16	4.14E-16	1.04E-15	2.32E-15	7.32E-11	2.19E-14	1.52E-13	n/a	**9.36E-11**
acetone	67-64-1	4.97E-11	5.83E-16	1.26E-16	3.17E-16	2.60E-15	4.06E-11	1.82E-15	1.71E-13	n/a	**9.05E-11**
benzene	71-43-2	3.81E-09	1.59E-12	2.86E-16	7.16E-16	2.45E-13	7.39E-11	1.42E-13	4.20E-11	n/a	**3.93E-09**
benzoic acid	65-85-0		5.05E-14	1.57E-15	1.63E-14	1.78E-14	3.91E-08	7.15E-14	1.17E-12	n/a	**3.91E-08**
benzyl alcohol	100-51-6		2.44E-12	1.43E-13	4.29E-12	2.43E-12	5.11E-07	5.16E-10	1.59E-11	n/a	**5.12E-07**
bis(2-ethylhexyl)-phthalate	117-81-7		1.19E-12	3.42E-13	4.71E-13	2.24E-14	4.33E-09	6.89E-08	8.34E-11	n/a	**7.33E-08**
bromodichloromethane	75-27-4		4.44E-14	9.08E-16	1.00E-14	1.64E-14	1.12E-09	7.92E-10	2.81E-12	n/a	**1.91E-09**
bromomethane	74-83-9	6.74E-09	2.52E-13	1.95E-16	4.89E-16	1.95E-13	7.10E-11	2.15E-13	6.69E-12	n/a	**6.81E-09**
carbon disulfide	75-15-0	1.13E-10	4.93E-14	9.43E-19	2.36E-18	6.75E-15	3.64E-13	4.93E-16	1.38E-12	n/a	**1.15E-10**
carbon tetrachloride	56-23-5	3.88E-10	7.63E-13	4.53E-17	1.49E-16	8.60E-14	1.68E-11	3.08E-11	5.11E-11	n/a	**4.88E-10**
chlorobenzene	108-90-7	1.82E-10	5.26E-14	3.45E-17	7.58E-17	4.07E-15	6.87E-12	1.52E-11	2.42E-12	n/a	**2.06E-10**
chloroform	67-66-3	2.29E-09	3.23E-13	9.55E-17	2.39E-16	9.66E-14	3.07E-11	4.67E-14	1.39E-11	n/a	**2.34E-09**
chloromethane	74-87-3	1.09E-09	5.11E-14	8.43E-18	2.11E-17	3.66E-14	3.91E-12	1.73E-15	2.40E-12	n/a	**1.10E-09**
cis-1,3-dichloropropene	10061-01-5	4.05E-10	4.77E-15	1.55E-19	2.23E-18	2.31E-15	3.40E-13	1.50E-13	1.63E-13	n/a	**4.06E-10**
dibromochloromethane	124-48-1		5.92E-14	8.23E-15	1.16E-13	2.48E-14	3.49E-09	9.35E-09	5.37E-12	n/a	**1.28E-08**
dichlorodifluoromethane	75-71-8	1.71E-10	3.24E-15	2.41E-18	1.59E-17	7.33E-16	4.93E-13	2.61E-13	1.40E-13	n/a	**1.72E-10**
dimethyl phthalate	131-11-3									n/a	**0.00E+00**
di-n-butyl phthalate	84-74-2		4.34E-12	1.19E-12	8.40E-13	6.72E-14	5.22E-10	2.72E-06	2.51E-09	n/a	**2.72E-06**
ethylbenzene	100-41-4	1.05E-11	2.09E-14	5.36E-18	1.34E-17	9.76E-16	1.22E-12	2.94E-15	9.85E-13	n/a	**1.27E-11**
Freon 113	76-13-1	5.91E-13	6.43E-17	3.02E-21	7.56E-21	5.61E-18	3.67E-15	2.79E-16	6.30E-15	n/a	**6.02E-13**
HD	505-60-2	6.51E-07	7.71E-11	1.79E-13	4.50E-13	2.97E-11	1.17E-08	2.25E-10	8.83E-09	n/a	**6.72E-07**
hexane	110-54-3	2.98E-11	1.06E-15	6.52E-21	1.63E-20	1.56E-17	3.16E-16	2.82E-18	6.50E-14	n/a	**2.99E-11**
methylene chloride	75-09-2	2.44E-10	2.04E-14	6.92E-18	1.74E-17	1.30E-14	7.68E-12	2.52E-15	5.38E-13	n/a	**2.53E-10**
styrene	100-42-5	2.92E-11	2.24E-14	4.91E-15	8.47E-15	1.37E-15	3.59E-11	1.05E-09	1.16E-12	n/a	**1.11E-09**
tetrachloroethene	127-18-4	2.93E-10	1.78E-13	1.00E-17	2.51E-17	9.26E-15	8.92E-12	8.96E-15	1.59E-11	n/a	**3.18E-10**
toluene	108-88-3	2.66E-12	1.96E-14	4.18E-18	1.05E-17	1.46E-15	9.79E-13	2.29E-15	7.24E-13	n/a	**4.39E-12**
trans-1,3-dichloropropene	10061-02-6	8.02E-11	1.46E-14	1.56E-17	7.82E-17	2.50E-15	2.29E-12	1.57E-14	6.01E-13	n/a	**8.31E-11**
trichloroethene	79-01-6	3.10E-10	1.94E-12	6.18E-16	1.55E-15	3.18E-13	1.00E-10	3.22E-13	9.32E-11	n/a	**5.07E-10**
trichlorofluoromethane	75-69-4	1.28E-11	1.73E-15	2.03E-20	8.68E-20	2.56E-16	8.62E-15	1.72E-14	8.94E-14	n/a	**1.29E-11**
vinyl chloride	75-01-4	9.84E-11	6.42E-14	1.76E-18	4.41E-18	2.67E-14	1.36E-12	6.76E-16	1.33E-12	n/a	**1.01E-10**
xylenes	1330-20-7	2.60E-10	2.62E-14	3.63E-17	9.11E-17	1.14E-15	1.99E-12	1.78E-14	1.28E-12	n/a	**2.63E-10**
2,3,7,8-TCDF	51207-31-9									n/a	
Total PCDDs and PCDFs	NA	1.27E-11	2.03E-11	9.28E-13	7.75E-12	2.70E-14	1.97E-09	2.17E-06	1.73E-09	n/a	**2.17E-06**
antimony	7440-36-0		6.07E-16	4.92E-18	2.90E-16	1.62E-15	5.31E-10	2.22E-11	1.34E-12	n/a	**5.55E-10**
cadmium	7440-43-9	5.91E-08	2.54E-15	6.50E-18	1.63E-15	6.77E-15	2.23E-09	9.14E-12	1.27E-10	n/a	**6.14E-08**
chromium (3+)	7440-47-3		1.38E-17	2.17E-20	9.79E-19	1.84E-17	6.81E-12	2.75E-12	1.21E-15	n/a	**9.56E-12**
chromium (6+)	18540-29-9	5.43E-08	6.91E-15	1.08E-17	4.90E-16	9.21E-15	3.41E-09	1.37E-09	6.04E-13	n/a	**5.91E-08**
copper	7440-50-8		3.87E-16	1.60E-17	1.31E-15	1.03E-15	3.83E-10	1.94E-10	6.77E-14	n/a	**5.76E-10**
lead	7439-92-1									n/a	**0.00E+00**
nickel	7440-02-0	1.25E-07	2.42E-15	1.97E-17	8.37E-16	3.23E-15	1.06E-09	3.43E-10	5.22E-12	n/a	**1.27E-07**
zinc	7440-66-6		4.71E-16	3.86E-18	5.18E-16	2.09E-15	6.89E-10	5.58E-12	8.95E-11	n/a	**7.84E-10**
Total Pathway Hazard	**All Chemicals**	**9.13E-07**	**1.11E-10**	**2.80E-12**	**1.40E-11**	**3.34E-11**	**5.82E-07**	**4.97E-06**	**1.36E-08**	**0.00E+00**	**6.48E-06**

RISK AND HAZARD BY PATHWAY FOR RESIDENT EXPOSURE SCENARIOS

CARCINOGENIC EFFECTS: Child Resident Exposure Scenario															
COPC	CAS Number	PCDD and PCDF Group Identifier	PCDD and PCDF Compound Identifier	Coplanar PCB Group Identifier	Coplanar PCB Compound Identifier	Risk from Inhalation	Risk from Dermal Water Contact	Risk from Dermal Soil Contact	Risk from Incidental Soil Ingestion	Risk from Incidental Surface Water Ingestion	Risk from Ingestion of Produce	Risk from Ingestion of Terrestrial Animal Products	Risk from Ingestion of Fish	Risk from Ingestion of Breast Milk	Total Risk from Individual Chemical
1,1,1-trichloroethane	71-55-6	N	N	N	N									n/a	**0.00E+00**
1,1-dichloroethane	75-34-3	N	N	N	N	2.15E-15	1.21E-19	1.04E-22	3.71E-22	1.06E-19	1.94E-17	2.24E-20	5.59E-18	n/a	**2.18E-15**
1,1-dichloroethene	75-35-4	N	N	N	N									n/a	**0.00E+00**
1,2-dichloroethane	107-06-2	N	N	N	N	3.48E-14	1.28E-18	4.00E-21	1.43E-20	1.79E-18	1.04E-15	7.65E-19	5.54E-17	n/a	**3.59E-14**
1,2-dichloropropane	78-87-5	N	N	N	N	3.13E-14	2.25E-18	4.31E-21	1.54E-20	1.64E-18	3.93E-16	9.86E-19	1.23E-16	n/a	**3.18E-14**
1,3-butadiene	106-99-0	N	N	N	N	3.48E-14	1.19E-16	1.74E-20	6.21E-20	4.89E-17	2.85E-15	4.18E-17	3.62E-15	n/a	**4.14E-14**
2-butanone	78-93-3	N	N	N	N									n/a	**0.00E+00**
acetone	67-64-1	N	N	N	N									n/a	**0.00E+00**
benzene	71-43-2	N	N	N	N	1.77E-13	4.27E-17	2.94E-20	1.05E-19	1.79E-17	2.39E-15	6.92E-18	1.61E-15	n/a	**1.81E-13**
benzoic acid	65-85-0	N	N	N	N									n/a	**0.00E+00**
benzyl alcohol	100-51-6	N	N	N	N									n/a	**0.00E+00**
bis(2-ethylhexyl)-phthalate	117-81-7	N	N	N	N	2.15E-14	4.07E-17	4.40E-17	8.63E-17	2.09E-18	2.96E-13	5.39E-12	4.07E-15	n/a	**5.71E-12**
bromodichloromethane	75-27-4	N	N	N	N	2.12E-13	6.73E-18	5.27E-19	8.30E-18	6.77E-18	2.02E-13	1.17E-13	6.08E-16	n/a	**5.33E-13**
bromomethane	74-83-9	N	N	N	N									n/a	**0.00E+00**
carbon disulfide	75-15-0	N	N	N	N									n/a	**0.00E+00**
carbon tetrachloride	56-23-5	N	N	N	N	4.66E-14	2.61E-17	5.94E-21	2.78E-20	8.03E-18	6.55E-16	1.94E-15	2.49E-15	n/a	**5.18E-14**
chlorobenzene	108-90-7	N	N	N	N									n/a	**0.00E+00**
chloroform	67-66-3	N	N	N	N	5.20E-13	1.22E-17	1.38E-20	4.94E-20	9.98E-18	1.39E-15	3.20E-18	7.51E-16	n/a	**5.22E-13**
chloromethane	74-87-3	N	N	N	N									n/a	**0.00E+00**
cis-1,3-dichloropropene	10061-01-5	N	N	N	N	6.48E-15	1.75E-18	2.18E-22	4.46E-21	2.31E-18	1.54E-16	5.38E-17	8.52E-17	n/a	**6.77E-15**
dibromochloromethane	124-48-1	N	N	N	N	1.41E-13	1.21E-17	6.45E-18	1.30E-16	1.39E-17	9.92E-13	1.87E-12	1.57E-15	n/a	**3.01E-12**
dichlorodifluoromethane	75-71-8	N	N	N	N									n/a	**0.00E+00**
dimethyl phthalate	131-11-3	N	N	N	N									n/a	**0.00E+00**
di-n-butyl phthalate	84-74-2	N	N	N	N									n/a	**0.00E+00**
ethylbenzene	100-41-4	N	N	N	N	5.39E-14	2.81E-18	2.76E-21	9.84E-21	3.58E-19	1.87E-16	7.12E-19	1.89E-16	n/a	**5.43E-14**
Freon 113	76-13-1	N	N	N	N									n/a	**0.00E+00**
HD	505-60-2	N	N	N	N	1.09E-11	5.08E-16	4.52E-18	1.62E-17	5.34E-16	1.30E-13	2.68E-15	8.31E-14	n/a	**1.12E-11**
hexane	110-54-3	N	N	N	N									n/a	**0.00E+00**
methylene chloride	75-09-2	N	N	N	N	8.60E-15	1.12E-18	1.46E-21	5.21E-21	1.94E-18	4.94E-16	2.51E-19	4.22E-17	n/a	**9.14E-15**
styrene	100-42-5	N	N	N	N									n/a	**0.00E+00**
tetrachloroethene	127-18-4	N	N	N	N	1.23E-14	1.17E-16	2.53E-20	9.05E-20	1.67E-17	6.55E-15	1.07E-17	1.50E-14	n/a	**3.40E-14**
toluene	108-88-3	N	N	N	N									n/a	**0.00E+00**
trans-1,3-dichloropropene	10061-02-6	N	N	N	N	6.87E-15	5.34E-18	2.18E-20	1.56E-19	2.50E-18	1.16E-15	1.04E-17	3.15E-16	n/a	**8.36E-15**
trichloroethene	79-01-6	N	N	N	N	2.48E-13	2.84E-17	3.47E-20	1.24E-19	1.27E-17	1.78E-15	8.52E-18	1.95E-15	n/a	**2.52E-13**
trichlorofluoromethane	75-69-4	N	N	N	N									n/a	**0.00E+00**
vinyl chloride	75-01-4	N	N	N	N	8.56E-15	1.69E-17	1.78E-21	6.35E-21	1.92E-17	4.27E-16	3.23E-19	5.00E-16	n/a	**9.53E-15**
xylenes	1330-20-7	N	N	N	N									n/a	**0.00E+00**
2,3,7,8-TCDF	51207-31-9	N	Y	N	N									n/a	
Total PCDDs and PCDFs	NA	Y	N	N	N	3.85E-15	1.34E-16	2.03E-17	2.41E-16	4.87E-19	3.63E-14	5.34E-11	1.64E-14	n/a	**5.35E-11**
antimony	7440-36-0	N	N	N	N									n/a	**0.00E+00**
cadmium	7440-43-9	N	N	N	N	2.13E-13								n/a	**2.13E-13**
chromium (3+)	7440-47-3	N	N	N	N									n/a	**0.00E+00**
chromium (6+)	18540-29-9	N	N	N	N	1.30E-11	1.27E-18	7.61E-21	4.90E-19	4.60E-18	1.25E-12	4.79E-13	1.58E-16	n/a	**1.48E-11**
copper	7440-50-8	N	N	N	N									n/a	**0.00E+00**
lead	7439-92-1	N	N	N	N	6.50E-15	2.00E-21	1.62E-21	3.15E-19	4.40E-20	1.06E-14	6.07E-16	4.27E-20	n/a	**1.77E-14**
nickel	7440-02-0	N	N	N	N	5.41E-13								n/a	**5.41E-13**
zinc	7440-66-6	N	N	N	N									n/a	**0.00E+00**
Total Pathway Risk	**All Chemicals**					**2.63E-11**	**1.08E-15**	**7.59E-17**	**4.83E-16**	**7.06E-16**	**2.94E-12**	**6.13E-11**	**1.33E-13**	**0.00E+00**	**9.07E-11**

RISK AND HAZARD BY PATHWAY FOR RESIDENT EXPOSURE SCENARIOS

NONCARCINOGENIC EFFECTS: Child Resident Exposure Scenario											
COPC	CAS Number	Hazard from Inhalation	Hazard from Dermal Water Contact	Hazard from Dermal Soil Contact	Hazard from Incidental Soil Ingestion	Hazard from Incidental Surface Water Ingestion	Hazard from Ingestion of Produce	Hazard from Ingestion of Terrestrial Animal Products	Hazard from Ingestion of Fish	Hazard from Ingestion of Breast Milk	Total Hazard from Individual Chemical
1,1,1-trichloroethane	71-55-6	7.80E-12	7.00E-16	1.79E-19	1.10E-18	2.88E-16	2.53E-14	7.40E-14	5.25E-14	n/a	**7.95E-12**
1,1-dichloroethane	75-34-3	3.77E-11	2.96E-15	2.55E-18	9.11E-18	2.61E-15	4.76E-13	5.50E-16	1.37E-13	n/a	**3.83E-11**
1,1-dichloroethene	75-35-4	8.48E-11	9.61E-15	7.64E-19	5.94E-18	4.77E-15	1.35E-13	8.59E-14	4.28E-13	n/a	**8.55E-11**
1,2-dichloroethane	107-06-2	3.82E-09	9.87E-15	3.08E-17	1.10E-16	1.38E-14	7.98E-12	5.89E-15	4.27E-13	n/a	**3.83E-09**
1,2-dichloropropane	78-87-5	5.86E-09	5.15E-15	9.85E-18	3.52E-17	3.74E-15	8.98E-13	2.26E-15	2.82E-13	n/a	**5.86E-09**
1,3-butadiene	106-99-0	8.12E-09								n/a	**8.12E-09**
2-butanone	78-93-3	5.67E-11	1.68E-15	2.71E-15	9.69E-15	1.08E-14	2.03E-10	6.79E-14	3.71E-13	n/a	**2.60E-10**
acetone	67-64-1	1.39E-10	9.98E-16	8.28E-16	2.96E-15	1.22E-14	9.63E-11	5.64E-15	4.17E-13	n/a	**2.36E-10**
benzene	71-43-2	1.07E-08	2.72E-12	1.87E-15	6.68E-15	1.14E-12	1.52E-10	4.41E-13	1.03E-10	n/a	**1.09E-08**
benzoic acid	65-85-0		8.63E-14	1.03E-14	1.52E-13	8.32E-14	7.42E-08	2.21E-13	2.86E-12	n/a	**7.42E-08**
benzyl alcohol	100-51-6		4.18E-12	9.38E-13	4.01E-11	1.14E-11	1.23E-06	1.60E-09	3.88E-11	n/a	**1.23E-06**
bis(2-ethylhexyl)-phthalate	117-81-7		2.04E-12	2.24E-12	4.40E-12	1.05E-13	1.48E-08	2.70E-07	2.04E-10	n/a	**2.85E-07**
bromodichloromethane	75-27-4		7.60E-14	5.95E-15	9.38E-14	7.64E-14	2.28E-09	1.33E-09	6.86E-12	n/a	**3.62E-09**
bromomethane	74-83-9	1.89E-08	4.32E-13	1.28E-15	4.56E-15	9.11E-13	1.63E-10	8.09E-13	1.63E-11	n/a	**1.90E-08**
carbon disulfide	75-15-0	3.17E-10	8.44E-14	6.18E-18	2.21E-17	3.15E-14	7.25E-13	1.52E-15	3.38E-12	n/a	**3.21E-10**
carbon tetrachloride	56-23-5	1.09E-09	1.31E-12	2.97E-16	1.39E-15	4.01E-13	3.28E-11	9.69E-11	1.25E-10	n/a	**1.34E-09**
chlorobenzene	108-90-7	5.09E-10	9.00E-14	2.26E-16	7.07E-16	1.90E-14	1.35E-11	4.81E-11	5.90E-12	n/a	**5.76E-10**
chloroform	67-66-3	6.42E-09	5.52E-13	6.25E-16	2.23E-15	4.51E-13	6.28E-11	1.45E-13	3.39E-11	n/a	**6.52E-09**
chloromethane	74-87-3	3.06E-09	8.75E-14	5.52E-17	1.97E-16	1.71E-13	8.69E-12	5.37E-15	5.87E-12	n/a	**3.07E-09**
cis-1,3-dichloropropene	10061-01-5	1.13E-09	8.16E-15	1.02E-18	2.08E-17	1.08E-14	7.17E-13	2.51E-13	3.98E-13	n/a	**1.14E-09**
dibromochloromethane	124-48-1		1.01E-13	5.39E-14	1.08E-12	1.16E-13	8.30E-09	1.57E-08	1.31E-11	n/a	**2.40E-08**
dichlorodifluoromethane	75-71-8	4.80E-10	5.54E-15	1.58E-17	1.48E-16	3.42E-15	1.19E-12	5.66E-13	3.41E-13	n/a	**4.82E-10**
dimethyl phthalate	131-11-3									n/a	**0.00E+00**
di-n-butyl phthalate	84-74-2		7.43E-12	7.80E-12	7.84E-12	3.14E-13	1.74E-09	1.06E-05	6.13E-09	n/a	**1.06E-05**
ethylbenzene	100-41-4	2.94E-11	3.58E-14	3.51E-17	1.25E-16	4.56E-15	2.38E-12	9.07E-15	2.41E-12	n/a	**3.42E-11**
Freon 113	76-13-1	1.66E-12	1.10E-16	1.98E-20	7.05E-20	2.62E-17	1.25E-14	8.64E-16	1.54E-14	n/a	**1.68E-12**
HD	505-60-2	1.82E-06	1.32E-10	1.17E-12	4.20E-12	1.39E-10	3.38E-08	6.97E-10	2.16E-08	n/a	**1.88E-06**
hexane	110-54-3	8.34E-11	1.81E-15	4.27E-20	1.52E-19	7.27E-17	6.26E-16	8.58E-18	1.59E-13	n/a	**8.36E-11**
methylene chloride	75-09-2	6.84E-10	3.50E-14	4.53E-17	1.62E-16	6.05E-14	1.54E-11	7.80E-15	1.31E-12	n/a	**7.01E-10**
styrene	100-42-5	8.19E-11	3.84E-14	3.22E-14	7.91E-14	6.39E-15	1.13E-10	4.07E-09	2.83E-12	n/a	**4.27E-09**
tetrachloroethene	127-18-4	8.20E-10	3.04E-13	6.57E-17	2.35E-16	4.32E-14	1.70E-11	2.76E-14	3.89E-11	n/a	**8.77E-10**
toluene	108-88-3	7.46E-12	3.35E-14	2.74E-17	9.78E-17	6.81E-15	1.94E-12	7.07E-15	1.77E-12	n/a	**1.12E-11**
trans-1,3-dichloropropene	10061-02-6	2.25E-10	2.49E-14	1.02E-16	7.30E-16	1.17E-14	5.40E-12	4.87E-14	1.47E-12	n/a	**2.32E-10**
trichloroethene	79-01-6	8.69E-10	3.32E-12	4.05E-15	1.45E-14	1.49E-12	2.08E-10	9.94E-13	2.28E-10	n/a	**1.31E-09**
trichlorofluoromethane	75-69-4	3.58E-11	2.96E-15	1.33E-19	8.10E-19	1.20E-15	1.72E-14	5.43E-14	2.18E-13	n/a	**3.60E-11**
vinyl chloride	75-01-4	2.76E-10	1.10E-13	1.15E-17	4.12E-17	1.25E-13	2.77E-12	2.09E-15	3.24E-12	n/a	**2.82E-10**
xylenes	1330-20-7	7.27E-10	4.48E-14	2.38E-16	8.50E-16	5.30E-15	4.15E-12	5.49E-14	3.12E-12	n/a	**7.34E-10**
2,3,7,8-TCDF	51207-31-9									n/a	
Total PCDDs and PCDFs	NA	3.55E-11	3.47E-11	6.08E-12	7.23E-11	1.26E-13	6.46E-09	8.48E-06	4.23E-09	n/a	**8.49E-06**
antimony	7440-36-0		1.04E-15	3.22E-17	2.71E-15	7.54E-15	1.82E-09	5.87E-11	3.28E-12	n/a	**1.88E-09**
cadmium	7440-43-9	1.65E-07	4.35E-15	4.26E-17	1.52E-14	3.16E-14	7.61E-09	2.09E-11	3.11E-10	n/a	**1.73E-07**
chromium (3+)	7440-47-3		2.37E-17	1.42E-19	9.14E-18	8.59E-17	2.33E-11	8.94E-12	2.95E-15	n/a	**3.22E-11**
chromium (6+)	18540-29-9	1.52E-07	1.18E-14	7.10E-17	4.57E-15	4.30E-14	1.17E-08	4.47E-09	1.48E-12	n/a	**1.68E-07**
copper	7440-50-8		6.62E-16	1.05E-16	1.22E-14	4.83E-15	1.31E-09	5.61E-10	1.65E-13	n/a	**1.87E-09**
lead	7439-92-1									n/a	**0.00E+00**
nickel	7440-02-0	3.51E-07	4.14E-15	1.29E-16	7.81E-15	1.51E-14	3.63E-09	1.02E-09	1.28E-11	n/a	**3.56E-07**
zinc	7440-66-6		8.07E-16	2.53E-17	4.84E-15	9.77E-15	2.36E-09	1.89E-11	2.19E-10	n/a	**2.59E-09**
Total Pathway Hazard	**All Chemicals**	**2.56E-06**	**1.90E-10**	**1.83E-11**	**1.30E-10**	**1.56E-10**	**1.40E-06**	**1.94E-05**	**3.33E-08**	**0.00E+00**	**2.34E-05**

RISK AND HAZARD BY PATHWAY FOR RESIDENT EXPOSURE SCENARIOS

CARCINOGENIC EFFECTS:
Infant Resident Exposure Scenario

COPC	CAS Number	PCDD and PCDF Group Identifier	PCDD and PCDF Compound Identifier	Coplanar PCB Group Identifier	Coplanar PCB Compound Identifier	Risk from Inhalation	Risk from Dermal Water Contact	Risk from Dermal Soil Contact	Risk from Incidental Soil Ingestion	Risk from Incidental Surface Water Ingestion	Risk from Ingestion of Produce	Risk from Ingestion of Terrestrial Animal Products	Risk from Ingestion of Fish	Risk from Ingestion of Breast Milk	Total Risk from Individual Chemical
1,1,1-trichloroethane	71-55-6	N	N	N	N		n/a			n/a					**0.00E+00**
1,1-dichloroethane	75-34-3	N	N	N	N	2.42E-16	n/a	2.92E-23	1.11E-22	n/a	4.77E-18	1.32E-20	1.68E-18		**2.48E-16**
1,1-dichloroethene	75-35-4	N	N	N	N		n/a			n/a					**0.00E+00**
1,2-dichloroethane	107-06-2	N	N	N	N	3.91E-15	n/a	1.12E-21	4.28E-21	n/a	2.55E-16	4.50E-19	1.66E-17	1.20E-14	**1.62E-14**
1,2-dichloropropane	78-87-5	N	N	N	N	3.52E-15	n/a	1.21E-21	4.62E-21	n/a	9.51E-17	5.79E-19	3.69E-17		**3.66E-15**
1,3-butadiene	106-99-0	N	N	N	N	3.91E-15	n/a	4.89E-21	1.86E-20	n/a	7.10E-16	2.51E-17	1.08E-15		**5.73E-15**
2-butanone	78-93-3	N	N	N	N		n/a			n/a					**0.00E+00**
acetone	67-64-1	N	N	N	N		n/a			n/a					**0.00E+00**
benzene	71-43-2	N	N	N	N	1.99E-14	n/a	8.26E-21	3.15E-20	n/a	5.80E-16	4.07E-18	4.83E-16	1.21E-13	**1.42E-13**
benzoic acid	65-85-0	N	N	N	N		n/a			n/a					**0.00E+00**
benzyl alcohol	100-51-6	N	N	N	N		n/a			n/a					**0.00E+00**
bis(2-ethylhexyl)-phthalate	117-81-7	N	N	N	N	2.42E-15	n/a	1.24E-17	2.59E-17	n/a	7.51E-14	3.73E-12	1.22E-15		**3.81E-12**
bromodichloromethane	75-27-4	N	N	N	N	2.39E-14	n/a	1.48E-19	2.49E-18	n/a	4.92E-14	1.99E-14	1.82E-16		**9.32E-14**
bromomethane	74-83-9	N	N	N	N		n/a			n/a					**0.00E+00**
carbon disulfide	75-15-0	N	N	N	N		n/a			n/a					**0.00E+00**
carbon tetrachloride	56-23-5	N	N	N	N	5.25E-15	n/a	1.67E-21	8.34E-21	n/a	1.63E-16	1.18E-15	7.48E-16		**7.34E-15**
chlorobenzene	108-90-7	N	N	N	N		n/a			n/a					**0.00E+00**
chloroform	67-66-3	N	N	N	N	5.85E-14	n/a	3.89E-21	1.48E-20	n/a	3.38E-16	1.88E-18	2.25E-16	6.69E-14	**1.26E-13**
chloromethane	74-87-3	N	N	N	N		n/a			n/a					**0.00E+00**
cis-1,3-dichloropropene	10061-01-5	N	N	N	N	7.29E-16	n/a	6.12E-23	1.34E-21	n/a	3.68E-17	9.13E-18	2.56E-17	1.55E-14	**1.63E-14**
dibromochloromethane	124-48-1	N	N	N	N	1.58E-14	n/a	1.81E-18	3.89E-17	n/a	2.26E-13	3.18E-13	4.71E-16		**5.60E-13**
dichlorodifluoromethane	75-71-8	N	N	N	N		n/a			n/a					**0.00E+00**
dimethyl phthalate	131-11-3	N	N	N	N		n/a			n/a					**0.00E+00**
di-n-butyl phthalate	84-74-2	N	N	N	N		n/a			n/a					**0.00E+00**
ethylbenzene	100-41-4	N	N	N	N	6.07E-15	n/a	7.75E-22	2.95E-21	n/a	4.66E-17	4.18E-19	5.67E-17	2.38E-15	**8.55E-15**
Freon 113	76-13-1	N	N	N	N		n/a			n/a					**0.00E+00**
HD	505-60-2	N	N	N	N	1.23E-12	n/a	1.27E-18	4.85E-18	n/a	3.06E-14	1.59E-15	2.49E-14		**1.29E-12**
hexane	110-54-3	N	N	N	N		n/a			n/a					**0.00E+00**
methylene chloride	75-09-2	N	N	N	N	9.68E-16	n/a	4.10E-22	1.56E-21	n/a	1.21E-16	1.47E-19	1.27E-17	1.36E-14	**1.47E-14**
styrene	100-42-5	N	N	N	N		n/a			n/a					**0.00E+00**
tetrachloroethene	127-18-4	N	N	N	N	1.38E-15	n/a	7.12E-21	2.71E-20	n/a	1.65E-15	6.29E-18	4.50E-15	1.14E-13	**1.21E-13**
toluene	108-88-3	N	N	N	N		n/a			n/a					**0.00E+00**
trans-1,3-dichloropropene	10061-02-6	N	N	N	N	7.73E-16	n/a	6.14E-21	4.69E-20	n/a	2.64E-16	6.12E-18	9.44E-17	1.69E-14	**1.80E-14**
trichloroethene	79-01-6	N	N	N	N	2.79E-14	n/a	9.77E-21	3.72E-20	n/a	4.31E-16	5.00E-18	5.86E-16	8.39E-14	**1.13E-13**
trichlorofluoromethane	75-69-4	N	N	N	N		n/a			n/a					**0.00E+00**
vinyl chloride	75-01-4	N	N	N	N	9.63E-16	n/a	5.00E-22	1.91E-21	n/a	1.04E-16	1.90E-19	1.50E-16		**1.22E-15**
xylenes	1330-20-7	N	N	N	N		n/a			n/a					**0.00E+00**
2,3,7,8-TCDF	51207-31-9	N	Y	N	N		n/a			n/a					**0.00E+00**
Total PCDDs and PCDFs	NA	Y	N	N	N	4.34E-16	n/a	5.70E-18	7.24E-17	n/a	8.98E-15	3.69E-11	4.91E-15	2.07E-09	**2.10E-09**
antimony	7440-36-0	N	N	N	N		n/a			n/a					**0.00E+00**
cadmium	7440-43-9	N	N	N	N	2.39E-14	n/a			n/a					**2.39E-14**
chromium (3+)	7440-47-3	N	N	N	N		n/a			n/a					**0.00E+00**
chromium (6+)	18540-29-9	N	N	N	N	1.47E-12	n/a	2.14E-21	1.47E-19	n/a	3.19E-13	2.99E-13	4.74E-17	5.27E-13	**2.61E-12**
copper	7440-50-8	N	N	N	N		n/a			n/a					**0.00E+00**
lead	7439-92-1	N	N	N	N	7.32E-16	n/a	4.57E-22	9.46E-20	n/a	2.70E-15	4.10E-16	1.28E-20	3.46E-15	**7.31E-15**
nickel	7440-02-0	N	N	N	N	6.09E-14	n/a			n/a					**6.09E-14**
zinc	7440-66-6	N	N	N	N		n/a			n/a					**0.00E+00**
Total Pathway Risk	**All Chemicals**					**2.96E-12**	**0.00E+00**	**2.13E-17**	**1.45E-16**	**0.00E+00**	**7.16E-13**	**4.13E-11**	**3.98E-14**	**2.07E-09**	**2.11E-09**

RISK AND HAZARD BY PATHWAY FOR RESIDENT EXPOSURE SCENARIOS

NONCARCINOGENIC EFFECTS: Infant Resident Exposure Scenario											
COPC	CAS Number	Hazard from Inhalation	Hazard from Dermal Water Contact	Hazard from Dermal Soil Contact	Hazard from Incidental Soil Ingestion	Hazard from Incidental Surface Water Ingestion	Hazard from Ingestion of Produce	Hazard from Ingestion of Terrestrial Animal Products	Hazard from Ingestion of Fish	Hazard from Ingestion of Breast Milk	Total Hazard from Individual Chemical
1,1,1-trichloroethane	71-55-6	4.39E-12	n/a	2.51E-19	1.66E-18	n/a	3.12E-14	2.26E-13	7.88E-14		**4.72E-12**
1,1-dichloroethane	75-34-3	2.12E-11	n/a	3.59E-18	1.37E-17	n/a	5.86E-13	1.62E-15	2.06E-13		**2.20E-11**
1,1-dichloroethene	75-35-4	4.77E-11	n/a	1.07E-18	8.91E-18	n/a	1.64E-13	7.30E-14	6.43E-13		**4.86E-11**
1,2-dichloroethane	107-06-2	2.15E-09	n/a	4.32E-17	1.65E-16	n/a	9.79E-12	1.73E-14	6.40E-13	4.63E-10	**2.62E-09**
1,2-dichloropropane	78-87-5	3.30E-09	n/a	1.39E-17	5.28E-17	n/a	1.09E-12	6.63E-15	4.22E-13		**3.30E-09**
1,3-butadiene	106-99-0	4.57E-09	n/a			n/a					**4.57E-09**
2-butanone	78-93-3	3.19E-11	n/a	3.82E-15	1.45E-14	n/a	2.16E-10	2.00E-13	5.57E-13	5.60E-10	**8.09E-10**
acetone	67-64-1	7.83E-11	n/a	1.16E-15	4.43E-15	n/a	1.09E-10	1.66E-14	6.26E-13	4.20E-10	**6.09E-10**
benzene	71-43-2	6.00E-09	n/a	2.63E-15	1.00E-14	n/a	1.85E-10	1.29E-12	1.54E-10	3.86E-08	**4.49E-08**
benzoic acid	65-85-0		n/a	1.45E-14	2.28E-13	n/a	9.35E-08	6.50E-13	4.28E-12		**9.35E-08**
benzyl alcohol	100-51-6		n/a	1.32E-12	6.01E-11	n/a	1.39E-06	4.70E-09	5.82E-11		**1.40E-06**
bis(2-ethylhexyl)-phthalate	117-81-7		n/a	3.15E-12	6.59E-12	n/a	1.88E-08	9.33E-07	3.06E-10		**9.52E-07**
bromodichloromethane	75-27-4		n/a	8.36E-15	1.41E-13	n/a	2.78E-09	1.13E-09	1.03E-11		**3.91E-09**
bromomethane	74-83-9	1.06E-08	n/a	1.80E-15	6.84E-15	n/a	1.88E-10	2.73E-12	2.45E-11		**1.08E-08**
carbon disulfide	75-15-0	1.78E-10	n/a	8.69E-18	3.31E-17	n/a	8.94E-13	4.48E-15	5.07E-12	1.06E-09	**1.24E-09**
carbon tetrachloride	56-23-5	6.12E-10	n/a	4.18E-16	2.08E-15	n/a	4.08E-11	2.95E-10	1.87E-10		**1.13E-09**
chlorobenzene	108-90-7	2.86E-10	n/a	3.18E-16	1.06E-15	n/a	1.67E-11	1.46E-10	8.85E-12		**4.58E-10**
chloroform	67-66-3	3.61E-09	n/a	8.79E-16	3.35E-15	n/a	7.63E-11	4.25E-13	5.09E-11	1.51E-08	**1.88E-08**
chloromethane	74-87-3	1.72E-09	n/a	7.77E-17	2.96E-16	n/a	1.02E-11	1.58E-14	8.81E-12	5.10E-09	**6.84E-09**
cis-1,3-dichloropropene	10061-01-5	6.38E-10	n/a	1.43E-18	3.12E-17	n/a	8.59E-13	2.13E-13	5.96E-13	3.61E-10	**1.00E-09**
dibromochloromethane	124-48-1		n/a	7.58E-14	1.63E-12	n/a	9.43E-09	1.33E-08	1.97E-11		**2.27E-08**
dichlorodifluoromethane	75-71-8	2.70E-10	n/a	2.22E-17	2.22E-16	n/a	1.34E-12	4.18E-13	5.12E-13	1.18E-10	**3.90E-10**
dimethyl phthalate	131-11-3		n/a			n/a					**0.00E+00**
di-n-butyl phthalate	84-74-2		n/a	1.10E-11	1.18E-11	n/a	1.92E-09	3.68E-05	9.19E-09		**3.68E-05**
ethylbenzene	100-41-4	1.65E-11	n/a	4.93E-17	1.88E-16	n/a	2.97E-12	2.66E-14	3.61E-12	1.52E-10	**1.75E-10**
Freon 113	76-13-1	9.31E-13	n/a	2.78E-20	1.06E-19	n/a	1.60E-14	2.59E-15	2.31E-14	8.32E-13	**1.80E-12**
HD	505-60-2	1.03E-06	n/a	1.65E-12	6.29E-12	n/a	3.97E-08	2.07E-09	3.24E-08		**1.10E-06**
hexane	110-54-3	4.69E-11	n/a	6.00E-20	2.29E-19	n/a	7.75E-16	2.49E-17	2.38E-13	2.82E-12	**5.00E-11**
methylene chloride	75-09-2	3.85E-10	n/a	6.38E-17	2.43E-16	n/a	1.89E-11	2.29E-14	1.97E-12	2.12E-09	**2.52E-09**
styrene	100-42-5	4.61E-11	n/a	4.52E-14	1.19E-13	n/a	1.15E-10	1.40E-08	4.24E-12	5.22E-09	**1.94E-08**
tetrachloroethene	127-18-4	4.62E-10	n/a	9.23E-17	3.52E-16	n/a	2.14E-11	8.16E-14	5.83E-11	1.48E-09	**2.02E-09**
toluene	108-88-3	4.20E-12	n/a	3.85E-17	1.47E-16	n/a	2.39E-12	2.07E-14	2.65E-12	2.24E-10	**2.34E-10**
trans-1,3-dichloropropene	10061-02-6	1.26E-10	n/a	1.43E-16	1.10E-15	n/a	6.16E-12	1.43E-13	2.20E-12	3.93E-10	**5.28E-10**
trichloroethene	79-01-6	4.89E-10	n/a	5.70E-15	2.17E-14	n/a	2.51E-10	2.92E-12	3.42E-10	4.90E-08	**5.00E-08**
trichlorofluoromethane	75-69-4	2.01E-11	n/a	1.87E-19	1.22E-18	n/a	2.12E-14	1.66E-13	3.28E-13	4.01E-11	**6.07E-11**
vinyl chloride	75-01-4	1.55E-10	n/a	1.62E-17	6.17E-17	n/a	3.38E-12	6.16E-15	4.86E-12		**1.63E-10**
xylenes	1330-20-7	4.09E-10	n/a	3.35E-16	1.28E-15	n/a	5.01E-12	1.60E-13	4.67E-12	1.90E-10	**6.09E-10**
2,3,7,8-TCDF	51207-31-9		n/a			n/a					
Total PCDDs and PCDFs	NA	2.00E-11	n/a	8.54E-12	1.08E-10	n/a	7.81E-09	2.93E-05	6.35E-09	1.59E-03	**1.62E-03**
antimony	7440-36-0		n/a	4.53E-17	4.07E-15	n/a	2.32E-09	1.56E-10	4.92E-12	2.95E-09	**5.43E-09**
cadmium	7440-43-9	9.30E-08	n/a	5.98E-17	2.28E-14	n/a	9.72E-09	4.67E-11	4.67E-10	1.25E-08	**1.16E-07**
chromium (3+)	7440-47-3		n/a	2.00E-19	1.37E-17	n/a	2.97E-11	2.79E-11	4.43E-15	4.92E-11	**1.07E-10**
chromium (6+)	18540-29-9	8.55E-08	n/a	9.98E-17	6.86E-15	n/a	1.49E-08	1.39E-08	2.21E-12	2.46E-08	**1.39E-07**
copper	7440-50-8		n/a	1.48E-16	1.84E-14	n/a	1.67E-09	1.61E-09	2.48E-13	2.94E-09	**6.22E-09**
lead	7439-92-1		n/a			n/a					**0.00E+00**
nickel	7440-02-0	1.97E-07	n/a	1.81E-16	1.17E-14	n/a	4.63E-09	2.97E-09	1.91E-11	7.29E-09	**2.12E-07**
zinc	7440-66-6		n/a	3.55E-17	7.26E-15	n/a	3.01E-09	6.04E-11	3.28E-10	4.13E-09	**7.52E-09**
Total Pathway Hazard	**All Chemicals**	**1.44E-06**	**0.00E+00**	**2.58E-11**	**1.95E-10**	**0.00E+00**	**1.60E-06**	**6.71E-05**	**5.00E-08**	**1.59E-03**	**1.66E-03**

RISK AND HAZARD BY PATHWAY FOR RESIDENT EXPOSURE SCENARIOS

CARCINOGENIC EFFECTS: Early Life Exposure - Infant															
COPC	CAS Number	PCDD and PCDF Group Identifier	PCDD and PCDF Compound Identifier	Coplanar PCB Group Identifier	Coplanar PCB Compound Identifier	Risk from Inhalation	Risk from Dermal Water Contact	Risk from Dermal Soil Contact	Risk from Incidental Soil Ingestion	Risk from Incidental Surface Water Ingestion	Risk from Ingestion of Produce	Risk from Ingestion of Terrestrial Animal Products	Risk from Ingestion of Fish	Risk from Ingestion of Breast Milk	Total Risk from Individual Chemical
vinyl chloride	75-01-4	N	N	N	N	6.74E-14	n/a	3.50E-20	1.33E-19	n/a	7.30E-15	1.33E-17	1.05E-14	n/a	**8.52E-14**

CARCINOGENIC EFFECTS: Early Life Exposure - Child															
COPC	CAS Number	PCDD and PCDF Group Identifier	PCDD and PCDF Compound Identifier	Coplanar PCB Group Identifier	Coplanar PCB Compound Identifier	Risk from Inhalation	Risk from Dermal Water Contact	Risk from Dermal Soil Contact	Risk from Incidental Soil Ingestion	Risk from Incidental Surface Water Ingestion	Risk from Ingestion of Produce	Risk from Ingestion of Terrestrial Animal Products	Risk from Ingestion of Fish	Risk from Ingestion of Breast Milk	Total Risk from Individual Chemical
vinyl chloride	75-01-4	N	N	N	N	1.20E-13	2.37E-16	2.49E-20	8.89E-20	2.69E-16	5.98E-15	4.52E-18	6.99E-15	n/a	**1.33E-13**

RISK AND HAZARD BY PATHWAY FOR SUBSISTENCE FISHER EXPOSURE SCENARIOS

CARCINOGENIC EFFECTS: Adult Subsistence Fisher Exposure Scenario											
COPC	CAS Number	Risk from Inhalation	Risk from Dermal Water Contact	Risk from Dermal Soil Contact	Risk from Incidental Soil Ingestion	Risk from Incidental Surface Water Ingestion	Risk from Ingestion of Produce	Risk from Ingestion of Terrestrial Animal Products	Risk from Ingestion of Fish	Risk from Ingestion of Breast Milk	Total Risk from Individual Chemical
1,1,1-trichloroethane	71-55-6									n/a	**0.00E+00**
1,1-dichloroethane	75-34-3	7.68E-16	4.23E-19	1.59E-23	3.98E-23	1.36E-19	9.76E-18	7.73E-21	3.43E-17	n/a	**8.13E-16**
1,1-dichloroethene	75-35-4									n/a	**0.00E+00**
1,2-dichloroethane	107-06-2	1.24E-14	4.49E-18	6.10E-22	1.53E-21	2.30E-18	5.20E-16	2.60E-19	3.40E-16	n/a	**1.33E-14**
1,2-dichloropropane	78-87-5	1.12E-14	7.88E-18	6.58E-22	1.65E-21	2.10E-18	1.92E-16	3.51E-19	7.55E-16	n/a	**1.21E-14**
1,3-butadiene	106-99-0	1.24E-14	4.17E-16	2.65E-21	6.65E-21	6.29E-17	4.47E-15	7.48E-17	2.22E-14	n/a	**3.96E-14**
2-butanone	78-93-3									n/a	**0.00E+00**
acetone	67-64-1									n/a	**0.00E+00**
benzene	71-43-2	6.32E-14	1.50E-16	4.49E-21	1.12E-20	2.31E-17	1.17E-15	2.51E-18	9.89E-15	n/a	**7.45E-14**
benzoic acid	65-85-0									n/a	**0.00E+00**
benzyl alcohol	100-51-6									n/a	**0.00E+00**
bis(2-ethylhexyl)-phthalate	117-81-7	7.69E-15	1.32E-16	6.83E-18	9.42E-18	2.49E-18	5.09E-13	8.24E-12	2.32E-14	n/a	**8.78E-12**
bromodichloromethane	75-27-4	7.59E-14	1.94E-17	8.04E-20	8.90E-19	7.16E-18	9.90E-14	7.02E-14	3.07E-15	n/a	**2.48E-13**
bromomethane	74-83-9									n/a	**0.00E+00**
carbon disulfide	75-15-0									n/a	**0.00E+00**
carbon tetrachloride	56-23-5	1.67E-14	9.15E-17	9.07E-22	2.98E-21	1.03E-17	3.42E-16	9.26E-16	1.53E-14	n/a	**3.33E-14**
chlorobenzene	108-90-7									n/a	**0.00E+00**
chloroform	67-66-3	1.86E-13	4.28E-17	2.11E-21	5.30E-21	1.28E-17	6.88E-16	1.19E-18	4.61E-15	n/a	**1.91E-13**
chloromethane	74-87-3									n/a	**0.00E+00**
cis-1,3-dichloropropene	10061-01-5	2.31E-15	6.13E-18	3.32E-23	4.78E-22	2.96E-18	7.29E-17	3.28E-17	5.23E-16	n/a	**2.95E-15**
dibromochloromethane	124-48-1	5.02E-14	2.48E-17	9.88E-19	1.39E-17	1.04E-17	4.19E-13	1.12E-12	5.63E-15	n/a	**1.60E-12**
dichlorodifluoromethane	75-71-8									n/a	**0.00E+00**
dimethyl phthalate	131-11-3									n/a	**0.00E+00**
di-n-butyl phthalate	84-74-2									n/a	**0.00E+00**
ethylbenzene	100-41-4	1.93E-14	9.85E-18	4.21E-22	1.05E-21	4.60E-19	9.83E-17	3.82E-19	1.16E-15	n/a	**2.05E-14**
Freon 113	76-13-1									n/a	**0.00E+00**
HD	505-60-2	3.91E-12	1.78E-15	6.91E-19	1.73E-18	6.87E-16	1.28E-13	3.46E-15	5.10E-13	n/a	**4.55E-12**
hexane	110-54-3									n/a	**0.00E+00**
methylene chloride	75-09-2	3.07E-15	3.94E-18	2.23E-22	5.58E-22	2.50E-18	2.47E-16	8.38E-20	2.59E-16	n/a	**3.59E-15**
styrene	100-42-5									n/a	**0.00E+00**
tetrachloroethene	127-18-4	4.40E-15	4.11E-16	3.87E-21	9.69E-21	2.14E-17	3.53E-15	1.22E-17	9.20E-14	n/a	**1.00E-13**
toluene	108-88-3									n/a	**0.00E+00**
trans-1,3-dichloropropene	10061-02-6	2.45E-15	1.87E-17	3.33E-21	1.68E-20	3.21E-18	4.96E-16	3.50E-18	1.93E-15	n/a	**4.90E-15**
trichloroethene	79-01-6	8.87E-14	9.96E-17	5.30E-21	1.33E-20	1.64E-17	8.70E-16	3.10E-18	1.20E-14	n/a	**1.02E-13**
trichlorofluoromethane	75-69-4									n/a	**0.00E+00**
vinyl chloride	75-01-4	3.06E-15	5.94E-17	2.72E-22	6.80E-22	2.47E-17	2.11E-16	1.08E-19	3.07E-15	n/a	**6.42E-15**
xylenes	1330-20-7									n/a	**0.00E+00**
2,3,7,8-TCDF	51207-31-9									n/a	
Total PCDDs and PCDFs	NA	1.38E-15	5.66E-16	2.38E-17	1.99E-16	7.53E-19	6.86E-14	8.27E-11	1.21E-13	n/a	**8.29E-11**
antimony	7440-36-0									n/a	**0.00E+00**
cadmium	7440-43-9	7.60E-14								n/a	**7.60E-14**
chromium (3+)	7440-47-3									n/a	**0.00E+00**
chromium (6+)	18540-29-9	4.66E-12	4.44E-18	1.16E-21	5.25E-20	5.92E-18	2.19E-12	8.82E-13	9.70E-16	n/a	**7.73E-12**
copper	7440-50-8									n/a	**0.00E+00**
lead	7439-92-1	2.32E-15	6.94E-21	2.48E-22	3.38E-20	5.62E-20	1.86E-14	9.78E-16	2.60E-19	n/a	**2.19E-14**
nickel	7440-02-0	1.93E-13								n/a	**1.93E-13**
zinc	7440-66-6									n/a	**0.00E+00**
Total Pathway Risk	**All Chemicals**	**9.40E-12**	**3.85E-15**	**3.24E-17**	**2.25E-16**	**8.99E-16**	**3.44E-12**	**9.31E-11**	**8.28E-13**	**0.00E+00**	**1.07E-10**

RISK AND HAZARD BY PATHWAY FOR SUBSISTENCE FISHER EXPOSURE SCENARIOS

NONCARCINOGENIC EFFECTS: Adult Subsistence Fisher Exposure Scenario											
COPC	CAS Number	Hazard from Inhalation	Hazard from Dermal Water Contact	Hazard from Dermal Soil Contact	Hazard from Incidental Soil Ingestion	Hazard from Incidental Surface Water Ingestion	Hazard from Ingestion of Produce	Hazard from Ingestion of Terrestrial Animal Products	Hazard from Ingestion of Fish	Hazard from Ingestion of Breast Milk	Total Hazard from Individual Chemical
1,1,1-trichloroethane	71-55-6	2.78E-12	4.09E-16	2.73E-20	1.18E-19	6.17E-17	1.27E-14	2.34E-14	5.38E-14	n/a	**2.88E-12**
1,1-dichloroethane	75-34-3	1.35E-11	1.73E-15	3.90E-19	9.77E-19	5.58E-16	2.39E-13	1.78E-16	1.41E-13	n/a	**1.39E-11**
1,1-dichloroethene	75-35-4	3.03E-11	5.61E-15	1.17E-19	6.36E-19	1.02E-15	6.57E-14	5.14E-14	4.38E-13	n/a	**3.09E-11**
1,2-dichloroethane	107-06-2	1.37E-09	5.77E-15	4.69E-18	1.18E-17	2.95E-15	3.98E-12	1.90E-15	4.37E-13	n/a	**1.37E-09**
1,2-dichloropropane	78-87-5	2.09E-09	3.01E-15	1.50E-18	3.77E-18	8.02E-16	4.35E-13	7.29E-16	2.88E-13	n/a	**2.09E-09**
1,3-butadiene	106-99-0	2.90E-09								n/a	**2.90E-09**
2-butanone	78-93-3	2.02E-11	9.81E-16	4.14E-16	1.04E-15	2.32E-15	7.32E-11	2.19E-14	3.80E-13	n/a	**9.39E-11**
acetone	67-64-1	4.97E-11	5.83E-16	1.26E-16	3.17E-16	2.60E-15	4.06E-11	1.82E-15	4.27E-13	n/a	**9.08E-11**
benzene	71-43-2	3.81E-09	1.59E-12	2.86E-16	7.16E-16	2.45E-13	7.39E-11	1.42E-13	1.05E-10	n/a	**3.99E-09**
benzoic acid	65-85-0		5.05E-14	1.57E-15	1.63E-14	1.78E-14	3.91E-08	7.15E-14	2.92E-12	n/a	**3.91E-08**
benzyl alcohol	100-51-6		2.44E-12	1.43E-13	4.29E-12	2.43E-12	5.11E-07	5.16E-10	3.97E-11	n/a	**5.12E-07**
bis(2-ethylhexyl)-phthalate	117-81-7		1.19E-12	3.42E-13	4.71E-13	2.24E-14	4.33E-09	6.89E-08	2.09E-10	n/a	**7.34E-08**
bromodichloromethane	75-27-4		4.44E-14	9.08E-16	1.00E-14	1.64E-14	1.12E-09	7.92E-10	7.02E-12	n/a	**1.92E-09**
bromomethane	74-83-9	6.74E-09	2.52E-13	1.95E-16	4.89E-16	1.95E-13	7.10E-11	2.15E-13	1.67E-11	n/a	**6.82E-09**
carbon disulfide	75-15-0	1.13E-10	4.93E-14	9.43E-19	2.36E-18	6.75E-15	3.64E-13	4.93E-16	3.46E-12	n/a	**1.17E-10**
carbon tetrachloride	56-23-5	3.88E-10	7.63E-13	4.53E-17	1.49E-16	8.60E-14	1.68E-11	3.08E-11	1.28E-10	n/a	**5.64E-10**
chlorobenzene	108-90-7	1.82E-10	5.26E-14	3.45E-17	7.58E-17	4.07E-15	6.87E-12	1.52E-11	6.04E-12	n/a	**2.10E-10**
chloroform	67-66-3	2.29E-09	3.23E-13	9.55E-17	2.39E-16	9.66E-14	3.07E-11	4.67E-14	3.47E-11	n/a	**2.36E-09**
chloromethane	74-87-3	1.09E-09	5.11E-14	8.43E-18	2.11E-17	3.66E-14	3.91E-12	1.73E-15	6.01E-12	n/a	**1.10E-09**
cis-1,3-dichloropropene	10061-01-5	4.05E-10	4.77E-15	1.55E-19	2.23E-18	2.31E-15	3.40E-13	1.50E-13	4.07E-13	n/a	**4.06E-10**
dibromochloromethane	124-48-1		5.92E-14	8.23E-15	1.16E-13	2.48E-14	3.49E-09	9.35E-09	1.34E-11	n/a	**1.29E-08**
dichlorodifluoromethane	75-71-8	1.71E-10	3.24E-15	2.41E-18	1.59E-17	7.33E-16	4.93E-13	2.61E-13	3.49E-13	n/a	**1.72E-10**
dimethyl phthalate	131-11-3									n/a	**0.00E+00**
di-n-butyl phthalate	84-74-2		4.34E-12	1.19E-12	8.40E-13	6.72E-14	5.22E-10	2.72E-06	6.27E-09	n/a	**2.73E-06**
ethylbenzene	100-41-4	1.05E-11	2.09E-14	5.36E-18	1.34E-17	9.76E-16	1.22E-12	2.94E-15	2.46E-12	n/a	**1.42E-11**
Freon 113	76-13-1	5.91E-13	6.43E-17	3.02E-21	7.56E-21	5.61E-18	3.67E-15	2.79E-16	1.57E-14	n/a	**6.11E-13**
HD	505-60-2	6.51E-07	7.71E-11	1.79E-13	4.50E-13	2.97E-11	1.17E-08	2.25E-10	2.21E-08	n/a	**6.85E-07**
hexane	110-54-3	2.98E-11	1.06E-15	6.52E-21	1.63E-20	1.56E-17	3.16E-16	2.82E-18	1.62E-13	n/a	**3.00E-11**
methylene chloride	75-09-2	2.44E-10	2.04E-14	6.92E-18	1.74E-17	1.30E-14	7.68E-12	2.52E-15	1.35E-12	n/a	**2.53E-10**
styrene	100-42-5	2.92E-11	2.24E-14	4.91E-15	8.47E-15	1.37E-15	3.59E-11	1.05E-09	2.89E-12	n/a	**1.11E-09**
tetrachloroethene	127-18-4	2.93E-10	1.78E-13	1.00E-17	2.51E-17	9.26E-15	8.92E-12	8.96E-15	3.98E-11	n/a	**3.42E-10**
toluene	108-88-3	2.66E-12	1.96E-14	4.18E-18	1.05E-17	1.46E-15	9.79E-13	2.29E-15	1.81E-12	n/a	**5.48E-12**
trans-1,3-dichloropropene	10061-02-6	8.02E-11	1.46E-14	1.56E-17	7.82E-17	2.50E-15	2.29E-12	1.57E-14	1.50E-12	n/a	**8.40E-11**
trichloroethene	79-01-6	3.10E-10	1.94E-12	6.18E-16	1.55E-15	3.18E-13	1.00E-10	3.22E-13	2.33E-10	n/a	**6.46E-10**
trichlorofluoromethane	75-69-4	1.28E-11	1.73E-15	2.03E-20	8.68E-20	2.56E-16	8.62E-15	1.72E-14	2.24E-13	n/a	**1.30E-11**
vinyl chloride	75-01-4	9.84E-11	6.42E-14	1.76E-18	4.41E-18	2.67E-14	1.36E-12	6.76E-16	3.31E-12	n/a	**1.03E-10**
xylenes	1330-20-7	2.60E-10	2.62E-14	3.63E-17	9.11E-17	1.14E-15	1.99E-12	1.78E-14	3.19E-12	n/a	**2.65E-10**
2,3,7,8-TCDF	51207-31-9									n/a	
Total PCDDs and PCDFs	NA	1.27E-11	2.03E-11	9.28E-13	7.75E-12	2.70E-14	1.97E-09	2.17E-06	4.33E-09	n/a	**2.18E-06**
antimony	7440-36-0		6.07E-16	4.92E-18	2.90E-16	1.62E-15	5.31E-10	2.22E-11	3.36E-12	n/a	**5.57E-10**
cadmium	7440-43-9	5.91E-08	2.54E-15	6.50E-18	1.63E-15	6.77E-15	2.23E-09	9.14E-12	3.18E-10	n/a	**6.16E-08**
chromium (3+)	7440-47-3		1.38E-17	2.17E-20	9.79E-19	1.84E-17	6.81E-12	2.75E-12	3.02E-15	n/a	**9.56E-12**
chromium (6+)	18540-29-9	5.43E-08	6.91E-15	1.08E-17	4.90E-16	9.21E-15	3.41E-09	1.37E-09	1.51E-12	n/a	**5.91E-08**
copper	7440-50-8		3.87E-16	1.60E-17	1.31E-15	1.03E-15	3.83E-10	1.94E-10	1.69E-13	n/a	**5.76E-10**
lead	7439-92-1									n/a	**0.00E+00**
nickel	7440-02-0	1.25E-07	2.42E-15	1.97E-17	8.37E-16	3.23E-15	1.06E-09	3.43E-10	1.31E-11	n/a	**1.27E-07**
zinc	7440-66-6		4.71E-16	3.86E-18	5.18E-16	2.09E-15	6.89E-10	5.58E-12	2.24E-10	n/a	**9.18E-10**
Total Pathway Hazard	**All Chemicals**	**9.13E-07**	**1.11E-10**	**2.80E-12**	**1.40E-11**	**3.34E-11**	**5.82E-07**	**4.97E-06**	**3.41E-08**	**0.00E+00**	**6.50E-06**

RISK AND HAZARD BY PATHWAY FOR SUBSISTENCE FISHER EXPOSURE SCENARIOS

CARCINOGENIC EFFECTS: Child Subsistence Fisher Exposure Scenario											
COPC	CAS Number	Risk from Inhalation	Risk from Dermal Water Contact	Risk from Dermal Soil Contact	Risk from Incidental Soil Ingestion	Risk from Incidental Surface Water Ingestion	Risk from Ingestion of Produce	Risk from Ingestion of Terrestrial Animal Products	Risk from Ingestion of Fish	Risk from Ingestion of Breast Milk	Total Risk from Individual Chemical
1,1,1-trichloroethane	71-55-6									n/a	**0.00E+00**
1,1-dichloroethane	75-34-3	2.15E-15	1.21E-19	1.04E-22	3.71E-22	1.06E-19	1.94E-17	2.24E-20	1.40E-17	n/a	**2.18E-15**
1,1-dichloroethene	75-35-4									n/a	**0.00E+00**
1,2-dichloroethane	107-06-2	3.48E-14	1.28E-18	4.00E-21	1.43E-20	1.79E-18	1.04E-15	7.65E-19	1.39E-16	n/a	**3.60E-14**
1,2-dichloropropane	78-87-5	3.13E-14	2.25E-18	4.31E-21	1.54E-20	1.64E-18	3.93E-16	9.86E-19	3.08E-16	n/a	**3.20E-14**
1,3-butadiene	106-99-0	3.48E-14	1.19E-16	1.74E-20	6.21E-20	4.89E-17	2.85E-15	4.18E-17	9.04E-15	n/a	**4.69E-14**
2-butanone	78-93-3									n/a	**0.00E+00**
acetone	67-64-1									n/a	**0.00E+00**
benzene	71-43-2	1.77E-13	4.27E-17	2.94E-20	1.05E-19	1.79E-17	2.39E-15	6.92E-18	4.03E-15	n/a	**1.84E-13**
benzoic acid	65-85-0									n/a	**0.00E+00**
benzyl alcohol	100-51-6									n/a	**0.00E+00**
bis(2-ethylhexyl)-phthalate	117-81-7	2.15E-14	4.07E-17	4.40E-17	8.63E-17	2.09E-18	2.96E-13	5.39E-12	1.02E-14	n/a	**5.72E-12**
bromodichloromethane	75-27-4	2.12E-13	6.73E-18	5.27E-19	8.30E-18	6.77E-18	2.02E-13	1.17E-13	1.52E-15	n/a	**5.34E-13**
bromomethane	74-83-9									n/a	**0.00E+00**
carbon disulfide	75-15-0									n/a	**0.00E+00**
carbon tetrachloride	56-23-5	4.66E-14	2.61E-17	5.94E-21	2.78E-20	8.03E-18	6.55E-16	1.94E-15	6.24E-15	n/a	**5.55E-14**
chlorobenzene	108-90-7									n/a	**0.00E+00**
chloroform	67-66-3	5.20E-13	1.22E-17	1.38E-20	4.94E-20	9.98E-18	1.39E-15	3.20E-18	1.88E-15	n/a	**5.23E-13**
chloromethane	74-87-3									n/a	**0.00E+00**
cis-1,3-dichloropropene	10061-01-5	6.48E-15	1.75E-18	2.18E-22	4.46E-21	2.31E-18	1.54E-16	5.38E-17	2.13E-16	n/a	**6.90E-15**
dibromochloromethane	124-48-1	1.41E-13	1.21E-17	6.45E-18	1.30E-16	1.39E-17	9.92E-13	1.87E-12	3.93E-15	n/a	**3.01E-12**
dichlorodifluoromethane	75-71-8									n/a	**0.00E+00**
dimethyl phthalate	131-11-3									n/a	**0.00E+00**
di-n-butyl phthalate	84-74-2									n/a	**0.00E+00**
ethylbenzene	100-41-4	5.39E-14	2.81E-18	2.76E-21	9.84E-21	3.58E-19	1.87E-16	7.12E-19	4.73E-16	n/a	**5.46E-14**
Freon 113	76-13-1									n/a	**0.00E+00**
HD	505-60-2	1.09E-11	5.08E-16	4.52E-18	1.62E-17	5.34E-16	1.30E-13	2.68E-15	2.08E-13	n/a	**1.13E-11**
hexane	110-54-3									n/a	**0.00E+00**
methylene chloride	75-09-2	8.60E-15	1.12E-18	1.46E-21	5.21E-21	1.94E-18	4.94E-16	2.51E-19	1.06E-16	n/a	**9.21E-15**
styrene	100-42-5									n/a	**0.00E+00**
tetrachloroethene	127-18-4	1.23E-14	1.17E-16	2.53E-20	9.05E-20	1.67E-17	6.55E-15	1.07E-17	3.75E-14	n/a	**5.65E-14**
toluene	108-88-3									n/a	**0.00E+00**
trans-1,3-dichloropropene	10061-02-6	6.87E-15	5.34E-18	2.18E-20	1.56E-19	2.50E-18	1.16E-15	1.04E-17	7.86E-16	n/a	**8.83E-15**
trichloroethene	79-01-6	2.48E-13	2.84E-17	3.47E-20	1.24E-19	1.27E-17	1.78E-15	8.52E-18	4.88E-15	n/a	**2.55E-13**
trichlorofluoromethane	75-69-4									n/a	**0.00E+00**
vinyl chloride	75-01-4	8.56E-15	1.69E-17	1.78E-21	6.35E-21	1.92E-17	4.27E-16	3.23E-19	1.25E-15	n/a	**1.03E-14**
xylenes	1330-20-7									n/a	**0.00E+00**
2,3,7,8-TCDF	51207-31-9									n/a	
Total PCDDs and PCDFs	NA	3.85E-15	1.34E-16	2.03E-17	2.41E-16	4.87E-19	3.63E-14	5.34E-11	4.09E-14	n/a	**5.35E-11**
antimony	7440-36-0									n/a	**0.00E+00**
cadmium	7440-43-9	2.13E-13								n/a	**2.13E-13**
chromium (3+)	7440-47-3									n/a	**0.00E+00**
chromium (6+)	18540-29-9	1.30E-11	1.27E-18	7.61E-21	4.90E-19	4.60E-18	1.25E-12	4.79E-13	3.95E-16	n/a	**1.48E-11**
copper	7440-50-8									n/a	**0.00E+00**
lead	7439-92-1	6.50E-15	2.00E-21	1.62E-21	3.15E-19	4.40E-20	1.06E-14	6.07E-16	1.07E-19	n/a	**1.77E-14**
nickel	7440-02-0	5.41E-13								n/a	**5.41E-13**
zinc	7440-66-6									n/a	**0.00E+00**
Total Pathway Risk	**All Chemicals**	**2.63E-11**	**1.08E-15**	**7.59E-17**	**4.83E-16**	**7.06E-16**	**2.94E-12**	**6.13E-11**	**3.31E-13**	**0.00E+00**	**9.09E-11**

RISK AND HAZARD BY PATHWAY FOR SUBSISTENCE FISHER EXPOSURE SCENARIOS

NONCARCINOGENIC EFFECTS: Child Subsistence Fisher Exposure Scenario											
COPC	CAS Number	Hazard from Inhalation	Hazard from Dermal Water Contact	Hazard from Dermal Soil Contact	Hazard from Incidental Soil Ingestion	Hazard from Incidental Surface Water Ingestion	Hazard from Ingestion of Produce	Hazard from Ingestion of Terrestrial Animal Products	Hazard from Ingestion of Fish	Hazard from Ingestion of Breast Milk	Total Hazard from Individual Chemical
1,1,1-trichloroethane	71-55-6	7.80E-12	7.00E-16	1.79E-19	1.10E-18	2.88E-16	2.53E-14	7.40E-14	1.31E-13	n/a	**8.03E-12**
1,1-dichloroethane	75-34-3	3.77E-11	2.96E-15	2.55E-18	9.11E-18	2.61E-15	4.76E-13	5.50E-16	3.43E-13	n/a	**3.86E-11**
1,1-dichloroethene	75-35-4	8.48E-11	9.61E-15	7.64E-19	5.94E-18	4.77E-15	1.35E-13	8.59E-14	1.07E-12	n/a	**8.61E-11**
1,2-dichloroethane	107-06-2	3.82E-09	9.87E-15	3.08E-17	1.10E-16	1.38E-14	7.98E-12	5.89E-15	1.07E-12	n/a	**3.83E-09**
1,2-dichloropropane	78-87-5	5.86E-09	5.15E-15	9.85E-18	3.52E-17	3.74E-15	8.98E-13	2.26E-15	7.04E-13	n/a	**5.86E-09**
1,3-butadiene	106-99-0	8.12E-09								n/a	**8.12E-09**
2-butanone	78-93-3	5.67E-11	1.68E-15	2.71E-15	9.69E-15	1.08E-14	2.03E-10	6.79E-14	9.28E-13	n/a	**2.60E-10**
acetone	67-64-1	1.39E-10	9.98E-16	8.28E-16	2.96E-15	1.22E-14	9.63E-11	5.64E-15	1.04E-12	n/a	**2.37E-10**
benzene	71-43-2	1.07E-08	2.72E-12	1.87E-15	6.68E-15	1.14E-12	1.52E-10	4.41E-13	2.56E-10	n/a	**1.11E-08**
benzoic acid	65-85-0		8.63E-14	1.03E-14	1.52E-13	8.32E-14	7.42E-08	2.21E-13	7.14E-12	n/a	**7.42E-08**
benzyl alcohol	100-51-6		4.18E-12	9.38E-13	4.01E-11	1.14E-11	1.23E-06	1.60E-09	9.69E-11	n/a	**1.23E-06**
bis(2-ethylhexyl)-phthalate	117-81-7		2.04E-12	2.24E-12	4.40E-12	1.05E-13	1.48E-08	2.70E-07	5.09E-10	n/a	**2.85E-07**
bromodichloromethane	75-27-4		7.60E-14	5.95E-15	9.38E-14	7.64E-14	2.28E-09	1.33E-09	1.72E-11	n/a	**3.63E-09**
bromomethane	74-83-9	1.89E-08	4.32E-13	1.28E-15	4.56E-15	9.11E-13	1.63E-10	8.09E-13	4.08E-11	n/a	**1.91E-08**
carbon disulfide	75-15-0	3.17E-10	8.44E-14	6.18E-18	2.21E-17	3.15E-14	7.25E-13	1.52E-15	8.45E-12	n/a	**3.26E-10**
carbon tetrachloride	56-23-5	1.09E-09	1.31E-12	2.97E-16	1.39E-15	4.01E-13	3.28E-11	9.69E-11	3.12E-10	n/a	**1.53E-09**
chlorobenzene	108-90-7	5.09E-10	9.00E-14	2.26E-16	7.07E-16	1.90E-14	1.35E-11	4.81E-11	1.47E-11	n/a	**5.85E-10**
chloroform	67-66-3	6.42E-09	5.52E-13	6.25E-16	2.23E-15	4.51E-13	6.28E-11	1.45E-13	8.48E-11	n/a	**6.57E-09**
chloromethane	74-87-3	3.06E-09	8.75E-14	5.52E-17	1.97E-16	1.71E-13	8.69E-12	5.37E-15	1.47E-11	n/a	**3.08E-09**
cis-1,3-dichloropropene	10061-01-5	1.13E-09	8.16E-15	1.02E-18	2.08E-17	1.08E-14	7.17E-13	2.51E-13	9.94E-13	n/a	**1.14E-09**
dibromochloromethane	124-48-1		1.01E-13	5.39E-14	1.08E-12	1.16E-13	8.30E-09	1.57E-08	3.28E-11	n/a	**2.40E-08**
dichlorodifluoromethane	75-71-8	4.80E-10	5.54E-15	1.58E-17	1.48E-16	3.42E-15	1.19E-12	5.66E-13	8.54E-13	n/a	**4.82E-10**
dimethyl phthalate	131-11-3									n/a	**0.00E+00**
di-n-butyl phthalate	84-74-2		7.43E-12	7.80E-12	7.84E-12	3.14E-13	1.74E-09	1.06E-05	1.53E-08	n/a	**1.07E-05**
ethylbenzene	100-41-4	2.94E-11	3.58E-14	3.51E-17	1.25E-16	4.56E-15	2.38E-12	9.07E-15	6.02E-12	n/a	**3.78E-11**
Freon 113	76-13-1	1.66E-12	1.10E-16	1.98E-20	7.05E-20	2.62E-17	1.25E-14	8.64E-16	3.85E-14	n/a	**1.71E-12**
HD	505-60-2	1.82E-06	1.32E-10	1.17E-12	4.20E-12	1.39E-10	3.38E-08	6.97E-10	5.40E-08	n/a	**1.91E-06**
hexane	110-54-3	8.34E-11	1.81E-15	4.27E-20	1.52E-19	7.27E-17	6.26E-16	8.58E-18	3.97E-13	n/a	**8.38E-11**
methylene chloride	75-09-2	6.84E-10	3.50E-14	4.53E-17	1.62E-16	6.05E-14	1.54E-11	7.80E-15	3.29E-12	n/a	**7.03E-10**
styrene	100-42-5	8.19E-11	3.84E-14	3.22E-14	7.91E-14	6.39E-15	1.13E-10	4.07E-09	7.06E-12	n/a	**4.27E-09**
tetrachloroethene	127-18-4	8.20E-10	3.04E-13	6.57E-17	2.35E-16	4.32E-14	1.70E-11	2.76E-14	9.72E-11	n/a	**9.35E-10**
toluene	108-88-3	7.46E-12	3.35E-14	2.74E-17	9.78E-17	6.81E-15	1.94E-12	7.07E-15	4.42E-12	n/a	**1.39E-11**
trans-1,3-dichloropropene	10061-02-6	2.25E-10	2.49E-14	1.02E-16	7.30E-16	1.17E-14	5.40E-12	4.87E-14	3.67E-12	n/a	**2.34E-10**
trichloroethene	79-01-6	8.69E-10	3.32E-12	4.05E-15	1.45E-14	1.49E-12	2.08E-10	9.94E-13	5.69E-10	n/a	**1.65E-09**
trichlorofluoromethane	75-69-4	3.58E-11	2.96E-15	1.33E-19	8.10E-19	1.20E-15	1.72E-14	5.43E-14	5.46E-13	n/a	**3.64E-11**
vinyl chloride	75-01-4	2.76E-10	1.10E-13	1.15E-17	4.12E-17	1.25E-13	2.77E-12	2.09E-15	8.10E-12	n/a	**2.87E-10**
xylenes	1330-20-7	7.27E-10	4.48E-14	2.38E-16	8.50E-16	5.30E-15	4.15E-12	5.49E-14	7.79E-12	n/a	**7.39E-10**
2,3,7,8-TCDF	51207-31-9									n/a	
Total PCDDs and PCDFs	NA	3.55E-11	3.47E-11	6.08E-12	7.23E-11	1.26E-13	6.46E-09	8.48E-06	1.06E-08	n/a	**8.50E-06**
antimony	7440-36-0		1.04E-15	3.22E-17	2.71E-15	7.54E-15	1.82E-09	5.87E-11	8.20E-12	n/a	**1.88E-09**
cadmium	7440-43-9	1.65E-07	4.35E-15	4.26E-17	1.52E-14	3.16E-14	7.61E-09	2.09E-11	7.78E-10	n/a	**1.74E-07**
chromium (3+)	7440-47-3		2.37E-17	1.42E-19	9.14E-18	8.59E-17	2.33E-11	8.94E-12	7.38E-15	n/a	**3.22E-11**
chromium (6+)	18540-29-9	1.52E-07	1.18E-14	7.10E-17	4.57E-15	4.30E-14	1.17E-08	4.47E-09	3.69E-12	n/a	**1.68E-07**
copper	7440-50-8		6.62E-16	1.05E-16	1.22E-14	4.83E-15	1.31E-09	5.61E-10	4.13E-13	n/a	**1.87E-09**
lead	7439-92-1									n/a	**0.00E+00**
nickel	7440-02-0	3.51E-07	4.14E-15	1.29E-16	7.81E-15	1.51E-14	3.63E-09	1.02E-09	3.19E-11	n/a	**3.56E-07**
zinc	7440-66-6		8.07E-16	2.53E-17	4.84E-15	9.77E-15	2.36E-09	1.89E-11	5.47E-10	n/a	**2.92E-09**
Total Pathway Hazard	**All Chemicals**	**2.56E-06**	**1.90E-10**	**1.83E-11**	**1.30E-10**	**1.56E-10**	**1.40E-06**	**1.94E-05**	**8.33E-08**	**0.00E+00**	**2.35E-05**

RISK AND HAZARD BY PATHWAY FOR SUBSISTENCE FISHER EXPOSURE SCENARIOS

CARCINOGENIC EFFECTS: Infant Subsistence Fisher Exposure Scenario											
COPC	CAS Number	Risk from Inhalation	Risk from Dermal Water Contact	Risk from Dermal Soil Contact	Risk from Incidental Soil Ingestion	Risk from Incidental Surface Water Ingestion	Risk from Ingestion of Produce	Risk from Ingestion of Terrestrial Animal Products	Risk from Ingestion of Fish	Risk from Ingestion of Breast Milk	Total Risk from Individual Chemical
1,1,1-trichloroethane	71-55-6		n/a			n/a					**0.00E+00**
1,1-dichloroethane	75-34-3	2.42E-16	n/a	2.92E-23	1.11E-22	n/a	4.77E-18	1.32E-20	4.19E-18		**2.51E-16**
1,1-dichloroethene	75-35-4		n/a			n/a					**0.00E+00**
1,2-dichloroethane	107-06-2	3.91E-15	n/a	1.12E-21	4.28E-21	n/a	2.55E-16	4.50E-19	4.16E-17	1.21E-14	**1.63E-14**
1,2-dichloropropane	78-87-5	3.52E-15	n/a	1.21E-21	4.62E-21	n/a	9.51E-17	5.79E-19	9.23E-17		**3.71E-15**
1,3-butadiene	106-99-0	3.91E-15	n/a	4.89E-21	1.86E-20	n/a	7.10E-16	2.51E-17	2.71E-15		**7.36E-15**
2-butanone	78-93-3		n/a			n/a					**0.00E+00**
acetone	67-64-1		n/a			n/a					**0.00E+00**
benzene	71-43-2	1.99E-14	n/a	8.26E-21	3.15E-20	n/a	5.80E-16	4.07E-18	1.21E-15	1.22E-13	**1.44E-13**
benzoic acid	65-85-0		n/a			n/a					**0.00E+00**
benzyl alcohol	100-51-6		n/a			n/a					**0.00E+00**
bis(2-ethylhexyl)-phthalate	117-81-7	2.42E-15	n/a	1.24E-17	2.59E-17	n/a	7.51E-14	3.73E-12	3.05E-15		**3.81E-12**
bromodichloromethane	75-27-4	2.39E-14	n/a	1.48E-19	2.49E-18	n/a	4.92E-14	1.99E-14	4.56E-16		**9.35E-14**
bromomethane	74-83-9		n/a			n/a					**0.00E+00**
carbon disulfide	75-15-0		n/a			n/a					**0.00E+00**
carbon tetrachloride	56-23-5	5.25E-15	n/a	1.67E-21	8.34E-21	n/a	1.63E-16	1.18E-15	1.87E-15		**8.46E-15**
chlorobenzene	108-90-7		n/a			n/a					**0.00E+00**
chloroform	67-66-3	5.85E-14	n/a	3.89E-21	1.48E-20	n/a	3.38E-16	1.88E-18	5.63E-16	6.73E-14	**1.27E-13**
chloromethane	74-87-3		n/a			n/a					**0.00E+00**
cis-1,3-dichloropropene	10061-01-5	7.29E-16	n/a	6.12E-23	1.34E-21	n/a	3.68E-17	9.13E-18	6.39E-17	1.55E-14	**1.64E-14**
dibromochloromethane	124-48-1	1.58E-14	n/a	1.81E-18	3.89E-17	n/a	2.26E-13	3.18E-13	1.18E-15		**5.60E-13**
dichlorodifluoromethane	75-71-8		n/a			n/a					**0.00E+00**
dimethyl phthalate	131-11-3		n/a			n/a					**0.00E+00**
di-n-butyl phthalate	84-74-2		n/a			n/a					**0.00E+00**
ethylbenzene	100-41-4	6.07E-15	n/a	7.75E-22	2.95E-21	n/a	4.66E-17	4.18E-19	1.42E-16	2.49E-15	**8.75E-15**
Freon 113	76-13-1		n/a			n/a					**0.00E+00**
HD	505-60-2	1.23E-12	n/a	1.27E-18	4.85E-18	n/a	3.06E-14	1.59E-15	6.23E-14		**1.33E-12**
hexane	110-54-3		n/a			n/a					**0.00E+00**
methylene chloride	75-09-2	9.68E-16	n/a	4.10E-22	1.56E-21	n/a	1.21E-16	1.47E-19	3.17E-17	1.36E-14	**1.48E-14**
styrene	100-42-5		n/a			n/a					**0.00E+00**
tetrachloroethene	127-18-4	1.38E-15	n/a	7.12E-21	2.71E-20	n/a	1.65E-15	6.29E-18	1.12E-14	1.22E-13	**1.37E-13**
toluene	108-88-3		n/a			n/a					**0.00E+00**
trans-1,3-dichloropropene	10061-02-6	7.73E-16	n/a	6.14E-21	4.69E-20	n/a	2.64E-16	6.12E-18	2.36E-16	1.70E-14	**1.83E-14**
trichloroethene	79-01-6	2.79E-14	n/a	9.77E-21	3.72E-20	n/a	4.31E-16	5.00E-18	1.46E-15	8.51E-14	**1.15E-13**
trichlorofluoromethane	75-69-4		n/a			n/a					**0.00E+00**
vinyl chloride	75-01-4	9.63E-16	n/a	5.00E-22	1.91E-21	n/a	1.04E-16	1.90E-19	3.75E-16		**1.44E-15**
xylenes	1330-20-7		n/a			n/a					**0.00E+00**
2,3,7,8-TCDF	51207-31-9		n/a			n/a					
Total PCDDs and PCDFs	NA	4.34E-16	n/a	5.70E-18	7.24E-17	n/a	8.98E-15	3.69E-11	1.23E-14	2.07E-09	**2.10E-09**
antimony	7440-36-0		n/a			n/a					**0.00E+00**
cadmium	7440-43-9	2.39E-14	n/a			n/a					**2.39E-14**
chromium (3+)	7440-47-3		n/a			n/a					**0.00E+00**
chromium (6+)	18540-29-9	1.47E-12	n/a	2.14E-21	1.47E-19	n/a	3.19E-13	2.99E-13	1.19E-16	5.27E-13	**2.61E-12**
copper	7440-50-8		n/a			n/a					**0.00E+00**
lead	7439-92-1	7.32E-16	n/a	4.57E-22	9.46E-20	n/a	2.70E-15	4.10E-16	3.20E-20	3.46E-15	**7.31E-15**
nickel	7440-02-0	6.09E-14	n/a			n/a					**6.09E-14**
zinc	7440-66-6		n/a			n/a					**0.00E+00**
Total Pathway Risk	**All Chemicals**	**2.96E-12**	**0.00E+00**	**2.13E-17**	**1.45E-16**	**0.00E+00**	**7.16E-13**	**4.13E-11**	**9.94E-14**	**2.07E-09**	**2.11E-09**

RISK AND HAZARD BY PATHWAY FOR SUBSISTENCE FISHER EXPOSURE SCENARIOS

NONCARCINOGENIC EFFECTS: Infant Subsistence Fisher Exposure Scenario											
COPC	CAS Number	Hazard from Inhalation	Hazard from Dermal Water Contact	Hazard from Dermal Soil Contact	Hazard from Incidental Soil Ingestion	Hazard from Incidental Surface Water Ingestion	Hazard from Ingestion of Produce	Hazard from Ingestion of Terrestrial Animal Products	Hazard from Ingestion of Fish	Hazard from Ingestion of Breast Milk	Total Hazard from Individual Chemical
1,1,1-trichloroethane	71-55-6	4.39E-12	n/a	2.51E-19	1.66E-18	n/a	3.12E-14	2.26E-13	1.97E-13		**4.84E-12**
1,1-dichloroethane	75-34-3	2.12E-11	n/a	3.59E-18	1.37E-17	n/a	5.86E-13	1.62E-15	5.15E-13		**2.23E-11**
1,1-dichloroethene	75-35-4	4.77E-11	n/a	1.07E-18	8.91E-18	n/a	1.64E-13	7.30E-14	1.61E-12		**4.96E-11**
1,2-dichloroethane	107-06-2	2.15E-09	n/a	4.32E-17	1.65E-16	n/a	9.79E-12	1.73E-14	1.60E-12	4.64E-10	**2.63E-09**
1,2-dichloropropane	78-87-5	3.30E-09	n/a	1.39E-17	5.28E-17	n/a	1.09E-12	6.63E-15	1.06E-12		**3.30E-09**
1,3-butadiene	106-99-0	4.57E-09	n/a			n/a					**4.57E-09**
2-butanone	78-93-3	3.19E-11	n/a	3.82E-15	1.45E-14	n/a	2.16E-10	2.00E-13	1.39E-12	5.61E-10	**8.11E-10**
acetone	67-64-1	7.83E-11	n/a	1.16E-15	4.43E-15	n/a	1.09E-10	1.66E-14	1.56E-12	4.21E-10	**6.11E-10**
benzene	71-43-2	6.00E-09	n/a	2.63E-15	1.00E-14	n/a	1.85E-10	1.29E-12	3.84E-10	3.89E-08	**4.55E-08**
benzoic acid	65-85-0		n/a	1.45E-14	2.28E-13	n/a	9.35E-08	6.50E-13	1.07E-11		**9.35E-08**
benzyl alcohol	100-51-6		n/a	1.32E-12	6.01E-11	n/a	1.39E-06	4.70E-09	1.45E-10		**1.40E-06**
bis(2-ethylhexyl)-phthalate	117-81-7		n/a	3.15E-12	6.59E-12	n/a	1.88E-08	9.33E-07	7.64E-10		**9.52E-07**
bromodichloromethane	75-27-4		n/a	8.36E-15	1.41E-13	n/a	2.78E-09	1.13E-09	2.57E-11		**3.93E-09**
bromomethane	74-83-9	1.06E-08	n/a	1.80E-15	6.84E-15	n/a	1.88E-10	2.73E-12	6.12E-11		**1.09E-08**
carbon disulfide	75-15-0	1.78E-10	n/a	8.69E-18	3.31E-17	n/a	8.94E-13	4.48E-15	1.27E-11	1.07E-09	**1.26E-09**
carbon tetrachloride	56-23-5	6.12E-10	n/a	4.18E-16	2.08E-15	n/a	4.08E-11	2.95E-10	4.68E-10		**1.41E-09**
chlorobenzene	108-90-7	2.86E-10	n/a	3.18E-16	1.06E-15	n/a	1.67E-11	1.46E-10	2.21E-11		**4.71E-10**
chloroform	67-66-3	3.61E-09	n/a	8.79E-16	3.35E-15	n/a	7.63E-11	4.25E-13	1.27E-10	1.52E-08	**1.90E-08**
chloromethane	74-87-3	1.72E-09	n/a	7.77E-17	2.96E-16	n/a	1.02E-11	1.58E-14	2.20E-11	5.12E-09	**6.87E-09**
cis-1,3-dichloropropene	10061-01-5	6.38E-10	n/a	1.43E-18	3.12E-17	n/a	8.59E-13	2.13E-13	1.49E-12	3.62E-10	**1.00E-09**
dibromochloromethane	124-48-1		n/a	7.58E-14	1.63E-12	n/a	9.43E-09	1.33E-08	4.92E-11		**2.28E-08**
dichlorodifluoromethane	75-71-8	2.70E-10	n/a	2.22E-17	2.22E-16	n/a	1.34E-12	4.18E-13	1.28E-12	1.19E-10	**3.92E-10**
dimethyl phthalate	131-11-3		n/a			n/a					**0.00E+00**
di-n-butyl phthalate	84-74-2		n/a	1.10E-11	1.18E-11	n/a	1.92E-09	3.68E-05	2.30E-08		**3.68E-05**
ethylbenzene	100-41-4	1.65E-11	n/a	4.93E-17	1.88E-16	n/a	2.97E-12	2.66E-14	9.02E-12	1.58E-10	**1.87E-10**
Freon 113	76-13-1	9.31E-13	n/a	2.78E-20	1.06E-19	n/a	1.60E-14	2.59E-15	5.77E-14	8.76E-13	**1.88E-12**
HD	505-60-2	1.03E-06	n/a	1.65E-12	6.29E-12	n/a	3.97E-08	2.07E-09	8.09E-08		**1.15E-06**
hexane	110-54-3	4.69E-11	n/a	6.00E-20	2.29E-19	n/a	7.75E-16	2.49E-17	5.95E-13	3.28E-12	**5.08E-11**
methylene chloride	75-09-2	3.85E-10	n/a	6.38E-17	2.43E-16	n/a	1.89E-11	2.29E-14	4.93E-12	2.12E-09	**2.53E-09**
styrene	100-42-5	4.61E-11	n/a	4.52E-14	1.19E-13	n/a	1.15E-10	1.40E-08	1.06E-11	5.23E-09	**1.94E-08**
tetrachloroethene	127-18-4	4.62E-10	n/a	9.23E-17	3.52E-16	n/a	2.14E-11	8.16E-14	1.46E-10	1.59E-09	**2.22E-09**
toluene	108-88-3	4.20E-12	n/a	3.85E-17	1.47E-16	n/a	2.39E-12	2.07E-14	6.63E-12	2.30E-10	**2.43E-10**
trans-1,3-dichloropropene	10061-02-6	1.26E-10	n/a	1.43E-16	1.10E-15	n/a	6.16E-12	1.43E-13	5.50E-12	3.97E-10	**5.36E-10**
trichloroethene	79-01-6	4.89E-10	n/a	5.70E-15	2.17E-14	n/a	2.51E-10	2.92E-12	8.54E-10	4.96E-08	**5.12E-08**
trichlorofluoromethane	75-69-4	2.01E-11	n/a	1.87E-19	1.22E-18	n/a	2.12E-14	1.66E-13	8.19E-13	4.07E-11	**6.18E-11**
vinyl chloride	75-01-4	1.55E-10	n/a	1.62E-17	6.17E-17	n/a	3.38E-12	6.16E-15	1.21E-11		**1.71E-10**
xylenes	1330-20-7	4.09E-10	n/a	3.35E-16	1.28E-15	n/a	5.01E-12	1.60E-13	1.17E-11	1.99E-10	**6.25E-10**
2,3,7,8-TCDF	51207-31-9		n/a			n/a					
Total PCDDs and PCDFs	NA	2.00E-11	n/a	8.54E-12	1.08E-10	n/a	7.81E-09	2.93E-05	1.59E-08	1.59E-03	**1.62E-03**
antimony	7440-36-0		n/a	4.53E-17	4.07E-15	n/a	2.32E-09	1.56E-10	1.23E-11	2.96E-09	**5.45E-09**
cadmium	7440-43-9	9.30E-08	n/a	5.98E-17	2.28E-14	n/a	9.72E-09	4.67E-11	1.17E-09	1.34E-08	**1.17E-07**
chromium (3+)	7440-47-3		n/a	2.00E-19	1.37E-17	n/a	2.97E-11	2.79E-11	1.11E-14	4.92E-11	**1.07E-10**
chromium (6+)	18540-29-9	8.55E-08	n/a	9.98E-17	6.86E-15	n/a	1.49E-08	1.39E-08	5.53E-12	2.46E-08	**1.39E-07**
copper	7440-50-8		n/a	1.48E-16	1.84E-14	n/a	1.67E-09	1.61E-09	6.20E-13	2.94E-09	**6.22E-09**
lead	7439-92-1		n/a			n/a					**0.00E+00**
nickel	7440-02-0	1.97E-07	n/a	1.81E-16	1.17E-14	n/a	4.63E-09	2.97E-09	4.78E-11	7.32E-09	**2.12E-07**
zinc	7440-66-6		n/a	3.55E-17	7.26E-15	n/a	3.01E-09	6.04E-11	8.20E-10	4.75E-09	**8.63E-09**
Total Pathway Hazard	**All Chemicals**	**1.44E-06**	**0.00E+00**	**2.58E-11**	**1.95E-10**	**0.00E+00**	**1.60E-06**	**6.71E-05**	**1.25E-07**	**1.59E-03**	**1.66E-03**

RISK AND HAZARD BY PATHWAY FOR SUBSISTENCE FISHER EXPOSURE SCENARIOS

CARCINOGENIC EFFECTS: Early Life Exposure - Infant											
COPC	CAS Number	Risk from Inhalation	Risk from Dermal Water Contact	Risk from Dermal Soil Contact	Risk from Incidental Soil Ingestion	Risk from Incidental Surface Water Ingestion	Risk from Ingestion of Produce	Risk from Ingestion of Terrestrial Animal Products	Risk from Ingestion of Fish	Risk from Ingestion of Breast Milk	Total Risk from Individual Chemical
vinyl chloride	75-01-4	6.74E-14	n/a	3.50E-20	1.33E-19	n/a	7.30E-15	1.33E-17	2.62E-14	n/a	**1.01E-13**

CARCINOGENIC EFFECTS: Early Life Exposure - Child											
COPC	CAS Number	Risk from Inhalation	Risk from Dermal Water Contact	Risk from Dermal Soil Contact	Risk from Incidental Soil Ingestion	Risk from Incidental Surface Water Ingestion	Risk from Ingestion of Produce	Risk from Ingestion of Terrestrial Animal Products	Risk from Ingestion of Fish	Risk from Ingestion of Breast Milk	Total Risk from Individual Chemical
vinyl chloride	75-01-4	1.20E-13	2.37E-16	2.49E-20	8.89E-20	2.69E-16	5.98E-15	4.52E-18	1.75E-14	n/a	**1.44E-13**

RISK AND HAZARD BY PATHWAY FOR SUBSISTENCE FARMER EXPOSURE SCENARIOS

CARCINOGENIC EFFECTS: Adult Subsistence Farmer Exposure Scenario											
COPC	CAS Number	Risk from Inhalation	Risk from Dermal Water Contact	Risk from Dermal Soil Contact	Risk from Incidental Soil Ingestion	Risk from Incidental Surface Water Ingestion	Risk from Ingestion of Produce	Risk from Ingestion of Terrestrial Animal Products	Risk from Ingestion of Fish	Risk from Ingestion of Breast Milk	Total Risk from Individual Chemical
1,1,1-trichloroethane	71-55-6									n/a	**0.00E+00**
1,1-dichloroethane	75-34-3	7.68E-16	5.64E-19	1.59E-23	3.98E-23	1.82E-19	2.44E-17	1.98E-20	1.83E-17	n/a	**8.12E-16**
1,1-dichloroethene	75-35-4									n/a	**0.00E+00**
1,2-dichloroethane	107-06-2	1.24E-14	5.99E-18	6.10E-22	1.53E-21	3.06E-18	1.30E-15	6.63E-19	1.81E-16	n/a	**1.39E-14**
1,2-dichloropropane	78-87-5	1.12E-14	1.05E-17	6.58E-22	1.65E-21	2.80E-18	4.82E-16	9.08E-19	4.03E-16	n/a	**1.21E-14**
1,3-butadiene	106-99-0	1.24E-14	5.56E-16	2.65E-21	6.65E-21	8.39E-17	1.48E-14	2.48E-16	1.18E-14	n/a	**3.99E-14**
2-butanone	78-93-3									n/a	**0.00E+00**
acetone	67-64-1									n/a	**0.00E+00**
benzene	71-43-2	6.32E-14	2.00E-16	4.49E-21	1.12E-20	3.07E-17	2.95E-15	6.55E-18	5.27E-15	n/a	**7.17E-14**
benzoic acid	65-85-0									n/a	**0.00E+00**
benzyl alcohol	100-51-6									n/a	**0.00E+00**
bis(2-ethylhexyl)-phthalate	117-81-7	7.69E-15	1.76E-16	6.83E-18	9.42E-18	3.30E-18	1.69E-12	2.75E-11	1.23E-14	n/a	**2.92E-11**
bromodichloromethane	75-27-4	7.59E-14	2.56E-17	8.04E-20	8.90E-19	9.45E-18	2.47E-13	1.76E-13	1.62E-15	n/a	**5.01E-13**
bromomethane	74-83-9									n/a	**0.00E+00**
carbon disulfide	75-15-0									n/a	**0.00E+00**
carbon tetrachloride	56-23-5	1.67E-14	1.22E-16	9.07E-22	2.98E-21	1.38E-17	8.60E-16	2.63E-15	8.17E-15	n/a	**2.85E-14**
chlorobenzene	108-90-7									n/a	**0.00E+00**
chloroform	67-66-3	1.86E-13	5.71E-17	2.11E-21	5.30E-21	1.71E-17	1.73E-15	3.12E-18	2.46E-15	n/a	**1.90E-13**
chloromethane	74-87-3									n/a	**0.00E+00**
cis-1,3-dichloropropene	10061-01-5	2.31E-15	8.17E-18	3.32E-23	4.78E-22	3.95E-18	1.82E-16	8.25E-17	2.79E-16	n/a	**2.87E-15**
dibromochloromethane	124-48-1	5.02E-14	3.19E-17	9.88E-19	1.39E-17	1.34E-17	1.05E-12	2.81E-12	2.90E-15	n/a	**3.91E-12**
dichlorodifluoromethane	75-71-8									n/a	**0.00E+00**
dimethyl phthalate	131-11-3									n/a	**0.00E+00**
di-n-butyl phthalate	84-74-2									n/a	**0.00E+00**
ethylbenzene	100-41-4	1.93E-14	1.31E-17	4.21E-22	1.05E-21	6.13E-19	2.48E-16	1.11E-18	6.18E-16	n/a	**2.01E-14**
Freon 113	76-13-1									n/a	**0.00E+00**
HD	505-60-2	3.91E-12	2.37E-15	6.91E-19	1.73E-18	9.15E-16	4.02E-13	1.12E-14	2.72E-13	n/a	**4.60E-12**
hexane	110-54-3									n/a	**0.00E+00**
methylene chloride	75-09-2	3.07E-15	5.25E-18	2.23E-22	5.58E-22	3.33E-18	6.19E-16	2.12E-19	1.38E-16	n/a	**3.84E-15**
styrene	100-42-5									n/a	**0.00E+00**
tetrachloroethene	127-18-4	4.40E-15	5.48E-16	3.87E-21	9.69E-21	2.86E-17	8.92E-15	3.93E-17	4.91E-14	n/a	**6.30E-14**
toluene	108-88-3									n/a	**0.00E+00**
trans-1,3-dichloropropene	10061-02-6	2.45E-15	2.49E-17	3.33E-21	1.68E-20	4.28E-18	1.24E-15	8.86E-18	1.03E-15	n/a	**4.76E-15**
trichloroethene	79-01-6	8.87E-14	1.33E-16	5.30E-21	1.33E-20	2.18E-17	2.19E-15	8.08E-18	6.39E-15	n/a	**9.74E-14**
trichlorofluoromethane	75-69-4									n/a	**0.00E+00**
vinyl chloride	75-01-4	3.06E-15	7.92E-17	2.72E-22	6.80E-22	3.30E-17	5.28E-16	2.73E-19	1.64E-15	n/a	**5.34E-15**
xylenes	1330-20-7									n/a	**0.00E+00**
2,3,7,8-TCDF	51207-31-9									n/a	
Total PCDDs and PCDFs	NA	1.38E-15	6.93E-16	2.84E-17	2.37E-16	9.23E-19	2.23E-13	2.74E-10	5.91E-14	n/a	**2.75E-10**
antimony	7440-36-0									n/a	**0.00E+00**
cadmium	7440-43-9	7.60E-14								n/a	**7.60E-14**
chromium (3+)	7440-47-3									n/a	**0.00E+00**
chromium (6+)	18540-29-9	4.66E-12	5.92E-18	1.16E-21	5.25E-20	7.89E-18	7.30E-12	2.94E-12	5.18E-16	n/a	**1.49E-11**
copper	7440-50-8									n/a	**0.00E+00**
lead	7439-92-1	2.32E-15	9.25E-21	2.48E-22	3.38E-20	7.49E-20	6.19E-14	3.26E-15	1.39E-19	n/a	**6.75E-14**
nickel	7440-02-0	1.93E-13								n/a	**1.93E-13**
zinc	7440-66-6									n/a	**0.00E+00**
Total Pathway Risk	**All Chemicals**	**9.40E-12**	**5.07E-15**	**3.70E-17**	**2.63E-16**	**1.20E-15**	**1.10E-11**	**3.08E-10**	**4.36E-13**	**0.00E+00**	**3.29E-10**

RISK AND HAZARD BY PATHWAY FOR SUBSISTENCE FARMER EXPOSURE SCENARIOS

NONCARCINOGENIC EFFECTS: Adult Subsistence Farmer Exposure Scenario											
COPC	CAS Number	Hazard from Inhalation	Hazard from Dermal Water Contact	Hazard from Dermal Soil Contact	Hazard from Incidental Soil Ingestion	Hazard from Incidental Surface Water Ingestion	Hazard from Ingestion of Produce	Hazard from Ingestion of Terrestrial Animal Products	Hazard from Ingestion of Fish	Hazard from Ingestion of Breast Milk	Total Hazard from Individual Chemical
1,1,1-trichloroethane	71-55-6	2.78E-12	4.09E-16	2.73E-20	1.18E-19	6.17E-17	3.18E-14	5.84E-14	2.15E-14	n/a	**2.90E-12**
1,1-dichloroethane	75-34-3	1.35E-11	1.73E-15	3.90E-19	9.77E-19	5.58E-16	5.97E-13	4.44E-16	5.62E-14	n/a	**1.41E-11**
1,1-dichloroethene	75-35-4	3.03E-11	5.61E-15	1.17E-19	6.36E-19	1.02E-15	1.64E-13	1.28E-13	1.75E-13	n/a	**3.08E-11**
1,2-dichloroethane	107-06-2	1.37E-09	5.77E-15	4.69E-18	1.18E-17	2.95E-15	9.96E-12	4.75E-15	1.75E-13	n/a	**1.38E-09**
1,2-dichloropropane	78-87-5	2.09E-09	3.01E-15	1.50E-18	3.77E-18	8.02E-16	1.09E-12	1.82E-15	1.15E-13	n/a	**2.09E-09**
1,3-butadiene	106-99-0	2.90E-09								n/a	**2.90E-09**
2-butanone	78-93-3	2.02E-11	9.81E-16	4.14E-16	1.04E-15	2.32E-15	1.83E-10	5.48E-14	1.52E-13	n/a	**2.03E-10**
acetone	67-64-1	4.97E-11	5.83E-16	1.26E-16	3.17E-16	2.60E-15	1.01E-10	4.55E-15	1.71E-13	n/a	**1.51E-10**
benzene	71-43-2	3.81E-09	1.59E-12	2.86E-16	7.16E-16	2.45E-13	1.85E-10	3.56E-13	4.20E-11	n/a	**4.04E-09**
benzoic acid	65-85-0		5.05E-14	1.57E-15	1.63E-14	1.78E-14	9.78E-08	1.79E-13	1.17E-12	n/a	**9.78E-08**
benzyl alcohol	100-51-6		2.44E-12	1.43E-13	4.29E-12	2.43E-12	1.28E-06	1.29E-09	1.59E-11	n/a	**1.28E-06**
bis(2-ethylhexyl)-phthalate	117-81-7		1.19E-12	3.42E-13	4.71E-13	2.24E-14	1.08E-08	1.72E-07	8.34E-11	n/a	**1.83E-07**
bromodichloromethane	75-27-4		4.44E-14	9.08E-16	1.00E-14	1.64E-14	2.79E-09	1.98E-09	2.81E-12	n/a	**4.78E-09**
bromomethane	74-83-9	6.74E-09	2.52E-13	1.95E-16	4.89E-16	1.95E-13	1.77E-10	5.37E-13	6.69E-12	n/a	**6.92E-09**
carbon disulfide	75-15-0	1.13E-10	4.93E-14	9.43E-19	2.36E-18	6.75E-15	9.10E-13	1.23E-15	1.38E-12	n/a	**1.15E-10**
carbon tetrachloride	56-23-5	3.88E-10	7.63E-13	4.53E-17	1.49E-16	8.60E-14	4.19E-11	7.69E-11	5.11E-11	n/a	**5.59E-10**
chlorobenzene	108-90-7	1.82E-10	5.26E-14	3.45E-17	7.58E-17	4.07E-15	1.72E-11	3.81E-11	2.42E-12	n/a	**2.39E-10**
chloroform	67-66-3	2.29E-09	3.23E-13	9.55E-17	2.39E-16	9.66E-14	7.67E-11	1.17E-13	1.39E-11	n/a	**2.38E-09**
chloromethane	74-87-3	1.09E-09	5.11E-14	8.43E-18	2.11E-17	3.66E-14	9.77E-12	4.34E-15	2.40E-12	n/a	**1.10E-09**
cis-1,3-dichloropropene	10061-01-5	4.05E-10	4.77E-15	1.55E-19	2.23E-18	2.31E-15	8.49E-13	3.76E-13	1.63E-13	n/a	**4.06E-10**
dibromochloromethane	124-48-1		5.92E-14	8.23E-15	1.16E-13	2.48E-14	8.73E-09	2.34E-08	5.37E-12	n/a	**3.21E-08**
dichlorodifluoromethane	75-71-8	1.71E-10	3.24E-15	2.41E-18	1.59E-17	7.33E-16	1.23E-12	6.53E-13	1.40E-13	n/a	**1.73E-10**
dimethyl phthalate	131-11-3									n/a	**0.00E+00**
di-n-butyl phthalate	84-74-2		4.34E-12	1.19E-12	8.40E-13	6.72E-14	1.31E-09	6.80E-06	2.51E-09	n/a	**6.80E-06**
ethylbenzene	100-41-4	1.05E-11	2.09E-14	5.36E-18	1.34E-17	9.76E-16	3.06E-12	7.36E-15	9.85E-13	n/a	**1.46E-11**
Freon 113	76-13-1	5.91E-13	6.43E-17	3.02E-21	7.56E-21	5.61E-18	9.17E-15	6.98E-16	6.30E-15	n/a	**6.08E-13**
HD	505-60-2	6.51E-07	7.71E-11	1.79E-13	4.50E-13	2.97E-11	2.91E-08	5.63E-10	8.83E-09	n/a	**6.90E-07**
hexane	110-54-3	2.98E-11	1.06E-15	6.52E-21	1.63E-20	1.56E-17	7.89E-16	7.04E-18	6.50E-14	n/a	**2.99E-11**
methylene chloride	75-09-2	2.44E-10	2.04E-14	6.92E-18	1.74E-17	1.30E-14	1.92E-11	6.30E-15	5.38E-13	n/a	**2.64E-10**
styrene	100-42-5	2.92E-11	2.24E-14	4.91E-15	8.47E-15	1.37E-15	8.97E-11	2.61E-09	1.16E-12	n/a	**2.73E-09**
tetrachloroethene	127-18-4	2.93E-10	1.78E-13	1.00E-17	2.51E-17	9.26E-15	2.23E-11	2.24E-14	1.59E-11	n/a	**3.31E-10**
toluene	108-88-3	2.66E-12	1.96E-14	4.18E-18	1.05E-17	1.46E-15	2.45E-12	5.73E-15	7.24E-13	n/a	**5.86E-12**
trans-1,3-dichloropropene	10061-02-6	8.02E-11	1.46E-14	1.56E-17	7.82E-17	2.50E-15	5.73E-12	3.93E-14	6.01E-13	n/a	**8.66E-11**
trichloroethene	79-01-6	3.10E-10	1.94E-12	6.18E-16	1.55E-15	3.18E-13	2.51E-10	8.04E-13	9.32E-11	n/a	**6.57E-10**
trichlorofluoromethane	75-69-4	1.28E-11	1.73E-15	2.03E-20	8.68E-20	2.56E-16	2.16E-14	4.29E-14	8.94E-14	n/a	**1.29E-11**
vinyl chloride	75-01-4	9.84E-11	6.42E-14	1.76E-18	4.41E-18	2.67E-14	3.41E-12	1.69E-15	1.33E-12	n/a	**1.03E-10**
xylenes	1330-20-7	2.60E-10	2.62E-14	3.63E-17	9.11E-17	1.14E-15	4.97E-12	4.46E-14	1.28E-12	n/a	**2.66E-10**
2,3,7,8-TCDF	51207-31-9									n/a	
Total PCDDs and PCDFs	NA	1.27E-11	2.03E-11	9.28E-13	7.75E-12	2.70E-14	4.92E-09	5.43E-06	1.73E-09	n/a	**5.43E-06**
antimony	7440-36-0		6.07E-16	4.92E-18	2.90E-16	1.62E-15	1.33E-09	5.55E-11	1.34E-12	n/a	**1.39E-09**
cadmium	7440-43-9	5.91E-08	2.54E-15	6.50E-18	1.63E-15	6.77E-15	5.57E-09	2.28E-11	1.27E-10	n/a	**6.48E-08**
chromium (3+)	7440-47-3		1.38E-17	2.17E-20	9.79E-19	1.84E-17	1.70E-11	6.86E-12	1.21E-15	n/a	**2.39E-11**
chromium (6+)	18540-29-9	5.43E-08	6.91E-15	1.08E-17	4.90E-16	9.21E-15	8.52E-09	3.43E-09	6.04E-13	n/a	**6.62E-08**
copper	7440-50-8		3.87E-16	1.60E-17	1.31E-15	1.03E-15	9.57E-10	4.84E-10	6.77E-14	n/a	**1.44E-09**
lead	7439-92-1									n/a	**0.00E+00**
nickel	7440-02-0	1.25E-07	2.42E-15	1.97E-17	8.37E-16	3.23E-15	2.65E-09	8.57E-10	5.22E-12	n/a	**1.29E-07**
zinc	7440-66-6		4.71E-16	3.86E-18	5.18E-16	2.09E-15	1.72E-09	1.39E-11	8.95E-11	n/a	**1.83E-09**
Total Pathway Hazard	**All Chemicals**	**9.13E-07**	**1.11E-10**	**2.80E-12**	**1.40E-11**	**3.34E-11**	**1.46E-06**	**1.24E-05**	**1.36E-08**	**0.00E+00**	**1.48E-05**

RISK AND HAZARD BY PATHWAY FOR SUBSISTENCE FARMER EXPOSURE SCENARIOS

CARCINOGENIC EFFECTS: Child Subsistence Farmer Exposure Scenario											
COPC	CAS Number	Risk from Inhalation	Risk from Dermal Water Contact	Risk from Dermal Soil Contact	Risk from Incidental Soil Ingestion	Risk from Incidental Surface Water Ingestion	Risk from Ingestion of Produce	Risk from Ingestion of Terrestrial Animal Products	Risk from Ingestion of Fish	Risk from Ingestion of Breast Milk	Total Risk from Individual Chemical
1,1,1-trichloroethane	71-55-6									n/a	**0.00E+00**
1,1-dichloroethane	75-34-3	2.15E-15	1.21E-19	1.04E-22	3.71E-22	1.06E-19	4.85E-17	5.60E-20	5.59E-18	n/a	**2.20E-15**
1,1-dichloroethene	75-35-4									n/a	**0.00E+00**
1,2-dichloroethane	107-06-2	3.48E-14	1.28E-18	4.00E-21	1.43E-20	1.79E-18	2.59E-15	1.91E-18	5.54E-17	n/a	**3.74E-14**
1,2-dichloropropane	78-87-5	3.13E-14	2.25E-18	4.31E-21	1.54E-20	1.64E-18	9.81E-16	2.47E-18	1.23E-16	n/a	**3.24E-14**
1,3-butadiene	106-99-0	3.48E-14	1.19E-16	1.74E-20	6.21E-20	4.89E-17	7.13E-15	1.05E-16	3.62E-15	n/a	**4.58E-14**
2-butanone	78-93-3									n/a	**0.00E+00**
acetone	67-64-1									n/a	**0.00E+00**
benzene	71-43-2	1.77E-13	4.27E-17	2.94E-20	1.05E-19	1.79E-17	5.98E-15	1.73E-17	1.61E-15	n/a	**1.85E-13**
benzoic acid	65-85-0									n/a	**0.00E+00**
benzyl alcohol	100-51-6									n/a	**0.00E+00**
bis(2-ethylhexyl)-phthalate	117-81-7	2.15E-14	4.07E-17	4.40E-17	8.63E-17	2.09E-18	7.39E-13	1.35E-11	4.07E-15	n/a	**1.42E-11**
bromodichloromethane	75-27-4	2.12E-13	6.73E-18	5.27E-19	8.30E-18	6.77E-18	5.06E-13	2.94E-13	6.08E-16	n/a	**1.01E-12**
bromomethane	74-83-9									n/a	**0.00E+00**
carbon disulfide	75-15-0									n/a	**0.00E+00**
carbon tetrachloride	56-23-5	4.66E-14	2.61E-17	5.94E-21	2.78E-20	8.03E-18	1.64E-15	4.85E-15	2.49E-15	n/a	**5.57E-14**
chlorobenzene	108-90-7									n/a	**0.00E+00**
chloroform	67-66-3	5.20E-13	1.22E-17	1.38E-20	4.94E-20	9.98E-18	3.47E-15	8.01E-18	7.51E-16	n/a	**5.24E-13**
chloromethane	74-87-3									n/a	**0.00E+00**
cis-1,3-dichloropropene	10061-01-5	6.48E-15	1.75E-18	2.18E-22	4.46E-21	2.31E-18	3.84E-16	1.34E-16	8.52E-17	n/a	**7.08E-15**
dibromochloromethane	124-48-1	1.41E-13	1.21E-17	6.45E-18	1.30E-16	1.39E-17	2.48E-12	4.68E-12	1.57E-15	n/a	**7.30E-12**
dichlorodifluoromethane	75-71-8									n/a	**0.00E+00**
dimethyl phthalate	131-11-3									n/a	**0.00E+00**
di-n-butyl phthalate	84-74-2									n/a	**0.00E+00**
ethylbenzene	100-41-4	5.39E-14	2.81E-18	2.76E-21	9.84E-21	3.58E-19	4.67E-16	1.78E-18	1.89E-16	n/a	**5.46E-14**
Freon 113	76-13-1									n/a	**0.00E+00**
HD	505-60-2	1.09E-11	5.08E-16	4.52E-18	1.62E-17	5.34E-16	3.25E-13	6.71E-15	8.31E-14	n/a	**1.14E-11**
hexane	110-54-3									n/a	**0.00E+00**
methylene chloride	75-09-2	8.60E-15	1.12E-18	1.46E-21	5.21E-21	1.94E-18	1.24E-15	6.27E-19	4.22E-17	n/a	**9.88E-15**
styrene	100-42-5									n/a	**0.00E+00**
tetrachloroethene	127-18-4	1.23E-14	1.17E-16	2.53E-20	9.05E-20	1.67E-17	1.64E-14	2.66E-17	1.50E-14	n/a	**4.38E-14**
toluene	108-88-3									n/a	**0.00E+00**
trans-1,3-dichloropropene	10061-02-6	6.87E-15	5.34E-18	2.18E-20	1.56E-19	2.50E-18	2.89E-15	2.61E-17	3.15E-16	n/a	**1.01E-14**
trichloroethene	79-01-6	2.48E-13	2.84E-17	3.47E-20	1.24E-19	1.27E-17	4.45E-15	2.13E-17	1.95E-15	n/a	**2.55E-13**
trichlorofluoromethane	75-69-4									n/a	**0.00E+00**
vinyl chloride	75-01-4	8.56E-15	1.69E-17	1.78E-21	6.35E-21	1.92E-17	1.07E-15	8.08E-19	5.00E-16	n/a	**1.02E-14**
xylenes	1330-20-7									n/a	**0.00E+00**
2,3,7,8-TCDF	51207-31-9									n/a	
Total PCDDs and PCDFs	NA	3.85E-15	1.34E-16	2.03E-17	2.41E-16	4.87E-19	9.07E-14	1.34E-10	1.64E-14	n/a	**1.34E-10**
antimony	7440-36-0									n/a	**0.00E+00**
cadmium	7440-43-9	2.13E-13								n/a	**2.13E-13**
chromium (3+)	7440-47-3									n/a	**0.00E+00**
chromium (6+)	18540-29-9	1.30E-11	1.27E-18	7.61E-21	4.90E-19	4.60E-18	3.12E-12	1.20E-12	1.58E-16	n/a	**1.74E-11**
copper	7440-50-8									n/a	**0.00E+00**
lead	7439-92-1	6.50E-15	2.00E-21	1.62E-21	3.15E-19	4.40E-20	2.65E-14	1.52E-15	4.27E-20	n/a	**3.45E-14**
nickel	7440-02-0	5.41E-13								n/a	**5.41E-13**
zinc	7440-66-6									n/a	**0.00E+00**
Total Pathway Risk	**All Chemicals**	**2.63E-11**	**1.08E-15**	**7.59E-17**	**4.83E-16**	**7.06E-16**	**7.34E-12**	**1.53E-10**	**1.33E-13**	**0.00E+00**	**1.87E-10**

RISK AND HAZARD BY PATHWAY FOR SUBSISTENCE FARMER EXPOSURE SCENARIOS

NONCARCINOGENIC EFFECTS: Child Subsistence Farmer Exposure Scenario											
COPC	CAS Number	Hazard from Inhalation	Hazard from Dermal Water Contact	Hazard from Dermal Soil Contact	Hazard from Incidental Soil Ingestion	Hazard from Incidental Surface Water Ingestion	Hazard from Ingestion of Produce	Hazard from Ingestion of Terrestrial Animal Products	Hazard from Ingestion of Fish	Hazard from Ingestion of Breast Milk	Total Hazard from Individual Chemical
1,1,1-trichloroethane	71-55-6	7.80E-12	7.00E-16	1.79E-19	1.10E-18	2.88E-16	6.33E-14	1.85E-13	5.25E-14	n/a	**8.10E-12**
1,1-dichloroethane	75-34-3	3.77E-11	2.96E-15	2.55E-18	9.11E-18	2.61E-15	1.19E-12	1.38E-15	1.37E-13	n/a	**3.91E-11**
1,1-dichloroethene	75-35-4	8.48E-11	9.61E-15	7.64E-19	5.94E-18	4.77E-15	3.38E-13	2.15E-13	4.28E-13	n/a	**8.58E-11**
1,2-dichloroethane	107-06-2	3.82E-09	9.87E-15	3.08E-17	1.10E-16	1.38E-14	1.99E-11	1.47E-14	4.27E-13	n/a	**3.84E-09**
1,2-dichloropropane	78-87-5	5.86E-09	5.15E-15	9.85E-18	3.52E-17	3.74E-15	2.24E-12	5.64E-15	2.82E-13	n/a	**5.86E-09**
1,3-butadiene	106-99-0	8.12E-09								n/a	**8.12E-09**
2-butanone	78-93-3	5.67E-11	1.68E-15	2.71E-15	9.69E-15	1.08E-14	5.06E-10	1.70E-13	3.71E-13	n/a	**5.64E-10**
acetone	67-64-1	1.39E-10	9.98E-16	8.28E-16	2.96E-15	1.22E-14	2.41E-10	1.41E-14	4.17E-13	n/a	**3.80E-10**
benzene	71-43-2	1.07E-08	2.72E-12	1.87E-15	6.68E-15	1.14E-12	3.81E-10	1.10E-12	1.03E-10	n/a	**1.12E-08**
benzoic acid	65-85-0		8.63E-14	1.03E-14	1.52E-13	8.32E-14	1.86E-07	5.53E-13	2.86E-12	n/a	**1.86E-07**
benzyl alcohol	100-51-6		4.18E-12	9.38E-13	4.01E-11	1.14E-11	3.08E-06	4.00E-09	3.88E-11	n/a	**3.08E-06**
bis(2-ethylhexyl)-phthalate	117-81-7		2.04E-12	2.24E-12	4.40E-12	1.05E-13	3.70E-08	6.74E-07	2.04E-10	n/a	**7.11E-07**
bromodichloromethane	75-27-4		7.60E-14	5.95E-15	9.38E-14	7.64E-14	5.71E-09	3.31E-09	6.86E-12	n/a	**9.03E-09**
bromomethane	74-83-9	1.89E-08	4.32E-13	1.28E-15	4.56E-15	9.11E-13	4.07E-10	2.02E-12	1.63E-11	n/a	**1.93E-08**
carbon disulfide	75-15-0	3.17E-10	8.44E-14	6.18E-18	2.21E-17	3.15E-14	1.81E-12	3.81E-15	3.38E-12	n/a	**3.22E-10**
carbon tetrachloride	56-23-5	1.09E-09	1.31E-12	2.97E-16	1.39E-15	4.01E-13	8.19E-11	2.42E-10	1.25E-10	n/a	**1.54E-09**
chlorobenzene	108-90-7	5.09E-10	9.00E-14	2.26E-16	7.07E-16	1.90E-14	3.38E-11	1.20E-10	5.90E-12	n/a	**6.69E-10**
chloroform	67-66-3	6.42E-09	5.52E-13	6.25E-16	2.23E-15	4.51E-13	1.57E-10	3.62E-13	3.39E-11	n/a	**6.61E-09**
chloromethane	74-87-3	3.06E-09	8.75E-14	5.52E-17	1.97E-16	1.71E-13	2.17E-11	1.34E-14	5.87E-12	n/a	**3.09E-09**
cis-1,3-dichloropropene	10061-01-5	1.13E-09	8.16E-15	1.02E-18	2.08E-17	1.08E-14	1.79E-12	6.27E-13	3.98E-13	n/a	**1.14E-09**
dibromochloromethane	124-48-1		1.01E-13	5.39E-14	1.08E-12	1.16E-13	2.07E-08	3.91E-08	1.31E-11	n/a	**5.99E-08**
dichlorodifluoromethane	75-71-8	4.80E-10	5.54E-15	1.58E-17	1.48E-16	3.42E-15	2.97E-12	1.42E-12	3.41E-13	n/a	**4.85E-10**
dimethyl phthalate	131-11-3									n/a	**0.00E+00**
di-n-butyl phthalate	84-74-2		7.43E-12	7.80E-12	7.84E-12	3.14E-13	4.35E-09	2.66E-05	6.13E-09	n/a	**2.66E-05**
ethylbenzene	100-41-4	2.94E-11	3.58E-14	3.51E-17	1.25E-16	4.56E-15	5.95E-12	2.27E-14	2.41E-12	n/a	**3.78E-11**
Freon 113	76-13-1	1.66E-12	1.10E-16	1.98E-20	7.05E-20	2.62E-17	3.13E-14	2.16E-15	1.54E-14	n/a	**1.70E-12**
HD	505-60-2	1.82E-06	1.32E-10	1.17E-12	4.20E-12	1.39E-10	8.45E-08	1.74E-09	2.16E-08	n/a	**1.93E-06**
hexane	110-54-3	8.34E-11	1.81E-15	4.27E-20	1.52E-19	7.27E-17	1.57E-15	2.15E-17	1.59E-13	n/a	**8.36E-11**
methylene chloride	75-09-2	6.84E-10	3.50E-14	4.53E-17	1.62E-16	6.05E-14	3.84E-11	1.95E-14	1.31E-12	n/a	**7.24E-10**
styrene	100-42-5	8.19E-11	3.84E-14	3.22E-14	7.91E-14	6.39E-15	2.81E-10	1.02E-08	2.83E-12	n/a	**1.05E-08**
tetrachloroethene	127-18-4	8.20E-10	3.04E-13	6.57E-17	2.35E-16	4.32E-14	4.24E-11	6.90E-14	3.89E-11	n/a	**9.02E-10**
toluene	108-88-3	7.46E-12	3.35E-14	2.74E-17	9.78E-17	6.81E-15	4.84E-12	1.77E-14	1.77E-12	n/a	**1.41E-11**
trans-1,3-dichloropropene	10061-02-6	2.25E-10	2.49E-14	1.02E-16	7.30E-16	1.17E-14	1.35E-11	1.22E-13	1.47E-12	n/a	**2.40E-10**
trichloroethene	79-01-6	8.69E-10	3.32E-12	4.05E-15	1.45E-14	1.49E-12	5.19E-10	2.49E-12	2.28E-10	n/a	**1.62E-09**
trichlorofluoromethane	75-69-4	3.58E-11	2.96E-15	1.33E-19	8.10E-19	1.20E-15	4.30E-14	1.36E-13	2.18E-13	n/a	**3.62E-11**
vinyl chloride	75-01-4	2.76E-10	1.10E-13	1.15E-17	4.12E-17	1.25E-13	6.93E-12	5.24E-15	3.24E-12	n/a	**2.86E-10**
xylenes	1330-20-7	7.27E-10	4.48E-14	2.38E-16	8.50E-16	5.30E-15	1.04E-11	1.37E-13	3.12E-12	n/a	**7.40E-10**
2,3,7,8-TCDF	51207-31-9									n/a	
Total PCDDs and PCDFs	NA	3.55E-11	3.47E-11	6.08E-12	7.23E-11	1.26E-13	1.61E-08	2.12E-05	4.23E-09	n/a	**2.12E-05**
antimony	7440-36-0		1.04E-15	3.22E-17	2.71E-15	7.54E-15	4.54E-09	1.47E-10	3.28E-12	n/a	**4.69E-09**
cadmium	7440-43-9	1.65E-07	4.35E-15	4.26E-17	1.52E-14	3.16E-14	1.90E-08	5.22E-11	3.11E-10	n/a	**1.85E-07**
chromium (3+)	7440-47-3		2.37E-17	1.42E-19	9.14E-18	8.59E-17	5.83E-11	2.23E-11	2.95E-15	n/a	**8.06E-11**
chromium (6+)	18540-29-9	1.52E-07	1.18E-14	7.10E-17	4.57E-15	4.30E-14	2.91E-08	1.12E-08	1.48E-12	n/a	**1.92E-07**
copper	7440-50-8		6.62E-16	1.05E-16	1.22E-14	4.83E-15	3.27E-09	1.40E-09	1.65E-13	n/a	**4.67E-09**
lead	7439-92-1									n/a	**0.00E+00**
nickel	7440-02-0	3.51E-07	4.14E-15	1.29E-16	7.81E-15	1.51E-14	9.07E-09	2.54E-09	1.28E-11	n/a	**3.62E-07**
zinc	7440-66-6		8.07E-16	2.53E-17	4.84E-15	9.77E-15	5.89E-09	4.73E-11	2.19E-10	n/a	**6.15E-09**
Total Pathway Hazard	**All Chemicals**	**2.56E-06**	**1.90E-10**	**1.83E-11**	**1.30E-10**	**1.56E-10**	**3.50E-06**	**4.86E-05**	**3.33E-08**	**0.00E+00**	**5.46E-05**

RISK AND HAZARD BY PATHWAY FOR SUBSISTENCE FARMER EXPOSURE SCENARIOS

CARCINOGENIC EFFECTS: Infant Subsistence Farmer Exposure Scenario											
COPC	CAS Number	Risk from Inhalation	Risk from Dermal Water Contact	Risk from Dermal Soil Contact	Risk from Incidental Soil Ingestion	Risk from Incidental Surface Water Ingestion	Risk from Ingestion of Produce	Risk from Ingestion of Terrestrial Animal Products	Risk from Ingestion of Fish	Risk from Ingestion of Breast Milk	Total Risk from Individual Chemical
1,1,1-trichloroethane	71-55-6		n/a			n/a					**0.00E+00**
1,1-dichloroethane	75-34-3	2.42E-16	n/a	2.92E-23	1.11E-22	n/a	1.19E-17	3.29E-20	1.68E-18		**2.56E-16**
1,1-dichloroethene	75-35-4		n/a			n/a					**0.00E+00**
1,2-dichloroethane	107-06-2	3.91E-15	n/a	1.12E-21	4.28E-21	n/a	6.37E-16	1.12E-18	1.66E-17	1.28E-14	**1.73E-14**
1,2-dichloropropane	78-87-5	3.52E-15	n/a	1.21E-21	4.62E-21	n/a	2.38E-16	1.45E-18	3.69E-17		**3.80E-15**
1,3-butadiene	106-99-0	3.91E-15	n/a	4.89E-21	1.86E-20	n/a	1.78E-15	6.26E-17	1.08E-15		**6.83E-15**
2-butanone	78-93-3		n/a			n/a					**0.00E+00**
acetone	67-64-1		n/a			n/a					**0.00E+00**
benzene	71-43-2	1.99E-14	n/a	8.26E-21	3.15E-20	n/a	1.45E-15	1.02E-17	4.83E-16	1.23E-13	**1.45E-13**
benzoic acid	65-85-0		n/a			n/a					**0.00E+00**
benzyl alcohol	100-51-6		n/a			n/a					**0.00E+00**
bis(2-ethylhexyl)-phthalate	117-81-7	2.42E-15	n/a	1.24E-17	2.59E-17	n/a	1.88E-13	9.33E-12	1.22E-15		**9.52E-12**
bromodichloromethane	75-27-4	2.39E-14	n/a	1.48E-19	2.49E-18	n/a	1.23E-13	4.98E-14	1.82E-16		**1.97E-13**
bromomethane	74-83-9		n/a			n/a					**0.00E+00**
carbon disulfide	75-15-0		n/a			n/a					**0.00E+00**
carbon tetrachloride	56-23-5	5.25E-15	n/a	1.67E-21	8.34E-21	n/a	4.08E-16	2.95E-15	7.48E-16		**9.35E-15**
chlorobenzene	108-90-7		n/a			n/a					**0.00E+00**
chloroform	67-66-3	5.85E-14	n/a	3.89E-21	1.48E-20	n/a	8.45E-16	4.70E-18	2.25E-16	6.79E-14	**1.27E-13**
chloromethane	74-87-3		n/a			n/a					**0.00E+00**
cis-1,3-dichloropropene	10061-01-5	7.29E-16	n/a	6.12E-23	1.34E-21	n/a	9.20E-17	2.28E-17	2.56E-17	1.56E-14	**1.65E-14**
dibromochloromethane	124-48-1	1.58E-14	n/a	1.81E-18	3.89E-17	n/a	5.64E-13	7.94E-13	4.71E-16		**1.37E-12**
dichlorodifluoromethane	75-71-8		n/a			n/a					**0.00E+00**
dimethyl phthalate	131-11-3		n/a			n/a					**0.00E+00**
di-n-butyl phthalate	84-74-2		n/a			n/a					**0.00E+00**
ethylbenzene	100-41-4	6.07E-15	n/a	7.75E-22	2.95E-21	n/a	1.17E-16	1.04E-18	5.67E-17	2.52E-15	**8.76E-15**
Freon 113	76-13-1		n/a			n/a					**0.00E+00**
HD	505-60-2	1.23E-12	n/a	1.27E-18	4.85E-18	n/a	7.64E-14	3.99E-15	2.49E-14		**1.34E-12**
hexane	110-54-3		n/a			n/a					**0.00E+00**
methylene chloride	75-09-2	9.68E-16	n/a	4.10E-22	1.56E-21	n/a	3.03E-16	3.68E-19	1.27E-17	1.40E-14	**1.52E-14**
styrene	100-42-5		n/a			n/a					**0.00E+00**
tetrachloroethene	127-18-4	1.38E-15	n/a	7.12E-21	2.71E-20	n/a	4.13E-15	1.57E-17	4.50E-15	1.19E-13	**1.29E-13**
toluene	108-88-3		n/a			n/a					**0.00E+00**
trans-1,3-dichloropropene	10061-02-6	7.73E-16	n/a	6.14E-21	4.69E-20	n/a	6.60E-16	1.53E-17	9.44E-17	1.75E-14	**1.91E-14**
trichloroethene	79-01-6	2.79E-14	n/a	9.77E-21	3.72E-20	n/a	1.08E-15	1.25E-17	5.86E-16	8.51E-14	**1.15E-13**
trichlorofluoromethane	75-69-4		n/a			n/a					**0.00E+00**
vinyl chloride	75-01-4	9.63E-16	n/a	5.00E-22	1.91E-21	n/a	2.61E-16	4.75E-19	1.50E-16		**1.37E-15**
xylenes	1330-20-7		n/a			n/a					**0.00E+00**
2,3,7,8-TCDF	51207-31-9		n/a			n/a					
Total PCDDs and PCDFs	NA	4.34E-16	n/a	5.70E-18	7.24E-17	n/a	2.24E-14	9.23E-11	4.91E-15	5.16E-09	**5.25E-09**
antimony	7440-36-0		n/a			n/a					**0.00E+00**
cadmium	7440-43-9	2.39E-14	n/a			n/a					**2.39E-14**
chromium (3+)	7440-47-3		n/a			n/a					**0.00E+00**
chromium (6+)	18540-29-9	1.47E-12	n/a	2.14E-21	1.47E-19	n/a	7.97E-13	7.47E-13	4.74E-17	1.24E-12	**4.25E-12**
copper	7440-50-8		n/a			n/a					**0.00E+00**
lead	7439-92-1	7.32E-16	n/a	4.57E-22	9.46E-20	n/a	6.76E-15	1.02E-15	1.28E-20	8.01E-15	**1.65E-14**
nickel	7440-02-0	6.09E-14	n/a			n/a					**6.09E-14**
zinc	7440-66-6		n/a			n/a					**0.00E+00**
Total Pathway Risk	**All Chemicals**	**2.96E-12**	**0.00E+00**	**2.13E-17**	**1.45E-16**	**0.00E+00**	**1.79E-12**	**1.03E-10**	**3.98E-14**	**5.16E-09**	**5.27E-09**

RISK AND HAZARD BY PATHWAY FOR SUBSISTENCE FARMER EXPOSURE SCENARIOS

NONCARCINOGENIC EFFECTS: Infant Subsistence Farmer Exposure Scenario											
COPC	CAS Number	Hazard from Inhalation	Hazard from Dermal Water Contact	Hazard from Dermal Soil Contact	Hazard from Incidental Soil Ingestion	Hazard from Incidental Surface Water Ingestion	Hazard from Ingestion of Produce	Hazard from Ingestion of Terrestrial Animal Products	Hazard from Ingestion of Fish	Hazard from Ingestion of Breast Milk	Total Hazard from Individual Chemical
1,1,1-trichloroethane	71-55-6	4.39E-12	n/a	2.51E-19	1.66E-18	n/a	7.81E-14	5.66E-13	7.88E-14		**5.11E-12**
1,1-dichloroethane	75-34-3	2.12E-11	n/a	3.59E-18	1.37E-17	n/a	1.46E-12	4.04E-15	2.06E-13		**2.29E-11**
1,1-dichloroethene	75-35-4	4.77E-11	n/a	1.07E-18	8.91E-18	n/a	4.10E-13	1.83E-13	6.43E-13		**4.89E-11**
1,2-dichloroethane	107-06-2	2.15E-09	n/a	4.32E-17	1.65E-16	n/a	2.45E-11	4.32E-14	6.40E-13	4.91E-10	**2.67E-09**
1,2-dichloropropane	78-87-5	3.30E-09	n/a	1.39E-17	5.28E-17	n/a	2.72E-12	1.66E-14	4.22E-13		**3.30E-09**
1,3-butadiene	106-99-0	4.57E-09	n/a			n/a					**4.57E-09**
2-butanone	78-93-3	3.19E-11	n/a	3.82E-15	1.45E-14	n/a	5.41E-10	4.99E-13	5.57E-13	1.07E-09	**1.64E-09**
acetone	67-64-1	7.83E-11	n/a	1.16E-15	4.43E-15	n/a	2.74E-10	4.15E-14	6.26E-13	7.03E-10	**1.06E-09**
benzene	71-43-2	6.00E-09	n/a	2.63E-15	1.00E-14	n/a	4.61E-10	3.23E-12	1.54E-10	3.91E-08	**4.57E-08**
benzoic acid	65-85-0		n/a	1.45E-14	2.28E-13	n/a	2.34E-07	1.62E-12	4.28E-12		**2.34E-07**
benzyl alcohol	100-51-6		n/a	1.32E-12	6.01E-11	n/a	3.48E-06	1.18E-08	5.82E-11		**3.49E-06**
bis(2-ethylhexyl)-phthalate	117-81-7		n/a	3.15E-12	6.59E-12	n/a	4.70E-08	2.33E-06	3.06E-10		**2.38E-06**
bromodichloromethane	75-27-4		n/a	8.36E-15	1.41E-13	n/a	6.94E-09	2.81E-09	1.03E-11		**9.77E-09**
bromomethane	74-83-9	1.06E-08	n/a	1.80E-15	6.84E-15	n/a	4.70E-10	6.82E-12	2.45E-11		**1.11E-08**
carbon disulfide	75-15-0	1.78E-10	n/a	8.69E-18	3.31E-17	n/a	2.23E-12	1.12E-14	5.07E-12	1.06E-09	**1.25E-09**
carbon tetrachloride	56-23-5	6.12E-10	n/a	4.18E-16	2.08E-15	n/a	1.02E-10	7.37E-10	1.87E-10		**1.64E-09**
chlorobenzene	108-90-7	2.86E-10	n/a	3.18E-16	1.06E-15	n/a	4.19E-11	3.65E-10	8.85E-12		**7.02E-10**
chloroform	67-66-3	3.61E-09	n/a	8.79E-16	3.35E-15	n/a	1.91E-10	1.06E-12	5.09E-11	1.53E-08	**1.92E-08**
chloromethane	74-87-3	1.72E-09	n/a	7.77E-17	2.96E-16	n/a	2.54E-11	3.95E-14	8.81E-12	5.13E-09	**6.88E-09**
cis-1,3-dichloropropene	10061-01-5	6.38E-10	n/a	1.43E-18	3.12E-17	n/a	2.15E-12	5.33E-13	5.96E-13	3.64E-10	**1.01E-09**
dibromochloromethane	124-48-1		n/a	7.58E-14	1.63E-12	n/a	2.36E-08	3.32E-08	1.97E-11		**5.68E-08**
dichlorodifluoromethane	75-71-8	2.70E-10	n/a	2.22E-17	2.22E-16	n/a	3.36E-12	1.05E-12	5.12E-13	1.23E-10	**3.98E-10**
dimethyl phthalate	131-11-3		n/a			n/a					**0.00E+00**
di-n-butyl phthalate	84-74-2		n/a	1.10E-11	1.18E-11	n/a	4.80E-09	9.20E-05	9.19E-09		**9.20E-05**
ethylbenzene	100-41-4	1.65E-11	n/a	4.93E-17	1.88E-16	n/a	7.42E-12	6.64E-14	3.61E-12	1.60E-10	**1.88E-10**
Freon 113	76-13-1	9.31E-13	n/a	2.78E-20	1.06E-19	n/a	3.99E-14	6.48E-15	2.31E-14	8.60E-13	**1.86E-12**
HD	505-60-2	1.03E-06	n/a	1.65E-12	6.29E-12	n/a	9.92E-08	5.18E-09	3.24E-08		**1.16E-06**
hexane	110-54-3	4.69E-11	n/a	6.00E-20	2.29E-19	n/a	1.94E-15	6.22E-17	2.38E-13	2.83E-12	**5.00E-11**
methylene chloride	75-09-2	3.85E-10	n/a	6.38E-17	2.43E-16	n/a	4.72E-11	5.73E-14	1.97E-12	2.17E-09	**2.61E-09**
styrene	100-42-5	4.61E-11	n/a	4.52E-14	1.19E-13	n/a	2.87E-10	3.50E-08	4.24E-12	1.28E-08	**4.81E-08**
tetrachloroethene	127-18-4	4.62E-10	n/a	9.23E-17	3.52E-16	n/a	5.35E-11	2.04E-13	5.83E-11	1.54E-09	**2.11E-09**
toluene	108-88-3	4.20E-12	n/a	3.85E-17	1.47E-16	n/a	5.99E-12	5.18E-14	2.65E-12	2.31E-10	**2.44E-10**
trans-1,3-dichloropropene	10061-02-6	1.26E-10	n/a	1.43E-16	1.10E-15	n/a	1.54E-11	3.57E-13	2.20E-12	4.09E-10	**5.54E-10**
trichloroethene	79-01-6	4.89E-10	n/a	5.70E-15	2.17E-14	n/a	6.28E-10	7.30E-12	3.42E-10	4.97E-08	**5.11E-08**
trichlorofluoromethane	75-69-4	2.01E-11	n/a	1.87E-19	1.22E-18	n/a	5.30E-14	4.15E-13	3.28E-13	4.02E-11	**6.12E-11**
vinyl chloride	75-01-4	1.55E-10	n/a	1.62E-17	6.17E-17	n/a	8.45E-12	1.54E-14	4.86E-12		**1.68E-10**
xylenes	1330-20-7	4.09E-10	n/a	3.35E-16	1.28E-15	n/a	1.25E-11	4.01E-13	4.67E-12	2.04E-10	**6.30E-10**
2,3,7,8-TCDF	51207-31-9		n/a			n/a					
Total PCDDs and PCDFs	NA	2.00E-11	n/a	8.54E-12	1.08E-10	n/a	1.95E-08	7.32E-05	6.35E-09	3.97E-03	**4.04E-03**
antimony	7440-36-0		n/a	4.53E-17	4.07E-15	n/a	5.80E-09	3.89E-10	4.92E-12	6.81E-09	**1.30E-08**
cadmium	7440-43-9	9.30E-08	n/a	5.98E-17	2.28E-14	n/a	2.43E-08	1.17E-10	4.67E-10	2.81E-08	**1.46E-07**
chromium (3+)	7440-47-3		n/a	2.00E-19	1.37E-17	n/a	7.44E-11	6.97E-11	4.43E-15	1.16E-10	**2.60E-10**
chromium (6+)	18540-29-9	8.55E-08	n/a	9.98E-17	6.86E-15	n/a	3.72E-08	3.48E-08	2.21E-12	5.79E-08	**2.15E-07**
copper	7440-50-8		n/a	1.48E-16	1.84E-14	n/a	4.17E-09	4.03E-09	2.48E-13	6.96E-09	**1.52E-08**
lead	7439-92-1		n/a			n/a					**0.00E+00**
nickel	7440-02-0	1.97E-07	n/a	1.81E-16	1.17E-14	n/a	1.16E-08	7.43E-09	1.91E-11	1.71E-08	**2.33E-07**
zinc	7440-66-6		n/a	3.55E-17	7.26E-15	n/a	7.51E-09	1.51E-10	3.28E-10	8.96E-09	**1.70E-08**
Total Pathway Hazard	**All Chemicals**	**1.44E-06**	**0.00E+00**	**2.58E-11**	**1.95E-10**	**0.00E+00**	**4.01E-06**	**1.68E-04**	**5.00E-08**	**3.97E-03**	**4.14E-03**

RISK AND HAZARD BY PATHWAY FOR SUBSISTENCE FARMER EXPOSURE SCENARIOS

CARCINOGENIC EFFECTS: Early Life Exposure - Infant											
COPC	CAS Number	Risk from Inhalation	Risk from Dermal Water Contact	Risk from Dermal Soil Contact	Risk from Incidental Soil Ingestion	Risk from Incidental Surface Water Ingestion	Risk from Ingestion of Produce	Risk from Ingestion of Terrestrial Animal Products	Risk from Ingestion of Fish	Risk from Ingestion of Breast Milk	Total Risk from Individual Chemical
vinyl chloride	75-01-4	6.74E-14	n/a	3.50E-20	1.33E-19	n/a	1.82E-14	3.33E-17	1.05E-14	n/a	**9.62E-14**

CARCINOGENIC EFFECTS: Early Life Exposure - Child											
COPC	CAS Number	Risk from Inhalation	Risk from Dermal Water Contact	Risk from Dermal Soil Contact	Risk from Incidental Soil Ingestion	Risk from Incidental Surface Water Ingestion	Risk from Ingestion of Produce	Risk from Ingestion of Terrestrial Animal Products	Risk from Ingestion of Fish	Risk from Ingestion of Breast Milk	Total Risk from Individual Chemical
vinyl chloride	75-01-4	1.20E-13	2.37E-16	2.49E-20	8.89E-20	2.69E-16	1.50E-14	1.13E-17	6.99E-15	n/a	**1.42E-13**

RISK AND HAZARD BY PATHWAY FOR THE ADULT WORKER EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Adult Worker Exposure Scenario											
COPC	CAS Number	Risk from Inhalation	Risk from Dermal Water Contact	Risk from Dermal Soil Contact	Risk from Incidental Soil Ingestion	Risk from Incidental Surface Water Ingestion	Risk from Ingestion of Produce	Risk from Ingestion of Terrestrial Animal Products	Risk from Ingestion of Fish	Risk from Ingestion of Breast Milk	Total Risk from Individual Chemical
1,1,1-trichloroethane	71-55-6		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
1,1-dichloroethane	75-34-3	1.83E-16	n/a	1.87E-23	1.42E-23	n/a	n/a	n/a	n/a	n/a	**1.83E-16**
1,1-dichloroethene	75-35-4		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
1,2-dichloroethane	107-06-2	2.96E-15	n/a	7.21E-22	5.46E-22	n/a	n/a	n/a	n/a	n/a	**2.96E-15**
1,2-dichloropropane	78-87-5	2.66E-15	n/a	7.77E-22	5.89E-22	n/a	n/a	n/a	n/a	n/a	**2.66E-15**
1,3-butadiene	106-99-0	2.96E-15	n/a	3.14E-21	2.38E-21	n/a	n/a	n/a	n/a	n/a	**2.96E-15**
2-butanone	78-93-3		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
acetone	67-64-1		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
benzene	71-43-2	1.51E-14	n/a	5.30E-21	4.02E-21	n/a	n/a	n/a	n/a	n/a	**1.51E-14**
benzoic acid	65-85-0		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
benzyl alcohol	100-51-6		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
bis(2-ethylhexyl)-phthalate	117-81-7	1.83E-15	n/a	8.08E-18	3.36E-18	n/a	n/a	n/a	n/a	n/a	**1.84E-15**
bromodichloromethane	75-27-4	1.81E-14	n/a	9.50E-20	3.18E-19	n/a	n/a	n/a	n/a	n/a	**1.81E-14**
bromomethane	74-83-9		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
carbon disulfide	75-15-0		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
carbon tetrachloride	56-23-5	3.97E-15	n/a	1.07E-21	1.06E-21	n/a	n/a	n/a	n/a	n/a	**3.97E-15**
chlorobenzene	108-90-7		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
chloroform	67-66-3	4.42E-14	n/a	2.50E-21	1.89E-21	n/a	n/a	n/a	n/a	n/a	**4.42E-14**
chloromethane	74-87-3		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
cis-1,3-dichloropropene	10061-01-5	5.51E-16	n/a	3.93E-23	1.71E-22	n/a	n/a	n/a	n/a	n/a	**5.51E-16**
dibromochloromethane	124-48-1	1.20E-14	n/a	1.17E-18	4.98E-18	n/a	n/a	n/a	n/a	n/a	**1.20E-14**
dichlorodifluoromethane	75-71-8		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
dimethyl phthalate	131-11-3		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
di-n-butyl phthalate	84-74-2		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
ethylbenzene	100-41-4	4.59E-15	n/a	4.97E-22	3.77E-22	n/a	n/a	n/a	n/a	n/a	**4.59E-15**
Freon 113	76-13-1		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
HD	505-60-2	9.31E-13	n/a	8.16E-19	6.18E-19	n/a	n/a	n/a	n/a	n/a	**9.31E-13**
hexane	110-54-3		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
methylene chloride	75-09-2	7.32E-16	n/a	2.63E-22	1.99E-22	n/a	n/a	n/a	n/a	n/a	**7.32E-16**
styrene	100-42-5		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
tetrachloroethene	127-18-4	1.05E-15	n/a	4.57E-21	3.46E-21	n/a	n/a	n/a	n/a	n/a	**1.05E-15**
toluene	108-88-3		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
trans-1,3-dichloropropene	10061-02-6	5.84E-16	n/a	3.94E-21	5.99E-21	n/a	n/a	n/a	n/a	n/a	**5.84E-16**
trichloroethene	79-01-6	2.11E-14	n/a	6.26E-21	4.74E-21	n/a	n/a	n/a	n/a	n/a	**2.11E-14**
trichlorofluoromethane	75-69-4		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
vinyl chloride	75-01-4	7.28E-16	n/a	3.21E-22	2.43E-22	n/a	n/a	n/a	n/a	n/a	**7.28E-16**
xylenes	1330-20-7		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
2,3,7,8-TCDF	51207-31-9		n/a			n/a	n/a	n/a	n/a	n/a	
Total PCDDs and PCDFs	NA	3.28E-16	n/a	2.46E-17	6.22E-17	n/a	n/a	n/a	n/a	n/a	**4.15E-16**
antimony	7440-36-0		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
cadmium	7440-43-9	1.81E-14	n/a			n/a	n/a	n/a	n/a	n/a	**1.81E-14**
chromium (3+)	7440-47-3		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
chromium (6+)	18540-29-9	1.11E-12	n/a	1.37E-21	1.87E-20	n/a	n/a	n/a	n/a	n/a	**1.11E-12**
copper	7440-50-8		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
lead	7439-92-1	5.53E-16	n/a	2.93E-22	1.21E-20	n/a	n/a	n/a	n/a	n/a	**5.53E-16**
nickel	7440-02-0	4.60E-14	n/a			n/a	n/a	n/a	n/a	n/a	**4.60E-14**
zinc	7440-66-6		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
Total Pathway Risk	**All Chemicals**	**2.24E-12**	**0.00E+00**	**3.48E-17**	**7.16E-17**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**2.24E-12**

RISK AND HAZARD BY PATHWAY FOR THE ADULT WORKER EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS: Adult Worker Exposure Scenario											
COPC	CAS Number	Hazard from Inhalation	Hazard from Dermal Water Contact	Hazard from Dermal Soil Contact	Hazard from Incidental Soil Ingestion	Hazard from Incidental Surface Water Ingestion	Hazard from Ingestion of Produce	Hazard from Ingestion of Terrestrial Animal Products	Hazard from Ingestion of Fish	Hazard from Ingestion of Breast Milk	Total Hazard from Individual Chemical
1,1,1-trichloroethane	71-55-6	6.63E-13	n/a	3.87E-20	5.07E-20	n/a	n/a	n/a	n/a	n/a	**6.63E-13**
1,1-dichloroethane	75-34-3	3.21E-12	n/a	5.52E-19	4.19E-19	n/a	n/a	n/a	n/a	n/a	**3.21E-12**
1,1-dichloroethene	75-35-4	7.21E-12	n/a	1.65E-19	2.73E-19	n/a	n/a	n/a	n/a	n/a	**7.21E-12**
1,2-dichloroethane	107-06-2	3.25E-10	n/a	6.66E-18	5.04E-18	n/a	n/a	n/a	n/a	n/a	**3.25E-10**
1,2-dichloropropane	78-87-5	4.98E-10	n/a	2.13E-18	1.62E-18	n/a	n/a	n/a	n/a	n/a	**4.98E-10**
1,3-butadiene	106-99-0	6.90E-10	n/a			n/a	n/a	n/a	n/a	n/a	**6.90E-10**
2-butanone	78-93-3	4.82E-12	n/a	5.87E-16	4.45E-16	n/a	n/a	n/a	n/a	n/a	**4.82E-12**
acetone	67-64-1	1.18E-11	n/a	1.79E-16	1.36E-16	n/a	n/a	n/a	n/a	n/a	**1.18E-11**
benzene	71-43-2	9.08E-10	n/a	4.05E-16	3.07E-16	n/a	n/a	n/a	n/a	n/a	**9.08E-10**
benzoic acid	65-85-0		n/a	2.23E-15	6.97E-15	n/a	n/a	n/a	n/a	n/a	**9.20E-15**
benzyl alcohol	100-51-6		n/a	2.03E-13	1.84E-12	n/a	n/a	n/a	n/a	n/a	**2.04E-12**
bis(2-ethylhexyl)-phthalate	117-81-7		n/a	4.85E-13	2.02E-13	n/a	n/a	n/a	n/a	n/a	**6.86E-13**
bromodichloromethane	75-27-4		n/a	1.29E-15	4.31E-15	n/a	n/a	n/a	n/a	n/a	**5.59E-15**
bromomethane	74-83-9	1.60E-09	n/a	2.76E-16	2.09E-16	n/a	n/a	n/a	n/a	n/a	**1.60E-09**
carbon disulfide	75-15-0	2.69E-11	n/a	1.34E-18	1.01E-18	n/a	n/a	n/a	n/a	n/a	**2.69E-11**
carbon tetrachloride	56-23-5	9.25E-11	n/a	6.43E-17	6.38E-17	n/a	n/a	n/a	n/a	n/a	**9.25E-11**
chlorobenzene	108-90-7	4.32E-11	n/a	4.90E-17	3.25E-17	n/a	n/a	n/a	n/a	n/a	**4.32E-11**
chloroform	67-66-3	5.46E-10	n/a	1.35E-16	1.03E-16	n/a	n/a	n/a	n/a	n/a	**5.46E-10**
chloromethane	74-87-3	2.60E-10	n/a	1.20E-17	9.06E-18	n/a	n/a	n/a	n/a	n/a	**2.60E-10**
cis-1,3-dichloropropene	10061-01-5	9.64E-11	n/a	2.20E-19	9.57E-19	n/a	n/a	n/a	n/a	n/a	**9.64E-11**
dibromochloromethane	124-48-1		n/a	1.17E-14	4.98E-14	n/a	n/a	n/a	n/a	n/a	**6.14E-14**
dichlorodifluoromethane	75-71-8	4.08E-11	n/a	3.42E-18	6.80E-18	n/a	n/a	n/a	n/a	n/a	**4.08E-11**
dimethyl phthalate	131-11-3		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
di-n-butyl phthalate	84-74-2		n/a	1.69E-12	3.60E-13	n/a	n/a	n/a	n/a	n/a	**2.05E-12**
ethylbenzene	100-41-4	2.50E-12	n/a	7.59E-18	5.75E-18	n/a	n/a	n/a	n/a	n/a	**2.50E-12**
Freon 113	76-13-1	1.41E-13	n/a	4.28E-21	3.24E-21	n/a	n/a	n/a	n/a	n/a	**1.41E-13**
HD	505-60-2	1.55E-07	n/a	2.54E-13	1.93E-13	n/a	n/a	n/a	n/a	n/a	**1.55E-07**
hexane	110-54-3	7.09E-12	n/a	9.24E-21	7.00E-21	n/a	n/a	n/a	n/a	n/a	**7.09E-12**
methylene chloride	75-09-2	5.82E-11	n/a	9.82E-18	7.44E-18	n/a	n/a	n/a	n/a	n/a	**5.82E-11**
styrene	100-42-5	6.96E-12	n/a	6.96E-15	3.63E-15	n/a	n/a	n/a	n/a	n/a	**6.97E-12**
tetrachloroethene	127-18-4	6.98E-11	n/a	1.42E-17	1.08E-17	n/a	n/a	n/a	n/a	n/a	**6.98E-11**
toluene	108-88-3	6.34E-13	n/a	5.93E-18	4.49E-18	n/a	n/a	n/a	n/a	n/a	**6.34E-13**
trans-1,3-dichloropropene	10061-02-6	1.91E-11	n/a	2.21E-17	3.35E-17	n/a	n/a	n/a	n/a	n/a	**1.91E-11**
trichloroethene	79-01-6	7.39E-11	n/a	8.77E-16	6.64E-16	n/a	n/a	n/a	n/a	n/a	**7.39E-11**
trichlorofluoromethane	75-69-4	3.04E-12	n/a	2.88E-20	3.72E-20	n/a	n/a	n/a	n/a	n/a	**3.04E-12**
vinyl chloride	75-01-4	2.34E-11	n/a	2.50E-18	1.89E-18	n/a	n/a	n/a	n/a	n/a	**2.34E-11**
xylenes	1330-20-7	6.18E-11	n/a	5.15E-17	3.90E-17	n/a	n/a	n/a	n/a	n/a	**6.18E-11**
2,3,7,8-TCDF	51207-31-9		n/a			n/a	n/a	n/a	n/a	n/a	
Total PCDDs and PCDFs	NA	3.02E-12	n/a	1.32E-12	3.32E-12	n/a	n/a	n/a	n/a	n/a	**7.65E-12**
antimony	7440-36-0		n/a	6.97E-18	1.24E-16	n/a	n/a	n/a	n/a	n/a	**1.31E-16**
cadmium	7440-43-9	1.41E-08	n/a	9.21E-18	6.98E-16	n/a	n/a	n/a	n/a	n/a	**1.41E-08**
chromium (3+)	7440-47-3		n/a	3.07E-20	4.20E-19	n/a	n/a	n/a	n/a	n/a	**4.50E-19**
chromium (6+)	18540-29-9	1.29E-08	n/a	1.54E-17	2.10E-16	n/a	n/a	n/a	n/a	n/a	**1.29E-08**
copper	7440-50-8		n/a	2.27E-17	5.62E-16	n/a	n/a	n/a	n/a	n/a	**5.85E-16**
lead	7439-92-1		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
nickel	7440-02-0	2.98E-08	n/a	2.79E-17	3.59E-16	n/a	n/a	n/a	n/a	n/a	**2.98E-08**
zinc	7440-66-6		n/a	5.47E-18	2.22E-16	n/a	n/a	n/a	n/a	n/a	**2.28E-16**
Total Pathway Hazard	**All Chemicals**	**2.17E-07**	**0.00E+00**	**3.97E-12**	**5.98E-12**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**2.17E-07**

COPC UPTAKE

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Adult Resident Exposure Scenario														
COPC	CAS Number	Incidental Ingestion of Soil (mg/day)[a]	Ingestion of Exposed Produce (mg/day)[a]	Ingestion of Protected Produce (mg/day)[a]	Ingestion of Belowground Produce (mg/day)[a]	Ingestion of Beef (mg/day)[a]	Ingestion of Pork (mg/day)[a]	Ingestion of Poultry (mg/day)[a]	Ingestion of Eggs (mg/day)[a]	Ingestion of Milk (mg/day)[a]	Ingestion of Fish (mg/day)[a]	Incidental Ingestion of Surface Water (mg/day)[a]	Ingestion of Breast Milk (mg/day)[a]	Total Daily COPC Ingestion (mg/day)[a]
1,1,1-trichloroethane	71-55-6	2.88E-18	1.73E-14	9.37E-15	2.88E-13	2.60E-13	4.88E-17	2.15E-15	8.67E-16	4.62E-13	3.14E-12	9.00E-15	n/a	**4.19E-12**
1,1-dichloroethane	75-34-3	1.19E-18	1.38E-14	9.81E-15	2.68E-13	7.53E-17	1.67E-17	7.62E-19	3.07E-19	1.38E-16	4.10E-13	4.07E-15	n/a	**7.06E-13**
1,1-dichloroethene	75-35-4	3.87E-19	3.30E-15	2.15E-15	3.50E-14	2.86E-14	6.02E-15	2.72E-16	1.09E-16	5.18E-17	6.40E-13	3.73E-15	n/a	**7.19E-13**
1,2-dichloroethane	107-06-2	2.86E-18	4.85E-14	3.52E-14	8.89E-13	1.58E-16	3.56E-17	1.62E-18	6.53E-19	2.91E-16	2.55E-13	4.30E-15	n/a	**1.23E-12**
1,2-dichloropropane	78-87-5	4.13E-18	3.86E-14	2.61E-14	4.17E-13	2.88E-16	6.20E-17	2.82E-18	1.13E-18	5.24E-16	7.56E-13	5.26E-15	n/a	**1.24E-12**
1,3-butadiene	106-99-0	3.33E-19	2.20E-13	2.14E-15	1.54E-15	1.40E-15	6.18E-17	2.27E-19	9.14E-20	2.29E-15	4.45E-13	3.15E-15	n/a	**6.76E-13**
2-butanone	78-93-3	7.58E-15	1.88E-10	1.49E-10	1.98E-10	5.14E-14	1.22E-14	5.65E-16	2.28E-16	9.55E-14	6.15E-12	9.37E-14	n/a	**5.41E-10**
acetone	67-64-1	3.47E-15	8.62E-11	6.80E-11	2.90E-10	6.41E-15	1.53E-15	7.06E-17	2.83E-17	1.19E-14	1.08E-11	1.64E-13	n/a	**4.56E-10**
benzene	71-43-2	3.48E-17	2.95E-13	1.93E-13	3.15E-12	2.56E-15	5.40E-16	2.44E-17	9.81E-18	4.65E-15	1.22E-11	7.14E-14	n/a	**1.60E-11**
benzoic acid	65-85-0	7.92E-13	7.70E-09	5.95E-09	1.89E-06	1.14E-12	2.69E-13	1.24E-14	5.01E-15	2.10E-12	8.01E-11	1.22E-12	n/a	**1.90E-06**
benzyl alcohol	100-51-6	5.22E-12	1.30E-07	1.02E-07	3.90E-07	2.02E-10	4.80E-11	2.22E-12	8.90E-13	3.75E-10	2.03E-11	3.12E-12	n/a	**6.23E-07**
bis(2-ethylhexyl)-phthalate	117-81-7	1.15E-13	6.18E-09	1.17E-11	1.10E-15	5.78E-09	1.50E-10	5.88E-12	2.37E-12	9.44E-08	1.13E-10	3.03E-14	n/a	**1.07E-07**
bromodichloromethane	75-27-4	2.44E-15	1.72E-11	1.36E-11	2.41E-10	1.53E-10	3.69E-11	1.72E-12	6.91E-13	2.83E-13	3.38E-12	1.97E-14	n/a	**4.68E-10**
bromomethane	74-83-9	8.32E-18	1.98E-13	1.55E-13	8.58E-13	3.65E-16	8.66E-17	3.99E-18	1.60E-18	3.22E-15	6.83E-13	1.99E-14	n/a	**1.92E-12**
carbon disulfide	75-15-0	2.88E-18	2.60E-14	1.39E-14	4.10E-13	2.55E-16	4.72E-17	2.06E-18	8.28E-19	4.56E-16	1.01E-11	4.93E-14	n/a	**1.06E-11**
carbon tetrachloride	56-23-5	7.25E-18	3.79E-14	1.58E-14	7.78E-13	8.14E-13	1.30E-14	5.49E-15	2.21E-15	1.42E-12	1.49E-11	2.51E-14	n/a	**1.80E-11**
chlorobenzene	108-90-7	1.84E-17	8.49E-14	4.02E-14	1.57E-12	1.85E-12	3.21E-14	1.40E-14	5.62E-15	3.24E-12	3.52E-12	5.92E-15	n/a	**1.04E-11**
chloroform	67-66-3	2.91E-17	2.92E-13	1.84E-13	3.30E-12	2.15E-15	4.43E-16	1.99E-17	7.98E-18	3.90E-15	1.01E-11	7.05E-14	n/a	**1.40E-11**
chloromethane	74-87-3	6.69E-18	1.68E-13	1.31E-13	9.39E-13	1.78E-16	4.21E-17	1.93E-18	7.81E-19	3.29E-16	4.56E-12	6.95E-14	n/a	**5.87E-12**
cis-1,3-dichloropropene	10061-01-5	8.15E-19	1.14E-14	8.77E-15	1.04E-13	4.47E-14	1.05E-14	4.83E-16	1.94E-19	8.28E-17	3.56E-13	5.05E-15	n/a	**5.41E-13**
dibromochloromethane	124-48-1	2.83E-14	1.67E-10	1.32E-10	5.51E-10	1.81E-09	4.36E-10	2.04E-11	8.19E-12	3.33E-12	4.57E-12	2.12E-14	n/a	**3.13E-09**
dichlorodifluoromethane	75-71-8	3.86E-17	2.51E-13	1.98E-13	7.52E-13	2.45E-15	5.90E-13	2.75E-14	1.11E-14	4.51E-15	2.04E-12	1.07E-14	n/a	**3.88E-12**
dimethyl phthalate	131-11-3	1.93E-13	3.49E-09	2.20E-09	6.42E-09	1.24E-08	2.53E-09	1.13E-10	4.55E-14	2.25E-11	3.03E-11	4.61E-13	n/a	**2.72E-08**
di-n-butyl phthalate	84-74-2	1.02E-12	1.62E-09	1.77E-10	2.14E-12	1.12E-06	4.74E-08	5.73E-13	2.30E-11	1.84E-05	1.75E-08	4.69E-13	n/a	**1.96E-05**
ethylbenzene	100-41-4	1.63E-17	6.92E-14	2.39E-14	1.43E-12	2.05E-15	2.97E-16	1.22E-17	4.91E-18	3.54E-15	7.18E-12	7.12E-15	n/a	**8.72E-12**
Freon 113	76-13-1	2.76E-18	7.95E-12	3.73E-15	6.69E-15	2.27E-13	9.43E-15	2.05E-18	8.26E-19	3.72E-13	1.38E-11	1.23E-14	n/a	**2.24E-11**
HD	505-60-2	3.83E-17	2.38E-12	1.41E-13	3.07E-13	2.82E-14	1.67E-15	2.84E-17	1.14E-17	4.66E-14	4.51E-12	1.52E-14	n/a	**7.43E-12**
hexane	110-54-3	2.19E-18	3.80E-15	1.13E-15	3.93E-14	2.35E-16	3.41E-17	1.47E-18	5.89E-19	3.91E-16	5.22E-11	1.25E-14	n/a	**5.22E-11**
methylene chloride	75-09-2	1.27E-17	2.72E-13	2.03E-13	5.14E-12	6.17E-16	1.41E-16	6.47E-18	2.61E-18	1.14E-15	2.36E-12	5.67E-14	n/a	**8.03E-12**
styrene	100-42-5	2.06E-14	4.39E-11	3.44E-11	9.19E-12	1.31E-10	3.25E-11	1.55E-11	6.24E-12	2.37E-09	1.66E-11	1.96E-14	n/a	**2.66E-09**
tetrachloroethene	127-18-4	3.06E-18	3.81E-14	3.00E-15	1.07E-12	1.41E-15	9.63E-17	2.21E-18	8.89E-19	2.34E-15	1.16E-11	6.76E-15	n/a	**1.27E-11**
toluene	108-88-3	1.02E-17	5.37E-14	2.55E-14	8.92E-13	1.03E-15	1.79E-16	7.75E-18	3.12E-18	1.82E-15	4.22E-12	8.51E-15	n/a	**5.21E-12**
trans-1,3-dichloropropene	10061-02-6	2.86E-17	1.65E-13	1.23E-13	5.57E-13	1.94E-15	4.49E-16	2.08E-17	8.37E-18	3.54E-15	1.31E-12	5.47E-15	n/a	**2.17E-12**
trichloroethene	79-01-6	5.66E-18	3.23E-14	2.10E-14	3.17E-13	4.34E-16	9.21E-17	4.20E-18	1.69E-18	7.87E-16	2.04E-12	6.97E-15	n/a	**2.42E-12**
trichlorofluoromethane	75-69-4	3.17E-19	1.92E-15	1.03E-15	2.90E-14	2.88E-14	5.38E-18	2.37E-16	9.53E-17	5.12E-14	1.96E-12	5.61E-15	n/a	**2.08E-12**
vinyl chloride	75-01-4	1.61E-19	3.03E-15	2.26E-15	4.46E-14	8.23E-18	1.90E-18	8.69E-20	3.50E-20	1.53E-17	2.90E-13	5.85E-15	n/a	**3.46E-13**
xylenes	1330-20-7	2.22E-16	5.12E-13	3.00E-13	4.13E-12	1.74E-14	3.57E-15	1.65E-16	6.64E-17	3.07E-14	1.86E-11	1.66E-14	n/a	**2.36E-11**
2,3,7,8-TCDF	51207-31-9												n/a	
Total PCDDs and PCDFs	NA	2.60E-19	7.85E-17	7.00E-18	4.39E-18	6.37E-15	3.09E-16	9.65E-18	3.88E-18	1.02E-13	6.32E-17	9.87E-22	n/a	**1.09E-13**
antimony	7440-36-0	1.41E-18	1.55E-11	1.05E-16	4.78E-17	3.65E-13	0.00E+00	0.00E+00	0.00E+00	2.83E-13	3.92E-14	4.72E-17	n/a	**1.62E-11**
cadmium	7440-43-9	9.91E-18	8.12E-11	2.90E-15	1.68E-15	2.29E-13	7.74E-15	2.81E-17	4.66E-19	9.62E-14	4.65E-12	2.47E-16	n/a	**8.62E-11**
chromium (3+)	7440-47-3	1.79E-17	7.46E-10	2.04E-16	9.07E-17	9.66E-11	0.00E+00	0.00E+00	0.00E+00	2.04E-10	1.32E-13	2.02E-15	n/a	**1.05E-09**
chromium (6+)	18540-29-9	1.79E-17	7.46E-10	2.04E-16	9.07E-17	9.66E-11	0.00E+00	0.00E+00	0.00E+00	2.04E-10	1.32E-13	2.02E-15	n/a	**1.05E-09**
copper	7440-50-8	6.38E-16	1.11E-09	4.02E-13	1.80E-13	2.61E-10	0.00E+00	0.00E+00	0.00E+00	3.04E-10	1.97E-13	3.01E-15	n/a	**1.68E-09**
lead	7439-92-1	6.78E-16	3.72E-10	2.16E-14	6.88E-15	2.63E-12	0.00E+00	0.00E+00	0.00E+00	1.70E-11	2.08E-15	1.13E-15	n/a	**3.92E-10**
nickel	7440-02-0	2.04E-16	1.55E-09	4.44E-15	1.38E-14	2.19E-10	0.00E+00	0.00E+00	0.00E+00	2.82E-10	7.62E-12	4.71E-15	n/a	**2.06E-09**
zinc	7440-66-6	1.89E-15	1.51E-08	4.29E-13	1.92E-12	3.19E-11	9.63E-13	3.89E-16	2.74E-16	8.93E-11	1.96E-09	4.58E-14	n/a	**1.72E-08**

a. Ingestion rates of total PCDDs/PCDFs and coplanar PCBs are presented in units of mg TEQ/day

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS: Adult Resident Exposure Scenario														
COPC	CAS Number	Incidental Ingestion of Soil (mg/day)[a]	Ingestion of Exposed Produce (mg/day)[a]	Ingestion of Protected Produce (mg/day)[a]	Ingestion of Belowground Produce (mg/day)[a]	Ingestion of Beef (mg/day)[a]	Ingestion of Pork (mg/day)[a]	Ingestion of Poultry (mg/day)[a]	Ingestion of Eggs (mg/day)[a]	Ingestion of Milk (mg/day)[a]	Ingestion of Fish (mg/day)[a]	Incidental Ingestion of Surface Water (mg/day)[a]	Ingestion of Breast Milk (mg/day)[a]	Total Daily COPC Ingestion (mg/day)[a]
1,1,1-trichloroethane	71-55-6	1.73E-17	7.66E-14	5.62E-14	1.73E-12	1.20E-12	2.78E-16	1.29E-14	5.20E-15	2.19E-12	3.14E-12	9.00E-15	n/a	**8.42E-12**
1,1-dichloroethane	75-34-3	7.13E-18	7.60E-14	5.89E-14	1.61E-12	4.19E-16	9.89E-17	4.57E-18	1.84E-18	7.73E-16	4.11E-13	4.08E-15	n/a	**2.16E-12**
1,1-dichloroethene	75-35-4	2.32E-18	1.69E-14	1.29E-14	2.10E-13	1.50E-13	3.52E-14	1.63E-15	6.56E-16	2.75E-16	6.40E-13	3.73E-15	n/a	**1.07E-12**
1,2-dichloroethane	107-06-2	1.72E-17	2.72E-13	2.11E-13	5.33E-12	8.92E-16	2.12E-16	9.75E-18	3.92E-18	1.66E-15	2.55E-13	4.31E-15	n/a	**6.08E-12**
1,2-dichloropropane	78-87-5	2.48E-17	2.04E-13	1.57E-13	2.50E-12	1.55E-15	3.65E-16	1.69E-17	6.79E-18	2.85E-15	7.58E-13	5.27E-15	n/a	**3.63E-12**
1,3-butadiene	106-99-0	2.00E-18	2.34E-13	1.28E-14	9.24E-15	1.50E-15	8.62E-17	1.36E-18	5.48E-19	2.48E-15	4.45E-13	3.15E-15	n/a	**7.08E-13**
2-butanone	78-93-3	4.55E-14	1.13E-09	8.92E-10	1.19E-09	3.09E-13	7.35E-14	3.39E-15	1.37E-15	5.73E-13	6.66E-12	1.01E-13	n/a	**3.21E-09**
acetone	67-64-1	2.08E-14	5.17E-10	4.08E-10	1.74E-09	3.85E-14	9.16E-15	4.23E-16	1.70E-16	7.14E-14	1.12E-11	1.71E-13	n/a	**2.68E-09**
benzene	71-43-2	2.09E-16	1.52E-12	1.16E-12	1.89E-11	1.35E-14	3.16E-15	1.47E-16	5.89E-17	2.48E-14	1.23E-11	7.15E-14	n/a	**3.39E-11**
benzoic acid	65-85-0	4.75E-12	4.54E-08	3.57E-08	1.13E-05	6.72E-12	1.61E-12	7.45E-14	3.00E-14	1.24E-11	3.41E-10	5.20E-12	n/a	**1.14E-05**
benzyl alcohol	100-51-6	3.13E-11	7.78E-07	6.14E-07	2.34E-06	1.21E-09	2.88E-10	1.33E-11	5.34E-12	2.25E-09	1.16E-10	1.78E-11	n/a	**3.74E-06**
bis(2-ethylhexyl)-phthalate	117-81-7	6.88E-13	6.25E-09	7.03E-11	6.61E-15	5.80E-09	1.55E-10	3.53E-11	1.42E-11	9.46E-08	1.22E-10	3.27E-14	n/a	**1.07E-07**
bromodichloromethane	75-27-4	1.47E-14	1.03E-10	8.14E-11	1.45E-09	9.19E-10	2.21E-10	1.03E-11	4.14E-12	1.69E-12	4.10E-12	2.39E-14	n/a	**2.79E-09**
bromomethane	74-83-9	4.99E-17	1.18E-12	9.29E-13	5.15E-12	2.18E-15	5.19E-16	2.40E-17	9.63E-18	1.92E-14	6.83E-13	1.99E-14	n/a	**7.98E-12**
carbon disulfide	75-15-0	1.73E-17	1.14E-13	8.36E-14	2.46E-12	1.17E-15	2.68E-16	1.24E-17	4.97E-18	2.14E-15	1.01E-11	4.93E-14	n/a	**1.28E-11**
carbon tetrachloride	56-23-5	4.35E-17	1.38E-13	9.48E-14	4.67E-12	3.17E-12	7.09E-14	3.29E-14	1.32E-14	5.70E-12	1.49E-11	2.51E-14	n/a	**2.88E-11**
chlorobenzene	108-90-7	1.11E-16	3.40E-13	2.41E-13	9.44E-12	7.83E-12	1.79E-13	8.38E-14	3.37E-14	1.41E-11	3.53E-12	5.94E-15	n/a	**3.58E-11**
chloroform	67-66-3	1.75E-16	1.46E-12	1.10E-12	1.98E-11	1.10E-14	2.58E-15	1.19E-16	4.79E-17	2.03E-14	1.01E-11	7.05E-14	n/a	**3.26E-11**
chloromethane	74-87-3	4.01E-17	9.98E-13	7.87E-13	5.63E-12	1.06E-15	2.52E-16	1.16E-17	4.69E-18	1.96E-15	4.56E-12	6.95E-14	n/a	**1.21E-11**
cis-1,3-dichloropropene	10061-01-5	4.89E-18	6.70E-14	5.26E-14	6.24E-13	2.63E-13	6.27E-14	2.90E-15	1.17E-18	4.88E-16	3.56E-13	5.05E-15	n/a	**1.43E-12**
dibromochloromethane	124-48-1	1.70E-13	1.00E-09	7.90E-10	3.31E-09	1.08E-08	2.62E-09	1.22E-10	4.91E-11	2.00E-11	7.83E-12	3.63E-14	n/a	**1.87E-08**
dichlorodifluoromethane	75-71-8	2.32E-16	1.50E-12	1.19E-12	4.51E-12	1.47E-14	3.54E-12	1.65E-13	6.64E-14	2.71E-14	2.04E-12	1.07E-14	n/a	**1.31E-11**
dimethyl phthalate	131-11-3	1.16E-12	1.74E-08	1.32E-08	3.85E-08	6.35E-08	1.47E-08	6.77E-10	2.73E-13	1.17E-10	4.95E-11	7.52E-13	n/a	**1.48E-07**
di-n-butyl phthalate	84-74-2	6.13E-12	2.74E-09	1.06E-09	1.29E-11	1.14E-06	5.26E-08	3.44E-12	1.38E-10	1.87E-05	1.83E-08	4.90E-13	n/a	**1.99E-05**
ethylbenzene	100-41-4	9.80E-17	2.20E-13	1.43E-13	8.57E-12	7.12E-15	1.57E-15	7.32E-17	2.94E-17	1.27E-14	7.19E-12	7.13E-15	n/a	**1.62E-11**
Freon 113	76-13-1	1.66E-17	7.97E-12	2.24E-14	4.01E-14	2.28E-13	9.65E-15	1.23E-17	4.95E-18	3.74E-13	1.38E-11	1.23E-14	n/a	**2.24E-11**
HD	505-60-2	2.30E-16	3.27E-12	8.44E-13	1.84E-12	4.07E-14	4.70E-15	1.71E-16	6.85E-17	6.95E-14	4.51E-12	1.52E-14	n/a	**1.06E-11**
hexane	110-54-3	1.31E-17	1.09E-14	6.75E-15	2.36E-13	7.69E-16	1.78E-16	8.80E-18	3.53E-18	1.30E-15	5.22E-11	1.25E-14	n/a	**5.24E-11**
methylene chloride	75-09-2	7.60E-17	1.56E-12	1.22E-12	3.09E-11	3.56E-15	8.42E-16	3.88E-17	1.56E-17	6.58E-15	2.36E-12	5.68E-14	n/a	**3.61E-11**
styrene	100-42-5	1.24E-13	2.62E-10	2.07E-10	5.51E-11	7.84E-10	1.95E-10	9.31E-11	3.75E-11	1.42E-08	1.69E-11	2.00E-14	n/a	**1.58E-08**
tetrachloroethene	127-18-4	1.83E-17	5.72E-14	1.80E-14	6.43E-12	2.30E-15	3.22E-16	1.33E-17	5.34E-18	3.90E-15	1.16E-11	6.76E-15	n/a	**1.81E-11**
toluene	108-88-3	6.12E-17	2.15E-13	1.53E-13	5.35E-12	4.38E-15	9.99E-16	4.65E-17	1.87E-17	7.93E-15	4.23E-12	8.52E-15	n/a	**9.97E-12**
trans-1,3-dichloropropene	10061-02-6	1.71E-16	9.43E-13	7.37E-13	3.34E-12	1.11E-14	2.67E-15	1.25E-16	5.02E-17	2.05E-14	1.32E-12	5.48E-15	n/a	**6.38E-12**
trichloroethene	79-01-6	3.39E-17	1.66E-13	1.26E-13	1.90E-12	2.28E-15	5.39E-16	2.52E-17	1.01E-17	4.19E-15	2.04E-12	6.97E-15	n/a	**4.25E-12**
trichlorofluoromethane	75-69-4	1.90E-18	8.44E-15	6.18E-15	1.74E-13	1.32E-13	3.06E-17	1.42E-15	5.72E-16	2.41E-13	1.96E-12	5.61E-15	n/a	**2.53E-12**
vinyl chloride	75-01-4	9.66E-19	1.74E-14	1.36E-14	2.68E-13	4.75E-17	1.13E-17	5.21E-19	2.10E-19	8.84E-17	2.90E-13	5.85E-15	n/a	**5.95E-13**
xylenes	1330-20-7	1.33E-15	2.41E-12	1.80E-12	2.48E-11	8.55E-14	2.06E-14	9.90E-16	3.98E-16	1.53E-13	1.86E-11	1.66E-14	n/a	**4.79E-11**
2,3,7,8-TCDF	51207-31-9												n/a	
Total PCDDs and PCDFs	NA	3.96E-19	8.31E-17	1.07E-17	6.68E-18	6.57E-15	3.91E-16	1.47E-17	5.91E-18	1.04E-13	8.85E-17	1.38E-21	n/a	**1.11E-13**
antimony	7440-36-0	8.48E-18	1.55E-11	6.33E-16	2.87E-16	3.65E-13	0.00E+00	0.00E+00	0.00E+00	2.83E-13	3.92E-14	4.72E-17	n/a	**1.62E-11**
cadmium	7440-43-9	5.94E-17	8.12E-11	1.74E-14	1.01E-14	2.29E-13	7.75E-15	1.69E-16	2.79E-18	9.62E-14	4.65E-12	2.47E-16	n/a	**8.62E-11**
chromium (3+)	7440-47-3	1.07E-16	7.46E-10	1.22E-15	5.44E-16	9.66E-11	0.00E+00	0.00E+00	0.00E+00	2.04E-10	1.32E-13	2.02E-15	n/a	**1.05E-09**
chromium (6+)	18540-29-9	1.07E-16	7.46E-10	1.22E-15	5.44E-16	9.66E-11	0.00E+00	0.00E+00	0.00E+00	2.04E-10	1.32E-13	2.02E-15	n/a	**1.05E-09**
copper	7440-50-8	3.83E-15	1.11E-09	2.41E-12	1.08E-12	2.61E-10	0.00E+00	0.00E+00	0.00E+00	3.04E-10	1.98E-13	3.02E-15	n/a	**1.68E-09**
lead	7439-92-1	4.07E-15	3.72E-10	1.29E-13	4.13E-14	2.63E-12	0.00E+00	0.00E+00	0.00E+00	1.70E-11	2.10E-15	1.13E-15	n/a	**3.92E-10**
nickel	7440-02-0	1.22E-15	1.55E-09	2.66E-14	8.27E-14	2.19E-10	0.00E+00	0.00E+00	0.00E+00	2.82E-10	7.63E-12	4.71E-15	n/a	**2.06E-09**
zinc	7440-66-6	1.13E-14	1.51E-08	2.58E-12	1.15E-11	3.19E-11	9.63E-13	2.34E-15	1.64E-15	8.93E-11	1.96E-09	4.59E-14	n/a	**1.72E-08**

a. Ingestion rates of total PCDDs/PCDFs are presented in units of mg TEQ/day

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS:
Adult Subsistence Fisher Exposure Scenario

COPC	CAS Number	Incidental Ingestion of Soil (mg/day)[a]	Ingestion of Exposed Produce (mg/day)[a]	Ingestion of Protected Produce (mg/day)[a]	Ingestion of Belowground Produce (mg/day)[a]	Ingestion of Beef (mg/day)[a]	Ingestion of Pork (mg/day)[a]	Ingestion of Poultry (mg/day)[a]	Ingestion of Eggs (mg/day)[a]	Ingestion of Milk (mg/day)[a]	Ingestion of Fish (mg/day)[a]	Incidental Ingestion of Surface Water (mg/day)[a]	Ingestion of Breast Milk (mg/day)[a]	Total Daily COPC Ingestion (mg/day)[a]
1,1,1-trichloroethane	71-55-6	2.88E-18	1.73E-14	9.37E-15	2.88E-13	2.60E-13	4.88E-17	2.15E-15	8.67E-16	4.62E-13	7.85E-12	9.00E-15	n/a	**8.90E-12**
1,1-dichloroethane	75-34-3	1.19E-18	1.38E-14	9.81E-15	2.68E-13	7.53E-17	1.67E-17	7.62E-19	3.07E-19	1.38E-16	1.03E-12	4.07E-15	n/a	**1.32E-12**
1,1-dichloroethene	75-35-4	3.87E-19	3.30E-15	2.15E-15	3.50E-14	2.86E-14	6.02E-15	2.72E-16	1.09E-16	5.18E-17	1.60E-12	3.73E-15	n/a	**1.68E-12**
1,2-dichloroethane	107-06-2	2.86E-18	4.85E-14	3.52E-14	8.89E-13	1.58E-16	3.56E-17	1.62E-18	6.53E-19	2.91E-16	6.36E-13	4.30E-15	n/a	**1.61E-12**
1,2-dichloropropane	78-87-5	4.13E-18	3.86E-14	2.61E-14	4.17E-13	2.88E-16	6.20E-17	2.82E-18	1.13E-18	5.24E-16	1.89E-12	5.26E-15	n/a	**2.38E-12**
1,3-butadiene	106-99-0	3.33E-19	2.20E-13	2.14E-15	1.54E-15	1.40E-15	6.18E-17	2.27E-19	9.14E-20	2.29E-15	1.11E-12	3.15E-15	n/a	**1.34E-12**
2-butanone	78-93-3	7.58E-15	1.88E-10	1.49E-10	1.98E-10	5.14E-14	1.22E-14	5.65E-16	2.28E-16	9.55E-14	1.54E-11	9.37E-14	n/a	**5.50E-10**
acetone	67-64-1	3.47E-15	8.62E-11	6.80E-11	2.90E-10	6.41E-15	1.53E-15	7.06E-17	2.83E-17	1.19E-14	2.70E-11	1.64E-13	n/a	**4.72E-10**
benzene	71-43-2	3.48E-17	2.95E-13	1.93E-13	3.15E-12	2.56E-15	5.40E-16	2.44E-17	9.81E-18	4.65E-15	3.06E-11	7.14E-14	n/a	**3.43E-11**
benzoic acid	65-85-0	7.92E-13	7.70E-09	5.95E-09	1.89E-06	1.14E-12	2.69E-13	1.24E-14	5.01E-15	2.10E-12	2.00E-10	1.22E-12	n/a	**1.90E-06**
benzyl alcohol	100-51-6	5.22E-12	1.30E-07	1.02E-07	3.90E-07	2.02E-10	4.80E-11	2.22E-12	8.90E-13	3.75E-10	5.08E-11	3.12E-12	n/a	**6.23E-07**
bis(2-ethylhexyl)-phthalate	117-81-7	1.15E-13	6.18E-09	1.17E-11	1.10E-15	5.78E-09	1.50E-10	5.88E-12	2.37E-12	9.44E-08	2.82E-10	3.03E-14	n/a	**1.07E-07**
bromodichloromethane	75-27-4	2.44E-15	1.72E-11	1.36E-11	2.41E-10	1.53E-10	3.69E-11	1.72E-12	6.91E-13	2.83E-13	8.44E-12	1.97E-14	n/a	**4.73E-10**
bromomethane	74-83-9	8.32E-18	1.98E-13	1.55E-13	8.58E-13	3.65E-16	8.66E-17	3.99E-18	1.60E-18	3.22E-15	1.71E-12	1.99E-14	n/a	**2.94E-12**
carbon disulfide	75-15-0	2.88E-18	2.60E-14	1.39E-14	4.10E-13	2.55E-16	4.72E-17	2.06E-18	8.28E-19	4.56E-16	2.52E-11	4.93E-14	n/a	**2.57E-11**
carbon tetrachloride	56-23-5	7.25E-18	3.79E-14	1.58E-14	7.78E-13	8.14E-13	1.30E-14	5.49E-15	2.21E-15	1.42E-12	3.73E-11	2.51E-14	n/a	**4.04E-11**
chlorobenzene	108-90-7	1.84E-17	8.49E-14	4.02E-14	1.57E-12	1.85E-12	3.21E-14	1.40E-14	5.62E-15	3.24E-12	8.79E-12	5.92E-15	n/a	**1.56E-11**
chloroform	67-66-3	2.91E-17	2.92E-13	1.84E-13	3.30E-12	2.15E-15	4.43E-16	1.99E-17	7.98E-18	3.90E-15	2.53E-11	7.05E-14	n/a	**2.92E-11**
chloromethane	74-87-3	6.69E-18	1.68E-13	1.31E-13	9.39E-13	1.78E-16	4.21E-17	1.93E-18	7.81E-19	3.29E-16	1.14E-11	6.95E-14	n/a	**1.27E-11**
cis-1,3-dichloropropene	10061-01-5	8.15E-19	1.14E-14	8.77E-15	1.04E-13	4.47E-14	1.05E-14	4.83E-16	1.94E-19	8.28E-17	8.91E-13	5.05E-15	n/a	**1.08E-12**
dibromochloromethane	124-48-1	2.83E-14	1.67E-10	1.32E-10	5.51E-10	1.81E-09	4.36E-10	2.04E-11	8.19E-12	3.33E-12	1.14E-11	2.12E-14	n/a	**3.14E-09**
dichlorodifluoromethane	75-71-8	3.86E-17	2.51E-13	1.98E-13	7.52E-13	2.45E-15	5.90E-13	2.75E-14	1.11E-14	4.51E-15	5.09E-12	1.07E-14	n/a	**6.94E-12**
dimethyl phthalate	131-11-3	1.93E-13	3.49E-09	2.20E-09	6.42E-09	1.24E-08	2.53E-09	1.13E-10	4.55E-14	2.25E-11	7.58E-11	4.61E-13	n/a	**2.73E-08**
di-n-butyl phthalate	84-74-2	1.02E-12	1.62E-09	1.77E-10	2.14E-12	1.12E-06	4.74E-08	5.73E-13	2.30E-11	1.84E-05	4.37E-08	4.69E-13	n/a	**1.96E-05**
ethylbenzene	100-41-4	1.63E-17	6.92E-14	2.39E-14	1.43E-12	2.05E-15	2.97E-16	1.22E-17	4.91E-18	3.54E-15	1.80E-11	7.12E-15	n/a	**1.95E-11**
Freon 113	76-13-1	2.76E-18	7.95E-12	3.73E-15	6.69E-15	2.27E-13	9.43E-15	2.05E-18	8.26E-19	3.72E-13	3.45E-11	1.23E-14	n/a	**4.31E-11**
HD	505-60-2	3.83E-17	2.38E-12	1.41E-13	3.07E-13	2.82E-14	1.67E-15	2.84E-17	1.14E-17	4.66E-14	1.13E-11	1.52E-14	n/a	**1.42E-11**
hexane	110-54-3	2.19E-18	3.80E-15	1.13E-15	3.93E-14	2.35E-16	3.41E-17	1.47E-18	5.89E-19	3.91E-16	1.30E-10	1.25E-14	n/a	**1.30E-10**
methylene chloride	75-09-2	1.27E-17	2.72E-13	2.03E-13	5.14E-12	6.17E-16	1.41E-16	6.47E-18	2.61E-18	1.14E-15	5.89E-12	5.67E-14	n/a	**1.16E-11**
styrene	100-42-5	2.06E-14	4.39E-11	3.44E-11	9.19E-12	1.31E-10	3.25E-11	1.55E-11	6.24E-12	2.37E-09	4.15E-11	1.96E-14	n/a	**2.68E-09**
tetrachloroethene	127-18-4	3.06E-18	3.81E-14	3.00E-15	1.07E-12	1.41E-15	9.63E-17	2.21E-18	8.89E-19	2.34E-15	2.90E-11	6.76E-15	n/a	**3.02E-11**
toluene	108-88-3	1.02E-17	5.37E-14	2.55E-14	8.92E-13	1.03E-15	1.79E-16	7.75E-18	3.12E-18	1.82E-15	1.06E-11	8.51E-15	n/a	**1.15E-11**
trans-1,3-dichloropropene	10061-02-6	2.86E-17	1.65E-13	1.23E-13	5.57E-13	1.94E-15	4.49E-16	2.08E-17	8.37E-18	3.54E-15	3.28E-12	5.47E-15	n/a	**4.14E-12**
trichloroethene	79-01-6	5.66E-18	3.23E-14	2.10E-14	3.17E-13	4.34E-16	9.21E-17	4.20E-18	1.69E-18	7.87E-16	5.10E-12	6.97E-15	n/a	**5.48E-12**
trichlorofluoromethane	75-69-4	3.17E-19	1.92E-15	1.03E-15	2.90E-14	2.88E-14	5.38E-18	2.37E-16	9.53E-17	5.12E-14	4.90E-12	5.61E-15	n/a	**5.01E-12**
vinyl chloride	75-01-4	1.61E-19	3.03E-15	2.26E-15	4.46E-14	8.23E-18	1.90E-18	8.69E-20	3.50E-20	1.53E-17	7.26E-13	5.85E-15	n/a	**7.82E-13**
xylenes	1330-20-7	2.22E-16	5.12E-13	3.00E-13	4.13E-12	1.74E-14	3.57E-15	1.65E-16	6.64E-17	3.07E-14	4.65E-11	1.66E-14	n/a	**5.15E-11**
2,3,7,8-TCDF	51207-31-9												n/a	
Total PCDDs and PCDFs	NA	2.60E-19	7.85E-17	7.00E-18	4.39E-18	6.37E-15	3.09E-16	9.65E-18	3.88E-18	1.02E-13	1.58E-16	9.87E-22	n/a	**1.09E-13**
antimony	7440-36-0	1.41E-18	1.55E-11	1.05E-16	4.78E-17	3.65E-13	0.00E+00	0.00E+00	0.00E+00	2.83E-13	9.79E-14	4.72E-17	n/a	**1.63E-11**
cadmium	7440-43-9	9.91E-18	8.12E-11	2.90E-15	1.68E-15	2.29E-13	7.74E-15	2.81E-17	4.66E-19	9.62E-14	1.16E-11	2.47E-16	n/a	**9.32E-11**
chromium (3+)	7440-47-3	1.79E-17	7.46E-10	2.04E-16	9.07E-17	9.66E-11	0.00E+00	0.00E+00	0.00E+00	2.04E-10	3.31E-13	2.02E-15	n/a	**1.05E-09**
chromium (6+)	18540-29-9	1.79E-17	7.46E-10	2.04E-16	9.07E-17	9.66E-11	0.00E+00	0.00E+00	0.00E+00	2.04E-10	3.31E-13	2.02E-15	n/a	**1.05E-09**
copper	7440-50-8	6.38E-16	1.11E-09	4.02E-13	1.80E-13	2.61E-10	0.00E+00	0.00E+00	0.00E+00	3.04E-10	4.93E-13	3.01E-15	n/a	**1.68E-09**
lead	7439-92-1	6.78E-16	3.72E-10	2.16E-14	6.88E-15	2.63E-12	0.00E+00	0.00E+00	0.00E+00	1.70E-11	5.21E-15	1.13E-15	n/a	**3.92E-10**
nickel	7440-02-0	2.04E-16	1.55E-09	4.44E-15	1.38E-14	2.19E-10	0.00E+00	0.00E+00	0.00E+00	2.82E-10	1.90E-11	4.71E-15	n/a	**2.07E-09**
zinc	7440-66-6	1.89E-15	1.51E-08	4.29E-13	1.92E-12	3.19E-11	9.63E-13	3.89E-16	2.74E-16	8.93E-11	4.90E-09	4.58E-14	n/a	**2.01E-08**

a. Ingestion rates of total PCDDs/PCDFs and coplanar PCBs are presented in units of mg TEQ/day

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS: Adult Subsistence Fisher Exposure Scenario														
COPC	CAS Number	Incidental Ingestion of Soil (mg/day)[a]	Ingestion of Exposed Produce (mg/day)[a]	Ingestion of Protected Produce (mg/day)[a]	Ingestion of Belowground Produce (mg/day)[a]	Ingestion of Beef (mg/day)[a]	Ingestion of Pork (mg/day)[a]	Ingestion of Poultry (mg/day)[a]	Ingestion of Eggs (mg/day)[a]	Ingestion of Milk (mg/day)[a]	Ingestion of Fish (mg/day)[a]	Incidental Ingestion of Surface Water (mg/day)[a]	Ingestion of Breast Milk (mg/day)[a]	Total Daily COPC Ingestion (mg/day)[a]
1,1,1-trichloroethane	71-55-6	1.73E-17	7.66E-14	5.62E-14	1.73E-12	1.20E-12	2.78E-16	1.29E-14	5.20E-15	2.19E-12	7.85E-12	9.00E-15	n/a	**1.31E-11**
1,1-dichloroethane	75-34-3	7.13E-18	7.60E-14	5.89E-14	1.61E-12	4.19E-16	9.89E-17	4.57E-18	1.84E-18	7.73E-16	1.03E-12	4.08E-15	n/a	**2.77E-12**
1,1-dichloroethene	75-35-4	2.32E-18	1.69E-14	1.29E-14	2.10E-13	1.50E-13	3.52E-14	1.63E-15	6.56E-16	2.75E-16	1.60E-12	3.73E-15	n/a	**2.03E-12**
1,2-dichloroethane	107-06-2	1.72E-17	2.72E-13	2.11E-13	5.33E-12	8.92E-16	2.12E-16	9.75E-18	3.92E-18	1.66E-15	6.37E-13	4.31E-15	n/a	**6.46E-12**
1,2-dichloropropane	78-87-5	2.48E-17	2.04E-13	1.57E-13	2.50E-12	1.55E-15	3.65E-16	1.69E-17	6.79E-18	2.85E-15	1.89E-12	5.27E-15	n/a	**4.76E-12**
1,3-butadiene	106-99-0	2.00E-18	2.34E-13	1.28E-14	9.24E-15	1.50E-15	8.62E-17	1.36E-18	5.48E-19	2.48E-15	1.11E-12	3.15E-15	n/a	**1.38E-12**
2-butanone	78-93-3	4.55E-14	1.13E-09	8.92E-10	1.19E-09	3.09E-13	7.35E-14	3.39E-15	1.37E-15	5.73E-13	1.66E-11	1.01E-13	n/a	**3.22E-09**
acetone	67-64-1	2.08E-14	5.17E-10	4.08E-10	1.74E-09	3.85E-14	9.16E-15	4.23E-16	1.70E-16	7.14E-14	2.81E-11	1.71E-13	n/a	**2.70E-09**
benzene	71-43-2	2.09E-16	1.52E-12	1.16E-12	1.89E-11	1.35E-14	3.16E-15	1.47E-16	5.89E-17	2.48E-14	3.06E-11	7.15E-14	n/a	**5.23E-11**
benzoic acid	65-85-0	4.75E-12	4.54E-08	3.57E-08	1.13E-05	6.72E-12	1.61E-12	7.45E-14	3.00E-14	1.24E-11	8.54E-10	5.20E-12	n/a	**1.14E-05**
benzyl alcohol	100-51-6	3.13E-11	7.78E-07	6.14E-07	2.34E-06	1.21E-09	2.88E-10	1.33E-11	5.34E-12	2.25E-09	2.90E-10	1.78E-11	n/a	**3.74E-06**
bis(2-ethylhexyl)-phthalate	117-81-7	6.88E-13	6.25E-09	7.03E-11	6.61E-15	5.80E-09	1.55E-10	3.53E-11	1.42E-11	9.46E-08	3.04E-10	3.27E-14	n/a	**1.07E-07**
bromodichloromethane	75-27-4	1.47E-14	1.03E-10	8.14E-11	1.45E-09	9.19E-10	2.21E-10	1.03E-11	4.14E-12	1.69E-12	1.03E-11	2.39E-14	n/a	**2.80E-09**
bromomethane	74-83-9	4.99E-17	1.18E-12	9.29E-13	5.15E-12	2.18E-15	5.19E-16	2.40E-17	9.63E-18	1.92E-14	1.71E-12	1.99E-14	n/a	**9.00E-12**
carbon disulfide	75-15-0	1.73E-17	1.14E-13	8.36E-14	2.46E-12	1.17E-15	2.68E-16	1.24E-17	4.97E-18	2.14E-15	2.52E-11	4.93E-14	n/a	**2.79E-11**
carbon tetrachloride	56-23-5	4.35E-17	1.38E-13	9.48E-14	4.67E-12	3.17E-12	7.09E-14	3.29E-14	1.32E-14	5.70E-12	3.73E-11	2.51E-14	n/a	**5.12E-11**
chlorobenzene	108-90-7	1.11E-16	3.40E-13	2.41E-13	9.44E-12	7.83E-12	1.79E-13	8.38E-14	3.37E-14	1.41E-11	8.82E-12	5.94E-15	n/a	**4.11E-11**
chloroform	67-66-3	1.75E-16	1.46E-12	1.10E-12	1.98E-11	1.10E-14	2.58E-15	1.19E-16	4.79E-17	2.03E-14	2.53E-11	7.05E-14	n/a	**4.78E-11**
chloromethane	74-87-3	4.01E-17	9.98E-13	7.87E-13	5.63E-12	1.06E-15	2.52E-16	1.16E-17	4.69E-18	1.96E-15	1.14E-11	6.95E-14	n/a	**1.89E-11**
cis-1,3-dichloropropene	10061-01-5	4.89E-18	6.70E-14	5.26E-14	6.24E-13	2.63E-13	6.27E-14	2.90E-15	1.17E-18	4.88E-16	8.91E-13	5.05E-15	n/a	**1.97E-12**
dibromochloromethane	124-48-1	1.70E-13	1.00E-09	7.90E-10	3.31E-09	1.08E-08	2.62E-09	1.22E-10	4.91E-11	2.00E-11	1.96E-11	3.63E-14	n/a	**1.88E-08**
dichlorodifluoromethane	75-71-8	2.32E-16	1.50E-12	1.19E-12	4.51E-12	1.47E-14	3.54E-12	1.65E-13	6.64E-14	2.71E-14	5.10E-12	1.07E-14	n/a	**1.61E-11**
dimethyl phthalate	131-11-3	1.16E-12	1.74E-08	1.32E-08	3.85E-08	6.35E-08	1.47E-08	6.77E-10	2.73E-13	1.17E-10	1.24E-10	7.52E-13	n/a	**1.48E-07**
di-n-butyl phthalate	84-74-2	6.13E-12	2.74E-09	1.06E-09	1.29E-11	1.14E-06	5.26E-08	3.44E-12	1.38E-10	1.87E-05	4.58E-08	4.90E-13	n/a	**1.99E-05**
ethylbenzene	100-41-4	9.80E-17	2.20E-13	1.43E-13	8.57E-12	7.12E-15	1.57E-15	7.32E-17	2.94E-17	1.27E-14	1.80E-11	7.13E-15	n/a	**2.69E-11**
Freon 113	76-13-1	1.66E-17	7.97E-12	2.24E-14	4.01E-14	2.28E-13	9.65E-15	1.23E-17	4.95E-18	3.74E-13	3.45E-11	1.23E-14	n/a	**4.31E-11**
HD	505-60-2	2.30E-16	3.27E-12	8.44E-13	1.84E-12	4.07E-14	4.70E-15	1.71E-16	6.85E-17	6.95E-14	1.13E-11	1.52E-14	n/a	**1.74E-11**
hexane	110-54-3	1.31E-17	1.09E-14	6.75E-15	2.36E-13	7.69E-16	1.78E-16	8.80E-18	3.53E-18	1.30E-15	1.30E-10	1.25E-14	n/a	**1.31E-10**
methylene chloride	75-09-2	7.60E-17	1.56E-12	1.22E-12	3.09E-11	3.56E-15	8.42E-16	3.88E-17	1.56E-17	6.58E-15	5.89E-12	5.68E-14	n/a	**3.96E-11**
styrene	100-42-5	1.24E-13	2.62E-10	2.07E-10	5.51E-11	7.84E-10	1.95E-10	9.31E-11	3.75E-11	1.42E-08	4.22E-11	2.00E-14	n/a	**1.58E-08**
tetrachloroethene	127-18-4	1.83E-17	5.72E-14	1.80E-14	6.43E-12	2.30E-15	3.22E-16	1.33E-17	5.34E-18	3.90E-15	2.90E-11	6.76E-15	n/a	**3.56E-11**
toluene	108-88-3	6.12E-17	2.15E-13	1.53E-13	5.35E-12	4.38E-15	9.99E-16	4.65E-17	1.87E-17	7.93E-15	1.06E-11	8.52E-15	n/a	**1.63E-11**
trans-1,3-dichloropropene	10061-02-6	1.71E-16	9.43E-13	7.37E-13	3.34E-12	1.11E-14	2.67E-15	1.25E-16	5.02E-17	2.05E-14	3.29E-12	5.48E-15	n/a	**8.35E-12**
trichloroethene	79-01-6	3.39E-17	1.66E-13	1.26E-13	1.90E-12	2.28E-15	5.39E-16	2.52E-17	1.01E-17	4.19E-15	5.10E-12	6.97E-15	n/a	**7.31E-12**
trichlorofluoromethane	75-69-4	1.90E-18	8.44E-15	6.18E-15	1.74E-13	1.32E-13	3.06E-17	1.42E-15	5.72E-16	2.41E-13	4.90E-12	5.61E-15	n/a	**5.47E-12**
vinyl chloride	75-01-4	9.66E-19	1.74E-14	1.36E-14	2.68E-13	4.75E-17	1.13E-17	5.21E-19	2.10E-19	8.84E-17	7.26E-13	5.85E-15	n/a	**1.03E-12**
xylenes	1330-20-7	1.33E-15	2.41E-12	1.80E-12	2.48E-11	8.55E-14	2.06E-14	9.90E-16	3.98E-16	1.53E-13	4.66E-11	1.66E-14	n/a	**7.59E-11**
2,3,7,8-TCDF	51207-31-9												n/a	
Total PCDDs and PCDFs	NA	3.96E-19	8.31E-17	1.07E-17	6.68E-18	6.57E-15	3.91E-16	1.47E-17	5.91E-18	1.04E-13	2.21E-16	1.38E-21	n/a	**1.11E-13**
antimony	7440-36-0	8.48E-18	1.55E-11	6.33E-16	2.87E-16	3.65E-13	0.00E+00	0.00E+00	0.00E+00	2.83E-13	9.80E-14	4.72E-17	n/a	**1.63E-11**
cadmium	7440-43-9	5.94E-17	8.12E-11	1.74E-14	1.01E-14	2.29E-13	7.75E-15	1.69E-16	2.79E-18	9.62E-14	1.16E-11	2.47E-16	n/a	**9.32E-11**
chromium (3+)	7440-47-3	1.07E-16	7.46E-10	1.22E-15	5.44E-16	9.66E-11	0.00E+00	0.00E+00	0.00E+00	2.04E-10	3.31E-13	2.02E-15	n/a	**1.05E-09**
chromium (6+)	18540-29-9	1.07E-16	7.46E-10	1.22E-15	5.44E-16	9.66E-11	0.00E+00	0.00E+00	0.00E+00	2.04E-10	3.31E-13	2.02E-15	n/a	**1.05E-09**
copper	7440-50-8	3.83E-15	1.11E-09	2.41E-12	1.08E-12	2.61E-10	0.00E+00	0.00E+00	0.00E+00	3.04E-10	4.94E-13	3.02E-15	n/a	**1.68E-09**
lead	7439-92-1	4.07E-15	3.72E-10	1.29E-13	4.13E-14	2.63E-12	0.00E+00	0.00E+00	0.00E+00	1.70E-11	5.25E-15	1.13E-15	n/a	**3.92E-10**
nickel	7440-02-0	1.22E-15	1.55E-09	2.66E-14	8.27E-14	2.19E-10	0.00E+00	0.00E+00	0.00E+00	2.82E-10	1.91E-11	4.71E-15	n/a	**2.07E-09**
zinc	7440-66-6	1.13E-14	1.51E-08	2.58E-12	1.15E-11	3.19E-11	9.63E-13	2.34E-15	1.64E-15	8.93E-11	4.90E-09	4.59E-14	n/a	**2.01E-08**

a. Ingestion rates of total PCDDs/PCDFs are presented in units of mg TEQ/day

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Adult Subsistence Farmer Exposure Scenario														
COPC	CAS Number	Incidental Ingestion of Soil (mg/day)[a]	Ingestion of Exposed Produce (mg/day)[a]	Ingestion of Protected Produce (mg/day)[a]	Ingestion of Belowground Produce (mg/day)[a]	Ingestion of Beef (mg/day)[a]	Ingestion of Pork (mg/day)[a]	Ingestion of Poultry (mg/day)[a]	Ingestion of Eggs (mg/day)[a]	Ingestion of Milk (mg/day)[a]	Ingestion of Fish (mg/day)[a]	Incidental Ingestion of Surface Water (mg/day)[a]	Ingestion of Breast Milk (mg/day)[a]	Total Daily COPC Ingestion (mg/day)[a]
1,1,1-trichloroethane	71-55-6	2.16E-18	3.58E-14	1.76E-14	5.40E-13	5.32E-13	9.34E-17	4.04E-15	1.62E-15	9.40E-13	3.14E-12	9.00E-15	n/a	**5.22E-12**
1,1-dichloroethane	75-34-3	8.91E-19	2.68E-14	1.84E-14	5.03E-13	1.45E-16	3.15E-17	1.43E-18	5.76E-19	2.65E-16	4.10E-13	4.07E-15	n/a	**9.63E-13**
1,1-dichloroethene	75-35-4	2.90E-19	6.55E-15	4.03E-15	6.56E-14	5.63E-14	1.14E-14	5.10E-16	2.05E-16	1.02E-16	6.40E-13	3.73E-15	n/a	**7.88E-13**
1,2-dichloroethane	107-06-2	2.15E-18	9.34E-14	6.61E-14	1.67E-12	3.02E-16	6.71E-17	3.05E-18	1.22E-18	5.56E-16	2.54E-13	4.30E-15	n/a	**2.09E-12**
1,2-dichloropropane	78-87-5	3.10E-18	7.59E-14	4.89E-14	7.81E-13	5.62E-16	1.17E-16	5.29E-18	2.12E-18	1.02E-15	7.56E-13	5.26E-15	n/a	**1.67E-12**
1,3-butadiene	106-99-0	2.50E-19	5.49E-13	4.01E-15	2.89E-15	3.48E-15	1.51E-16	4.26E-19	1.71E-19	5.70E-15	4.45E-13	3.15E-15	n/a	**1.01E-12**
2-butanone	78-93-3	5.68E-15	3.53E-10	2.79E-10	3.70E-10	9.65E-14	2.30E-14	1.06E-15	4.27E-16	1.79E-13	6.12E-12	9.33E-14	n/a	**1.01E-09**
acetone	67-64-1	2.60E-15	1.62E-10	1.27E-10	5.45E-10	1.20E-14	2.86E-15	1.32E-16	5.30E-17	2.23E-14	1.08E-11	1.64E-13	n/a	**8.45E-10**
benzene	71-43-2	2.61E-17	5.86E-13	3.62E-13	5.90E-12	5.04E-15	1.02E-15	4.58E-17	1.84E-17	9.10E-15	1.22E-11	7.14E-14	n/a	**1.92E-11**
benzoic acid	65-85-0	5.94E-13	1.45E-08	1.12E-08	3.54E-06	2.15E-12	5.04E-13	2.33E-14	9.39E-15	3.96E-12	6.71E-11	1.02E-12	n/a	**3.57E-06**
benzyl alcohol	100-51-6	3.92E-12	2.43E-07	1.92E-07	7.31E-07	3.78E-10	9.01E-11	4.16E-12	1.67E-12	7.04E-10	1.55E-11	2.38E-12	n/a	**1.17E-06**
bis(2-ethylhexyl)-phthalate	117-81-7	8.59E-14	1.54E-08	2.20E-11	2.07E-15	1.45E-08	3.73E-10	1.10E-11	4.44E-12	2.36E-07	1.12E-10	3.01E-14	n/a	**2.66E-07**
bromodichloromethane	75-27-4	1.83E-15	3.23E-11	2.54E-11	4.52E-10	2.88E-10	6.92E-11	3.22E-12	1.30E-12	5.31E-13	3.34E-12	1.95E-14	n/a	**8.75E-10**
bromomethane	74-83-9	6.24E-18	3.71E-13	2.90E-13	1.61E-12	6.86E-16	1.63E-16	7.49E-18	3.01E-18	6.05E-15	6.83E-13	1.99E-14	n/a	**2.98E-12**
carbon disulfide	75-15-0	2.16E-18	5.40E-14	2.61E-14	7.69E-13	5.24E-16	9.03E-17	3.86E-18	1.55E-18	9.29E-16	1.01E-11	4.93E-14	n/a	**1.10E-11**
carbon tetrachloride	56-23-5	5.43E-18	8.23E-14	2.96E-14	1.46E-12	1.74E-12	2.53E-14	1.03E-14	4.14E-15	3.01E-12	1.49E-11	2.51E-14	n/a	**2.13E-11**
chlorobenzene	108-90-7	1.38E-17	1.80E-13	7.54E-14	2.95E-12	3.87E-12	6.20E-14	2.62E-14	1.05E-14	6.75E-12	3.52E-12	5.92E-15	n/a	**1.75E-11**
chloroform	67-66-3	2.18E-17	5.84E-13	3.45E-13	6.19E-12	4.28E-15	8.40E-16	3.73E-17	1.50E-17	7.71E-15	1.01E-11	7.05E-14	n/a	**1.73E-11**
chloromethane	74-87-3	5.01E-18	3.15E-13	2.46E-13	1.76E-12	3.34E-16	7.89E-17	3.63E-18	1.46E-18	6.19E-16	4.56E-12	6.95E-14	n/a	**6.95E-12**
cis-1,3-dichloropropene	10061-01-5	6.11E-19	2.16E-14	1.64E-14	1.95E-13	8.46E-14	1.97E-14	9.06E-16	3.64E-19	1.56E-16	3.56E-13	5.05E-15	n/a	**7.00E-13**
dibromochloromethane	124-48-1	2.12E-14	3.13E-10	2.47E-10	1.03E-09	3.39E-09	8.18E-10	3.82E-11	1.54E-11	6.24E-12	4.41E-12	2.04E-14	n/a	**5.86E-09**
dichlorodifluoromethane	75-71-8	2.90E-17	4.70E-13	3.71E-13	1.41E-12	4.59E-15	1.11E-12	5.15E-14	2.07E-14	8.46E-15	2.04E-12	1.07E-14	n/a	**5.49E-12**
dimethyl phthalate	131-11-3	1.45E-13	6.99E-09	4.13E-09	1.20E-08	2.46E-08	4.80E-09	2.12E-10	8.52E-14	4.44E-11	2.94E-11	4.46E-13	n/a	**5.28E-08**
di-n-butyl phthalate	84-74-2	7.67E-13	3.90E-09	3.32E-10	4.02E-12	2.81E-06	1.18E-07	1.07E-12	4.32E-11	4.60E-05	1.75E-08	4.68E-13	n/a	**4.89E-05**
ethylbenzene	100-41-4	1.22E-17	1.54E-13	4.48E-14	2.68E-12	4.50E-15	5.85E-16	2.29E-17	9.20E-18	7.72E-15	7.18E-12	7.12E-15	n/a	**1.01E-11**
Freon 113	76-13-1	2.07E-18	1.99E-11	6.99E-15	1.25E-14	5.68E-13	2.36E-14	3.85E-18	1.55E-18	9.30E-13	1.38E-11	1.23E-14	n/a	**3.52E-11**
HD	505-60-2	2.87E-17	5.83E-12	2.64E-13	5.77E-13	6.89E-14	3.79E-15	5.33E-17	2.14E-17	1.14E-13	4.51E-12	1.52E-14	n/a	**1.14E-11**
hexane	110-54-3	1.64E-18	8.61E-15	2.11E-15	7.37E-14	5.20E-16	6.73E-17	2.75E-18	1.10E-18	8.64E-16	5.22E-11	1.25E-14	n/a	**5.23E-11**
methylene chloride	75-09-2	9.50E-18	5.20E-13	3.81E-13	9.64E-12	1.17E-15	2.66E-16	1.21E-17	4.89E-18	2.16E-15	2.36E-12	5.67E-14	n/a	**1.30E-11**
styrene	100-42-5	1.55E-14	8.24E-11	6.46E-11	1.72E-11	2.46E-10	6.09E-11	2.91E-11	1.17E-11	4.45E-09	1.66E-11	1.96E-14	n/a	**4.97E-09**
tetrachloroethene	127-18-4	2.29E-18	9.30E-14	5.63E-15	2.01E-12	3.43E-15	2.13E-16	4.14E-18	1.67E-18	5.65E-15	1.16E-11	6.76E-15	n/a	**1.37E-11**
toluene	108-88-3	7.65E-18	1.14E-13	4.79E-14	1.67E-12	2.16E-15	3.45E-16	1.45E-17	5.85E-18	3.78E-15	4.22E-12	8.51E-15	n/a	**6.07E-12**
trans-1,3-dichloropropene	10061-02-6	2.14E-17	3.16E-13	2.30E-13	1.04E-12	3.69E-15	8.44E-16	3.90E-17	1.57E-17	6.74E-15	1.31E-12	5.46E-15	n/a	**2.92E-12**
trichloroethene	79-01-6	4.24E-18	6.41E-14	3.95E-14	5.95E-13	8.54E-16	1.74E-16	7.87E-18	3.16E-18	1.54E-15	2.04E-12	6.97E-15	n/a	**2.75E-12**
trichlorofluoromethane	75-69-4	2.38E-19	3.97E-15	1.93E-15	5.44E-14	5.90E-14	1.03E-17	4.44E-16	1.79E-16	1.04E-13	1.96E-12	5.61E-15	n/a	**2.19E-12**
vinyl chloride	75-01-4	1.21E-19	5.79E-15	4.24E-15	8.36E-14	1.57E-17	3.58E-18	1.63E-19	6.56E-20	2.90E-17	2.90E-13	5.85E-15	n/a	**3.90E-13**
xylenes	1330-20-7	1.66E-16	1.04E-12	5.62E-13	7.75E-12	3.50E-14	6.79E-15	3.09E-16	1.24E-16	6.13E-14	1.86E-11	1.66E-14	n/a	**2.81E-11**
2,3,7,8-TCDF	51207-31-9												n/a	
Total PCDDs and PCDFs	NA	2.33E-19	1.94E-16	1.57E-17	9.81E-18	1.58E-14	7.32E-16	2.16E-17	8.69E-18	2.53E-13	5.81E-17	9.07E-22	n/a	**2.70E-13**
antimony	7440-36-0	1.06E-18	3.88E-11	1.98E-16	8.97E-17	9.12E-13	0.00E+00	0.00E+00	0.00E+00	7.07E-13	3.92E-14	4.72E-17	n/a	**4.04E-11**
cadmium	7440-43-9	7.43E-18	2.03E-10	5.43E-15	3.14E-15	5.73E-13	1.94E-14	5.27E-17	8.73E-19	2.41E-13	4.65E-12	2.47E-16	n/a	**2.09E-10**
chromium (3+)	7440-47-3	1.34E-17	1.87E-09	3.83E-16	1.70E-16	2.41E-10	0.00E+00	0.00E+00	0.00E+00	5.10E-10	1.32E-13	2.02E-15	n/a	**2.62E-09**
chromium (6+)	18540-29-9	1.34E-17	1.87E-09	3.83E-16	1.70E-16	2.41E-10	0.00E+00	0.00E+00	0.00E+00	5.10E-10	1.32E-13	2.02E-15	n/a	**2.62E-09**
copper	7440-50-8	4.79E-16	2.78E-09	7.53E-13	3.37E-13	6.53E-10	0.00E+00	0.00E+00	0.00E+00	7.59E-10	1.97E-13	3.01E-15	n/a	**4.19E-09**
lead	7439-92-1	5.09E-16	9.30E-10	4.05E-14	1.29E-14	6.57E-12	0.00E+00	0.00E+00	0.00E+00	4.24E-11	2.08E-15	1.13E-15	n/a	**9.80E-10**
nickel	7440-02-0	1.53E-16	3.87E-09	8.32E-15	2.59E-14	5.46E-10	0.00E+00	0.00E+00	0.00E+00	7.06E-10	7.62E-12	4.71E-15	n/a	**5.13E-09**
zinc	7440-66-6	1.42E-15	3.77E-08	8.05E-13	3.60E-12	7.98E-11	2.41E-12	7.30E-16	5.14E-16	2.23E-10	1.96E-09	4.58E-14	n/a	**3.99E-08**

a. Ingestion rates of total PCDDs/PCDFs and coplanar PCBs are presented in units of mg TEQ/day

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS:
Adult Subsistence Farmer Exposure Scenario

COPC	CAS Number	Incidental Ingestion of Soil (mg/day)[a]	Ingestion of Exposed Produce (mg/day)[a]	Ingestion of Protected Produce (mg/day)[a]	Ingestion of Belowground Produce (mg/day)[a]	Ingestion of Beef (mg/day)[a]	Ingestion of Pork (mg/day)[a]	Ingestion of Poultry (mg/day)[a]	Ingestion of Eggs (mg/day)[a]	Ingestion of Milk (mg/day)[a]	Ingestion of Fish (mg/day)[a]	Incidental Ingestion of Surface Water (mg/day)[a]	Ingestion of Breast Milk (mg/day)[a]	Total Daily COPC Ingestion (mg/day)[a]
1,1,1-trichloroethane	71-55-6	1.73E-17	1.91E-13	1.40E-13	4.32E-12	3.01E-12	6.95E-16	3.23E-14	1.30E-14	5.47E-12	3.14E-12	9.00E-15	n/a	**1.63E-11**
1,1-dichloroethane	75-34-3	7.13E-18	1.90E-13	1.47E-13	4.02E-12	1.05E-15	2.47E-16	1.14E-17	4.61E-18	1.93E-15	4.11E-13	4.08E-15	n/a	**4.78E-12**
1,1-dichloroethene	75-35-4	2.32E-18	4.22E-14	3.22E-14	5.25E-13	3.74E-13	8.80E-14	4.08E-15	1.64E-15	6.89E-16	6.40E-13	3.73E-15	n/a	**1.71E-12**
1,2-dichloroethane	107-06-2	1.72E-17	6.79E-13	5.29E-13	1.33E-11	2.23E-15	5.29E-16	2.44E-17	9.80E-18	4.14E-15	2.55E-13	4.31E-15	n/a	**1.48E-11**
1,2-dichloropropane	78-87-5	2.48E-17	5.10E-13	3.91E-13	6.25E-12	3.87E-15	9.12E-16	4.23E-17	1.70E-17	7.13E-15	7.58E-13	5.27E-15	n/a	**7.92E-12**
1,3-butadiene	106-99-0	2.00E-18	5.85E-13	3.20E-14	2.31E-14	3.74E-15	2.16E-16	3.41E-18	1.37E-18	6.20E-15	4.45E-13	3.15E-15	n/a	**1.10E-12**
2-butanone	78-93-3	4.55E-14	2.82E-09	2.23E-09	2.96E-09	7.72E-13	1.84E-13	8.48E-15	3.41E-15	1.43E-12	6.66E-12	1.01E-13	n/a	**8.03E-09**
acetone	67-64-1	2.08E-14	1.29E-09	1.02E-09	4.36E-09	9.62E-14	2.29E-14	1.06E-15	4.24E-16	1.79E-13	1.12E-11	1.71E-13	n/a	**6.68E-09**
benzene	71-43-2	2.09E-16	3.80E-12	2.90E-12	4.72E-11	3.36E-14	7.91E-15	3.66E-16	1.47E-16	6.19E-14	1.23E-11	7.15E-14	n/a	**6.64E-11**
benzoic acid	65-85-0	4.75E-12	1.13E-07	8.92E-08	2.84E-05	1.68E-11	4.02E-12	1.86E-13	7.51E-14	3.11E-11	3.41E-10	5.20E-12	n/a	**2.86E-05**
benzyl alcohol	100-51-6	3.13E-11	1.95E-06	1.54E-06	5.85E-06	3.02E-09	7.20E-10	3.32E-11	1.34E-11	5.63E-09	1.16E-10	1.78E-11	n/a	**9.34E-06**
bis(2-ethylhexyl)-phthalate	117-81-7	6.88E-13	1.56E-08	1.76E-10	1.65E-14	1.45E-08	3.87E-10	8.82E-11	3.55E-11	2.36E-07	1.22E-10	3.27E-14	n/a	**2.67E-07**
bromodichloromethane	75-27-4	1.47E-14	2.58E-10	2.03E-10	3.62E-09	2.30E-09	5.53E-10	2.57E-11	1.04E-11	4.24E-12	4.10E-12	2.39E-14	n/a	**6.97E-09**
bromomethane	74-83-9	4.99E-17	2.95E-12	2.32E-12	1.29E-11	5.45E-15	1.30E-15	5.99E-17	2.41E-17	4.81E-14	6.83E-13	1.99E-14	n/a	**1.89E-11**
carbon disulfide	75-15-0	1.73E-17	2.86E-13	2.09E-13	6.15E-12	2.92E-15	6.70E-16	3.09E-17	1.24E-17	5.35E-15	1.01E-11	4.93E-14	n/a	**1.68E-11**
carbon tetrachloride	56-23-5	4.35E-17	3.45E-13	2.37E-13	1.17E-11	7.92E-12	1.77E-13	8.23E-14	3.31E-14	1.42E-11	1.49E-11	2.51E-14	n/a	**4.96E-11**
chlorobenzene	108-90-7	1.11E-16	8.49E-13	6.03E-13	2.36E-11	1.96E-11	4.49E-13	2.09E-13	8.43E-14	3.53E-11	3.53E-12	5.94E-15	n/a	**8.42E-11**
chloroform	67-66-3	1.75E-16	3.64E-12	2.76E-12	4.96E-11	2.76E-14	6.44E-15	2.98E-16	1.20E-16	5.08E-14	1.01E-11	7.05E-14	n/a	**6.62E-11**
chloromethane	74-87-3	4.01E-17	2.49E-12	1.97E-12	1.41E-11	2.65E-15	6.30E-16	2.90E-17	1.17E-17	4.91E-15	4.56E-12	6.95E-14	n/a	**2.32E-11**
cis-1,3-dichloropropene	10061-01-5	4.89E-18	1.67E-13	1.32E-13	1.56E-12	6.58E-13	1.57E-13	7.25E-15	2.91E-18	1.22E-15	3.56E-13	5.05E-15	n/a	**3.04E-12**
dibromochloromethane	124-48-1	1.70E-13	2.50E-09	1.97E-09	8.27E-09	2.71E-08	6.54E-09	3.05E-10	1.23E-10	4.99E-11	7.83E-12	3.63E-14	n/a	**4.69E-08**
dichlorodifluoromethane	75-71-8	2.32E-16	3.76E-12	2.97E-12	1.13E-11	3.67E-14	8.85E-12	4.12E-13	1.66E-13	6.77E-14	2.04E-12	1.07E-14	n/a	**2.96E-11**
dimethyl phthalate	131-11-3	1.16E-12	4.36E-08	3.30E-08	9.63E-08	1.59E-07	3.68E-08	1.69E-09	6.82E-13	2.93E-10	4.95E-11	7.52E-13	n/a	**3.70E-07**
di-n-butyl phthalate	84-74-2	6.13E-12	6.85E-09	2.65E-09	3.21E-11	2.85E-06	1.31E-07	8.59E-12	3.46E-10	4.66E-05	1.83E-08	4.90E-13	n/a	**4.96E-05**
ethylbenzene	100-41-4	9.80E-17	5.51E-13	3.58E-13	2.14E-11	1.78E-14	3.92E-15	1.83E-16	7.36E-17	3.17E-14	7.19E-12	7.13E-15	n/a	**2.96E-11**
Freon 113	76-13-1	1.66E-17	1.99E-11	5.59E-14	1.00E-13	5.70E-13	2.41E-14	3.08E-17	1.24E-17	9.34E-13	1.38E-11	1.23E-14	n/a	**3.54E-11**
HD	505-60-2	2.30E-16	8.17E-12	2.11E-12	4.61E-12	1.02E-13	1.18E-14	4.26E-16	1.71E-16	1.74E-13	4.51E-12	1.52E-14	n/a	**1.97E-11**
hexane	110-54-3	1.31E-17	2.73E-14	1.69E-14	5.89E-13	1.92E-15	4.46E-16	2.20E-17	8.83E-18	3.25E-15	5.22E-11	1.25E-14	n/a	**5.28E-11**
methylene chloride	75-09-2	7.60E-17	3.90E-12	3.05E-12	7.72E-11	8.89E-15	2.10E-15	9.70E-17	3.91E-17	1.64E-14	2.36E-12	5.68E-14	n/a	**8.65E-11**
styrene	100-42-5	1.24E-13	6.55E-10	5.17E-10	1.38E-10	1.96E-09	4.87E-10	2.33E-10	9.36E-11	3.54E-08	1.69E-11	2.00E-14	n/a	**3.95E-08**
tetrachloroethene	127-18-4	1.83E-17	1.43E-13	4.51E-14	1.61E-11	5.75E-15	8.05E-16	3.31E-17	1.33E-17	9.76E-15	1.16E-11	6.76E-15	n/a	**2.79E-11**
toluene	108-88-3	6.12E-17	5.39E-13	3.83E-13	1.34E-11	1.10E-14	2.50E-15	1.16E-16	4.68E-17	1.98E-14	4.23E-12	8.52E-15	n/a	**1.86E-11**
trans-1,3-dichloropropene	10061-02-6	1.71E-16	2.36E-12	1.84E-12	8.35E-12	2.78E-14	6.69E-15	3.12E-16	1.26E-16	5.12E-14	1.32E-12	5.48E-15	n/a	**1.40E-11**
trichloroethene	79-01-6	3.39E-17	4.14E-13	3.16E-13	4.76E-12	5.70E-15	1.35E-15	6.29E-17	2.53E-17	1.05E-14	2.04E-12	6.97E-15	n/a	**7.55E-12**
trichlorofluoromethane	75-69-4	1.90E-18	2.11E-14	1.55E-14	4.36E-13	3.31E-13	7.65E-17	3.55E-15	1.43E-15	6.03E-13	1.96E-12	5.61E-15	n/a	**3.38E-12**
vinyl chloride	75-01-4	9.66E-19	4.34E-14	3.40E-14	6.69E-13	1.19E-16	2.83E-17	1.30E-18	5.25E-19	2.21E-16	2.90E-13	5.85E-15	n/a	**1.04E-12**
xylenes	1330-20-7	1.33E-15	6.03E-12	4.50E-12	6.20E-11	2.14E-13	5.16E-14	2.47E-15	9.96E-16	3.82E-13	1.86E-11	1.66E-14	n/a	**9.18E-11**
2,3,7,8-TCDF	51207-31-9												n/a	
Total PCDDs and PCDFs	NA	3.96E-19	2.08E-16	2.66E-17	1.67E-17	1.64E-14	9.77E-16	3.67E-17	1.48E-17	2.60E-13	8.85E-17	1.38E-21	n/a	**2.78E-13**
antimony	7440-36-0	8.48E-18	3.88E-11	1.58E-15	7.17E-16	9.12E-13	0.00E+00	0.00E+00	0.00E+00	7.07E-13	3.92E-14	4.72E-17	n/a	**4.04E-11**
cadmium	7440-43-9	5.94E-17	2.03E-10	4.35E-14	2.51E-14	5.73E-13	1.94E-14	4.21E-16	6.98E-18	2.41E-13	4.65E-12	2.47E-16	n/a	**2.09E-10**
chromium (3+)	7440-47-3	1.07E-16	1.87E-09	3.06E-15	1.36E-15	2.41E-10	0.00E+00	0.00E+00	0.00E+00	5.10E-10	1.32E-13	2.02E-15	n/a	**2.62E-09**
chromium (6+)	18540-29-9	1.07E-16	1.87E-09	3.06E-15	1.36E-15	2.41E-10	0.00E+00	0.00E+00	0.00E+00	5.10E-10	1.32E-13	2.02E-15	n/a	**2.62E-09**
copper	7440-50-8	3.83E-15	2.78E-09	6.02E-12	2.70E-12	6.54E-10	0.00E+00	0.00E+00	0.00E+00	7.60E-10	1.98E-13	3.02E-15	n/a	**4.21E-09**
lead	7439-92-1	4.07E-15	9.31E-10	3.24E-13	1.03E-13	6.57E-12	0.00E+00	0.00E+00	0.00E+00	4.24E-11	2.10E-15	1.13E-15	n/a	**9.80E-10**
nickel	7440-02-0	1.22E-15	3.87E-09	6.66E-14	2.07E-13	5.46E-10	0.00E+00	0.00E+00	0.00E+00	7.06E-10	7.63E-12	4.71E-15	n/a	**5.13E-09**
zinc	7440-66-6	1.13E-14	3.77E-08	6.44E-12	2.88E-11	7.98E-11	2.41E-12	5.84E-15	4.11E-15	2.23E-10	1.96E-09	4.59E-14	n/a	**4.00E-08**

a. Ingestion rates of total PCDDs/PCDFs are presented in units of mg TEQ/day

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Adult Worker Exposure Scenario														
COPC	CAS Number	Incidental Ingestion of Soil (mg/day)[a]	Ingestion of Exposed Produce (mg/day)[a]	Ingestion of Protected Produce (mg/day)[a]	Ingestion of Belowground Produce (mg/day)[a]	Ingestion of Beef (mg/day)[a]	Ingestion of Pork (mg/day)[a]	Ingestion of Poultry (mg/day)[a]	Ingestion of Eggs (mg/day)[a]	Ingestion of Milk (mg/day)[a]	Ingestion of Fish (mg/day)[a]	Incidental Ingestion of Surface Water (mg/day)[a]	Ingestion of Breast Milk (mg/day)[a]	Total Daily COPC Ingestion (mg/day)[a]
1,1,1-trichloroethane	71-55-6	1.73E-18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.73E-18**
1,1-dichloroethane	75-34-3	7.13E-19	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**7.13E-19**
1,1-dichloroethene	75-35-4	2.32E-19	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**2.32E-19**
1,2-dichloroethane	107-06-2	1.72E-18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.72E-18**
1,2-dichloropropane	78-87-5	2.48E-18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**2.48E-18**
1,3-butadiene	106-99-0	2.00E-19	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**2.00E-19**
2-butanone	78-93-3	4.55E-15	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**4.55E-15**
acetone	67-64-1	2.08E-15	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**2.08E-15**
benzene	71-43-2	2.09E-17	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**2.09E-17**
benzoic acid	65-85-0	4.75E-13	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**4.75E-13**
benzyl alcohol	100-51-6	3.13E-12	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**3.13E-12**
bis(2-ethylhexyl)-phthalate	117-81-7	6.88E-14	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**6.88E-14**
bromodichloromethane	75-27-4	1.47E-15	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.47E-15**
bromomethane	74-83-9	4.99E-18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**4.99E-18**
carbon disulfide	75-15-0	1.73E-18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.73E-18**
carbon tetrachloride	56-23-5	4.35E-18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**4.35E-18**
chlorobenzene	108-90-7	1.11E-17	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.11E-17**
chloroform	67-66-3	1.75E-17	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.75E-17**
chloromethane	74-87-3	4.01E-18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**4.01E-18**
cis-1,3-dichloropropene	10061-01-5	4.89E-19	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**4.89E-19**
dibromochloromethane	124-48-1	1.70E-14	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.70E-14**
dichlorodifluoromethane	75-71-8	2.32E-17	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**2.32E-17**
dimethyl phthalate	131-11-3	1.16E-13	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.16E-13**
di-n-butyl phthalate	84-74-2	6.13E-13	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**6.13E-13**
ethylbenzene	100-41-4	9.80E-18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**9.80E-18**
Freon 113	76-13-1	1.66E-18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.66E-18**
HD	505-60-2	2.30E-17	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**2.30E-17**
hexane	110-54-3	1.31E-18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.31E-18**
methylene chloride	75-09-2	7.60E-18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**7.60E-18**
styrene	100-42-5	1.24E-14	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.24E-14**
tetrachloroethene	127-18-4	1.83E-18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.83E-18**
toluene	108-88-3	6.12E-18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**6.12E-18**
trans-1,3-dichloropropene	10061-02-6	1.71E-17	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.71E-17**
trichloroethene	79-01-6	3.39E-18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**3.39E-18**
trichlorofluoromethane	75-69-4	1.90E-19	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.90E-19**
vinyl chloride	75-01-4	9.66E-20	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**9.66E-20**
xylenes	1330-20-7	1.33E-16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.33E-16**
2,3,7,8-TCDF	51207-31-9		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
Total PCDDs and PCDFs	NA	1.37E-19	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.37E-19**
antimony	7440-36-0	8.48E-19	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**8.48E-19**
cadmium	7440-43-9	5.94E-18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**5.94E-18**
chromium (3+)	7440-47-3	1.07E-17	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.07E-17**
chromium (6+)	18540-29-9	1.07E-17	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.07E-17**
copper	7440-50-8	3.83E-16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**3.83E-16**
lead	7439-92-1	4.07E-16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**4.07E-16**
nickel	7440-02-0	1.22E-16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.22E-16**
zinc	7440-66-6	1.13E-15	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.13E-15**

a. Ingestion rates of total PCDDs/PCDFs and coplanar PCBs are presented in units of mg TEQ/day

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS: Adult Worker Exposure Scenario														
COPC	CAS Number	Incidental Ingestion of Soil (mg/day)[a]	Ingestion of Exposed Produce (mg/day)[a]	Ingestion of Protected Produce (mg/day)[a]	Ingestion of Belowground Produce (mg/day)[a]	Ingestion of Beef (mg/day)[a]	Ingestion of Pork (mg/day)[a]	Ingestion of Poultry (mg/day)[a]	Ingestion of Eggs (mg/day)[a]	Ingestion of Milk (mg/day)[a]	Ingestion of Fish (mg/day)[a]	Incidental Ingestion of Surface Water (mg/day)[a]	Ingestion of Breast Milk (mg/day)[a]	Total Daily COPC Ingestion (mg/day)[a]
1,1,1-trichloroethane	71-55-6	8.64E-18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**8.64E-18**
1,1-dichloroethane	75-34-3	3.56E-18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**3.56E-18**
1,1-dichloroethene	75-35-4	1.16E-18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.16E-18**
1,2-dichloroethane	107-06-2	8.59E-18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**8.59E-18**
1,2-dichloropropane	78-87-5	1.24E-17	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.24E-17**
1,3-butadiene	106-99-0	1.00E-18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.00E-18**
2-butanone	78-93-3	2.27E-14	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**2.27E-14**
acetone	67-64-1	1.04E-14	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.04E-14**
benzene	71-43-2	1.04E-16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.04E-16**
benzoic acid	65-85-0	2.38E-12	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**2.38E-12**
benzyl alcohol	100-51-6	1.57E-11	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.57E-11**
bis(2-ethylhexyl)-phthalate	117-81-7	3.44E-13	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**3.44E-13**
bromodichloromethane	75-27-4	7.33E-15	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**7.33E-15**
bromomethane	74-83-9	2.50E-17	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**2.50E-17**
carbon disulfide	75-15-0	8.63E-18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**8.63E-18**
carbon tetrachloride	56-23-5	2.17E-17	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**2.17E-17**
chlorobenzene	108-90-7	5.53E-17	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**5.53E-17**
chloroform	67-66-3	8.73E-17	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**8.73E-17**
chloromethane	74-87-3	2.01E-17	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**2.01E-17**
cis-1,3-dichloropropene	10061-01-5	2.44E-18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**2.44E-18**
dibromochloromethane	124-48-1	8.48E-14	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**8.48E-14**
dichlorodifluoromethane	75-71-8	1.16E-16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.16E-16**
dimethyl phthalate	131-11-3	5.80E-13	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**5.80E-13**
di-n-butyl phthalate	84-74-2	3.07E-12	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**3.07E-12**
ethylbenzene	100-41-4	4.90E-17	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**4.90E-17**
Freon 113	76-13-1	8.28E-18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**8.28E-18**
HD	505-60-2	1.15E-16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.15E-16**
hexane	110-54-3	6.56E-18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**6.56E-18**
methylene chloride	75-09-2	3.80E-17	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**3.80E-17**
styrene	100-42-5	6.19E-14	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**6.19E-14**
tetrachloroethene	127-18-4	9.17E-18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**9.17E-18**
toluene	108-88-3	3.06E-17	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**3.06E-17**
trans-1,3-dichloropropene	10061-02-6	8.57E-17	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**8.57E-17**
trichloroethene	79-01-6	1.70E-17	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.70E-17**
trichlorofluoromethane	75-69-4	9.50E-19	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**9.50E-19**
vinyl chloride	75-01-4	4.83E-19	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**4.83E-19**
xylenes	1330-20-7	6.65E-16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**6.65E-16**
2,3,7,8-TCDF	51207-31-9		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
Total PCDDs and PCDFs	NA	1.98E-19	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.98E-19**
antimony	7440-36-0	4.24E-18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**4.24E-18**
cadmium	7440-43-9	2.97E-17	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**2.97E-17**
chromium (3+)	7440-47-3	5.36E-17	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**5.36E-17**
chromium (6+)	18540-29-9	5.36E-17	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**5.36E-17**
copper	7440-50-8	1.91E-15	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.91E-15**
lead	7439-92-1	2.03E-15	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**2.03E-15**
nickel	7440-02-0	6.11E-16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**6.11E-16**
zinc	7440-66-6	5.67E-15	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**5.67E-15**

a. Ingestion rates of total PCDDs/PCDFs are presented in units of mg TEQ/day

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Child Resident Exposure Scenario														
COPC	CAS Number	Incidental Ingestion of Soil (mg/day)[a]	Ingestion of Exposed Produce (mg/day)[a]	Ingestion of Protected Produce (mg/day)[a]	Ingestion of Belowground Produce (mg/day)[a]	Ingestion of Beef (mg/day)[a]	Ingestion of Pork (mg/day)[a]	Ingestion of Poultry (mg/day)[a]	Ingestion of Eggs (mg/day)[a]	Ingestion of Milk (mg/day)[a]	Ingestion of Fish (mg/day)[a]	Incidental Ingestion of Surface Water (mg/day)[a]	Ingestion of Breast Milk (mg/day)[a]	Total Daily COPC Ingestion (mg/day)[a]
1,1,1-trichloroethane	71-55-6	3.46E-17	5.61E-14	3.75E-14	6.98E-13	3.98E-13	1.29E-16	5.19E-15	3.17E-15	1.91E-12	1.64E-12	9.00E-15	n/a	**4.76E-12**
1,1-dichloroethane	75-34-3	1.43E-17	5.57E-14	3.93E-14	6.50E-13	1.39E-16	4.58E-17	1.83E-18	1.12E-18	6.74E-16	2.15E-13	4.08E-15	n/a	**9.65E-13**
1,1-dichloroethene	75-35-4	4.65E-18	1.24E-14	8.59E-15	8.49E-14	4.96E-14	1.63E-14	6.55E-16	4.00E-16	2.40E-16	3.35E-13	3.73E-15	n/a	**5.12E-13**
1,2-dichloroethane	107-06-2	3.44E-17	1.99E-13	1.41E-13	2.16E-12	2.95E-16	9.78E-17	3.91E-18	2.39E-18	1.44E-15	1.33E-13	4.31E-15	n/a	**2.64E-12**
1,2-dichloropropane	78-87-5	4.95E-17	1.49E-13	1.04E-13	1.01E-12	5.13E-16	1.69E-16	6.79E-18	4.14E-18	2.48E-15	3.97E-13	5.27E-15	n/a	**1.67E-12**
1,3-butadiene	106-99-0	4.00E-18	1.71E-13	8.55E-15	3.74E-15	4.96E-16	3.99E-17	5.47E-19	3.35E-19	2.16E-15	2.33E-13	3.15E-15	n/a	**4.22E-13**
2-butanone	78-93-3	9.09E-14	8.28E-10	5.94E-10	4.79E-10	1.02E-13	3.40E-14	1.36E-15	8.33E-16	4.99E-13	3.48E-12	1.01E-13	n/a	**1.91E-09**
acetone	67-64-1	4.16E-14	3.79E-10	2.72E-10	7.04E-10	1.27E-14	4.24E-15	1.70E-16	1.03E-16	6.22E-14	5.87E-12	1.71E-13	n/a	**1.36E-09**
benzene	71-43-2	4.18E-16	1.11E-12	7.73E-13	7.64E-12	4.46E-15	1.46E-15	5.88E-17	3.59E-17	2.16E-14	6.42E-12	7.15E-14	n/a	**1.60E-11**
benzoic acid	65-85-0	9.43E-12	3.30E-08	2.36E-08	4.55E-06	2.21E-12	7.39E-13	2.97E-14	1.82E-14	1.07E-11	1.78E-10	5.17E-12	n/a	**4.61E-06**
benzyl alcohol	100-51-6	5.58E-11	5.08E-07	3.65E-07	8.41E-07	3.57E-10	1.19E-10	4.75E-12	2.90E-12	1.75E-09	5.41E-11	1.58E-11	n/a	**1.72E-06**
bis(2-ethylhexyl)-phthalate	117-81-7	1.35E-12	4.58E-09	4.60E-11	2.62E-15	1.92E-09	7.15E-11	1.39E-11	8.50E-12	8.23E-08	6.36E-11	3.26E-14	n/a	**8.91E-08**
bromodichloromethane	75-27-4	2.93E-14	7.55E-11	5.42E-11	5.85E-10	3.04E-10	1.02E-10	4.13E-12	2.53E-12	1.48E-12	2.15E-12	2.39E-14	n/a	**1.13E-09**
bromomethane	74-83-9	9.99E-17	8.63E-13	6.19E-13	2.08E-12	7.22E-16	2.40E-16	9.62E-18	5.87E-18	1.67E-14	3.58E-13	1.99E-14	n/a	**3.96E-12**
carbon disulfide	75-15-0	3.45E-17	8.37E-14	5.57E-14	9.95E-13	3.87E-16	1.24E-16	4.96E-18	3.03E-18	1.86E-15	5.28E-12	4.93E-14	n/a	**6.47E-12**
carbon tetrachloride	56-23-5	8.70E-17	1.01E-13	6.32E-14	1.89E-12	1.05E-12	3.28E-14	1.32E-14	8.08E-15	4.96E-12	7.81E-12	2.51E-14	n/a	**1.59E-11**
chlorobenzene	108-90-7	2.21E-16	2.49E-13	1.61E-13	3.82E-12	2.60E-12	8.30E-14	3.36E-14	2.06E-14	1.23E-11	1.85E-12	5.94E-15	n/a	**2.11E-11**
chloroform	67-66-3	3.49E-16	1.07E-12	7.36E-13	8.01E-12	3.66E-15	1.19E-15	4.79E-17	2.92E-17	1.77E-14	5.31E-12	7.05E-14	n/a	**1.52E-11**
chloromethane	74-87-3	8.02E-17	7.31E-13	5.24E-13	2.28E-12	3.51E-16	1.17E-16	4.66E-18	2.86E-18	1.71E-15	2.39E-12	6.95E-14	n/a	**5.99E-12**
cis-1,3-dichloropropene	10061-01-5	9.78E-18	4.91E-14	3.51E-14	2.52E-13	8.71E-14	2.90E-14	1.16E-15	7.11E-19	4.25E-16	1.87E-13	5.05E-15	n/a	**6.46E-13**
dibromochloromethane	124-48-1	3.38E-13	7.31E-10	5.25E-10	1.33E-09	3.58E-09	1.21E-09	4.89E-11	2.99E-11	1.73E-11	4.09E-12	3.62E-14	n/a	**7.47E-09**
dichlorodifluoromethane	75-71-8	4.63E-16	1.10E-12	7.91E-13	1.82E-12	4.86E-15	1.64E-12	6.62E-14	4.05E-14	2.36E-14	1.07E-12	1.07E-14	n/a	**6.57E-12**
dimethyl phthalate	131-11-3	2.31E-12	1.27E-08	8.75E-09	1.55E-08	2.09E-08	6.78E-09	2.71E-10	1.66E-13	1.01E-10	2.58E-11	7.50E-13	n/a	**6.50E-08**
di-n-butyl phthalate	84-74-2	1.20E-11	1.99E-09	6.95E-10	5.10E-12	3.78E-07	2.43E-08	1.35E-12	8.28E-11	1.62E-05	9.58E-09	4.90E-13	n/a	**1.67E-05**
ethylbenzene	100-41-4	1.96E-16	1.62E-13	9.55E-14	3.46E-12	2.36E-15	7.25E-16	2.94E-17	1.80E-17	1.11E-14	3.76E-12	7.13E-15	n/a	**7.51E-12**
Freon 113	76-13-1	3.31E-17	5.84E-12	1.49E-14	1.62E-14	7.55E-14	4.46E-15	4.94E-18	3.02E-18	3.25E-13	7.22E-12	1.23E-14	n/a	**1.35E-11**
HD	505-60-2	4.59E-16	2.39E-12	5.63E-13	7.46E-13	1.35E-14	2.17E-15	6.85E-17	4.18E-17	6.05E-14	2.36E-12	1.52E-14	n/a	**6.16E-12**
hexane	110-54-3	2.62E-17	8.01E-15	4.50E-15	9.53E-14	2.55E-16	8.26E-17	3.53E-18	2.15E-18	1.13E-15	2.73E-11	1.25E-14	n/a	**2.74E-11**
methylene chloride	75-09-2	1.52E-16	1.14E-12	8.13E-13	1.25E-11	1.18E-15	3.89E-16	1.56E-17	9.54E-18	5.73E-15	1.23E-12	5.68E-14	n/a	**1.57E-11**
styrene	100-42-5	2.47E-13	1.92E-10	1.37E-10	2.22E-11	2.59E-10	8.99E-11	3.73E-11	2.28E-11	1.23E-08	8.84E-12	2.00E-14	n/a	**1.31E-08**
tetrachloroethene	127-18-4	3.67E-17	4.19E-14	1.20E-14	2.60E-12	7.62E-16	1.49E-16	5.32E-18	3.25E-18	3.40E-15	6.08E-12	6.76E-15	n/a	**8.75E-12**
toluene	108-88-3	1.22E-16	1.58E-13	1.02E-13	2.16E-12	1.45E-15	4.62E-16	1.87E-17	1.14E-17	6.90E-15	2.21E-12	8.52E-15	n/a	**4.65E-12**
trans-1,3-dichloropropene	10061-02-6	3.43E-16	6.91E-13	4.91E-13	1.35E-12	3.69E-15	1.24E-15	5.01E-17	3.06E-17	1.78E-14	6.89E-13	5.48E-15	n/a	**3.25E-12**
trichloroethene	79-01-6	6.79E-17	1.21E-13	8.42E-14	7.69E-13	7.55E-16	2.49E-16	1.01E-17	6.17E-18	3.65E-15	1.07E-12	6.97E-15	n/a	**2.06E-12**
trichlorofluoromethane	75-69-4	3.80E-18	6.19E-15	4.12E-15	7.04E-14	4.39E-14	1.42E-17	5.71E-16	3.49E-16	2.10E-13	1.02E-12	5.61E-15	n/a	**1.37E-12**
vinyl chloride	75-01-4	1.93E-18	1.27E-14	9.06E-15	1.08E-13	1.57E-17	5.24E-18	2.09E-19	1.28E-19	7.70E-17	1.52E-13	5.85E-15	n/a	**2.88E-13**
xylenes	1330-20-7	2.66E-15	1.77E-12	1.20E-12	1.00E-11	2.83E-14	9.55E-15	3.97E-16	2.43E-16	1.33E-13	9.75E-12	1.66E-14	n/a	**2.29E-11**
2,3,7,8-TCDF	51207-31-9												n/a	
Total PCDDs and PCDFs	NA	4.07E-19	5.61E-17	3.65E-18	1.39E-18	2.08E-15	1.27E-16	3.03E-18	1.85E-18	8.78E-14	2.75E-17	8.21E-22	n/a	**9.01E-14**
antimony	7440-36-0	1.70E-17	1.14E-11	4.22E-16	1.16E-16	1.21E-13	0.00E+00	0.00E+00	0.00E+00	2.46E-13	2.05E-14	4.72E-17	n/a	**1.18E-11**
cadmium	7440-43-9	1.19E-16	5.95E-11	1.16E-14	4.06E-15	7.60E-14	3.58E-15	6.77E-17	1.70E-18	8.38E-14	2.43E-12	2.47E-16	n/a	**6.21E-11**
chromium (3+)	7440-47-3	2.14E-16	5.47E-10	8.16E-16	2.20E-16	3.20E-11	0.00E+00	0.00E+00	0.00E+00	1.78E-10	6.92E-14	2.02E-15	n/a	**7.57E-10**
chromium (6+)	18540-29-9	2.14E-16	5.47E-10	8.16E-16	2.20E-16	3.20E-11	0.00E+00	0.00E+00	0.00E+00	1.78E-10	6.92E-14	2.02E-15	n/a	**7.57E-10**
copper	7440-50-8	7.65E-15	8.16E-10	1.61E-12	4.36E-13	8.66E-11	0.00E+00	0.00E+00	0.00E+00	2.65E-10	1.03E-13	3.02E-15	n/a	**1.17E-09**
lead	7439-92-1	8.12E-15	2.73E-10	8.62E-14	1.67E-14	8.70E-13	0.00E+00	0.00E+00	0.00E+00	1.48E-11	1.10E-15	1.13E-15	n/a	**2.89E-10**
nickel	7440-02-0	2.44E-15	1.13E-09	1.77E-14	3.34E-14	7.24E-11	0.00E+00	0.00E+00	0.00E+00	2.46E-10	3.99E-12	4.71E-15	n/a	**1.46E-09**
zinc	7440-66-6	2.27E-14	1.10E-08	1.72E-12	4.66E-12	1.06E-11	4.46E-13	9.37E-16	1.00E-15	7.78E-11	1.03E-09	4.59E-14	n/a	**1.22E-08**

a. Ingestion rates of total PCDDs/PCDFs and coplanar PCBs are presented in units of mg TEQ/day

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS: Child Resident Exposure Scenario														
COPC	CAS Number	Incidental Ingestion of Soil (mg/day)[a]	Ingestion of Exposed Produce (mg/day)[a]	Ingestion of Protected Produce (mg/day)[a]	Ingestion of Belowground Produce (mg/day)[a]	Ingestion of Beef (mg/day)[a]	Ingestion of Pork (mg/day)[a]	Ingestion of Poultry (mg/day)[a]	Ingestion of Eggs (mg/day)[a]	Ingestion of Milk (mg/day)[a]	Ingestion of Fish (mg/day)[a]	Incidental Ingestion of Surface Water (mg/day)[a]	Ingestion of Breast Milk (mg/day)[a]	Total Daily COPC Ingestion (mg/day)[a]
1,1,1-trichloroethane	71-55-6	3.46E-17	5.61E-14	3.75E-14	6.98E-13	3.98E-13	1.29E-16	5.19E-15	3.17E-15	1.91E-12	1.64E-12	9.00E-15	n/a	**4.76E-12**
1,1-dichloroethane	75-34-3	1.43E-17	5.57E-14	3.93E-14	6.50E-13	1.39E-16	4.58E-17	1.83E-18	1.12E-18	6.74E-16	2.15E-13	4.08E-15	n/a	**9.65E-13**
1,1-dichloroethene	75-35-4	4.65E-18	1.24E-14	8.59E-15	8.49E-14	4.96E-14	1.63E-14	6.55E-16	4.00E-16	2.40E-16	3.35E-13	3.73E-15	n/a	**5.12E-13**
1,2-dichloroethane	107-06-2	3.44E-17	1.99E-13	1.41E-13	2.16E-12	2.95E-16	9.78E-17	3.91E-18	2.39E-18	1.44E-15	1.33E-13	4.31E-15	n/a	**2.64E-12**
1,2-dichloropropane	78-87-5	4.95E-17	1.49E-13	1.04E-13	1.01E-12	5.13E-16	1.69E-16	6.79E-18	4.14E-18	2.48E-15	3.97E-13	5.27E-15	n/a	**1.67E-12**
1,3-butadiene	106-99-0	4.00E-18	1.71E-13	8.55E-15	3.74E-15	4.96E-16	3.99E-17	5.47E-19	3.35E-19	2.16E-15	2.33E-13	3.15E-15	n/a	**4.22E-13**
2-butanone	78-93-3	9.10E-14	8.28E-10	5.94E-10	4.79E-10	1.02E-13	3.40E-14	1.36E-15	8.33E-16	4.99E-13	3.48E-12	1.01E-13	n/a	**1.91E-09**
acetone	67-64-1	4.16E-14	3.79E-10	2.72E-10	7.04E-10	1.27E-14	4.24E-15	1.70E-16	1.03E-16	6.22E-14	5.88E-12	1.71E-13	n/a	**1.36E-09**
benzene	71-43-2	4.18E-16	1.11E-12	7.73E-13	7.64E-12	4.46E-15	1.46E-15	5.88E-17	3.59E-17	2.16E-14	6.42E-12	7.15E-14	n/a	**1.60E-11**
benzoic acid	65-85-0	9.50E-12	3.32E-08	2.38E-08	4.59E-06	2.23E-12	7.44E-13	2.99E-14	1.83E-14	1.08E-11	1.79E-10	5.20E-12	n/a	**4.64E-06**
benzyl alcohol	100-51-6	6.27E-11	5.70E-07	4.10E-07	9.45E-07	4.01E-10	1.33E-10	5.34E-12	3.26E-12	1.96E-09	6.07E-11	1.78E-11	n/a	**1.93E-06**
bis(2-ethylhexyl)-phthalate	117-81-7	1.38E-12	4.58E-09	4.69E-11	2.67E-15	1.92E-09	7.15E-11	1.42E-11	8.66E-12	8.24E-08	6.37E-11	3.27E-14	n/a	**8.91E-08**
bromodichloromethane	75-27-4	2.93E-14	7.55E-11	5.42E-11	5.85E-10	3.04E-10	1.02E-10	4.13E-12	2.53E-12	1.48E-12	2.15E-12	2.39E-14	n/a	**1.13E-09**
bromomethane	74-83-9	9.99E-17	8.63E-13	6.19E-13	2.08E-12	7.22E-16	2.40E-16	9.62E-18	5.87E-18	1.67E-14	3.58E-13	1.99E-14	n/a	**3.96E-12**
carbon disulfide	75-15-0	3.45E-17	8.37E-14	5.57E-14	9.95E-13	3.87E-16	1.24E-16	4.96E-18	3.03E-18	1.86E-15	5.28E-12	4.93E-14	n/a	**6.47E-12**
carbon tetrachloride	56-23-5	8.70E-17	1.01E-13	6.32E-14	1.89E-12	1.05E-12	3.28E-14	1.32E-14	8.08E-15	4.96E-12	7.81E-12	2.51E-14	n/a	**1.59E-11**
chlorobenzene	108-90-7	2.21E-16	2.49E-13	1.61E-13	3.82E-12	2.60E-12	8.30E-14	3.36E-14	2.06E-14	1.23E-11	1.85E-12	5.94E-15	n/a	**2.11E-11**
chloroform	67-66-3	3.49E-16	1.07E-12	7.36E-13	8.01E-12	3.66E-15	1.19E-15	4.79E-17	2.92E-17	1.77E-14	5.31E-12	7.05E-14	n/a	**1.52E-11**
chloromethane	74-87-3	8.02E-17	7.31E-13	5.24E-13	2.28E-12	3.51E-16	1.17E-16	4.66E-18	2.86E-18	1.71E-15	2.39E-12	6.95E-14	n/a	**5.99E-12**
cis-1,3-dichloropropene	10061-01-5	9.78E-18	4.91E-14	3.51E-14	2.52E-13	8.71E-14	2.90E-14	1.16E-15	7.11E-19	4.25E-16	1.87E-13	5.05E-15	n/a	**6.46E-13**
dibromochloromethane	124-48-1	3.39E-13	7.33E-10	5.26E-10	1.34E-09	3.59E-09	1.21E-09	4.90E-11	3.00E-11	1.74E-11	4.10E-12	3.63E-14	n/a	**7.50E-09**
dichlorodifluoromethane	75-71-8	4.63E-16	1.10E-12	7.91E-13	1.82E-12	4.86E-15	1.64E-12	6.62E-14	4.05E-14	2.36E-14	1.07E-12	1.07E-14	n/a	**6.57E-12**
dimethyl phthalate	131-11-3	2.32E-12	1.28E-08	8.80E-09	1.56E-08	2.10E-08	6.81E-09	2.72E-10	1.66E-13	1.02E-10	2.59E-11	7.52E-13	n/a	**6.54E-08**
di-n-butyl phthalate	84-74-2	1.23E-11	2.01E-09	7.08E-10	5.19E-12	3.78E-07	2.43E-08	1.38E-12	8.43E-11	1.62E-05	9.58E-09	4.90E-13	n/a	**1.67E-05**
ethylbenzene	100-41-4	1.96E-16	1.62E-13	9.55E-14	3.46E-12	2.36E-15	7.25E-16	2.94E-17	1.80E-17	1.11E-14	3.76E-12	7.13E-15	n/a	**7.51E-12**
Freon 113	76-13-1	3.31E-17	5.84E-12	1.49E-14	1.62E-14	7.55E-14	4.46E-15	4.94E-18	3.02E-18	3.25E-13	7.22E-12	1.23E-14	n/a	**1.35E-11**
HD	505-60-2	4.59E-16	2.39E-12	5.63E-13	7.46E-13	1.35E-14	2.17E-15	6.85E-17	4.18E-17	6.05E-14	2.36E-12	1.52E-14	n/a	**6.16E-12**
hexane	110-54-3	2.62E-17	8.01E-15	4.50E-15	9.53E-14	2.55E-16	8.26E-17	3.53E-18	2.15E-18	1.13E-15	2.73E-11	1.25E-14	n/a	**2.74E-11**
methylene chloride	75-09-2	1.52E-16	1.14E-12	8.13E-13	1.25E-11	1.18E-15	3.89E-16	1.56E-17	9.54E-18	5.73E-15	1.23E-12	5.68E-14	n/a	**1.57E-11**
styrene	100-42-5	2.47E-13	1.92E-10	1.38E-10	2.23E-11	2.60E-10	9.01E-11	3.74E-11	2.28E-11	1.23E-08	8.84E-12	2.00E-14	n/a	**1.31E-08**
tetrachloroethene	127-18-4	3.67E-17	4.19E-14	1.20E-14	2.60E-12	7.62E-16	1.49E-16	5.32E-18	3.25E-18	3.40E-15	6.08E-12	6.76E-15	n/a	**8.75E-12**
toluene	108-88-3	1.22E-16	1.58E-13	1.02E-13	2.16E-12	1.45E-15	4.62E-16	1.87E-17	1.14E-17	6.90E-15	2.21E-12	8.52E-15	n/a	**4.65E-12**
trans-1,3-dichloropropene	10061-02-6	3.43E-16	6.91E-13	4.91E-13	1.35E-12	3.69E-15	1.24E-15	5.01E-17	3.06E-17	1.78E-14	6.89E-13	5.48E-15	n/a	**3.25E-12**
trichloroethene	79-01-6	6.79E-17	1.21E-13	8.42E-14	7.69E-13	7.55E-16	2.49E-16	1.01E-17	6.17E-18	3.65E-15	1.07E-12	6.97E-15	n/a	**2.06E-12**
trichlorofluoromethane	75-69-4	3.80E-18	6.19E-15	4.12E-15	7.04E-14	4.39E-14	1.42E-17	5.71E-16	3.49E-16	2.10E-13	1.02E-12	5.61E-15	n/a	**1.37E-12**
vinyl chloride	75-01-4	1.93E-18	1.27E-14	9.06E-15	1.08E-13	1.57E-17	5.24E-18	2.09E-19	1.28E-19	7.70E-17	1.52E-13	5.85E-15	n/a	**2.88E-13**
xylenes	1330-20-7	2.66E-15	1.77E-12	1.20E-12	1.00E-11	2.83E-14	9.55E-15	3.97E-16	2.43E-16	1.33E-13	9.75E-12	1.66E-14	n/a	**2.29E-11**
2,3,7,8-TCDF	51207-31-9												n/a	
Total PCDDs and PCDFs	NA	7.92E-19	6.09E-17	7.10E-18	2.70E-18	2.18E-15	1.81E-16	5.90E-18	3.61E-18	9.05E-14	4.63E-17	1.38E-21	n/a	**9.30E-14**
antimony	7440-36-0	1.70E-17	1.14E-11	4.22E-16	1.16E-16	1.21E-13	0.00E+00	0.00E+00	0.00E+00	2.46E-13	2.05E-14	4.72E-17	n/a	**1.18E-11**
cadmium	7440-43-9	1.19E-16	5.95E-11	1.16E-14	4.07E-15	7.60E-14	3.58E-15	6.77E-17	1.70E-18	8.38E-14	2.43E-12	2.47E-16	n/a	**6.21E-11**
chromium (3+)	7440-47-3	2.14E-16	5.47E-10	8.16E-16	2.20E-16	3.20E-11	0.00E+00	0.00E+00	0.00E+00	1.78E-10	6.92E-14	2.02E-15	n/a	**7.57E-10**
chromium (6+)	18540-29-9	2.14E-16	5.47E-10	8.16E-16	2.20E-16	3.20E-11	0.00E+00	0.00E+00	0.00E+00	1.78E-10	6.92E-14	2.02E-15	n/a	**7.57E-10**
copper	7440-50-8	7.66E-15	8.16E-10	1.61E-12	4.36E-13	8.66E-11	0.00E+00	0.00E+00	0.00E+00	2.65E-10	1.03E-13	3.02E-15	n/a	**1.17E-09**
lead	7439-92-1	8.14E-15	2.73E-10	8.63E-14	1.67E-14	8.70E-13	0.00E+00	0.00E+00	0.00E+00	1.48E-11	1.10E-15	1.13E-15	n/a	**2.89E-10**
nickel	7440-02-0	2.44E-15	1.13E-09	1.78E-14	3.34E-14	7.24E-11	0.00E+00	0.00E+00	0.00E+00	2.46E-10	3.99E-12	4.71E-15	n/a	**1.46E-09**
zinc	7440-66-6	2.27E-14	1.10E-08	1.72E-12	4.66E-12	1.06E-11	4.46E-13	9.37E-16	1.00E-15	7.78E-11	1.03E-09	4.59E-14	n/a	**1.22E-08**

a. Ingestion rates of total PCDDs/PCDFs are presented in units of mg TEQ/day

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS:
Child Subsistence Fisher Exposure Scenario

COPC	CAS Number	Incidental Ingestion of Soil (mg/day)[a]	Ingestion of Exposed Produce (mg/day)[a]	Ingestion of Protected Produce (mg/day)[a]	Ingestion of Belowground Produce (mg/day)[a]	Ingestion of Beef (mg/day)[a]	Ingestion of Pork (mg/day)[a]	Ingestion of Poultry (mg/day)[a]	Ingestion of Eggs (mg/day)[a]	Ingestion of Milk (mg/day)[a]	Ingestion of Fish (mg/day)[a]	Incidental Ingestion of Surface Water (mg/day)[a]	Ingestion of Breast Milk (mg/day)[a]	Total Daily COPC Ingestion (mg/day)[a]
1,1,1-trichloroethane	71-55-6	3.46E-17	5.61E-14	3.75E-14	6.98E-13	3.98E-13	1.29E-16	5.19E-15	3.17E-15	1.91E-12	4.11E-12	9.00E-15	n/a	**7.22E-12**
1,1-dichloroethane	75-34-3	1.43E-17	5.57E-14	3.93E-14	6.50E-13	1.39E-16	4.58E-17	1.83E-18	1.12E-18	6.74E-16	5.37E-13	4.08E-15	n/a	**1.29E-12**
1,1-dichloroethene	75-35-4	4.65E-18	1.24E-14	8.59E-15	8.49E-14	4.96E-14	1.63E-14	6.55E-16	4.00E-16	2.40E-16	8.38E-13	3.73E-15	n/a	**1.01E-12**
1,2-dichloroethane	107-06-2	3.44E-17	1.99E-13	1.41E-13	2.16E-12	2.95E-16	9.78E-17	3.91E-18	2.39E-18	1.44E-15	3.34E-13	4.31E-15	n/a	**2.84E-12**
1,2-dichloropropane	78-87-5	4.95E-17	1.49E-13	1.04E-13	1.01E-12	5.13E-16	1.69E-16	6.79E-18	4.14E-18	2.48E-15	9.91E-13	5.27E-15	n/a	**2.26E-12**
1,3-butadiene	106-99-0	4.00E-18	1.71E-13	8.55E-15	3.74E-15	4.96E-16	3.99E-17	5.47E-19	3.35E-19	2.16E-15	5.82E-13	3.15E-15	n/a	**7.72E-13**
2-butanone	78-93-3	9.09E-14	8.28E-10	5.94E-10	4.79E-10	1.02E-13	3.40E-14	1.36E-15	8.33E-16	4.99E-13	8.71E-12	1.01E-13	n/a	**1.91E-09**
acetone	67-64-1	4.16E-14	3.79E-10	2.72E-10	7.04E-10	1.27E-14	4.24E-15	1.70E-16	1.03E-16	6.22E-14	1.47E-11	1.71E-13	n/a	**1.37E-09**
benzene	71-43-2	4.18E-16	1.11E-12	7.73E-13	7.64E-12	4.46E-15	1.46E-15	5.88E-17	3.59E-17	2.16E-14	1.60E-11	7.15E-14	n/a	**2.57E-11**
benzoic acid	65-85-0	9.43E-12	3.30E-08	2.36E-08	4.55E-06	2.21E-12	7.39E-13	2.97E-14	1.82E-14	1.07E-11	4.44E-10	5.17E-12	n/a	**4.61E-06**
benzyl alcohol	100-51-6	5.58E-11	5.08E-07	3.65E-07	8.41E-07	3.57E-10	1.19E-10	4.75E-12	2.90E-12	1.75E-09	1.35E-10	1.58E-11	n/a	**1.72E-06**
bis(2-ethylhexyl)-phthalate	117-81-7	1.35E-12	4.58E-09	4.60E-11	2.62E-15	1.92E-09	7.15E-11	1.39E-11	8.50E-12	8.23E-08	1.59E-10	3.26E-14	n/a	**8.92E-08**
bromodichloromethane	75-27-4	2.93E-14	7.55E-11	5.42E-11	5.85E-10	3.04E-10	1.02E-10	4.13E-12	2.53E-12	1.48E-12	5.37E-12	2.39E-14	n/a	**1.13E-09**
bromomethane	74-83-9	9.99E-17	8.63E-13	6.19E-13	2.08E-12	7.22E-16	2.40E-16	9.62E-18	5.87E-18	1.67E-14	8.94E-13	1.99E-14	n/a	**4.49E-12**
carbon disulfide	75-15-0	3.45E-17	8.37E-14	5.57E-14	9.95E-13	3.87E-16	1.24E-16	4.96E-18	3.03E-18	1.86E-15	1.32E-11	4.93E-14	n/a	**1.44E-11**
carbon tetrachloride	56-23-5	8.70E-17	1.01E-13	6.32E-14	1.89E-12	1.05E-12	3.28E-14	1.32E-14	8.08E-15	4.96E-12	1.95E-11	2.51E-14	n/a	**2.77E-11**
chlorobenzene	108-90-7	2.21E-16	2.49E-13	1.61E-13	3.82E-12	2.60E-12	8.30E-14	3.36E-14	2.06E-14	1.23E-11	4.61E-12	5.94E-15	n/a	**2.39E-11**
chloroform	67-66-3	3.49E-16	1.07E-12	7.36E-13	8.01E-12	3.66E-15	1.19E-15	4.79E-17	2.92E-17	1.77E-14	1.33E-11	7.05E-14	n/a	**2.32E-11**
chloromethane	74-87-3	8.02E-17	7.31E-13	5.24E-13	2.28E-12	3.51E-16	1.17E-16	4.66E-18	2.86E-18	1.71E-15	5.97E-12	6.95E-14	n/a	**9.58E-12**
cis-1,3-dichloropropene	10061-01-5	9.78E-18	4.91E-14	3.51E-14	2.52E-13	8.71E-14	2.90E-14	1.16E-15	7.11E-19	4.25E-16	4.66E-13	5.05E-15	n/a	**9.26E-13**
dibromochloromethane	124-48-1	3.38E-13	7.31E-10	5.25E-10	1.33E-09	3.58E-09	1.21E-09	4.89E-11	2.99E-11	1.73E-11	1.02E-11	3.62E-14	n/a	**7.48E-09**
dichlorodifluoromethane	75-71-8	4.63E-16	1.10E-12	7.91E-13	1.82E-12	4.86E-15	1.64E-12	6.62E-14	4.05E-14	2.36E-14	2.67E-12	1.07E-14	n/a	**8.17E-12**
dimethyl phthalate	131-11-3	2.31E-12	1.27E-08	8.75E-09	1.55E-08	2.09E-08	6.78E-09	2.71E-10	1.66E-13	1.01E-10	6.46E-11	7.50E-13	n/a	**6.51E-08**
di-n-butyl phthalate	84-74-2	1.20E-11	1.99E-09	6.95E-10	5.10E-12	3.78E-07	2.43E-08	1.35E-12	8.28E-11	1.62E-05	2.39E-08	4.90E-13	n/a	**1.67E-05**
ethylbenzene	100-41-4	1.96E-16	1.62E-13	9.55E-14	3.46E-12	2.36E-15	7.25E-16	2.94E-17	1.80E-17	1.11E-14	9.41E-12	7.13E-15	n/a	**1.32E-11**
Freon 113	76-13-1	3.31E-17	5.84E-12	1.49E-14	1.62E-14	7.55E-14	4.46E-15	4.94E-18	3.02E-18	3.25E-13	1.80E-11	1.23E-14	n/a	**2.43E-11**
HD	505-60-2	4.59E-16	2.39E-12	5.63E-13	7.46E-13	1.35E-14	2.17E-15	6.85E-17	4.18E-17	6.05E-14	5.91E-12	1.52E-14	n/a	**9.70E-12**
hexane	110-54-3	2.62E-17	8.01E-15	4.50E-15	9.53E-14	2.55E-16	8.26E-17	3.53E-18	2.15E-18	1.13E-15	6.83E-11	1.25E-14	n/a	**6.84E-11**
methylene chloride	75-09-2	1.52E-16	1.14E-12	8.13E-13	1.25E-11	1.18E-15	3.89E-16	1.56E-17	9.54E-18	5.73E-15	3.08E-12	5.68E-14	n/a	**1.76E-11**
styrene	100-42-5	2.47E-13	1.92E-10	1.37E-10	2.22E-11	2.59E-10	8.99E-11	3.73E-11	2.28E-11	1.23E-08	2.21E-11	2.00E-14	n/a	**1.31E-08**
tetrachloroethene	127-18-4	3.67E-17	4.19E-14	1.20E-14	2.60E-12	7.62E-16	1.49E-16	5.32E-18	3.25E-18	3.40E-15	1.52E-11	6.76E-15	n/a	**1.79E-11**
toluene	108-88-3	1.22E-16	1.58E-13	1.02E-13	2.16E-12	1.45E-15	4.62E-16	1.87E-17	1.14E-17	6.90E-15	5.53E-12	8.52E-15	n/a	**7.97E-12**
trans-1,3-dichloropropene	10061-02-6	3.43E-16	6.91E-13	4.91E-13	1.35E-12	3.69E-15	1.24E-15	5.01E-17	3.06E-17	1.78E-14	1.72E-12	5.48E-15	n/a	**4.28E-12**
trichloroethene	79-01-6	6.79E-17	1.21E-13	8.42E-14	7.69E-13	7.55E-16	2.49E-16	1.01E-17	6.17E-18	3.65E-15	2.67E-12	6.97E-15	n/a	**3.66E-12**
trichlorofluoromethane	75-69-4	3.80E-18	6.19E-15	4.12E-15	7.04E-14	4.39E-14	1.42E-17	5.71E-16	3.49E-16	2.10E-13	2.56E-12	5.61E-15	n/a	**2.90E-12**
vinyl chloride	75-01-4	1.93E-18	1.27E-14	9.06E-15	1.08E-13	1.57E-17	5.24E-18	2.09E-19	1.28E-19	7.70E-17	3.80E-13	5.85E-15	n/a	**5.16E-13**
xylenes	1330-20-7	2.66E-15	1.77E-12	1.20E-12	1.00E-11	2.83E-14	9.55E-15	3.97E-16	2.43E-16	1.33E-13	2.44E-11	1.66E-14	n/a	**3.76E-11**
2,3,7,8-TCDF	51207-31-9												n/a	
Total PCDDs and PCDFs	NA	4.07E-19	5.61E-17	3.65E-18	1.39E-18	2.08E-15	1.27E-16	3.03E-18	1.85E-18	8.78E-14	6.89E-17	8.21E-22	n/a	**9.01E-14**
antimony	7440-36-0	1.70E-17	1.14E-11	4.22E-16	1.16E-16	1.21E-13	0.00E+00	0.00E+00	0.00E+00	2.46E-13	5.13E-14	4.72E-17	n/a	**1.18E-11**
cadmium	7440-43-9	1.19E-16	5.95E-11	1.16E-14	4.06E-15	7.60E-14	3.58E-15	6.77E-17	1.70E-18	8.38E-14	6.09E-12	2.47E-16	n/a	**6.58E-11**
chromium (3+)	7440-47-3	2.14E-16	5.47E-10	8.16E-16	2.20E-16	3.20E-11	0.00E+00	0.00E+00	0.00E+00	1.78E-10	1.73E-13	2.02E-15	n/a	**7.57E-10**
chromium (6+)	18540-29-9	2.14E-16	5.47E-10	8.16E-16	2.20E-16	3.20E-11	0.00E+00	0.00E+00	0.00E+00	1.78E-10	1.73E-13	2.02E-15	n/a	**7.57E-10**
copper	7440-50-8	7.65E-15	8.16E-10	1.61E-12	4.36E-13	8.66E-11	0.00E+00	0.00E+00	0.00E+00	2.65E-10	2.59E-13	3.02E-15	n/a	**1.17E-09**
lead	7439-92-1	8.12E-15	2.73E-10	8.62E-14	1.67E-14	8.70E-13	0.00E+00	0.00E+00	0.00E+00	1.48E-11	2.75E-15	1.13E-15	n/a	**2.89E-10**
nickel	7440-02-0	2.44E-15	1.13E-09	1.77E-14	3.34E-14	7.24E-11	0.00E+00	0.00E+00	0.00E+00	2.46E-10	9.98E-12	4.71E-15	n/a	**1.46E-09**
zinc	7440-66-6	2.27E-14	1.10E-08	1.72E-12	4.66E-12	1.06E-11	4.46E-13	9.37E-16	1.00E-15	7.78E-11	2.57E-09	4.59E-14	n/a	**1.37E-08**

a. Ingestion rates of total PCDDs/PCDFs and coplanar PCBs are presented in units of mg TEQ/day

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS: Child Subsistence Fisher Exposure Scenario														
COPC	CAS Number	Incidental Ingestion of Soil (mg/day)[a]	Ingestion of Exposed Produce (mg/day)[a]	Ingestion of Protected Produce (mg/day)[a]	Ingestion of Belowground Produce (mg/day)[a]	Ingestion of Beef (mg/day)[a]	Ingestion of Pork (mg/day)[a]	Ingestion of Poultry (mg/day)[a]	Ingestion of Eggs (mg/day)[a]	Ingestion of Milk (mg/day)[a]	Ingestion of Fish (mg/day)[a]	Incidental Ingestion of Surface Water (mg/day)[a]	Ingestion of Breast Milk (mg/day)[a]	Total Daily COPC Ingestion (mg/day)[a]
1,1,1-trichloroethane	71-55-6	3.46E-17	5.61E-14	3.75E-14	6.98E-13	3.98E-13	1.29E-16	5.19E-15	3.17E-15	1.91E-12	4.11E-12	9.00E-15	n/a	**7.22E-12**
1,1-dichloroethane	75-34-3	1.43E-17	5.57E-14	3.93E-14	6.50E-13	1.39E-16	4.58E-17	1.83E-18	1.12E-18	6.74E-16	5.37E-13	4.08E-15	n/a	**1.29E-12**
1,1-dichloroethene	75-35-4	4.65E-18	1.24E-14	8.59E-15	8.49E-14	4.96E-14	1.63E-14	6.55E-16	4.00E-16	2.40E-16	8.38E-13	3.73E-15	n/a	**1.01E-12**
1,2-dichloroethane	107-06-2	3.44E-17	1.99E-13	1.41E-13	2.16E-12	2.95E-16	9.78E-17	3.91E-18	2.39E-18	1.44E-15	3.34E-13	4.31E-15	n/a	**2.84E-12**
1,2-dichloropropane	78-87-5	4.95E-17	1.49E-13	1.04E-13	1.01E-12	5.13E-16	1.69E-16	6.79E-18	4.14E-18	2.48E-15	9.91E-13	5.27E-15	n/a	**2.26E-12**
1,3-butadiene	106-99-0	4.00E-18	1.71E-13	8.55E-15	3.74E-15	4.96E-16	3.99E-17	5.47E-19	3.35E-19	2.16E-15	5.82E-13	3.15E-15	n/a	**7.72E-13**
2-butanone	78-93-3	9.10E-14	8.28E-10	5.94E-10	4.79E-10	1.02E-13	3.40E-14	1.36E-15	8.33E-16	4.99E-13	8.71E-12	1.01E-13	n/a	**1.91E-09**
acetone	67-64-1	4.16E-14	3.79E-10	2.72E-10	7.04E-10	1.27E-14	4.24E-15	1.70E-16	1.03E-16	6.22E-14	1.47E-11	1.71E-13	n/a	**1.37E-09**
benzene	71-43-2	4.18E-16	1.11E-12	7.73E-13	7.64E-12	4.46E-15	1.46E-15	5.88E-17	3.59E-17	2.16E-14	1.60E-11	7.15E-14	n/a	**2.57E-11**
benzoic acid	65-85-0	9.50E-12	3.32E-08	2.38E-08	4.59E-06	2.23E-12	7.44E-13	2.99E-14	1.83E-14	1.08E-11	4.47E-10	5.20E-12	n/a	**4.64E-06**
benzyl alcohol	100-51-6	6.27E-11	5.70E-07	4.10E-07	9.45E-07	4.01E-10	1.33E-10	5.34E-12	3.26E-12	1.96E-09	1.52E-10	1.78E-11	n/a	**1.93E-06**
bis(2-ethylhexyl)-phthalate	117-81-7	1.38E-12	4.58E-09	4.69E-11	2.67E-15	1.92E-09	7.15E-11	1.42E-11	8.66E-12	8.24E-08	1.59E-10	3.27E-14	n/a	**8.92E-08**
bromodichloromethane	75-27-4	2.93E-14	7.55E-11	5.42E-11	5.85E-10	3.04E-10	1.02E-10	4.13E-12	2.53E-12	1.48E-12	5.37E-12	2.39E-14	n/a	**1.14E-09**
bromomethane	74-83-9	9.99E-17	8.63E-13	6.19E-13	2.08E-12	7.22E-16	2.40E-16	9.62E-18	5.87E-18	1.67E-14	8.94E-13	1.99E-14	n/a	**4.49E-12**
carbon disulfide	75-15-0	3.45E-17	8.37E-14	5.57E-14	9.95E-13	3.87E-16	1.24E-16	4.96E-18	3.03E-18	1.86E-15	1.32E-11	4.93E-14	n/a	**1.44E-11**
carbon tetrachloride	56-23-5	8.70E-17	1.01E-13	6.32E-14	1.89E-12	1.05E-12	3.28E-14	1.32E-14	8.08E-15	4.96E-12	1.95E-11	2.51E-14	n/a	**2.77E-11**
chlorobenzene	108-90-7	2.21E-16	2.49E-13	1.61E-13	3.82E-12	2.60E-12	8.30E-14	3.36E-14	2.06E-14	1.23E-11	4.61E-12	5.94E-15	n/a	**2.39E-11**
chloroform	67-66-3	3.49E-16	1.07E-12	7.36E-13	8.01E-12	3.66E-15	1.19E-15	4.79E-17	2.92E-17	1.77E-14	1.33E-11	7.05E-14	n/a	**2.32E-11**
chloromethane	74-87-3	8.02E-17	7.31E-13	5.24E-13	2.28E-12	3.51E-16	1.17E-16	4.66E-18	2.86E-18	1.71E-15	5.97E-12	6.95E-14	n/a	**9.58E-12**
cis-1,3-dichloropropene	10061-01-5	9.78E-18	4.91E-14	3.51E-14	2.52E-13	8.71E-14	2.90E-14	1.16E-15	7.11E-19	4.25E-16	4.66E-13	5.05E-15	n/a	**9.26E-13**
dibromochloromethane	124-48-1	3.39E-13	7.33E-10	5.26E-10	1.34E-09	3.59E-09	1.21E-09	4.90E-11	3.00E-11	1.74E-11	1.03E-11	3.63E-14	n/a	**7.50E-09**
dichlorodifluoromethane	75-71-8	4.63E-16	1.10E-12	7.91E-13	1.82E-12	4.86E-15	1.64E-12	6.62E-14	4.05E-14	2.36E-14	2.67E-12	1.07E-14	n/a	**8.17E-12**
dimethyl phthalate	131-11-3	2.32E-12	1.28E-08	8.80E-09	1.56E-08	2.10E-08	6.81E-09	2.72E-10	1.66E-13	1.02E-10	6.48E-11	7.52E-13	n/a	**6.54E-08**
di-n-butyl phthalate	84-74-2	1.23E-11	2.01E-09	7.08E-10	5.19E-12	3.78E-07	2.43E-08	1.38E-12	8.43E-11	1.62E-05	2.40E-08	4.90E-13	n/a	**1.67E-05**
ethylbenzene	100-41-4	1.96E-16	1.62E-13	9.55E-14	3.46E-12	2.36E-15	7.25E-16	2.94E-17	1.80E-17	1.11E-14	9.41E-12	7.13E-15	n/a	**1.32E-11**
Freon 113	76-13-1	3.31E-17	5.84E-12	1.49E-14	1.62E-14	7.55E-14	4.46E-15	4.94E-18	3.02E-18	3.25E-13	1.80E-11	1.23E-14	n/a	**2.43E-11**
HD	505-60-2	4.59E-16	2.39E-12	5.63E-13	7.46E-13	1.35E-14	2.17E-15	6.85E-17	4.18E-17	6.05E-14	5.91E-12	1.52E-14	n/a	**9.70E-12**
hexane	110-54-3	2.62E-17	8.01E-15	4.50E-15	9.53E-14	2.55E-16	8.26E-17	3.53E-18	2.15E-18	1.13E-15	6.83E-11	1.25E-14	n/a	**6.84E-11**
methylene chloride	75-09-2	1.52E-16	1.14E-12	8.13E-13	1.25E-11	1.18E-15	3.89E-16	1.56E-17	9.54E-18	5.73E-15	3.08E-12	5.68E-14	n/a	**1.76E-11**
styrene	100-42-5	2.47E-13	1.92E-10	1.38E-10	2.23E-11	2.60E-10	9.01E-11	3.74E-11	2.28E-11	1.23E-08	2.21E-11	2.00E-14	n/a	**1.31E-08**
tetrachloroethene	127-18-4	3.67E-17	4.19E-14	1.20E-14	2.60E-12	7.62E-16	1.49E-16	5.32E-18	3.25E-18	3.40E-15	1.52E-11	6.76E-15	n/a	**1.79E-11**
toluene	108-88-3	1.22E-16	1.58E-13	1.02E-13	2.16E-12	1.45E-15	4.62E-16	1.87E-17	1.14E-17	6.90E-15	5.53E-12	8.52E-15	n/a	**7.97E-12**
trans-1,3-dichloropropene	10061-02-6	3.43E-16	6.91E-13	4.91E-13	1.35E-12	3.69E-15	1.24E-15	5.01E-17	3.06E-17	1.78E-14	1.72E-12	5.48E-15	n/a	**4.28E-12**
trichloroethene	79-01-6	6.79E-17	1.21E-13	8.42E-14	7.69E-13	7.55E-16	2.49E-16	1.01E-17	6.17E-18	3.65E-15	2.67E-12	6.97E-15	n/a	**3.66E-12**
trichlorofluoromethane	75-69-4	3.80E-18	6.19E-15	4.12E-15	7.04E-14	4.39E-14	1.42E-17	5.71E-16	3.49E-16	2.10E-13	2.56E-12	5.61E-15	n/a	**2.90E-12**
vinyl chloride	75-01-4	1.93E-18	1.27E-14	9.06E-15	1.08E-13	1.57E-17	5.24E-18	2.09E-19	1.28E-19	7.70E-17	3.80E-13	5.85E-15	n/a	**5.16E-13**
xylenes	1330-20-7	2.66E-15	1.77E-12	1.20E-12	1.00E-11	2.83E-14	9.55E-15	3.97E-16	2.43E-16	1.33E-13	2.44E-11	1.66E-14	n/a	**3.76E-11**
2,3,7,8-TCDF	51207-31-9												n/a	
Total PCDDs and PCDFs	NA	7.92E-19	6.09E-17	7.10E-18	2.70E-18	2.18E-15	1.81E-16	5.90E-18	3.61E-18	9.05E-14	1.16E-16	1.38E-21	n/a	**9.30E-14**
antimony	7440-36-0	1.70E-17	1.14E-11	4.22E-16	1.16E-16	1.21E-13	0.00E+00	0.00E+00	0.00E+00	2.46E-13	5.13E-14	4.72E-17	n/a	**1.18E-11**
cadmium	7440-43-9	1.19E-16	5.95E-11	1.16E-14	4.07E-15	7.60E-14	3.58E-15	6.77E-17	1.70E-18	8.38E-14	6.09E-12	2.47E-16	n/a	**6.58E-11**
chromium (3+)	7440-47-3	2.14E-16	5.47E-10	8.16E-16	2.20E-16	3.20E-11	0.00E+00	0.00E+00	0.00E+00	1.78E-10	1.73E-13	2.02E-15	n/a	**7.57E-10**
chromium (6+)	18540-29-9	2.14E-16	5.47E-10	8.16E-16	2.20E-16	3.20E-11	0.00E+00	0.00E+00	0.00E+00	1.78E-10	1.73E-13	2.02E-15	n/a	**7.57E-10**
copper	7440-50-8	7.66E-15	8.16E-10	1.61E-12	4.36E-13	8.66E-11	0.00E+00	0.00E+00	0.00E+00	2.65E-10	2.59E-13	3.02E-15	n/a	**1.17E-09**
lead	7439-92-1	8.14E-15	2.73E-10	8.63E-14	1.67E-14	8.70E-13	0.00E+00	0.00E+00	0.00E+00	1.48E-11	2.75E-15	1.13E-15	n/a	**2.89E-10**
nickel	7440-02-0	2.44E-15	1.13E-09	1.78E-14	3.34E-14	7.24E-11	0.00E+00	0.00E+00	0.00E+00	2.46E-10	9.98E-12	4.71E-15	n/a	**1.46E-09**
zinc	7440-66-6	2.27E-14	1.10E-08	1.72E-12	4.66E-12	1.06E-11	4.46E-13	9.37E-16	1.00E-15	7.78E-11	2.57E-09	4.59E-14	n/a	**1.37E-08**

a. Ingestion rates of total PCDDs/PCDFs are presented in units of mg TEQ/day

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Child Subsistence Farmer Exposure Scenario														
COPC	CAS Number	Incidental Ingestion of Soil (mg/day)[a]	Ingestion of Exposed Produce (mg/day)[a]	Ingestion of Protected Produce (mg/day)[a]	Ingestion of Belowground Produce (mg/day)[a]	Ingestion of Beef (mg/day)[a]	Ingestion of Pork (mg/day)[a]	Ingestion of Poultry (mg/day)[a]	Ingestion of Eggs (mg/day)[a]	Ingestion of Milk (mg/day)[a]	Ingestion of Fish (mg/day)[a]	Incidental Ingestion of Surface Water (mg/day)[a]	Ingestion of Breast Milk (mg/day)[a]	Total Daily COPC Ingestion (mg/day)[a]
1,1,1-trichloroethane	71-55-6	3.46E-17	1.40E-13	9.37E-14	1.75E-12	9.96E-13	3.22E-16	1.30E-14	7.93E-15	4.77E-12	1.64E-12	9.00E-15	n/a	**9.42E-12**
1,1-dichloroethane	75-34-3	1.43E-17	1.39E-13	9.81E-14	1.63E-12	3.47E-16	1.14E-16	4.59E-18	2.81E-18	1.68E-15	2.15E-13	4.08E-15	n/a	**2.08E-12**
1,1-dichloroethene	75-35-4	4.65E-18	3.10E-14	2.15E-14	2.12E-13	1.24E-13	4.07E-14	1.64E-15	1.00E-15	6.00E-16	3.35E-13	3.73E-15	n/a	**7.72E-13**
1,2-dichloroethane	107-06-2	3.44E-17	4.98E-13	3.52E-13	5.39E-12	7.38E-16	2.45E-16	9.78E-18	5.98E-18	3.60E-15	1.33E-13	4.31E-15	n/a	**6.38E-12**
1,2-dichloropropane	78-87-5	4.95E-17	3.73E-13	2.61E-13	2.53E-12	1.28E-15	4.22E-16	1.70E-17	1.04E-17	6.21E-15	3.97E-13	5.27E-15	n/a	**3.57E-12**
1,3-butadiene	106-99-0	4.00E-18	4.29E-13	2.14E-14	9.34E-15	1.24E-15	9.97E-17	1.37E-18	8.36E-19	5.40E-15	2.33E-13	3.15E-15	n/a	**7.02E-13**
2-butanone	78-93-3	9.09E-14	2.07E-09	1.49E-09	1.20E-09	2.56E-13	8.49E-14	3.40E-15	2.08E-15	1.25E-12	3.48E-12	1.01E-13	n/a	**4.76E-09**
acetone	67-64-1	4.16E-14	9.47E-10	6.80E-10	1.76E-09	3.19E-14	1.06E-14	4.25E-16	2.59E-16	1.55E-13	5.87E-12	1.71E-13	n/a	**3.39E-09**
benzene	71-43-2	4.18E-16	2.78E-12	1.93E-12	1.91E-11	1.11E-14	3.66E-15	1.47E-16	8.98E-17	5.39E-14	6.42E-12	7.15E-14	n/a	**3.04E-11**
benzoic acid	65-85-0	9.43E-12	8.25E-08	5.91E-08	1.14E-05	5.53E-12	1.85E-12	7.43E-14	4.55E-14	2.69E-11	1.78E-10	5.17E-12	n/a	**1.15E-05**
benzyl alcohol	100-51-6	5.58E-11	1.27E-06	9.11E-07	2.10E-06	8.91E-10	2.97E-10	1.19E-11	7.25E-12	4.36E-09	5.41E-11	1.58E-11	n/a	**4.29E-06**
bis(2-ethylhexyl)-phthalate	117-81-7	1.35E-12	1.14E-08	1.15E-10	6.56E-15	4.80E-09	1.79E-10	3.48E-11	2.13E-11	2.06E-07	6.36E-11	3.26E-14	n/a	**2.23E-07**
bromodichloromethane	75-27-4	2.93E-14	1.89E-10	1.36E-10	1.46E-09	7.61E-10	2.56E-10	1.03E-11	6.32E-12	3.69E-12	2.15E-12	2.39E-14	n/a	**2.83E-09**
bromomethane	74-83-9	9.99E-17	2.16E-12	1.55E-12	5.20E-12	1.81E-15	6.01E-16	2.40E-17	1.47E-17	4.19E-14	3.58E-13	1.99E-14	n/a	**9.33E-12**
carbon disulfide	75-15-0	3.45E-17	2.09E-13	1.39E-13	2.49E-12	9.68E-16	3.10E-16	1.24E-17	7.57E-18	4.66E-15	5.28E-12	4.93E-14	n/a	**8.17E-12**
carbon tetrachloride	56-23-5	8.70E-17	2.53E-13	1.58E-13	4.72E-12	2.62E-12	8.20E-14	3.30E-14	2.02E-14	1.24E-11	7.81E-12	2.51E-14	n/a	**2.81E-11**
chlorobenzene	108-90-7	2.21E-16	6.22E-13	4.02E-13	9.54E-12	6.49E-12	2.07E-13	8.41E-14	5.14E-14	3.08E-11	1.85E-12	5.94E-15	n/a	**5.00E-11**
chloroform	67-66-3	3.49E-16	2.67E-12	1.84E-12	2.00E-11	9.14E-15	2.98E-15	1.20E-16	7.30E-17	4.42E-14	5.31E-12	7.05E-14	n/a	**3.00E-11**
chloromethane	74-87-3	8.02E-17	1.83E-12	1.31E-12	5.69E-12	8.77E-16	2.92E-16	1.16E-17	7.15E-18	4.28E-15	2.39E-12	6.95E-14	n/a	**1.13E-11**
cis-1,3-dichloropropene	10061-01-5	9.78E-18	1.23E-13	8.77E-14	6.31E-13	2.18E-13	7.25E-14	2.91E-15	1.78E-18	1.06E-15	1.87E-13	5.05E-15	n/a	**1.33E-12**
dibromochloromethane	124-48-1	3.38E-13	1.83E-09	1.31E-09	3.33E-09	8.95E-09	3.02E-09	1.22E-10	7.47E-11	4.33E-11	4.09E-12	3.62E-14	n/a	**1.87E-08**
dichlorodifluoromethane	75-71-8	4.63E-16	2.75E-12	1.98E-12	4.56E-12	1.22E-14	4.09E-12	1.66E-13	1.01E-13	5.89E-14	1.07E-12	1.07E-14	n/a	**1.48E-11**
dimethyl phthalate	131-11-3	2.31E-12	3.18E-08	2.19E-08	3.87E-08	5.23E-08	1.69E-08	6.76E-10	4.14E-13	2.53E-10	2.58E-11	7.50E-13	n/a	**1.63E-07**
di-n-butyl phthalate	84-74-2	1.20E-11	4.97E-09	1.74E-09	1.28E-11	9.44E-07	6.06E-08	3.39E-12	2.07E-10	4.06E-05	9.58E-09	4.90E-13	n/a	**4.16E-05**
ethylbenzene	100-41-4	1.96E-16	4.04E-13	2.39E-13	8.66E-12	5.89E-15	1.81E-15	7.35E-17	4.49E-17	2.76E-14	3.76E-12	7.13E-15	n/a	**1.31E-11**
Freon 113	76-13-1	3.31E-17	1.46E-11	3.73E-14	4.06E-14	1.89E-13	1.12E-14	1.24E-17	7.55E-18	8.14E-13	7.22E-12	1.23E-14	n/a	**2.29E-11**
HD	505-60-2	4.59E-16	5.99E-12	1.41E-12	1.86E-12	3.37E-14	5.44E-15	1.71E-16	1.05E-16	1.51E-13	2.36E-12	1.52E-14	n/a	**1.18E-11**
hexane	110-54-3	2.62E-17	2.00E-14	1.13E-14	2.38E-13	6.37E-16	2.06E-16	8.83E-18	5.39E-18	2.83E-15	2.73E-11	1.25E-14	n/a	**2.76E-11**
methylene chloride	75-09-2	1.52E-16	2.86E-12	2.03E-12	3.12E-11	2.94E-15	9.73E-16	3.89E-17	2.38E-17	1.43E-14	1.23E-12	5.68E-14	n/a	**3.74E-11**
styrene	100-42-5	2.47E-13	4.79E-10	3.44E-10	5.56E-11	6.48E-10	2.25E-10	9.32E-11	5.70E-11	3.08E-08	8.84E-12	2.00E-14	n/a	**3.27E-08**
tetrachloroethene	127-18-4	3.67E-17	1.05E-13	3.00E-14	6.50E-12	1.90E-15	3.73E-16	1.33E-17	8.14E-18	8.50E-15	6.08E-12	6.76E-15	n/a	**1.27E-11**
toluene	108-88-3	1.22E-16	3.95E-13	2.55E-13	5.41E-12	3.63E-15	1.16E-15	4.67E-17	2.85E-17	1.73E-14	2.21E-12	8.52E-15	n/a	**8.30E-12**
trans-1,3-dichloropropene	10061-02-6	3.43E-16	1.73E-12	1.23E-12	3.38E-12	9.23E-15	3.09E-15	1.25E-16	7.66E-17	4.46E-14	6.89E-13	5.48E-15	n/a	**7.08E-12**
trichloroethene	79-01-6	6.79E-17	3.03E-13	2.10E-13	1.92E-12	1.89E-15	6.24E-16	2.53E-17	1.54E-17	9.11E-15	1.07E-12	6.97E-15	n/a	**3.52E-12**
trichlorofluoromethane	75-69-4	3.80E-18	1.55E-14	1.03E-14	1.76E-13	1.10E-13	3.54E-17	1.43E-15	8.72E-16	5.25E-13	1.02E-12	5.61E-15	n/a	**1.87E-12**
vinyl chloride	75-01-4	1.93E-18	3.18E-14	2.26E-14	2.71E-13	3.93E-17	1.31E-17	5.23E-19	3.20E-19	1.92E-16	1.52E-13	5.85E-15	n/a	**4.83E-13**
xylenes	1330-20-7	2.66E-15	4.42E-12	3.00E-12	2.51E-11	7.08E-14	2.39E-14	9.93E-16	6.07E-16	3.33E-13	9.75E-12	1.66E-14	n/a	**4.27E-11**
2,3,7,8-TCDF	51207-31-9												n/a	
Total PCDDs and PCDFs	NA	4.07E-19	1.40E-16	9.12E-18	3.47E-18	5.20E-15	3.18E-16	7.57E-18	4.63E-18	2.19E-13	2.75E-17	8.21E-22	n/a	**2.25E-13**
antimony	7440-36-0	1.70E-17	2.84E-11	1.05E-15	2.90E-16	3.02E-13	0.00E+00	0.00E+00	0.00E+00	6.16E-13	2.05E-14	4.72E-17	n/a	**2.94E-11**
cadmium	7440-43-9	1.19E-16	1.49E-10	2.90E-14	1.02E-14	1.90E-13	8.96E-15	1.69E-16	4.26E-18	2.10E-13	2.43E-12	2.47E-16	n/a	**1.52E-10**
chromium (3+)	7440-47-3	2.14E-16	1.37E-09	2.04E-15	5.50E-16	8.00E-11	0.00E+00	0.00E+00	0.00E+00	4.44E-10	6.92E-14	2.02E-15	n/a	**1.89E-09**
chromium (6+)	18540-29-9	2.14E-16	1.37E-09	2.04E-15	5.50E-16	8.00E-11	0.00E+00	0.00E+00	0.00E+00	4.44E-10	6.92E-14	2.02E-15	n/a	**1.89E-09**
copper	7440-50-8	7.65E-15	2.04E-09	4.01E-12	1.09E-12	2.17E-10	0.00E+00	0.00E+00	0.00E+00	6.62E-10	1.03E-13	3.02E-15	n/a	**2.92E-09**
lead	7439-92-1	8.12E-15	6.82E-10	2.15E-13	4.17E-14	2.18E-12	0.00E+00	0.00E+00	0.00E+00	3.69E-11	1.10E-15	1.13E-15	n/a	**7.21E-10**
nickel	7440-02-0	2.44E-15	2.84E-09	4.44E-14	8.36E-14	1.81E-10	0.00E+00	0.00E+00	0.00E+00	6.14E-10	3.99E-12	4.71E-15	n/a	**3.64E-09**
zinc	7440-66-6	2.27E-14	2.76E-08	4.29E-12	1.16E-11	2.64E-11	1.11E-12	2.34E-15	2.51E-15	1.94E-10	1.03E-09	4.59E-14	n/a	**2.89E-08**

a. Ingestion rates of total PCDDs/PCDFs and coplanar PCBs are presented in units of mg TEQ/day

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS: Child Subsistence Farmer Exposure Scenario														
COPC	CAS Number	Incidental Ingestion of Soil (mg/day)[a]	Ingestion of Exposed Produce (mg/day)[a]	Ingestion of Protected Produce (mg/day)[a]	Ingestion of Belowground Produce (mg/day)[a]	Ingestion of Beef (mg/day)[a]	Ingestion of Pork (mg/day)[a]	Ingestion of Poultry (mg/day)[a]	Ingestion of Eggs (mg/day)[a]	Ingestion of Milk (mg/day)[a]	Ingestion of Fish (mg/day)[a]	Incidental Ingestion of Surface Water (mg/day)[a]	Ingestion of Breast Milk (mg/day)[a]	Total Daily COPC Ingestion (mg/day)[a]
1,1,1-trichloroethane	71-55-6	3.46E-17	1.40E-13	9.37E-14	1.75E-12	9.96E-13	3.22E-16	1.30E-14	7.93E-15	4.77E-12	1.64E-12	9.00E-15	n/a	**9.42E-12**
1,1-dichloroethane	75-34-3	1.43E-17	1.39E-13	9.81E-14	1.63E-12	3.47E-16	1.14E-16	4.59E-18	2.81E-18	1.68E-15	2.15E-13	4.08E-15	n/a	**2.08E-12**
1,1-dichloroethene	75-35-4	4.65E-18	3.10E-14	2.15E-14	2.12E-13	1.24E-13	4.07E-14	1.64E-15	1.00E-15	6.00E-16	3.35E-13	3.73E-15	n/a	**7.72E-13**
1,2-dichloroethane	107-06-2	3.44E-17	4.98E-13	3.52E-13	5.39E-12	7.38E-16	2.45E-16	9.78E-18	5.98E-18	3.60E-15	1.33E-13	4.31E-15	n/a	**6.38E-12**
1,2-dichloropropane	78-87-5	4.95E-17	3.73E-13	2.61E-13	2.53E-12	1.28E-15	4.22E-16	1.70E-17	1.04E-17	6.21E-15	3.97E-13	5.27E-15	n/a	**3.57E-12**
1,3-butadiene	106-99-0	4.00E-18	4.29E-13	2.14E-14	9.34E-15	1.24E-15	9.97E-17	1.37E-18	8.36E-19	5.40E-15	2.33E-13	3.15E-15	n/a	**7.02E-13**
2-butanone	78-93-3	9.10E-14	2.07E-09	1.49E-09	1.20E-09	2.56E-13	8.50E-14	3.40E-15	2.08E-15	1.25E-12	3.48E-12	1.01E-13	n/a	**4.76E-09**
acetone	67-64-1	4.16E-14	9.47E-10	6.80E-10	1.76E-09	3.19E-14	1.06E-14	4.25E-16	2.59E-16	1.55E-13	5.88E-12	1.71E-13	n/a	**3.39E-09**
benzene	71-43-2	4.18E-16	2.78E-12	1.93E-12	1.91E-11	1.11E-14	3.66E-15	1.47E-16	8.98E-17	5.39E-14	6.42E-12	7.15E-14	n/a	**3.04E-11**
benzoic acid	65-85-0	9.50E-12	8.31E-08	5.95E-08	1.15E-05	5.57E-12	1.86E-12	7.48E-14	4.58E-14	2.71E-11	1.79E-10	5.20E-12	n/a	**1.16E-05**
benzyl alcohol	100-51-6	6.27E-11	1.43E-06	1.02E-06	2.36E-06	1.00E-09	3.33E-10	1.33E-11	8.15E-12	4.90E-09	6.07E-11	1.78E-11	n/a	**4.82E-06**
bis(2-ethylhexyl)-phthalate	117-81-7	1.38E-12	1.15E-08	1.17E-10	6.68E-15	4.80E-09	1.79E-10	3.54E-11	2.17E-11	2.06E-07	6.37E-11	3.27E-14	n/a	**2.23E-07**
bromodichloromethane	75-27-4	2.93E-14	1.89E-10	1.36E-10	1.46E-09	7.61E-10	2.56E-10	1.03E-11	6.32E-12	3.69E-12	2.15E-12	2.39E-14	n/a	**2.83E-09**
bromomethane	74-83-9	9.99E-17	2.16E-12	1.55E-12	5.20E-12	1.81E-15	6.01E-16	2.40E-17	1.47E-17	4.19E-14	3.58E-13	1.99E-14	n/a	**9.33E-12**
carbon disulfide	75-15-0	3.45E-17	2.09E-13	1.39E-13	2.49E-12	9.68E-16	3.10E-16	1.24E-17	7.57E-18	4.66E-15	5.28E-12	4.93E-14	n/a	**8.17E-12**
carbon tetrachloride	56-23-5	8.70E-17	2.53E-13	1.58E-13	4.72E-12	2.62E-12	8.20E-14	3.30E-14	2.02E-14	1.24E-11	7.81E-12	2.51E-14	n/a	**2.81E-11**
chlorobenzene	108-90-7	2.21E-16	6.22E-13	4.02E-13	9.54E-12	6.49E-12	2.07E-13	8.41E-14	5.14E-14	3.08E-11	1.85E-12	5.94E-15	n/a	**5.00E-11**
chloroform	67-66-3	3.49E-16	2.67E-12	1.84E-12	2.00E-11	9.14E-15	2.98E-15	1.20E-16	7.30E-17	4.42E-14	5.31E-12	7.05E-14	n/a	**3.00E-11**
chloromethane	74-87-3	8.02E-17	1.83E-12	1.31E-12	5.69E-12	8.77E-16	2.92E-16	1.16E-17	7.15E-18	4.28E-15	2.39E-12	6.95E-14	n/a	**1.13E-11**
cis-1,3-dichloropropene	10061-01-5	9.78E-18	1.23E-13	8.77E-14	6.31E-13	2.18E-13	7.25E-14	2.91E-15	1.78E-18	1.06E-15	1.87E-13	5.05E-15	n/a	**1.33E-12**
dibromochloromethane	124-48-1	3.39E-13	1.83E-09	1.32E-09	3.34E-09	8.98E-09	3.03E-09	1.23E-10	7.49E-11	4.35E-11	4.10E-12	3.63E-14	n/a	**1.87E-08**
dichlorodifluoromethane	75-71-8	4.63E-16	2.75E-12	1.98E-12	4.56E-12	1.22E-14	4.09E-12	1.66E-13	1.01E-13	5.89E-14	1.07E-12	1.07E-14	n/a	**1.48E-11**
dimethyl phthalate	131-11-3	2.32E-12	3.19E-08	2.20E-08	3.89E-08	5.26E-08	1.70E-08	6.80E-10	4.16E-13	2.55E-10	2.59E-11	7.52E-13	n/a	**1.63E-07**
di-n-butyl phthalate	84-74-2	1.23E-11	5.02E-09	1.77E-09	1.30E-11	9.44E-07	6.08E-08	3.45E-12	2.11E-10	4.06E-05	9.58E-09	4.90E-13	n/a	**4.16E-05**
ethylbenzene	100-41-4	1.96E-16	4.04E-13	2.39E-13	8.66E-12	5.89E-15	1.81E-15	7.35E-17	4.49E-17	2.76E-14	3.76E-12	7.13E-15	n/a	**1.31E-11**
Freon 113	76-13-1	3.31E-17	1.46E-11	3.73E-14	4.06E-14	1.89E-13	1.12E-14	1.24E-17	7.55E-18	8.14E-13	7.22E-12	1.23E-14	n/a	**2.29E-11**
HD	505-60-2	4.59E-16	5.99E-12	1.41E-12	1.86E-12	3.37E-14	5.44E-15	1.71E-16	1.05E-16	1.51E-13	2.36E-12	1.52E-14	n/a	**1.18E-11**
hexane	110-54-3	2.62E-17	2.00E-14	1.13E-14	2.38E-13	6.37E-16	2.06E-16	8.83E-18	5.39E-18	2.83E-15	2.73E-11	1.25E-14	n/a	**2.76E-11**
methylene chloride	75-09-2	1.52E-16	2.86E-12	2.03E-12	3.12E-11	2.94E-15	9.73E-16	3.89E-17	2.38E-17	1.43E-14	1.23E-12	5.68E-14	n/a	**3.74E-11**
styrene	100-42-5	2.47E-13	4.80E-10	3.44E-10	5.57E-11	6.49E-10	2.25E-10	9.34E-11	5.71E-11	3.08E-08	8.84E-12	2.00E-14	n/a	**3.27E-08**
tetrachloroethene	127-18-4	3.67E-17	1.05E-13	3.00E-14	6.50E-12	1.90E-15	3.73E-16	1.33E-17	8.14E-18	8.50E-15	6.08E-12	6.76E-15	n/a	**1.27E-11**
toluene	108-88-3	1.22E-16	3.95E-13	2.55E-13	5.41E-12	3.63E-15	1.16E-15	4.67E-17	2.85E-17	1.73E-14	2.21E-12	8.52E-15	n/a	**8.30E-12**
trans-1,3-dichloropropene	10061-02-6	3.43E-16	1.73E-12	1.23E-12	3.38E-12	9.23E-15	3.09E-15	1.25E-16	7.66E-17	4.46E-14	6.89E-13	5.48E-15	n/a	**7.08E-12**
trichloroethene	79-01-6	6.79E-17	3.03E-13	2.10E-13	1.92E-12	1.89E-15	6.24E-16	2.53E-17	1.54E-17	9.11E-15	1.07E-12	6.97E-15	n/a	**3.52E-12**
trichlorofluoromethane	75-69-4	3.80E-18	1.55E-14	1.03E-14	1.76E-13	1.10E-13	3.54E-17	1.43E-15	8.72E-16	5.25E-13	1.02E-12	5.61E-15	n/a	**1.87E-12**
vinyl chloride	75-01-4	1.93E-18	3.18E-14	2.26E-14	2.71E-13	3.93E-17	1.31E-17	5.23E-19	3.20E-19	1.92E-16	1.52E-13	5.85E-15	n/a	**4.83E-13**
xylenes	1330-20-7	2.66E-15	4.42E-12	3.00E-12	2.51E-11	7.08E-14	2.39E-14	9.93E-16	6.07E-16	3.33E-13	9.75E-12	1.66E-14	n/a	**4.27E-11**
2,3,7,8-TCDF	51207-31-9												n/a	
Total PCDDs and PCDFs	NA	7.92E-19	1.52E-16	1.78E-17	6.75E-18	5.44E-15	4.52E-16	1.47E-17	9.01E-18	2.26E-13	4.63E-17	1.38E-21	n/a	**2.32E-13**
antimony	7440-36-0	1.70E-17	2.84E-11	1.05E-15	2.90E-16	3.02E-13	0.00E+00	0.00E+00	0.00E+00	6.16E-13	2.05E-14	4.72E-17	n/a	**2.94E-11**
cadmium	7440-43-9	1.19E-16	1.49E-10	2.90E-14	1.02E-14	1.90E-13	8.96E-15	1.69E-16	4.26E-18	2.10E-13	2.43E-12	2.47E-16	n/a	**1.52E-10**
chromium (3+)	7440-47-3	2.14E-16	1.37E-09	2.04E-15	5.50E-16	8.00E-11	0.00E+00	0.00E+00	0.00E+00	4.44E-10	6.92E-14	2.02E-15	n/a	**1.89E-09**
chromium (6+)	18540-29-9	2.14E-16	1.37E-09	2.04E-15	5.50E-16	8.00E-11	0.00E+00	0.00E+00	0.00E+00	4.44E-10	6.92E-14	2.02E-15	n/a	**1.89E-09**
copper	7440-50-8	7.66E-15	2.04E-09	4.02E-12	1.09E-12	2.17E-10	0.00E+00	0.00E+00	0.00E+00	6.62E-10	1.03E-13	3.02E-15	n/a	**2.92E-09**
lead	7439-92-1	8.14E-15	6.82E-10	2.16E-13	4.17E-14	2.18E-12	0.00E+00	0.00E+00	0.00E+00	3.69E-11	1.10E-15	1.13E-15	n/a	**7.21E-10**
nickel	7440-02-0	2.44E-15	2.84E-09	4.44E-14	8.36E-14	1.81E-10	0.00E+00	0.00E+00	0.00E+00	6.14E-10	3.99E-12	4.71E-15	n/a	**3.64E-09**
zinc	7440-66-6	2.27E-14	2.76E-08	4.29E-12	1.16E-11	2.64E-11	1.11E-12	2.34E-15	2.51E-15	1.94E-10	1.03E-09	4.59E-14	n/a	**2.89E-08**

a. Ingestion rates of total PCDDs/PCDFs are presented in units of mg TEQ/day

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Infant Resident Exposure Scenario														
COPC	CAS Number	Incidental Ingestion of Soil (mg/day)[a]	Ingestion of Exposed Produce (mg/day)[a]	Ingestion of Protected Produce (mg/day)[a]	Ingestion of Belowground Produce (mg/day)[a]	Ingestion of Beef (mg/day)[a]	Ingestion of Pork (mg/day)[a]	Ingestion of Poultry (mg/day)[a]	Ingestion of Eggs (mg/day)[a]	Ingestion of Milk (mg/day)[a]	Ingestion of Fish (mg/day)[a]	Incidental Ingestion of Surface Water (mg/day)[a]	Ingestion of Breast Milk (mg/day)[a]	Total Daily COPC Ingestion (mg/day)[a]
1,1,1-trichloroethane	71-55-6	3.46E-17	4.78E-14	1.55E-14	5.88E-13	2.36E-13	5.91E-17	3.18E-15	1.72E-15	4.48E-12	1.64E-12	n/a		**7.01E-12**
1,1-dichloroethane	75-34-3	1.43E-17	4.74E-14	1.62E-14	5.48E-13	8.22E-17	2.10E-17	1.13E-18	6.08E-19	1.58E-15	2.15E-13	n/a		**8.28E-13**
1,1-dichloroethene	75-35-4	4.65E-18	1.05E-14	3.55E-15	7.15E-14	2.94E-14	7.48E-15	4.02E-16	2.17E-16	5.63E-16	3.35E-13	n/a		**4.59E-13**
1,2-dichloroethane	107-06-2	3.44E-17	1.69E-13	5.82E-14	1.82E-12	1.75E-16	4.49E-17	2.40E-18	1.29E-18	3.38E-15	1.33E-13	n/a	9.66E-11	**9.88E-11**
1,2-dichloropropane	78-87-5	4.95E-17	1.27E-13	4.31E-14	8.51E-13	3.04E-16	7.75E-17	4.17E-18	2.24E-18	5.83E-15	3.97E-13	n/a		**1.42E-12**
1,3-butadiene	106-99-0	4.00E-18	1.46E-13	3.53E-15	3.15E-15	2.94E-16	1.83E-17	3.36E-19	1.81E-19	5.07E-15	2.33E-13	n/a		**3.91E-13**
2-butanone	78-93-3	9.09E-14	7.04E-10	2.45E-10	4.03E-10	6.06E-14	1.56E-14	8.35E-16	4.50E-16	1.17E-12	3.48E-12	n/a		**1.36E-09**
acetone	67-64-1	4.16E-14	3.22E-10	1.12E-10	5.93E-10	7.55E-15	1.95E-15	1.04E-16	5.60E-17	1.46E-13	5.87E-12	n/a		**1.03E-09**
benzene	71-43-2	4.18E-16	9.47E-13	3.19E-13	6.43E-12	2.64E-15	6.72E-16	3.61E-17	1.94E-17	5.06E-14	6.42E-12	n/a	1.61E-09	**1.62E-09**
benzoic acid	65-85-0	9.43E-12	2.81E-08	9.75E-09	3.83E-06	1.31E-12	3.39E-13	1.82E-14	9.84E-15	2.52E-11	1.78E-10	n/a		**3.87E-06**
benzyl alcohol	100-51-6	5.58E-11	4.32E-07	1.51E-07	7.09E-07	2.11E-10	5.45E-11	2.92E-12	1.57E-12	4.10E-09	5.41E-11	n/a		**1.30E-06**
bis(2-ethylhexyl)-phthalate	117-81-7	1.35E-12	3.90E-09	1.90E-11	2.21E-15	1.14E-09	3.28E-11	8.54E-12	4.60E-12	1.93E-07	6.36E-11	n/a		**1.98E-07**
bromodichloromethane	75-27-4	2.93E-14	6.43E-11	2.24E-11	4.92E-10	1.80E-10	4.70E-11	2.54E-12	1.37E-12	3.46E-12	2.15E-12	n/a		**8.16E-10**
bromomethane	74-83-9	9.99E-17	7.35E-13	2.56E-13	1.75E-12	4.28E-16	1.10E-16	5.91E-18	3.18E-18	3.93E-14	3.58E-13	n/a		**3.14E-12**
carbon disulfide	75-15-0	3.45E-17	7.12E-14	2.30E-14	8.38E-13	2.30E-16	5.69E-17	3.04E-18	1.64E-18	4.38E-15	5.28E-12	n/a		**6.22E-12**
carbon tetrachloride	56-23-5	8.70E-17	8.61E-14	2.61E-14	1.59E-12	6.22E-13	1.51E-14	8.11E-15	4.37E-15	1.16E-11	7.81E-12	n/a		**2.18E-11**
chlorobenzene	108-90-7	2.21E-16	2.12E-13	6.64E-14	3.22E-12	1.54E-12	3.81E-14	2.06E-14	1.11E-14	2.89E-11	1.85E-12	n/a		**3.58E-11**
chloroform	67-66-3	3.49E-16	9.08E-13	3.04E-13	6.75E-12	2.17E-15	5.48E-16	2.94E-17	1.58E-17	4.15E-14	5.31E-12	n/a	1.58E-09	**1.59E-09**
chloromethane	74-87-3	8.02E-17	6.22E-13	2.16E-13	1.92E-12	2.08E-16	5.36E-17	2.86E-18	1.55E-18	4.02E-15	2.39E-12	n/a		**5.15E-12**
cis-1,3-dichloropropene	10061-01-5	9.78E-18	4.18E-14	1.45E-14	2.12E-13	5.16E-14	1.33E-14	7.15E-16	3.85E-19	9.97E-16	1.87E-13	n/a	1.13E-10	**1.13E-10**
dibromochloromethane	124-48-1	3.38E-13	6.22E-10	2.17E-10	1.12E-09	2.12E-09	5.54E-10	3.00E-11	1.62E-11	4.07E-11	4.09E-12	n/a		**4.73E-09**
dichlorodifluoromethane	75-71-8	4.63E-16	9.38E-13	3.27E-13	1.54E-12	2.88E-15	7.52E-13	4.07E-14	2.19E-14	5.53E-14	1.07E-12	n/a		**4.74E-12**
dimethyl phthalate	131-11-3	2.31E-12	1.08E-08	3.61E-09	1.30E-08	1.24E-08	3.11E-09	1.66E-10	8.95E-14	2.38E-10	2.58E-11	n/a		**4.34E-08**
di-n-butyl phthalate	84-74-2	1.20E-11	1.69E-09	2.87E-10	4.29E-12	2.24E-07	1.11E-08	8.32E-13	4.48E-11	3.81E-05	9.58E-09	n/a		**3.84E-05**
ethylbenzene	100-41-4	1.96E-16	1.37E-13	3.94E-14	2.92E-12	1.40E-15	3.33E-16	1.81E-17	9.72E-18	2.60E-14	3.76E-12	n/a	1.58E-10	**1.65E-10**
Freon 113	76-13-1	3.31E-17	4.97E-12	6.15E-15	1.37E-14	4.48E-14	2.05E-15	3.03E-18	1.63E-18	7.64E-13	7.22E-12	n/a		**1.30E-11**
HD	505-60-2	4.59E-16	2.04E-12	2.32E-13	6.28E-13	7.99E-15	9.99E-16	4.20E-17	2.26E-17	1.42E-13	2.36E-12	n/a		**5.41E-12**
hexane	110-54-3	2.62E-17	6.81E-15	1.86E-15	8.02E-14	1.51E-16	3.79E-17	2.17E-18	1.17E-18	2.66E-15	2.73E-11	n/a		**2.74E-11**
methylene chloride	75-09-2	1.52E-16	9.73E-13	3.36E-13	1.05E-11	6.98E-16	1.79E-16	9.57E-18	5.16E-18	1.34E-14	1.23E-12	n/a	1.33E-09	**1.34E-09**
styrene	100-42-5	2.47E-13	1.63E-10	5.68E-11	1.87E-11	1.54E-10	4.13E-11	2.29E-11	1.23E-11	2.89E-08	8.84E-12	n/a		**2.94E-08**
tetrachloroethene	127-18-4	3.67E-17	3.56E-14	4.96E-15	2.19E-12	4.51E-16	6.85E-17	3.27E-18	1.76E-18	7.98E-15	6.08E-12	n/a	1.54E-10	**1.62E-10**
toluene	108-88-3	1.22E-16	1.34E-13	4.22E-14	1.82E-12	8.60E-16	2.12E-16	1.15E-17	6.18E-18	1.62E-14	2.21E-12	n/a		**4.23E-12**
trans-1,3-dichloropropene	10061-02-6	3.43E-16	5.88E-13	2.03E-13	1.14E-12	2.19E-15	5.68E-16	3.08E-17	1.66E-17	4.19E-14	6.89E-13	n/a	1.23E-10	**1.26E-10**
trichloroethene	79-01-6	6.79E-17	1.03E-13	3.48E-14	6.48E-13	4.48E-16	1.15E-16	6.20E-18	3.34E-18	8.56E-15	1.07E-12	n/a	1.53E-10	**1.55E-10**
trichlorofluoromethane	75-69-4	3.80E-18	5.26E-15	1.70E-15	5.93E-14	2.60E-14	6.50E-18	3.50E-16	1.89E-16	4.93E-13	1.02E-12	n/a		**1.61E-12**
vinyl chloride	75-01-4	1.93E-18	1.08E-14	3.74E-15	9.11E-14	9.32E-18	2.41E-18	1.28E-19	6.93E-20	1.81E-16	1.52E-13	n/a		**2.58E-13**
xylenes	1330-20-7	2.66E-15	1.50E-12	4.95E-13	8.44E-12	1.68E-14	4.39E-15	2.44E-16	1.31E-16	3.13E-13	9.75E-12	n/a		**2.05E-11**
2,3,7,8-TCDF	51207-31-9											n/a		
Total PCDDs and PCDFs	NA	4.07E-19	4.77E-17	1.51E-18	1.17E-18	1.23E-15	5.85E-17	1.86E-18	1.00E-18	2.06E-13	2.75E-17	n/a	1.16E-11	**1.18E-11**
antimony	7440-36-0	1.70E-17	9.67E-12	1.74E-16	9.77E-17	7.17E-14	0.00E+00	0.00E+00	0.00E+00	5.78E-13	2.05E-14	n/a		**1.03E-11**
cadmium	7440-43-9	1.19E-16	5.06E-11	4.78E-15	3.42E-15	4.50E-14	1.65E-15	4.15E-17	9.22E-19	1.97E-13	2.43E-12	n/a		**5.33E-11**
chromium (3+)	7440-47-3	2.14E-16	4.65E-10	3.37E-16	1.85E-16	1.90E-11	0.00E+00	0.00E+00	0.00E+00	4.17E-10	6.92E-14	n/a		**9.01E-10**
chromium (6+)	18540-29-9	2.14E-16	4.65E-10	3.37E-16	1.85E-16	1.90E-11	0.00E+00	0.00E+00	0.00E+00	4.17E-10	6.92E-14	n/a	7.70E-10	**1.67E-09**
copper	7440-50-8	7.65E-15	6.94E-10	6.63E-13	3.67E-13	5.13E-11	0.00E+00	0.00E+00	0.00E+00	6.21E-10	1.03E-13	n/a		**1.37E-09**
lead	7439-92-1	8.12E-15	2.32E-10	3.56E-14	1.40E-14	5.16E-13	0.00E+00	0.00E+00	0.00E+00	3.47E-11	1.10E-15	n/a	2.98E-10	**5.65E-10**
nickel	7440-02-0	2.44E-15	9.65E-10	7.33E-15	2.82E-14	4.29E-11	0.00E+00	0.00E+00	0.00E+00	5.77E-10	3.99E-12	n/a		**1.59E-09**
zinc	7440-66-6	2.27E-14	9.40E-09	7.09E-13	3.92E-12	6.26E-12	2.05E-13	5.75E-16	5.43E-16	1.83E-10	1.03E-09	n/a		**1.06E-08**

a. Ingestion rates of total PCDDs/PCDFs and coplanar PCBs are presented in units of mg TEQ/day

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS: Infant Resident Exposure Scenario														
COPC	CAS Number	Incidental Ingestion of Soil (mg/day)[a]	Ingestion of Exposed Produce (mg/day)[a]	Ingestion of Protected Produce (mg/day)[a]	Ingestion of Belowground Produce (mg/day)[a]	Ingestion of Beef (mg/day)[a]	Ingestion of Pork (mg/day)[a]	Ingestion of Poultry (mg/day)[a]	Ingestion of Eggs (mg/day)[a]	Ingestion of Milk (mg/day)[a]	Ingestion of Fish (mg/day)[a]	Incidental Ingestion of Surface Water (mg/day)[a]	Ingestion of Breast Milk (mg/day)[a]	Total Daily COPC Ingestion (mg/day)[a]
1,1,1-trichloroethane	71-55-6	3.46E-17	4.78E-14	1.55E-14	5.88E-13	2.36E-13	5.91E-17	3.18E-15	1.72E-15	4.48E-12	1.64E-12	n/a		**7.01E-12**
1,1-dichloroethane	75-34-3	1.43E-17	4.74E-14	1.62E-14	5.48E-13	8.22E-17	2.10E-17	1.13E-18	6.08E-19	1.58E-15	2.15E-13	n/a		**8.28E-13**
1,1-dichloroethene	75-35-4	4.65E-18	1.05E-14	3.55E-15	7.15E-14	2.94E-14	7.48E-15	4.02E-16	2.17E-16	5.63E-16	3.35E-13	n/a		**4.59E-13**
1,2-dichloroethane	107-06-2	3.44E-17	1.69E-13	5.82E-14	1.82E-12	1.75E-16	4.49E-17	2.40E-18	1.29E-18	3.38E-15	1.33E-13	n/a	9.66E-11	**9.88E-11**
1,2-dichloropropane	78-87-5	4.95E-17	1.27E-13	4.31E-14	8.51E-13	3.04E-16	7.75E-17	4.17E-18	2.24E-18	5.83E-15	3.97E-13	n/a		**1.42E-12**
1,3-butadiene	106-99-0	4.00E-18	1.46E-13	3.53E-15	3.15E-15	2.94E-16	1.83E-17	3.36E-19	1.81E-19	5.07E-15	2.33E-13	n/a		**3.91E-13**
2-butanone	78-93-3	9.10E-14	7.04E-10	2.45E-10	4.03E-10	6.06E-14	1.56E-14	8.36E-16	4.51E-16	1.17E-12	3.48E-12	n/a	3.50E-09	**4.86E-09**
acetone	67-64-1	4.16E-14	3.22E-10	1.12E-10	5.93E-10	7.55E-15	1.95E-15	1.04E-16	5.60E-17	1.46E-13	5.88E-12	n/a	3.94E-09	**4.98E-09**
benzene	71-43-2	4.18E-16	9.47E-13	3.19E-13	6.43E-12	2.64E-15	6.72E-16	3.61E-17	1.94E-17	5.06E-14	6.42E-12	n/a	1.61E-09	**1.62E-09**
benzoic acid	65-85-0	9.50E-12	2.83E-08	9.82E-09	3.86E-06	1.32E-12	3.42E-13	1.84E-14	9.91E-15	2.54E-11	1.79E-10	n/a		**3.90E-06**
benzyl alcohol	100-51-6	6.27E-11	4.85E-07	1.69E-07	7.96E-07	2.37E-10	6.12E-11	3.28E-12	1.76E-12	4.60E-09	6.07E-11	n/a		**1.46E-06**
bis(2-ethylhexyl)-phthalate	117-81-7	1.38E-12	3.90E-09	1.94E-11	2.25E-15	1.14E-09	3.29E-11	8.70E-12	4.68E-12	1.93E-07	6.37E-11	n/a		**1.98E-07**
bromodichloromethane	75-27-4	2.93E-14	6.43E-11	2.24E-11	4.93E-10	1.80E-10	4.70E-11	2.54E-12	1.37E-12	3.46E-12	2.15E-12	n/a		**8.16E-10**
bromomethane	74-83-9	9.99E-17	7.35E-13	2.56E-13	1.75E-12	4.28E-16	1.10E-16	5.91E-18	3.18E-18	3.93E-14	3.58E-13	n/a		**3.14E-12**
carbon disulfide	75-15-0	3.45E-17	7.12E-14	2.30E-14	8.38E-13	2.30E-16	5.69E-17	3.04E-18	1.64E-18	4.38E-15	5.28E-12	n/a	1.10E-09	**1.11E-09**
carbon tetrachloride	56-23-5	8.70E-17	8.61E-14	2.61E-14	1.59E-12	6.22E-13	1.51E-14	8.11E-15	4.37E-15	1.16E-11	7.81E-12	n/a		**2.18E-11**
chlorobenzene	108-90-7	2.21E-16	2.12E-13	6.64E-14	3.22E-12	1.54E-12	3.81E-14	2.06E-14	1.11E-14	2.89E-11	1.85E-12	n/a		**3.58E-11**
chloroform	67-66-3	3.49E-16	9.08E-13	3.04E-13	6.75E-12	2.17E-15	5.48E-16	2.94E-17	1.58E-17	4.15E-14	5.31E-12	n/a	1.58E-09	**1.59E-09**
chloromethane	74-87-3	8.02E-17	6.22E-13	2.16E-13	1.92E-12	2.08E-16	5.36E-17	2.86E-18	1.55E-18	4.02E-15	2.39E-12	n/a	1.38E-09	**1.39E-09**
cis-1,3-dichloropropene	10061-01-5	9.78E-18	4.18E-14	1.45E-14	2.12E-13	5.16E-14	1.33E-14	7.15E-16	3.85E-19	9.97E-16	1.87E-13	n/a	1.13E-10	**1.13E-10**
dibromochloromethane	124-48-1	3.39E-13	6.24E-10	2.17E-10	1.13E-09	2.13E-09	5.56E-10	3.01E-11	1.62E-11	4.08E-11	4.10E-12	n/a		**4.74E-09**
dichlorodifluoromethane	75-71-8	4.63E-16	9.38E-13	3.27E-13	1.54E-12	2.88E-15	7.52E-13	4.07E-14	2.19E-14	5.53E-14	1.07E-12	n/a	2.46E-10	**2.51E-10**
dimethyl phthalate	131-11-3	2.32E-12	1.09E-08	3.63E-09	1.31E-08	1.25E-08	3.13E-09	1.67E-10	9.00E-14	2.39E-10	2.59E-11	n/a		**4.36E-08**
di-n-butyl phthalate	84-74-2	1.23E-11	1.71E-09	2.92E-10	4.37E-12	2.24E-07	1.12E-08	8.47E-13	4.56E-11	3.81E-05	9.58E-09	n/a		**3.84E-05**
ethylbenzene	100-41-4	1.96E-16	1.37E-13	3.94E-14	2.92E-12	1.40E-15	3.33E-16	1.81E-17	9.72E-18	2.60E-14	3.76E-12	n/a	1.58E-10	**1.65E-10**
Freon 113	76-13-1	3.31E-17	4.97E-12	6.15E-15	1.37E-14	4.48E-14	2.05E-15	3.03E-18	1.63E-18	7.64E-13	7.22E-12	n/a	2.60E-10	**2.73E-10**
HD	505-60-2	4.59E-16	2.04E-12	2.32E-13	6.28E-13	7.99E-15	9.99E-16	4.20E-17	2.26E-17	1.42E-13	2.36E-12	n/a		**5.41E-12**
hexane	110-54-3	2.62E-17	6.81E-15	1.86E-15	8.02E-14	1.51E-16	3.79E-17	2.17E-18	1.17E-18	2.66E-15	2.73E-11	n/a	3.24E-10	**3.51E-10**
methylene chloride	75-09-2	1.52E-16	9.73E-13	3.36E-13	1.05E-11	6.98E-16	1.79E-16	9.57E-18	5.16E-18	1.34E-14	1.23E-12	n/a	1.33E-09	**1.34E-09**
styrene	100-42-5	2.47E-13	1.63E-10	5.69E-11	1.88E-11	1.54E-10	4.14E-11	2.29E-11	1.24E-11	2.89E-08	8.84E-12	n/a	1.09E-08	**4.03E-08**
tetrachloroethene	127-18-4	3.67E-17	3.56E-14	4.96E-15	2.19E-12	4.51E-16	6.85E-17	3.27E-18	1.76E-18	7.98E-15	6.08E-12	n/a	1.54E-10	**1.62E-10**
toluene	108-88-3	1.22E-16	1.34E-13	4.22E-14	1.82E-12	8.60E-16	2.12E-16	1.15E-17	6.18E-18	1.62E-14	2.21E-12	n/a	1.87E-10	**1.92E-10**
trans-1,3-dichloropropene	10061-02-6	3.43E-16	5.88E-13	2.03E-13	1.14E-12	2.19E-15	5.68E-16	3.08E-17	1.66E-17	4.19E-14	6.89E-13	n/a	1.23E-10	**1.26E-10**
trichloroethene	79-01-6	6.79E-17	1.03E-13	3.48E-14	6.48E-13	4.48E-16	1.15E-16	6.20E-18	3.34E-18	8.56E-15	1.07E-12	n/a	1.53E-10	**1.55E-10**
trichlorofluoromethane	75-69-4	3.80E-18	5.26E-15	1.70E-15	5.93E-14	2.60E-14	6.50E-18	3.50E-16	1.89E-16	4.93E-13	1.02E-12	n/a	1.25E-10	**1.27E-10**
vinyl chloride	75-01-4	1.93E-18	1.08E-14	3.74E-15	9.11E-14	9.32E-18	2.41E-18	1.28E-19	6.93E-20	1.81E-16	1.52E-13	n/a		**2.58E-13**
xylenes	1330-20-7	2.66E-15	1.50E-12	4.95E-13	8.44E-12	1.68E-14	4.39E-15	2.44E-16	1.31E-16	3.13E-13	9.75E-12	n/a	3.96E-10	**4.17E-10**
2,3,7,8-TCDF	51207-31-9											n/a		
Total PCDDs and PCDFs	NA	7.92E-19	5.18E-17	2.93E-18	2.27E-18	1.29E-15	8.30E-17	3.62E-18	1.95E-18	2.12E-13	4.63E-17	n/a	1.16E-11	**1.18E-11**
antimony	7440-36-0	1.70E-17	9.67E-12	1.74E-16	9.77E-17	7.17E-14	0.00E+00	0.00E+00	0.00E+00	5.78E-13	2.05E-14	n/a	1.23E-11	**2.27E-11**
cadmium	7440-43-9	1.19E-16	5.06E-11	4.78E-15	3.42E-15	4.50E-14	1.65E-15	4.16E-17	9.22E-19	1.97E-13	2.43E-12	n/a	6.54E-11	**1.19E-10**
chromium (3+)	7440-47-3	2.14E-16	4.65E-10	3.37E-16	1.85E-16	1.90E-11	0.00E+00	0.00E+00	0.00E+00	4.17E-10	6.92E-14	n/a	7.70E-10	**1.67E-09**
chromium (6+)	18540-29-9	2.14E-16	4.65E-10	3.37E-16	1.85E-16	1.90E-11	0.00E+00	0.00E+00	0.00E+00	4.17E-10	6.92E-14	n/a	7.70E-10	**1.67E-09**
copper	7440-50-8	7.66E-15	6.94E-10	6.63E-13	3.68E-13	5.13E-11	0.00E+00	0.00E+00	0.00E+00	6.21E-10	1.03E-13	n/a	1.23E-09	**2.60E-09**
lead	7439-92-1	8.14E-15	2.32E-10	3.56E-14	1.41E-14	5.16E-13	0.00E+00	0.00E+00	0.00E+00	3.47E-11	1.10E-15	n/a		**2.67E-10**
nickel	7440-02-0	2.44E-15	9.65E-10	7.33E-15	2.82E-14	4.29E-11	0.00E+00	0.00E+00	0.00E+00	5.77E-10	3.99E-12	n/a	1.52E-09	**3.11E-09**
zinc	7440-66-6	2.27E-14	9.40E-09	7.09E-13	3.92E-12	6.26E-12	2.05E-13	5.76E-16	5.43E-16	1.83E-10	1.03E-09	n/a	1.29E-08	**2.35E-08**

a. Ingestion rates of total PCDDs/PCDFs are presented in units of mg TEQ/day

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS:
Infant Subsistence Fisher Exposure Scenario

COPC	CAS Number	Incidental Ingestion of Soil (mg/day)[a]	Ingestion of Exposed Produce (mg/day)[a]	Ingestion of Protected Produce (mg/day)[a]	Ingestion of Belowground Produce (mg/day)[a]	Ingestion of Beef (mg/day)[a]	Ingestion of Pork (mg/day)[a]	Ingestion of Poultry (mg/day)[a]	Ingestion of Eggs (mg/day)[a]	Ingestion of Milk (mg/day)[a]	Ingestion of Fish (mg/day)[a]	Incidental Ingestion of Surface Water (mg/day)[a]	Ingestion of Breast Milk (mg/day)[a]	Total Daily COPC Ingestion (mg/day)[a]
1,1,1-trichloroethane	71-55-6	3.46E-17	4.78E-14	1.55E-14	5.88E-13	2.36E-13	5.91E-17	3.18E-15	1.72E-15	4.48E-12	4.11E-12	n/a		**9.48E-12**
1,1-dichloroethane	75-34-3	1.43E-17	4.74E-14	1.62E-14	5.48E-13	8.22E-17	2.10E-17	1.13E-18	6.08E-19	1.58E-15	5.37E-13	n/a		**1.15E-12**
1,1-dichloroethene	75-35-4	4.65E-18	1.05E-14	3.55E-15	7.15E-14	2.94E-14	7.48E-15	4.02E-16	2.17E-16	5.63E-16	8.38E-13	n/a		**9.61E-13**
1,2-dichloroethane	107-06-2	3.44E-17	1.69E-13	5.82E-14	1.82E-12	1.75E-16	4.49E-17	2.40E-18	1.29E-18	3.38E-15	3.34E-13	n/a	9.68E-11	**9.92E-11**
1,2-dichloropropane	78-87-5	4.95E-17	1.27E-13	4.31E-14	8.51E-13	3.04E-16	7.75E-17	4.17E-18	2.24E-18	5.83E-15	9.91E-13	n/a		**2.02E-12**
1,3-butadiene	106-99-0	4.00E-18	1.46E-13	3.53E-15	3.15E-15	2.94E-16	1.83E-17	3.36E-19	1.81E-19	5.07E-15	5.82E-13	n/a		**7.40E-13**
2-butanone	78-93-3	9.09E-14	7.04E-10	2.45E-10	4.03E-10	6.06E-14	1.56E-14	8.35E-16	4.50E-16	1.17E-12	8.71E-12	n/a		**1.36E-09**
acetone	67-64-1	4.16E-14	3.22E-10	1.12E-10	5.93E-10	7.55E-15	1.95E-15	1.04E-16	5.60E-17	1.46E-13	1.47E-11	n/a		**1.04E-09**
benzene	71-43-2	4.18E-16	9.47E-13	3.19E-13	6.43E-12	2.64E-15	6.72E-16	3.61E-17	1.94E-17	5.06E-14	1.60E-11	n/a	1.62E-09	**1.65E-09**
benzoic acid	65-85-0	9.43E-12	2.81E-08	9.75E-09	3.83E-06	1.31E-12	3.39E-13	1.82E-14	9.84E-15	2.52E-11	4.44E-10	n/a		**3.87E-06**
benzyl alcohol	100-51-6	5.58E-11	4.32E-07	1.51E-07	7.09E-07	2.11E-10	5.45E-11	2.92E-12	1.57E-12	4.10E-09	1.35E-10	n/a		**1.30E-06**
bis(2-ethylhexyl)-phthalate	117-81-7	1.35E-12	3.90E-09	1.90E-11	2.21E-15	1.14E-09	3.28E-11	8.54E-12	4.60E-12	1.93E-07	1.59E-10	n/a		**1.99E-07**
bromodichloromethane	75-27-4	2.93E-14	6.43E-11	2.24E-11	4.92E-10	1.80E-10	4.70E-11	2.54E-12	1.37E-12	3.46E-12	5.37E-12	n/a		**8.19E-10**
bromomethane	74-83-9	9.99E-17	7.35E-13	2.56E-13	1.75E-12	4.28E-16	1.10E-16	5.91E-18	3.18E-18	3.93E-14	8.94E-13	n/a		**3.68E-12**
carbon disulfide	75-15-0	3.45E-17	7.12E-14	2.30E-14	8.38E-13	2.30E-16	5.69E-17	3.04E-18	1.64E-18	4.38E-15	1.32E-11	n/a		**1.41E-11**
carbon tetrachloride	56-23-5	8.70E-17	8.61E-14	2.61E-14	1.59E-12	6.22E-13	1.51E-14	8.11E-15	4.37E-15	1.16E-11	1.95E-11	n/a		**3.35E-11**
chlorobenzene	108-90-7	2.21E-16	2.12E-13	6.64E-14	3.22E-12	1.54E-12	3.81E-14	2.06E-14	1.11E-14	2.89E-11	4.61E-12	n/a		**3.86E-11**
chloroform	67-66-3	3.49E-16	9.08E-13	3.04E-13	6.75E-12	2.17E-15	5.48E-16	2.94E-17	1.58E-17	4.15E-14	1.33E-11	n/a	1.59E-09	**1.61E-09**
chloromethane	74-87-3	8.02E-17	6.22E-13	2.16E-13	1.92E-12	2.08E-16	5.36E-17	2.86E-18	1.55E-18	4.02E-15	5.97E-12	n/a		**8.73E-12**
cis-1,3-dichloropropene	10061-01-5	9.78E-18	4.18E-14	1.45E-14	2.12E-13	5.16E-14	1.33E-14	7.15E-16	3.85E-19	9.97E-16	4.66E-13	n/a	1.13E-10	**1.14E-10**
dibromochloromethane	124-48-1	3.38E-13	6.22E-10	2.17E-10	1.12E-09	2.12E-09	5.54E-10	3.00E-11	1.62E-11	4.07E-11	1.02E-11	n/a		**4.73E-09**
dichlorodifluoromethane	75-71-8	4.63E-16	9.38E-13	3.27E-13	1.54E-12	2.88E-15	7.52E-13	4.07E-14	2.19E-14	5.53E-14	2.67E-12	n/a		**6.34E-12**
dimethyl phthalate	131-11-3	2.31E-12	1.08E-08	3.61E-09	1.30E-08	1.24E-08	3.11E-09	1.66E-10	8.95E-14	2.38E-10	6.46E-11	n/a		**4.34E-08**
di-n-butyl phthalate	84-74-2	1.20E-11	1.69E-09	2.87E-10	4.29E-12	2.24E-07	1.11E-08	8.32E-13	4.48E-11	3.81E-05	2.39E-08	n/a		**3.84E-05**
ethylbenzene	100-41-4	1.96E-16	1.37E-13	3.94E-14	2.92E-12	1.40E-15	3.33E-16	1.81E-17	9.72E-18	2.60E-14	9.41E-12	n/a	1.65E-10	**1.78E-10**
Freon 113	76-13-1	3.31E-17	4.97E-12	6.15E-15	1.37E-14	4.48E-14	2.05E-15	3.03E-18	1.63E-18	7.64E-13	1.80E-11	n/a		**2.38E-11**
HD	505-60-2	4.59E-16	2.04E-12	2.32E-13	6.28E-13	7.99E-15	9.99E-16	4.20E-17	2.26E-17	1.42E-13	5.91E-12	n/a		**8.96E-12**
hexane	110-54-3	2.62E-17	6.81E-15	1.86E-15	8.02E-14	1.51E-16	3.79E-17	2.17E-18	1.17E-18	2.66E-15	6.83E-11	n/a		**6.84E-11**
methylene chloride	75-09-2	1.52E-16	9.73E-13	3.36E-13	1.05E-11	6.98E-16	1.79E-16	9.57E-18	5.16E-18	1.34E-14	3.08E-12	n/a	1.33E-09	**1.34E-09**
styrene	100-42-5	2.47E-13	1.63E-10	5.68E-11	1.87E-11	1.54E-10	4.13E-11	2.29E-11	1.23E-11	2.89E-08	2.21E-11	n/a		**2.94E-08**
tetrachloroethene	127-18-4	3.67E-17	3.56E-14	4.96E-15	2.19E-12	4.51E-16	6.85E-17	3.27E-18	1.76E-18	7.98E-15	1.52E-11	n/a	1.66E-10	**1.83E-10**
toluene	108-88-3	1.22E-16	1.34E-13	4.22E-14	1.82E-12	8.60E-16	2.12E-16	1.15E-17	6.18E-18	1.62E-14	5.53E-12	n/a		**7.55E-12**
trans-1,3-dichloropropene	10061-02-6	3.43E-16	5.88E-13	2.03E-13	1.14E-12	2.19E-15	5.68E-16	3.08E-17	1.66E-17	4.19E-14	1.72E-12	n/a	1.24E-10	**1.28E-10**
trichloroethene	79-01-6	6.79E-17	1.03E-13	3.48E-14	6.48E-13	4.48E-16	1.15E-16	6.20E-18	3.34E-18	8.56E-15	2.67E-12	n/a	1.55E-10	**1.59E-10**
trichlorofluoromethane	75-69-4	3.80E-18	5.26E-15	1.70E-15	5.93E-14	2.60E-14	6.50E-18	3.50E-16	1.89E-16	4.93E-13	2.56E-12	n/a		**3.15E-12**
vinyl chloride	75-01-4	1.93E-18	1.08E-14	3.74E-15	9.11E-14	9.32E-18	2.41E-18	1.28E-19	6.93E-20	1.81E-16	3.80E-13	n/a		**4.86E-13**
xylenes	1330-20-7	2.66E-15	1.50E-12	4.95E-13	8.44E-12	1.68E-14	4.39E-15	2.44E-16	1.31E-16	3.13E-13	2.44E-11	n/a		**3.52E-11**
2,3,7,8-TCDF	51207-31-9											n/a		
Total PCDDs and PCDFs	NA	4.07E-19	4.77E-17	1.51E-18	1.17E-18	1.23E-15	5.85E-17	1.86E-18	1.00E-18	2.06E-13	6.89E-17	n/a	1.16E-11	**1.18E-11**
antimony	7440-36-0	1.70E-17	9.67E-12	1.74E-16	9.77E-17	7.17E-14	0.00E+00	0.00E+00	0.00E+00	5.78E-13	5.13E-14	n/a		**1.04E-11**
cadmium	7440-43-9	1.19E-16	5.06E-11	4.78E-15	3.42E-15	4.50E-14	1.65E-15	4.15E-17	9.22E-19	1.97E-13	6.09E-12	n/a		**5.70E-11**
chromium (3+)	7440-47-3	2.14E-16	4.65E-10	3.37E-16	1.85E-16	1.90E-11	0.00E+00	0.00E+00	0.00E+00	4.17E-10	1.73E-13	n/a		**9.01E-10**
chromium (6+)	18540-29-9	2.14E-16	4.65E-10	3.37E-16	1.85E-16	1.90E-11	0.00E+00	0.00E+00	0.00E+00	4.17E-10	1.73E-13	n/a	7.70E-10	**1.67E-09**
copper	7440-50-8	7.65E-15	6.94E-10	6.63E-13	3.67E-13	5.13E-11	0.00E+00	0.00E+00	0.00E+00	6.21E-10	2.59E-13	n/a		**1.37E-09**
lead	7439-92-1	8.12E-15	2.32E-10	3.56E-14	1.40E-14	5.16E-13	0.00E+00	0.00E+00	0.00E+00	3.47E-11	2.75E-15	n/a	2.98E-10	**5.65E-10**
nickel	7440-02-0	2.44E-15	9.65E-10	7.33E-15	2.82E-14	4.29E-11	0.00E+00	0.00E+00	0.00E+00	5.77E-10	9.98E-12	n/a		**1.60E-09**
zinc	7440-66-6	2.27E-14	9.40E-09	7.09E-13	3.92E-12	6.26E-12	2.05E-13	5.75E-16	5.43E-16	1.83E-10	2.57E-09	n/a		**1.22E-08**

a. Ingestion rates of total PCDDs/PCDFs and coplanar PCBs are presented in units of mg TEQ/day

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS: Infant Subsistence Fisher Exposure Scenario														
COPC	CAS Number	Incidental Ingestion of Soil (mg/day)[a]	Ingestion of Exposed Produce (mg/day)[a]	Ingestion of Protected Produce (mg/day)[a]	Ingestion of Belowground Produce (mg/day)[a]	Ingestion of Beef (mg/day)[a]	Ingestion of Pork (mg/day)[a]	Ingestion of Poultry (mg/day)[a]	Ingestion of Eggs (mg/day)[a]	Ingestion of Milk (mg/day)[a]	Ingestion of Fish (mg/day)[a]	Incidental Ingestion of Surface Water (mg/day)[a]	Ingestion of Breast Milk (mg/day)[a]	Total Daily COPC Ingestion (mg/day)[a]
1,1,1-trichloroethane	71-55-6	3.46E-17	4.78E-14	1.55E-14	5.88E-13	2.36E-13	5.91E-17	3.18E-15	1.72E-15	4.48E-12	4.11E-12	n/a		**9.48E-12**
1,1-dichloroethane	75-34-3	1.43E-17	4.74E-14	1.62E-14	5.48E-13	8.22E-17	2.10E-17	1.13E-18	6.08E-19	1.58E-15	5.37E-13	n/a		**1.15E-12**
1,1-dichloroethene	75-35-4	4.65E-18	1.05E-14	3.55E-15	7.15E-14	2.94E-14	7.48E-15	4.02E-16	2.17E-16	5.63E-16	8.38E-13	n/a		**9.61E-13**
1,2-dichloroethane	107-06-2	3.44E-17	1.69E-13	5.82E-14	1.82E-12	1.75E-16	4.49E-17	2.40E-18	1.29E-18	3.38E-15	3.34E-13	n/a	9.68E-11	**9.92E-11**
1,2-dichloropropane	78-87-5	4.95E-17	1.27E-13	4.31E-14	8.51E-13	3.04E-16	7.75E-17	4.17E-18	2.24E-18	5.83E-15	9.91E-13	n/a		**2.02E-12**
1,3-butadiene	106-99-0	4.00E-18	1.46E-13	3.53E-15	3.15E-15	2.94E-16	1.83E-17	3.36E-19	1.81E-19	5.07E-15	5.82E-13	n/a		**7.40E-13**
2-butanone	78-93-3	9.10E-14	7.04E-10	2.45E-10	4.03E-10	6.06E-14	1.56E-14	8.36E-16	4.51E-16	1.17E-12	8.71E-12	n/a	3.51E-09	**4.87E-09**
acetone	67-64-1	4.16E-14	3.22E-10	1.12E-10	5.93E-10	7.55E-15	1.95E-15	1.04E-16	5.60E-17	1.46E-13	1.47E-11	n/a	3.96E-09	**5.00E-09**
benzene	71-43-2	4.18E-16	9.47E-13	3.19E-13	6.43E-12	2.64E-15	6.72E-16	3.61E-17	1.94E-17	5.06E-14	1.60E-11	n/a	1.62E-09	**1.65E-09**
benzoic acid	65-85-0	9.50E-12	2.83E-08	9.82E-09	3.86E-06	1.32E-12	3.42E-13	1.84E-14	9.91E-15	2.54E-11	4.47E-10	n/a		**3.90E-06**
benzyl alcohol	100-51-6	6.27E-11	4.85E-07	1.69E-07	7.96E-07	2.37E-10	6.12E-11	3.28E-12	1.76E-12	4.60E-09	1.52E-10	n/a		**1.46E-06**
bis(2-ethylhexyl)-phthalate	117-81-7	1.38E-12	3.90E-09	1.94E-11	2.25E-15	1.14E-09	3.29E-11	8.70E-12	4.68E-12	1.93E-07	1.59E-10	n/a		**1.99E-07**
bromodichloromethane	75-27-4	2.93E-14	6.43E-11	2.24E-11	4.93E-10	1.80E-10	4.70E-11	2.54E-12	1.37E-12	3.46E-12	5.37E-12	n/a		**8.19E-10**
bromomethane	74-83-9	9.99E-17	7.35E-13	2.56E-13	1.75E-12	4.28E-16	1.10E-16	5.91E-18	3.18E-18	3.93E-14	8.94E-13	n/a		**3.68E-12**
carbon disulfide	75-15-0	3.45E-17	7.12E-14	2.30E-14	8.38E-13	2.30E-16	5.69E-17	3.04E-18	1.64E-18	4.38E-15	1.32E-11	n/a	1.11E-09	**1.13E-09**
carbon tetrachloride	56-23-5	8.70E-17	8.61E-14	2.61E-14	1.59E-12	6.22E-13	1.51E-14	8.11E-15	4.37E-15	1.16E-11	1.95E-11	n/a		**3.35E-11**
chlorobenzene	108-90-7	2.21E-16	2.12E-13	6.64E-14	3.22E-12	1.54E-12	3.81E-14	2.06E-14	1.11E-14	2.89E-11	4.61E-12	n/a		**3.86E-11**
chloroform	67-66-3	3.49E-16	9.08E-13	3.04E-13	6.75E-12	2.17E-15	5.48E-16	2.94E-17	1.58E-17	4.15E-14	1.33E-11	n/a	1.59E-09	**1.61E-09**
chloromethane	74-87-3	8.02E-17	6.22E-13	2.16E-13	1.92E-12	2.08E-16	5.36E-17	2.86E-18	1.55E-18	4.02E-15	5.97E-12	n/a	1.39E-09	**1.40E-09**
cis-1,3-dichloropropene	10061-01-5	9.78E-18	4.18E-14	1.45E-14	2.12E-13	5.16E-14	1.33E-14	7.15E-16	3.85E-19	9.97E-16	4.66E-13	n/a	1.13E-10	**1.14E-10**
dibromochloromethane	124-48-1	3.39E-13	6.24E-10	2.17E-10	1.13E-09	2.13E-09	5.56E-10	3.01E-11	1.62E-11	4.08E-11	1.03E-11	n/a		**4.75E-09**
dichlorodifluoromethane	75-71-8	4.63E-16	9.38E-13	3.27E-13	1.54E-12	2.88E-15	7.52E-13	4.07E-14	2.19E-14	5.53E-14	2.67E-12	n/a	2.48E-10	**2.54E-10**
dimethyl phthalate	131-11-3	2.32E-12	1.09E-08	3.63E-09	1.31E-08	1.25E-08	3.13E-09	1.67E-10	9.00E-14	2.39E-10	6.48E-11	n/a		**4.37E-08**
di-n-butyl phthalate	84-74-2	1.23E-11	1.71E-09	2.92E-10	4.37E-12	2.24E-07	1.12E-08	8.47E-13	4.56E-11	3.81E-05	2.40E-08	n/a		**3.84E-05**
ethylbenzene	100-41-4	1.96E-16	1.37E-13	3.94E-14	2.92E-12	1.40E-15	3.33E-16	1.81E-17	9.72E-18	2.60E-14	9.41E-12	n/a	1.65E-10	**1.78E-10**
Freon 113	76-13-1	3.31E-17	4.97E-12	6.15E-15	1.37E-14	4.48E-14	2.05E-15	3.03E-18	1.63E-18	7.64E-13	1.80E-11	n/a	2.74E-10	**2.98E-10**
HD	505-60-2	4.59E-16	2.04E-12	2.32E-13	6.28E-13	7.99E-15	9.99E-16	4.20E-17	2.26E-17	1.42E-13	5.91E-12	n/a		**8.96E-12**
hexane	110-54-3	2.62E-17	6.81E-15	1.86E-15	8.02E-14	1.51E-16	3.79E-17	2.17E-18	1.17E-18	2.66E-15	6.83E-11	n/a	3.76E-10	**4.44E-10**
methylene chloride	75-09-2	1.52E-16	9.73E-13	3.36E-13	1.05E-11	6.98E-16	1.79E-16	9.57E-18	5.16E-18	1.34E-14	3.08E-12	n/a	1.33E-09	**1.34E-09**
styrene	100-42-5	2.47E-13	1.63E-10	5.69E-11	1.88E-11	1.54E-10	4.14E-11	2.29E-11	1.24E-11	2.89E-08	2.21E-11	n/a	1.09E-08	**4.03E-08**
tetrachloroethene	127-18-4	3.67E-17	3.56E-14	4.96E-15	2.19E-12	4.51E-16	6.85E-17	3.27E-18	1.76E-18	7.98E-15	1.52E-11	n/a	1.66E-10	**1.83E-10**
toluene	108-88-3	1.22E-16	1.34E-13	4.22E-14	1.82E-12	8.60E-16	2.12E-16	1.15E-17	6.18E-18	1.62E-14	5.53E-12	n/a	1.91E-10	**1.99E-10**
trans-1,3-dichloropropene	10061-02-6	3.43E-16	5.88E-13	2.03E-13	1.14E-12	2.19E-15	5.68E-16	3.08E-17	1.66E-17	4.19E-14	1.72E-12	n/a	1.24E-10	**1.28E-10**
trichloroethene	79-01-6	6.79E-17	1.03E-13	3.48E-14	6.48E-13	4.48E-16	1.15E-16	6.20E-18	3.34E-18	8.56E-15	2.67E-12	n/a	1.55E-10	**1.59E-10**
trichlorofluoromethane	75-69-4	3.80E-18	5.26E-15	1.70E-15	5.93E-14	2.60E-14	6.50E-18	3.50E-16	1.89E-16	4.93E-13	2.56E-12	n/a	1.27E-10	**1.30E-10**
vinyl chloride	75-01-4	1.93E-18	1.08E-14	3.74E-15	9.11E-14	9.32E-18	2.41E-18	1.28E-19	6.93E-20	1.81E-16	3.80E-13	n/a		**4.86E-13**
xylenes	1330-20-7	2.66E-15	1.50E-12	4.95E-13	8.44E-12	1.68E-14	4.39E-15	2.44E-16	1.31E-16	3.13E-13	2.44E-11	n/a	4.15E-10	**4.50E-10**
2,3,7,8-TCDF	51207-31-9											n/a		
Total PCDDs and PCDFs	NA	7.92E-19	5.18E-17	2.93E-18	2.27E-18	1.29E-15	8.30E-17	3.62E-18	1.95E-18	2.12E-13	1.16E-16	n/a	1.16E-11	**1.18E-11**
antimony	7440-36-0	1.70E-17	9.67E-12	1.74E-16	9.77E-17	7.17E-14	0.00E+00	0.00E+00	0.00E+00	5.78E-13	5.13E-14	n/a	1.23E-11	**2.27E-11**
cadmium	7440-43-9	1.19E-16	5.06E-11	4.78E-15	3.42E-15	4.50E-14	1.65E-15	4.16E-17	9.22E-19	1.97E-13	6.09E-12	n/a	7.00E-11	**1.27E-10**
chromium (3+)	7440-47-3	2.14E-16	4.65E-10	3.37E-16	1.85E-16	1.90E-11	0.00E+00	0.00E+00	0.00E+00	4.17E-10	1.73E-13	n/a	7.70E-10	**1.67E-09**
chromium (6+)	18540-29-9	2.14E-16	4.65E-10	3.37E-16	1.85E-16	1.90E-11	0.00E+00	0.00E+00	0.00E+00	4.17E-10	1.73E-13	n/a	7.70E-10	**1.67E-09**
copper	7440-50-8	7.66E-15	6.94E-10	6.63E-13	3.68E-13	5.13E-11	0.00E+00	0.00E+00	0.00E+00	6.21E-10	2.59E-13	n/a	1.23E-09	**2.60E-09**
lead	7439-92-1	8.14E-15	2.32E-10	3.56E-14	1.41E-14	5.16E-13	0.00E+00	0.00E+00	0.00E+00	3.47E-11	2.75E-15	n/a		**2.67E-10**
nickel	7440-02-0	2.44E-15	9.65E-10	7.33E-15	2.82E-14	4.29E-11	0.00E+00	0.00E+00	0.00E+00	5.77E-10	9.98E-12	n/a	1.53E-09	**3.12E-09**
zinc	7440-66-6	2.27E-14	9.40E-09	7.09E-13	3.92E-12	6.26E-12	2.05E-13	5.76E-16	5.43E-16	1.83E-10	2.57E-09	n/a	1.49E-08	**2.70E-08**

a. Ingestion rates of total PCDDs/PCDFs are presented in units of mg TEQ/day

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS:
Infant Subsistence Farmer Exposure Scenario

COPC	CAS Number	Incidental Ingestion of Soil (mg/day)[a]	Ingestion of Exposed Produce (mg/day)[a]	Ingestion of Protected Produce (mg/day)[a]	Ingestion of Belowground Produce (mg/day)[a]	Ingestion of Beef (mg/day)[a]	Ingestion of Pork (mg/day)[a]	Ingestion of Poultry (mg/day)[a]	Ingestion of Eggs (mg/day)[a]	Ingestion of Milk (mg/day)[a]	Ingestion of Fish (mg/day)[a]	Incidental Ingestion of Surface Water (mg/day)[a]	Ingestion of Breast Milk (mg/day)[a]	Total Daily COPC Ingestion (mg/day)[a]
1,1,1-trichloroethane	71-55-6	3.46E-17	1.19E-13	3.87E-14	1.47E-12	5.90E-13	1.48E-16	7.96E-15	4.29E-15	1.12E-11	1.64E-12	n/a		**1.51E-11**
1,1-dichloroethane	75-34-3	1.43E-17	1.18E-13	4.05E-14	1.37E-12	2.06E-16	5.26E-17	2.82E-18	1.52E-18	3.95E-15	2.15E-13	n/a		**1.75E-12**
1,1-dichloroethene	75-35-4	4.65E-18	2.63E-14	8.86E-15	1.79E-13	7.35E-14	1.87E-14	1.00E-15	5.41E-16	1.41E-15	3.35E-13	n/a		**6.44E-13**
1,2-dichloroethane	107-06-2	3.44E-17	4.24E-13	1.45E-13	4.54E-12	4.38E-16	1.12E-16	6.01E-18	3.23E-18	8.46E-15	1.33E-13	n/a	1.02E-10	**1.08E-10**
1,2-dichloropropane	78-87-5	4.95E-17	3.18E-13	1.08E-13	2.13E-12	7.60E-16	1.94E-16	1.04E-17	5.61E-18	1.46E-14	3.97E-13	n/a		**2.96E-12**
1,3-butadiene	106-99-0	4.00E-18	3.65E-13	8.82E-15	7.87E-15	7.35E-16	4.58E-17	8.40E-19	4.52E-19	1.27E-14	2.33E-13	n/a		**6.28E-13**
2-butanone	78-93-3	9.09E-14	1.76E-09	6.13E-10	1.01E-09	1.51E-13	3.90E-14	2.09E-15	1.13E-15	2.93E-12	3.48E-12	n/a		**3.39E-09**
acetone	67-64-1	4.16E-14	8.05E-10	2.81E-10	1.48E-09	1.89E-14	4.86E-15	2.61E-16	1.40E-16	3.65E-13	5.87E-12	n/a		**2.58E-09**
benzene	71-43-2	4.18E-16	2.37E-12	7.97E-13	1.61E-11	6.60E-15	1.68E-15	9.03E-17	4.86E-17	1.27E-13	6.42E-12	n/a	1.63E-09	**1.66E-09**
benzoic acid	65-85-0	9.43E-12	7.02E-08	2.44E-08	9.59E-06	3.28E-12	8.48E-13	4.56E-14	2.46E-14	6.31E-11	1.78E-10	n/a		**9.68E-06**
benzyl alcohol	100-51-6	5.58E-11	1.08E-06	3.76E-07	1.77E-06	5.28E-10	1.36E-10	7.29E-12	3.92E-12	1.02E-08	5.41E-11	n/a		**3.24E-06**
bis(2-ethylhexyl)-phthalate	117-81-7	1.35E-12	9.74E-09	4.75E-11	5.52E-15	2.85E-09	8.21E-11	2.13E-11	1.15E-11	4.83E-07	6.36E-11	n/a		**4.96E-07**
bromodichloromethane	75-27-4	2.93E-14	1.61E-10	5.60E-11	1.23E-09	4.51E-10	1.17E-10	6.34E-12	3.42E-12	8.66E-12	2.15E-12	n/a		**2.04E-09**
bromomethane	74-83-9	9.99E-17	1.84E-12	6.39E-13	4.38E-12	1.07E-15	2.76E-16	1.48E-17	7.94E-18	9.83E-14	3.58E-13	n/a		**7.31E-12**
carbon disulfide	75-15-0	3.45E-17	1.78E-13	5.75E-14	2.09E-12	5.74E-16	1.42E-16	7.61E-18	4.10E-18	1.09E-14	5.28E-12	n/a		**7.63E-12**
carbon tetrachloride	56-23-5	8.70E-17	2.15E-13	6.52E-14	3.97E-12	1.55E-12	3.77E-14	2.03E-14	1.09E-14	2.91E-11	7.81E-12	n/a		**4.28E-11**
chlorobenzene	108-90-7	2.21E-16	5.29E-13	1.66E-13	8.04E-12	3.84E-12	9.53E-14	5.16E-14	2.78E-14	7.22E-11	1.85E-12	n/a		**8.68E-11**
chloroform	67-66-3	3.49E-16	2.27E-12	7.59E-13	1.69E-11	5.42E-15	1.37E-15	7.35E-17	3.95E-17	1.04E-13	5.31E-12	n/a	1.60E-09	**1.62E-09**
chloromethane	74-87-3	8.02E-17	1.56E-12	5.41E-13	4.79E-12	5.20E-16	1.34E-16	7.15E-18	3.87E-18	1.00E-14	2.39E-12	n/a		**9.29E-12**
cis-1,3-dichloropropene	10061-01-5	9.78E-18	1.04E-13	3.62E-14	5.31E-13	1.29E-13	3.33E-14	1.79E-15	9.62E-19	2.49E-15	1.87E-13	n/a	1.14E-10	**1.15E-10**
dibromochloromethane	124-48-1	3.38E-13	1.55E-09	5.41E-10	2.80E-09	5.30E-09	1.39E-09	7.50E-11	4.04E-11	1.02E-10	4.09E-12	n/a		**1.18E-08**
dichlorodifluoromethane	75-71-8	4.63E-16	2.34E-12	8.17E-13	3.84E-12	7.21E-15	1.88E-12	1.02E-13	5.48E-14	1.38E-13	1.07E-12	n/a		**1.02E-11**
dimethyl phthalate	131-11-3	2.31E-12	2.70E-08	9.03E-09	3.26E-08	3.10E-08	7.79E-09	4.15E-10	2.24E-13	5.95E-10	2.58E-11	n/a		**1.08E-07**
di-n-butyl phthalate	84-74-2	1.20E-11	4.23E-09	7.17E-10	1.07E-11	5.59E-07	2.79E-08	2.08E-12	1.12E-10	9.53E-05	9.58E-09	n/a		**9.59E-05**
ethylbenzene	100-41-4	1.96E-16	3.44E-13	9.86E-14	7.29E-12	3.49E-15	8.33E-16	4.51E-17	2.43E-17	6.49E-14	3.76E-12	n/a	1.67E-10	**1.79E-10**
Freon 113	76-13-1	3.31E-17	1.24E-11	1.54E-14	3.42E-14	1.12E-13	5.13E-15	7.58E-18	4.09E-18	1.91E-12	7.22E-12	n/a		**2.17E-11**
HD	505-60-2	4.59E-16	5.09E-12	5.81E-13	1.57E-12	2.00E-14	2.50E-15	1.05E-16	5.65E-17	3.55E-13	2.36E-12	n/a		**9.99E-12**
hexane	110-54-3	2.62E-17	1.70E-14	4.64E-15	2.01E-13	3.78E-16	9.48E-17	5.42E-18	2.91E-18	6.65E-15	2.73E-11	n/a		**2.75E-11**
methylene chloride	75-09-2	1.52E-16	2.43E-12	8.39E-13	2.63E-11	1.74E-15	4.47E-16	2.39E-17	1.29E-17	3.36E-14	1.23E-12	n/a	1.36E-09	**1.39E-09**
styrene	100-42-5	2.47E-13	4.08E-10	1.42E-10	4.68E-11	3.84E-10	1.03E-10	5.72E-11	3.08E-11	7.22E-08	8.84E-12	n/a		**7.34E-08**
tetrachloroethene	127-18-4	3.67E-17	8.91E-14	1.24E-14	5.48E-12	1.13E-15	1.71E-16	8.17E-18	4.40E-18	2.00E-14	6.08E-12	n/a	1.60E-10	**1.72E-10**
toluene	108-88-3	1.22E-16	3.36E-13	1.05E-13	4.55E-12	2.15E-15	5.31E-16	2.87E-17	1.54E-17	4.05E-14	2.21E-12	n/a		**7.25E-12**
trans-1,3-dichloropropene	10061-02-6	3.43E-16	1.47E-12	5.07E-13	2.84E-12	5.47E-15	1.42E-15	7.69E-17	4.14E-17	1.05E-13	6.89E-13	n/a	1.28E-10	**1.34E-10**
trichloroethene	79-01-6	6.79E-17	2.58E-13	8.69E-14	1.62E-12	1.12E-15	2.87E-16	1.55E-17	8.34E-18	2.14E-14	1.07E-12	n/a	1.55E-10	**1.58E-10**
trichlorofluoromethane	75-69-4	3.80E-18	1.32E-14	4.25E-15	1.48E-13	6.50E-14	1.63E-17	8.76E-16	4.72E-16	1.23E-12	1.02E-12	n/a		**2.49E-12**
vinyl chloride	75-01-4	1.93E-18	2.71E-14	9.35E-15	2.28E-13	2.33E-17	6.02E-18	3.21E-19	1.73E-19	4.52E-16	1.52E-13	n/a		**4.17E-13**
xylenes	1330-20-7	2.66E-15	3.76E-12	1.24E-12	2.11E-11	4.19E-14	1.10E-14	6.10E-16	3.29E-16	7.82E-13	9.75E-12	n/a		**3.67E-11**
2,3,7,8-TCDF	51207-31-9											n/a		
Total PCDDs and PCDFs	NA	4.07E-19	1.19E-16	3.76E-18	2.92E-18	3.08E-15	1.46E-16	4.65E-18	2.50E-18	5.15E-13	2.75E-17	n/a	2.90E-11	**2.95E-11**
antimony	7440-36-0	1.70E-17	2.42E-11	4.35E-16	2.44E-16	1.79E-13	0.00E+00	0.00E+00	0.00E+00	1.45E-12	2.05E-14	n/a		**2.58E-11**
cadmium	7440-43-9	1.19E-16	1.27E-10	1.20E-14	8.56E-15	1.13E-13	4.12E-15	1.04E-16	2.30E-18	4.92E-13	2.43E-12	n/a		**1.30E-10**
chromium (3+)	7440-47-3	2.14E-16	1.16E-09	8.43E-16	4.63E-16	4.74E-11	0.00E+00	0.00E+00	0.00E+00	1.04E-09	6.92E-14	n/a		**2.25E-09**
chromium (6+)	18540-29-9	2.14E-16	1.16E-09	8.43E-16	4.63E-16	4.74E-11	0.00E+00	0.00E+00	0.00E+00	1.04E-09	6.92E-14	n/a	1.81E-09	**4.06E-09**
copper	7440-50-8	7.65E-15	1.74E-09	1.66E-12	9.18E-13	1.28E-10	0.00E+00	0.00E+00	0.00E+00	1.55E-09	1.03E-13	n/a		**3.42E-09**
lead	7439-92-1	8.12E-15	5.80E-10	8.89E-14	3.51E-14	1.29E-12	0.00E+00	0.00E+00	0.00E+00	8.67E-11	1.10E-15	n/a	6.88E-10	**1.36E-09**
nickel	7440-02-0	2.44E-15	2.41E-09	1.83E-14	7.04E-14	1.07E-10	0.00E+00	0.00E+00	0.00E+00	1.44E-09	3.99E-12	n/a		**3.97E-09**
zinc	7440-66-6	2.27E-14	2.35E-08	1.77E-12	9.80E-12	1.57E-11	5.12E-13	1.44E-15	1.36E-15	4.56E-10	1.03E-09	n/a		**2.50E-08**

a. Ingestion rates of total PCDDs/PCDFs and coplanar PCBs are presented in units of mg TEQ/day

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS:
Infant Subsistence Farmer Exposure Scenario

COPC	CAS Number	Incidental Ingestion of Soil (mg/day)[a]	Ingestion of Exposed Produce (mg/day)[a]	Ingestion of Protected Produce (mg/day)[a]	Ingestion of Belowground Produce (mg/day)[a]	Ingestion of Beef (mg/day)[a]	Ingestion of Pork (mg/day)[a]	Ingestion of Poultry (mg/day)[a]	Ingestion of Eggs (mg/day)[a]	Ingestion of Milk (mg/day)[a]	Ingestion of Fish (mg/day)[a]	Incidental Ingestion of Surface Water (mg/day)[a]	Ingestion of Breast Milk (mg/day)[a]	Total Daily COPC Ingestion (mg/day)[a]
1,1,1-trichloroethane	71-55-6	3.46E-17	1.19E-13	3.87E-14	1.47E-12	5.90E-13	1.48E-16	7.96E-15	4.29E-15	1.12E-11	1.64E-12	n/a		**1.51E-11**
1,1-dichloroethane	75-34-3	1.43E-17	1.18E-13	4.05E-14	1.37E-12	2.06E-16	5.26E-17	2.82E-18	1.52E-18	3.95E-15	2.15E-13	n/a		**1.75E-12**
1,1-dichloroethene	75-35-4	4.65E-18	2.63E-14	8.86E-15	1.79E-13	7.35E-14	1.87E-14	1.00E-15	5.41E-16	1.41E-15	3.35E-13	n/a		**6.44E-13**
1,2-dichloroethane	107-06-2	3.44E-17	4.24E-13	1.45E-13	4.54E-12	4.38E-16	1.12E-16	6.01E-18	3.23E-18	8.46E-15	1.33E-13	n/a	1.02E-10	**1.08E-10**
1,2-dichloropropane	78-87-5	4.95E-17	3.18E-13	1.08E-13	2.13E-12	7.60E-16	1.94E-16	1.04E-17	5.61E-18	1.46E-14	3.97E-13	n/a		**2.96E-12**
1,3-butadiene	106-99-0	4.00E-18	3.65E-13	8.82E-15	7.87E-15	7.35E-16	4.58E-17	8.40E-19	4.52E-19	1.27E-14	2.33E-13	n/a		**6.28E-13**
2-butanone	78-93-3	9.10E-14	1.76E-09	6.14E-10	1.01E-09	1.51E-13	3.90E-14	2.09E-15	1.13E-15	2.93E-12	3.48E-12	n/a	6.70E-09	**1.01E-08**
acetone	67-64-1	4.16E-14	8.06E-10	2.81E-10	1.48E-09	1.89E-14	4.87E-15	2.61E-16	1.40E-16	3.65E-13	5.88E-12	n/a	6.60E-09	**9.17E-09**
benzene	71-43-2	4.18E-16	2.37E-12	7.97E-13	1.61E-11	6.60E-15	1.68E-15	9.03E-17	4.86E-17	1.27E-13	6.42E-12	n/a	1.63E-09	**1.66E-09**
benzoic acid	65-85-0	9.50E-12	7.07E-08	2.46E-08	9.65E-06	3.30E-12	8.54E-13	4.59E-14	2.48E-14	6.35E-11	1.79E-10	n/a		**9.75E-06**
benzyl alcohol	100-51-6	6.27E-11	1.21E-06	4.23E-07	1.99E-06	5.93E-10	1.53E-10	8.19E-12	4.41E-12	1.15E-08	6.07E-11	n/a		**3.64E-06**
bis(2-ethylhexyl)-phthalate	117-81-7	1.38E-12	9.74E-09	4.84E-11	5.63E-15	2.85E-09	8.21E-11	2.17E-11	1.17E-11	4.83E-07	6.37E-11	n/a		**4.96E-07**
bromodichloromethane	75-27-4	2.93E-14	1.61E-10	5.60E-11	1.23E-09	4.51E-10	1.18E-10	6.35E-12	3.42E-12	8.66E-12	2.15E-12	n/a		**2.04E-09**
bromomethane	74-83-9	9.99E-17	1.84E-12	6.39E-13	4.38E-12	1.07E-15	2.76E-16	1.48E-17	7.94E-18	9.83E-14	3.58E-13	n/a		**7.31E-12**
carbon disulfide	75-15-0	3.45E-17	1.78E-13	5.75E-14	2.09E-12	5.74E-16	1.42E-16	7.61E-18	4.10E-18	1.09E-14	5.28E-12	n/a	1.11E-09	**1.11E-09**
carbon tetrachloride	56-23-5	8.70E-17	2.15E-13	6.52E-14	3.97E-12	1.55E-12	3.77E-14	2.03E-14	1.09E-14	2.91E-11	7.81E-12	n/a		**4.28E-11**
chlorobenzene	108-90-7	2.21E-16	5.29E-13	1.66E-13	8.04E-12	3.84E-12	9.53E-14	5.16E-14	2.78E-14	7.22E-11	1.85E-12	n/a		**8.68E-11**
chloroform	67-66-3	3.49E-16	2.27E-12	7.59E-13	1.69E-11	5.42E-15	1.37E-15	7.35E-17	3.95E-17	1.04E-13	5.31E-12	n/a	1.60E-09	**1.62E-09**
chloromethane	74-87-3	8.02E-17	1.56E-12	5.41E-13	4.79E-12	5.20E-16	1.34E-16	7.15E-18	3.87E-18	1.00E-14	2.39E-12	n/a	1.39E-09	**1.40E-09**
cis-1,3-dichloropropene	10061-01-5	9.78E-18	1.04E-13	3.62E-14	5.31E-13	1.29E-13	3.33E-14	1.79E-15	9.62E-19	2.49E-15	1.87E-13	n/a	1.14E-10	**1.15E-10**
dibromochloromethane	124-48-1	3.39E-13	1.56E-09	5.43E-10	2.81E-09	5.32E-09	1.39E-09	7.53E-11	4.05E-11	1.02E-10	4.10E-12	n/a		**1.18E-08**
dichlorodifluoromethane	75-71-8	4.63E-16	2.34E-12	8.17E-13	3.84E-12	7.21E-15	1.88E-12	1.02E-13	5.48E-14	1.38E-13	1.07E-12	n/a	2.57E-10	**2.67E-10**
dimethyl phthalate	131-11-3	2.32E-12	2.72E-08	9.08E-09	3.28E-08	3.11E-08	7.83E-09	4.17E-10	2.25E-13	5.98E-10	2.59E-11	n/a		**1.09E-07**
di-n-butyl phthalate	84-74-2	1.23E-11	4.27E-09	7.31E-10	1.09E-11	5.60E-07	2.79E-08	2.12E-12	1.14E-10	9.53E-05	9.58E-09	n/a		**9.59E-05**
ethylbenzene	100-41-4	1.96E-16	3.44E-13	9.86E-14	7.29E-12	3.49E-15	8.33E-16	4.51E-17	2.43E-17	6.49E-14	3.76E-12	n/a	1.67E-10	**1.79E-10**
Freon 113	76-13-1	3.31E-17	1.24E-11	1.54E-14	3.42E-14	1.12E-13	5.13E-15	7.58E-18	4.09E-18	1.91E-12	7.22E-12	n/a	2.69E-10	**2.91E-10**
HD	505-60-2	4.59E-16	5.09E-12	5.81E-13	1.57E-12	2.00E-14	2.50E-15	1.05E-16	5.65E-17	3.55E-13	2.36E-12	n/a		**9.99E-12**
hexane	110-54-3	2.62E-17	1.70E-14	4.64E-15	2.01E-13	3.78E-16	9.48E-17	5.42E-18	2.91E-18	6.65E-15	2.73E-11	n/a	3.24E-10	**3.52E-10**
methylene chloride	75-09-2	1.52E-16	2.43E-12	8.39E-13	2.63E-11	1.74E-15	4.47E-16	2.39E-17	1.29E-17	3.36E-14	1.23E-12	n/a	1.36E-09	**1.39E-09**
styrene	100-42-5	2.47E-13	4.08E-10	1.42E-10	4.69E-11	3.85E-10	1.03E-10	5.74E-11	3.09E-11	7.24E-08	8.84E-12	n/a	2.66E-08	**1.00E-07**
tetrachloroethene	127-18-4	3.67E-17	8.91E-14	1.24E-14	5.48E-12	1.13E-15	1.71E-16	8.17E-18	4.40E-18	2.00E-14	6.08E-12	n/a	1.60E-10	**1.72E-10**
toluene	108-88-3	1.22E-16	3.36E-13	1.05E-13	4.55E-12	2.15E-15	5.31E-16	2.87E-17	1.54E-17	4.05E-14	2.21E-12	n/a	1.93E-10	**2.00E-10**
trans-1,3-dichloropropene	10061-02-6	3.43E-16	1.47E-12	5.07E-13	2.84E-12	5.47E-15	1.42E-15	7.69E-17	4.14E-17	1.05E-13	6.89E-13	n/a	1.28E-10	**1.34E-10**
trichloroethene	79-01-6	6.79E-17	2.58E-13	8.69E-14	1.62E-12	1.12E-15	2.87E-16	1.55E-17	8.34E-18	2.14E-14	1.07E-12	n/a	1.55E-10	**1.58E-10**
trichlorofluoromethane	75-69-4	3.80E-18	1.32E-14	4.25E-15	1.48E-13	6.50E-14	1.63E-17	8.76E-16	4.72E-16	1.23E-12	1.02E-12	n/a	1.26E-10	**1.28E-10**
vinyl chloride	75-01-4	1.93E-18	2.71E-14	9.35E-15	2.28E-13	2.33E-17	6.02E-18	3.21E-19	1.73E-19	4.52E-16	1.52E-13	n/a		**4.17E-13**
xylenes	1330-20-7	2.66E-15	3.76E-12	1.24E-12	2.11E-11	4.19E-14	1.10E-14	6.10E-16	3.29E-16	7.82E-13	9.75E-12	n/a	4.26E-10	**4.62E-10**
2,3,7,8-TCDF	51207-31-9											n/a		
Total PCDDs and PCDFs	NA	7.92E-19	1.30E-16	7.33E-18	5.68E-18	3.23E-15	2.08E-16	9.05E-18	4.88E-18	5.31E-13	4.63E-17	n/a	2.90E-11	**2.95E-11**
antimony	7440-36-0	1.70E-17	2.42E-11	4.35E-16	2.44E-16	1.79E-13	0.00E+00	0.00E+00	0.00E+00	1.45E-12	2.05E-14	n/a	2.84E-11	**5.42E-11**
cadmium	7440-43-9	1.19E-16	1.27E-10	1.20E-14	8.56E-15	1.13E-13	4.12E-15	1.04E-16	2.30E-18	4.92E-13	2.43E-12	n/a	1.47E-10	**2.76E-10**
chromium (3+)	7440-47-3	2.14E-16	1.16E-09	8.43E-16	4.63E-16	4.74E-11	0.00E+00	0.00E+00	0.00E+00	1.04E-09	6.92E-14	n/a	1.81E-09	**4.06E-09**
chromium (6+)	18540-29-9	2.14E-16	1.16E-09	8.43E-16	4.63E-16	4.74E-11	0.00E+00	0.00E+00	0.00E+00	1.04E-09	6.92E-14	n/a	1.81E-09	**4.06E-09**
copper	7440-50-8	7.66E-15	1.74E-09	1.66E-12	9.19E-13	1.28E-10	0.00E+00	0.00E+00	0.00E+00	1.55E-09	1.03E-13	n/a	2.90E-09	**6.32E-09**
lead	7439-92-1	8.14E-15	5.80E-10	8.91E-14	3.52E-14	1.29E-12	0.00E+00	0.00E+00	0.00E+00	8.67E-11	1.10E-15	n/a		**6.68E-10**
nickel	7440-02-0	2.44E-15	2.41E-09	1.83E-14	7.04E-14	1.07E-10	0.00E+00	0.00E+00	0.00E+00	1.44E-09	3.99E-12	n/a	3.56E-09	**7.53E-09**
zinc	7440-66-6	2.27E-14	2.35E-08	1.77E-12	9.81E-12	1.57E-11	5.12E-13	1.44E-15	1.36E-15	4.56E-10	1.03E-09	n/a	2.80E-08	**5.30E-08**

a. Ingestion rates of total PCDDs/PCDFs are presented in units of mg TEQ/day

DERMAL UPTAKE OF COPCS FROM CONTACT WITH SOIL FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: All Exposure Scenarios							
COPC	CAS Number	Adult Resident DA_{event} mg/(cm^2-event)[a]	Adult Fisher DA_{event} mg/(cm^2-event)[a]	Adult Farmer DA_{event} mg/(cm^2-event)[a]	Adult Worker DA_{event} mg/(cm^2-event)[a]	Child DA_{event} mg/(cm^2-event)[a]	Infant DA_{event} mg/(cm^2-event)[a]
1,1,1-trichloroethane	71-55-6	1.16E-22	1.16E-22	8.73E-23	3.99E-22	2.00E-21	2.00E-21
1,1-dichloroethane	75-34-3	8.32E-23	8.32E-23	6.24E-23	2.85E-22	1.43E-21	1.43E-21
1,1-dichloroethene	75-35-4	1.24E-23	1.24E-23	9.33E-24	4.27E-23	2.13E-22	2.13E-22
1,2-dichloroethane	107-06-2	2.00E-22	2.00E-22	1.50E-22	6.87E-22	3.44E-21	3.44E-21
1,2-dichloropropane	78-87-5	2.89E-22	2.89E-22	2.17E-22	9.91E-22	4.95E-21	4.95E-21
1,3-butadiene	106-99-0	2.33E-23	2.33E-23	1.75E-23	8.00E-23	4.00E-22	4.00E-22
2-butanone	78-93-3	5.31E-19	5.31E-19	3.98E-19	1.82E-18	9.09E-18	9.09E-18
acetone	67-64-1	2.43E-19	2.43E-19	1.82E-19	8.32E-19	4.16E-18	4.16E-18
benzene	71-43-2	2.44E-21	2.44E-21	1.83E-21	8.36E-21	4.18E-20	4.18E-20
benzoic acid	65-85-0	1.34E-17	1.34E-17	1.01E-17	4.60E-17	2.29E-16	2.29E-16
benzyl alcohol	100-51-6	3.06E-17	3.06E-17	2.29E-17	1.05E-16	4.67E-16	4.67E-16
bis(2-ethylhexyl)-phthalate	117-81-7	1.46E-17	1.46E-17	1.09E-17	5.00E-17	2.46E-16	2.46E-16
bromodichloromethane	75-27-4	3.88E-20	3.88E-20	2.91E-20	1.33E-19	6.64E-19	6.64E-19
bromomethane	74-83-9	5.83E-22	5.83E-22	4.37E-22	2.00E-21	9.99E-21	9.99E-21
carbon disulfide	75-15-0	2.01E-22	2.01E-22	1.51E-22	6.90E-22	3.45E-21	3.45E-21
carbon tetrachloride	56-23-5	3.87E-22	3.87E-22	2.90E-22	1.33E-21	6.64E-21	6.64E-21
chlorobenzene	108-90-7	1.47E-21	1.47E-21	1.11E-21	5.06E-21	2.53E-20	2.53E-20
chloroform	67-66-3	2.04E-21	2.04E-21	1.53E-21	6.99E-21	3.49E-20	3.49E-20
chloromethane	74-87-3	4.68E-22	4.68E-22	3.51E-22	1.60E-21	8.02E-21	8.02E-21
cis-1,3-dichloropropene	10061-01-5	9.94E-24	9.94E-24	7.45E-24	3.41E-23	1.70E-22	1.70E-22
dibromochloromethane	124-48-1	3.51E-19	3.51E-19	2.64E-19	1.20E-18	6.00E-18	6.00E-18
dichlorodifluoromethane	75-71-8	1.03E-21	1.03E-21	7.71E-22	3.53E-21	1.76E-20	1.76E-20
dimethyl phthalate	131-11-3	1.02E-18	1.02E-18	7.62E-19	3.48E-18	1.73E-17	1.73E-17
di-n-butyl phthalate	84-74-2	2.54E-16	2.54E-16	1.91E-16	8.71E-16	4.28E-15	4.28E-15
ethylbenzene	100-41-4	1.14E-21	1.14E-21	8.57E-22	3.92E-21	1.96E-20	1.96E-20
Freon 113	76-13-1	1.93E-22	1.93E-22	1.45E-22	6.62E-22	3.31E-21	3.31E-21
HD	505-60-2	2.68E-21	2.68E-21	2.01E-21	9.19E-21	4.59E-20	4.59E-20
hexane	110-54-3	1.53E-22	1.53E-22	1.15E-22	5.25E-22	2.62E-21	2.62E-21
methylene chloride	75-09-2	8.87E-22	8.87E-22	6.65E-22	3.04E-21	1.52E-20	1.52E-20
styrene	100-42-5	2.10E-18	2.10E-18	1.57E-18	7.19E-18	3.59E-17	3.59E-17
tetrachloroethene	127-18-4	2.14E-22	2.14E-22	1.61E-22	7.34E-22	3.67E-21	3.67E-21
toluene	108-88-3	7.14E-22	7.14E-22	5.35E-22	2.45E-21	1.22E-20	1.22E-20
trans-1,3-dichloropropene	10061-02-6	9.96E-22	9.96E-22	7.47E-22	3.42E-21	1.71E-20	1.71E-20
trichloroethene	79-01-6	3.96E-22	3.96E-22	2.97E-22	1.36E-21	6.79E-21	6.79E-21
trichlorofluoromethane	75-69-4	1.30E-23	1.30E-23	9.75E-24	4.46E-23	2.23E-22	2.23E-22
vinyl chloride	75-01-4	1.13E-23	1.13E-23	8.45E-24	3.86E-23	1.93E-22	1.93E-22
xylenes	1330-20-7	1.55E-20	1.55E-20	1.16E-20	5.32E-20	2.66E-19	2.66E-19
2,3,7,8-TCDF	51207-31-9						
Total PCDDs and PCDFs	NA	5.46E-24	5.46E-24	4.89E-24	1.64E-23	1.22E-23	1.22E-23
antimony	7440-36-0	4.20E-24	4.20E-24	3.15E-24	1.44E-23	7.20E-23	7.20E-23
cadmium	7440-43-9	6.93E-24	6.93E-24	5.20E-24	2.38E-23	1.19E-22	1.19E-22
chromium (3+)	7440-47-3	6.94E-23	6.94E-23	5.20E-23	2.38E-22	1.19E-21	1.19E-21
chromium (6+)	18540-29-9	6.94E-23	6.94E-23	5.20E-23	2.38E-22	1.19E-21	1.19E-21
copper	7440-50-8	1.37E-21	1.37E-21	1.03E-21	4.69E-21	2.35E-20	2.35E-20
lead	7439-92-1	8.73E-22	8.73E-22	6.55E-22	2.99E-21	1.49E-20	1.49E-20
nickel	7440-02-0	8.40E-22	8.40E-22	6.30E-22	2.88E-21	1.44E-20	1.44E-20
zinc	7440-66-6	2.47E-21	2.47E-21	1.85E-21	8.47E-21	4.24E-20	4.24E-20

a. The dermally absorbed dose of total PCDDs/PCDFs and coplanar PCBs per event are presented in units of mg TEQ/(cm^2-event)

DERMAL UPTAKE OF COPCS FROM CONTACT WITH SOIL FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS: All Exposure Scenarios							
COPC	CAS Number	Adult Resident DA_{event} mg/(cm^2-event)[a]	Adult Fisher DA_{event} mg/(cm^2-event)[a]	Adult Farmer DA_{event} mg/(cm^2-event)[a]	Adult Worker DA_{event} mg/(cm^2-event)[a]	Child DA_{event} mg/(cm^2-event)[a]	Infant DA_{event} mg/(cm^2-event)[a]
1,1,1-trichloroethane	71-55-6	6.98E-22	6.98E-22	6.98E-22	2.00E-21	2.00E-21	2.00E-21
1,1-dichloroethane	75-34-3	4.99E-22	4.99E-22	4.99E-22	1.43E-21	1.43E-21	1.43E-21
1,1-dichloroethene	75-35-4	7.47E-23	7.47E-23	7.47E-23	2.13E-22	2.13E-22	2.13E-22
1,2-dichloroethane	107-06-2	1.20E-21	1.20E-21	1.20E-21	3.44E-21	3.44E-21	3.44E-21
1,2-dichloropropane	78-87-5	1.73E-21	1.73E-21	1.73E-21	4.95E-21	4.95E-21	4.95E-21
1,3-butadiene	106-99-0	1.40E-22	1.40E-22	1.40E-22	4.00E-22	4.00E-22	4.00E-22
2-butanone	78-93-3	3.18E-18	3.18E-18	3.18E-18	9.10E-18	9.10E-18	9.10E-18
acetone	67-64-1	1.46E-18	1.46E-18	1.46E-18	4.16E-18	4.16E-18	4.16E-18
benzene	71-43-2	1.46E-20	1.46E-20	1.46E-20	4.18E-20	4.18E-20	4.18E-20
benzoic acid	65-85-0	8.06E-17	8.06E-17	8.06E-17	2.30E-16	2.30E-16	2.30E-16
benzyl alcohol	100-51-6	1.83E-16	1.83E-16	1.83E-16	5.24E-16	5.24E-16	5.24E-16
bis(2-ethylhexyl)-phthalate	117-81-7	8.75E-17	8.75E-17	8.75E-17	2.50E-16	2.50E-16	2.50E-16
bromodichloromethane	75-27-4	2.33E-19	2.33E-19	2.33E-19	6.64E-19	6.64E-19	6.64E-19
bromomethane	74-83-9	3.50E-21	3.50E-21	3.50E-21	9.99E-21	9.99E-21	9.99E-21
carbon disulfide	75-15-0	1.21E-21	1.21E-21	1.21E-21	3.45E-21	3.45E-21	3.45E-21
carbon tetrachloride	56-23-5	2.32E-21	2.32E-21	2.32E-21	6.64E-21	6.64E-21	6.64E-21
chlorobenzene	108-90-7	8.85E-21	8.85E-21	8.85E-21	2.53E-20	2.53E-20	2.53E-20
chloroform	67-66-3	1.22E-20	1.22E-20	1.22E-20	3.49E-20	3.49E-20	3.49E-20
chloromethane	74-87-3	2.81E-21	2.81E-21	2.81E-21	8.02E-21	8.02E-21	8.02E-21
cis-1,3-dichloropropene	10061-01-5	5.96E-23	5.96E-23	5.96E-23	1.70E-22	1.70E-22	1.70E-22
dibromochloromethane	124-48-1	2.11E-18	2.11E-18	2.11E-18	6.02E-18	6.02E-18	6.02E-18
dichlorodifluoromethane	75-71-8	6.17E-21	6.17E-21	6.17E-21	1.76E-20	1.76E-20	1.76E-20
dimethyl phthalate	131-11-3	6.10E-18	6.10E-18	6.10E-18	1.74E-17	1.74E-17	1.74E-17
di-n-butyl phthalate	84-74-2	1.53E-15	1.53E-15	1.53E-15	4.36E-15	4.36E-15	4.36E-15
ethylbenzene	100-41-4	6.86E-21	6.86E-21	6.86E-21	1.96E-20	1.96E-20	1.96E-20
Freon 113	76-13-1	1.16E-21	1.16E-21	1.16E-21	3.31E-21	3.31E-21	3.31E-21
HD	505-60-2	1.61E-20	1.61E-20	1.61E-20	4.59E-20	4.59E-20	4.59E-20
hexane	110-54-3	9.18E-22	9.18E-22	9.18E-22	2.62E-21	2.62E-21	2.62E-21
methylene chloride	75-09-2	5.32E-21	5.32E-21	5.32E-21	1.52E-20	1.52E-20	1.52E-20
styrene	100-42-5	1.26E-17	1.26E-17	1.26E-17	3.59E-17	3.59E-17	3.59E-17
tetrachloroethene	127-18-4	1.28E-21	1.28E-21	1.28E-21	3.67E-21	3.67E-21	3.67E-21
toluene	108-88-3	4.28E-21	4.28E-21	4.28E-21	1.22E-20	1.22E-20	1.22E-20
trans-1,3-dichloropropene	10061-02-6	5.98E-21	5.98E-21	5.98E-21	1.71E-20	1.71E-20	1.71E-20
trichloroethene	79-01-6	2.38E-21	2.38E-21	2.38E-21	6.79E-21	6.79E-21	6.79E-21
trichlorofluoromethane	75-69-4	7.80E-23	7.80E-23	7.80E-23	2.23E-22	2.23E-22	2.23E-22
vinyl chloride	75-01-4	6.76E-23	6.76E-23	6.76E-23	1.93E-22	1.93E-22	1.93E-22
xylenes	1330-20-7	9.31E-20	9.31E-20	9.31E-20	2.66E-19	2.66E-19	2.66E-19
2,3,7,8-TCDF	51207-31-9						
Total PCDDs and PCDFs	NA	8.32E-24	8.32E-24	8.32E-24	2.38E-23	2.38E-23	2.38E-23
antimony	7440-36-0	2.52E-23	2.52E-23	2.52E-23	7.20E-23	7.20E-23	7.20E-23
cadmium	7440-43-9	4.16E-23	4.16E-23	4.16E-23	1.19E-22	1.19E-22	1.19E-22
chromium (3+)	7440-47-3	4.16E-22	4.16E-22	4.16E-22	1.19E-21	1.19E-21	1.19E-21
chromium (6+)	18540-29-9	4.16E-22	4.16E-22	4.16E-22	1.19E-21	1.19E-21	1.19E-21
copper	7440-50-8	8.21E-21	8.21E-21	8.21E-21	2.35E-20	2.35E-20	2.35E-20
lead	7439-92-1	5.24E-21	5.24E-21	5.24E-21	1.50E-20	1.50E-20	1.50E-20
nickel	7440-02-0	5.04E-21	5.04E-21	5.04E-21	1.44E-20	1.44E-20	1.44E-20
zinc	7440-66-6	1.48E-20	1.48E-20	1.48E-20	4.24E-20	4.24E-20	4.24E-20

a. The dermally absorbed dose of total PCDDs/PCDFs per event are presented in units of mg TEQ/(cm^2-event)

DERMAL UPTAKE OF COPCS FROM SWIMMING FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Adult Resident and Adult Subsistence Fisher Exposure Scenarios								
COPC	CAS Number	B (dimensionless)	D_{sc} (cm^2/hr)	τ_{event} (hr)	b (dimensionless)	c (dimensionless)	t* (hr)	Dermally Absorbed Dose per Event DA_{event} mg/(cm^2-event)[a]
1,1,1-trichloroethane	71-55-6	5.77E-02	2.84E-07	5.87E-01			1.41E+00	9.67E-17
1,1-dichloroethane	75-34-3	2.56E-02	4.42E-07	3.77E-01			9.04E-01	2.05E-17
1,1-dichloroethene	75-35-4	4.59E-02	4.42E-07	3.77E-01			9.04E-01	3.32E-17
1,2-dichloroethane	107-06-2	1.61E-02	4.42E-07	3.77E-01			9.04E-01	1.36E-17
1,2-dichloropropane	78-87-5	3.19E-02	3.69E-07	4.51E-01			1.08E+00	3.20E-17
1,3-butadiene	106-99-0	4.53E-02	7.89E-07	2.11E-01			5.07E-01	3.39E-17
2-butanone	78-93-3	3.14E-03	6.25E-07	2.66E-01			6.40E-01	6.43E-17
acetone	67-64-1	1.53E-03	7.49E-07	2.22E-01			5.34E-01	5.97E-17
benzene	71-43-2	5.10E-02	5.79E-07	2.88E-01			6.91E-01	7.51E-16
benzoic acid	65-85-0	2.42E-02	3.28E-07	5.08E-01			1.22E+00	5.60E-15
benzyl alcohol	100-51-6	8.36E-03	3.93E-07	4.24E-01			1.02E+00	5.06E-15
bis(2-ethylhexyl)-phthalate	117-81-7	1.82E-01	1.03E-08	1.62E+01			3.88E+01	2.61E-15
bromodichloromethane	75-27-4	2.26E-02	1.92E-07	8.70E-01			2.09E+00	8.65E-17
bromomethane	74-83-9	1.05E-02	4.66E-07	3.58E-01			8.58E-01	4.18E-17
carbon disulfide	75-15-0	5.70E-02	5.94E-07	2.81E-01			6.73E-01	5.83E-16
carbon tetrachloride	56-23-5	7.63E-02	2.18E-07	7.64E-01			1.83E+00	3.61E-16
chlorobenzene	108-90-7	1.14E-01	3.71E-07	4.49E-01			1.08E+00	1.24E-16
chloroform	67-66-3	2.86E-02	3.40E-07	4.90E-01			1.18E+00	3.81E-16
chloromethane	74-87-3	9.02E-03	8.27E-07	2.02E-01			4.84E-01	1.57E-16
cis-1,3-dichloropropene	10061-01-5	1.74E-02	3.79E-07	4.40E-01			1.06E+00	1.69E-17
dibromochloromethane	124-48-1	1.78E-02	1.08E-07	1.54E+00			3.70E+00	8.16E-17
dichlorodifluoromethane	75-71-8	3.81E-02	3.33E-07	5.00E-01			1.20E+00	7.65E-17
dimethyl phthalate	131-11-3	7.50E-03	1.30E-07	1.29E+00			3.09E+00	7.10E-16
di-n-butyl phthalate	84-74-2	3.55E-01	4.38E-08	3.81E+00			9.14E+00	4.91E-14
ethylbenzene	100-41-4	1.94E-01	4.03E-07	4.14E-01			9.93E-01	2.47E-16
Freon 113	76-13-1	9.07E-02	1.41E-07	1.18E+00			2.83E+00	2.28E-16
HD	505-60-2	2.18E-02	2.04E-07	8.18E-01			1.96E+00	6.38E-17
hexane	110-54-3	6.98E-01	5.22E-07	3.20E-01	9.42E-01	8.95E-01	1.24E+00	1.38E-15
methylene chloride	75-09-2	1.24E-02	5.30E-07	3.14E-01			7.55E-01	1.45E-16
styrene	100-42-5	1.45E-01	4.14E-07	4.03E-01			9.67E-01	5.21E-16
tetrachloroethene	127-18-4	1.63E-01	1.87E-07	8.92E-01			2.14E+00	2.10E-16
toluene	108-88-3	1.14E-01	4.83E-07	3.45E-01			8.28E-01	1.85E-16
trans-1,3-dichloropropene	10061-02-6	4.98E-02	3.79E-07	4.40E-01			1.06E+00	5.15E-17
trichloroethene	79-01-6	5.29E-02	2.91E-07	5.72E-01			1.37E+00	6.87E-17
trichlorofluoromethane	75-69-4	5.86E-02	2.70E-07	6.18E-01			1.48E+00	6.13E-17
vinyl chloride	75-01-4	1.70E-02	7.08E-07	2.35E-01			5.65E-01	2.28E-17
xylenes	1330-20-7	2.10E-01	4.03E-07	4.13E-01			9.92E-01	6.18E-16
2,3,7,8-TCDF	51207-31-9							
Total PCDDs and PCDFs	NA	5.30E+00	2.49E-08	6.68E+00	1.99E+01	5.35E+00	2.94E+01	1.20E-21
antimony	7440-36-0							2.87E-20
cadmium	7440-43-9							1.50E-19
chromium (3+)	7440-47-3							2.45E-18
chromium (6+)	18540-29-9							2.45E-18
copper	7440-50-8							1.83E-18
lead	7439-92-1							2.25E-19
nickel	7440-02-0							5.72E-18
zinc	7440-66-6							1.67E-17

a. The dermally absorbed dose of total PCDDs/PCDFs and coplanar PCBs per event are presented in units of mg TEQ/(cm^2-event)

DERMAL UPTAKE OF COPCS FROM SWIMMING FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Adult Subsistence Farmer Exposure Scenario								
COPC	CAS Number	B (dimensionless)	D_{sc} (cm^2/hr)	τ_{event} (hr)	b (dimensionless)	c (dimensionless)	t* (hr)	Dermally Absorbed Dose per Event DA_{event} mg/(cm^2-event)
1,1,1-trichloroethane	71-55-6	5.77E-02	2.84E-07	5.87E-01			1.41E+00	9.67E-17
1,1-dichloroethane	75-34-3	2.56E-02	4.42E-07	3.77E-01			9.04E-01	2.05E-17
1,1-dichloroethene	75-35-4	4.59E-02	4.42E-07	3.77E-01			9.04E-01	3.32E-17
1,2-dichloroethane	107-06-2	1.61E-02	4.42E-07	3.77E-01			9.04E-01	1.36E-17
1,2-dichloropropane	78-87-5	3.19E-02	3.69E-07	4.51E-01			1.08E+00	3.20E-17
1,3-butadiene	106-99-0	4.53E-02	7.89E-07	2.11E-01			5.07E-01	3.39E-17
2-butanone	78-93-3	3.14E-03	6.25E-07	2.66E-01			6.40E-01	6.40E-17
acetone	67-64-1	1.53E-03	7.49E-07	2.22E-01			5.34E-01	5.96E-17
benzene	71-43-2	5.10E-02	5.79E-07	2.88E-01			6.91E-01	7.51E-16
benzoic acid	65-85-0	2.42E-02	3.28E-07	5.08E-01			1.22E+00	4.69E-15
benzyl alcohol	100-51-6	8.36E-03	3.93E-07	4.24E-01			1.02E+00	3.87E-15
bis(2-ethylhexyl)-phthalate	117-81-7	1.82E-01	1.03E-08	1.62E+01			3.88E+01	2.60E-15
bromodichloromethane	75-27-4	2.26E-02	1.92E-07	8.70E-01			2.09E+00	8.56E-17
bromomethane	74-83-9	1.05E-02	4.66E-07	3.58E-01			8.58E-01	4.18E-17
carbon disulfide	75-15-0	5.70E-02	5.94E-07	2.81E-01			6.73E-01	5.83E-16
carbon tetrachloride	56-23-5	7.63E-02	2.18E-07	7.64E-01			1.83E+00	3.61E-16
chlorobenzene	108-90-7	1.14E-01	3.71E-07	4.49E-01			1.08E+00	1.24E-16
chloroform	67-66-3	2.86E-02	3.40E-07	4.90E-01			1.18E+00	3.81E-16
chloromethane	74-87-3	9.02E-03	8.27E-07	2.02E-01			4.84E-01	1.57E-16
cis-1,3-dichloropropene	10061-01-5	1.74E-02	3.79E-07	4.40E-01			1.06E+00	1.69E-17
dibromochloromethane	124-48-1	1.78E-02	1.08E-07	1.54E+00			3.70E+00	7.87E-17
dichlorodifluoromethane	75-71-8	3.81E-02	3.33E-07	5.00E-01			1.20E+00	7.65E-17
dimethyl phthalate	131-11-3	7.50E-03	1.30E-07	1.29E+00			3.09E+00	6.88E-16
di-n-butyl phthalate	84-74-2	3.55E-01	4.38E-08	3.81E+00			9.14E+00	4.90E-14
ethylbenzene	100-41-4	1.94E-01	4.03E-07	4.14E-01			9.93E-01	2.47E-16
Freon 113	76-13-1	9.07E-02	1.41E-07	1.18E+00			2.83E+00	2.28E-16
HD	505-60-2	2.18E-02	2.04E-07	8.18E-01			1.96E+00	6.38E-17
hexane	110-54-3	6.98E-01	5.22E-07	3.20E-01	9.42E-01	8.95E-01	1.24E+00	1.38E-15
methylene chloride	75-09-2	1.24E-02	5.30E-07	3.14E-01			7.55E-01	1.45E-16
styrene	100-42-5	1.45E-01	4.14E-07	4.03E-01			9.67E-01	5.21E-16
tetrachloroethene	127-18-4	1.63E-01	1.87E-07	8.92E-01			2.14E+00	2.10E-16
toluene	108-88-3	1.14E-01	4.83E-07	3.45E-01			8.28E-01	1.85E-16
trans-1,3-dichloropropene	10061-02-6	4.98E-02	3.79E-07	4.40E-01			1.06E+00	5.15E-17
trichloroethene	79-01-6	5.29E-02	2.91E-07	5.72E-01			1.37E+00	6.87E-17
trichlorofluoromethane	75-69-4	5.86E-02	2.70E-07	6.18E-01			1.48E+00	6.13E-17
vinyl chloride	75-01-4	1.70E-02	7.08E-07	2.35E-01			5.65E-01	2.28E-17
xylenes	1330-20-7	2.10E-01	4.03E-07	4.13E-01			9.92E-01	6.18E-16
2,3,7,8-TCDF	51207-31-9							
Total PCDDs and PCDFs	NA	5.30E+00	2.49E-08	6.68E+00	1.99E+01	5.35E+00	2.94E+01	1.10E-21
antimony	7440-36-0							2.87E-20
cadmium	7440-43-9							1.50E-19
chromium (3+)	7440-47-3							2.45E-18
chromium (6+)	18540-29-9							2.45E-18
copper	7440-50-8							1.83E-18
lead	7439-92-1							2.25E-19
nickel	7440-02-0							5.72E-18
zinc	7440-66-6							1.67E-17

a. The dermally absorbed dose of total PCDDs/PCDFs and coplanar PCBs per event are presented in units of mg TEQ/(cm^2-event)

DERMAL UPTAKE OF COPCS FROM SWIMMING FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Child Exposure Scenarios								
COPC	CAS Number	B (dimensionless)	D_{sc} (cm^2/hr)	τ_{event} (hr)	b (dimensionless)	c (dimensionless)	t* (hr)	Dermally Absorbed Dose per Event DA_{event} mg/(cm^2-event)
1,1,1-trichloroethane	71-55-6	5.77E-02	2.84E-07	5.87E-01			1.41E+00	9.68E-17
1,1-dichloroethane	75-34-3	2.56E-02	4.42E-07	3.77E-01			9.04E-01	2.05E-17
1,1-dichloroethene	75-35-4	4.59E-02	4.42E-07	3.77E-01			9.04E-01	3.32E-17
1,2-dichloroethane	107-06-2	1.61E-02	4.42E-07	3.77E-01			9.04E-01	1.36E-17
1,2-dichloropropane	78-87-5	3.19E-02	3.69E-07	4.51E-01			1.08E+00	3.20E-17
1,3-butadiene	106-99-0	4.53E-02	7.89E-07	2.11E-01			5.07E-01	3.39E-17
2-butanone	78-93-3	3.14E-03	6.25E-07	2.66E-01			6.40E-01	6.96E-17
acetone	67-64-1	1.53E-03	7.49E-07	2.22E-01			5.34E-01	6.21E-17
benzene	71-43-2	5.10E-02	5.79E-07	2.88E-01			6.91E-01	7.52E-16
benzoic acid	65-85-0	2.42E-02	3.28E-07	5.08E-01			1.22E+00	2.37E-14
benzyl alcohol	100-51-6	8.36E-03	3.93E-07	4.24E-01			1.02E+00	2.57E-14
bis(2-ethylhexyl)-phthalate	117-81-7	1.82E-01	1.03E-08	1.62E+01			3.88E+01	2.82E-15
bromodichloromethane	75-27-4	2.26E-02	1.92E-07	8.70E-01			2.09E+00	1.05E-16
bromomethane	74-83-9	1.05E-02	4.66E-07	3.58E-01			8.58E-01	4.18E-17
carbon disulfide	75-15-0	5.70E-02	5.94E-07	2.81E-01			6.73E-01	5.83E-16
carbon tetrachloride	56-23-5	7.63E-02	2.18E-07	7.64E-01			1.83E+00	3.61E-16
chlorobenzene	108-90-7	1.14E-01	3.71E-07	4.49E-01			1.08E+00	1.24E-16
chloroform	67-66-3	2.86E-02	3.40E-07	4.90E-01			1.18E+00	3.82E-16
chloromethane	74-87-3	9.02E-03	8.27E-07	2.02E-01			4.84E-01	1.57E-16
cis-1,3-dichloropropene	10061-01-5	1.74E-02	3.79E-07	4.40E-01			1.06E+00	1.69E-17
dibromochloromethane	124-48-1	1.78E-02	1.08E-07	1.54E+00			3.70E+00	1.40E-16
dichlorodifluoromethane	75-71-8	3.81E-02	3.33E-07	5.00E-01			1.20E+00	7.67E-17
dimethyl phthalate	131-11-3	7.50E-03	1.30E-07	1.29E+00			3.09E+00	1.16E-15
di-n-butyl phthalate	84-74-2	3.55E-01	4.38E-08	3.81E+00			9.14E+00	5.13E-14
ethylbenzene	100-41-4	1.94E-01	4.03E-07	4.14E-01			9.93E-01	2.48E-16
Freon 113	76-13-1	9.07E-02	1.41E-07	1.18E+00			2.83E+00	2.28E-16
HD	505-60-2	2.18E-02	2.04E-07	8.18E-01			1.96E+00	6.39E-17
hexane	110-54-3	6.98E-01	5.22E-07	3.20E-01	9.42E-01	8.95E-01	1.24E+00	1.38E-15
methylene chloride	75-09-2	1.24E-02	5.30E-07	3.14E-01			7.55E-01	1.45E-16
styrene	100-42-5	1.45E-01	4.14E-07	4.03E-01			9.67E-01	5.31E-16
tetrachloroethene	127-18-4	1.63E-01	1.87E-07	8.92E-01			2.14E+00	2.10E-16
toluene	108-88-3	1.14E-01	4.83E-07	3.45E-01			8.28E-01	1.85E-16
trans-1,3-dichloropropene	10061-02-6	4.98E-02	3.79E-07	4.40E-01			1.06E+00	5.17E-17
trichloroethene	79-01-6	5.29E-02	2.91E-07	5.72E-01			1.37E+00	6.88E-17
trichlorofluoromethane	75-69-4	5.86E-02	2.70E-07	6.18E-01			1.48E+00	6.13E-17
vinyl chloride	75-01-4	1.70E-02	7.08E-07	2.35E-01			5.65E-01	2.28E-17
xylenes	1330-20-7	2.10E-01	4.03E-07	4.13E-01			9.92E-01	6.19E-16
2,3,7,8-TCDF	51207-31-9							
Total PCDDs and PCDFs	NA	5.30E+00	2.49E-08	6.68E+00	1.99E+01	5.35E+00	2.94E+01	1.00E-21
antimony	7440-36-0							2.87E-20
cadmium	7440-43-9							1.50E-19
chromium (3+)	7440-47-3							2.45E-18
chromium (6+)	18540-29-9							2.45E-18
copper	7440-50-8							1.83E-18
lead	7439-92-1							2.27E-19
nickel	7440-02-0							5.73E-18
zinc	7440-66-6							1.67E-17

a. The dermally absorbed dose of total PCDDs/PCDFs and coplanar PCBs per event are presented in units of mg TEQ/(cm^2-event)

DERMAL UPTAKE OF COPCS FROM SWIMMING FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS: All Exposure Scenarios (Except Infants and Adult Worker)								
COPC	CAS Number	B (dimensionless)	D_{sc} (cm^2/hr)	τ_{event} (hr)	b (dimensionless)	c (dimensionless)	t* (hr)	Dermally Absorbed Dose per Event DA_{event} mg/(cm^2-event)
1,1,1-trichloroethane	71-55-6	5.77E-02	2.84E-07	5.87E-01			1.41E+00	9.68E-17
1,1-dichloroethane	75-34-3	2.56E-02	4.42E-07	3.77E-01			9.04E-01	2.05E-17
1,1-dichloroethene	75-35-4	4.59E-02	4.42E-07	3.77E-01			9.04E-01	3.32E-17
1,2-dichloroethane	107-06-2	1.61E-02	4.42E-07	3.77E-01			9.04E-01	1.36E-17
1,2-dichloropropane	78-87-5	3.19E-02	3.69E-07	4.51E-01			1.08E+00	3.20E-17
1,3-butadiene	106-99-0	4.53E-02	7.89E-07	2.11E-01			5.07E-01	3.39E-17
2-butanone	78-93-3	3.14E-03	6.25E-07	2.66E-01			6.40E-01	6.96E-17
acetone	67-64-1	1.53E-03	7.49E-07	2.22E-01			5.34E-01	6.21E-17
benzene	71-43-2	5.10E-02	5.79E-07	2.88E-01			6.91E-01	7.52E-16
benzoic acid	65-85-0	2.42E-02	3.28E-07	5.08E-01			1.22E+00	2.39E-14
benzyl alcohol	100-51-6	8.36E-03	3.93E-07	4.24E-01			1.02E+00	2.89E-14
bis(2-ethylhexyl)-phthalate	117-81-7	1.82E-01	1.03E-08	1.62E+01			3.88E+01	2.82E-15
bromodichloromethane	75-27-4	2.26E-02	1.92E-07	8.70E-01			2.09E+00	1.05E-16
bromomethane	74-83-9	1.05E-02	4.66E-07	3.58E-01			8.58E-01	4.18E-17
carbon disulfide	75-15-0	5.70E-02	5.94E-07	2.81E-01			6.73E-01	5.83E-16
carbon tetrachloride	56-23-5	7.63E-02	2.18E-07	7.64E-01			1.83E+00	3.61E-16
chlorobenzene	108-90-7	1.14E-01	3.71E-07	4.49E-01			1.08E+00	1.24E-16
chloroform	67-66-3	2.86E-02	3.40E-07	4.90E-01			1.18E+00	3.82E-16
chloromethane	74-87-3	9.02E-03	8.27E-07	2.02E-01			4.84E-01	1.57E-16
cis-1,3-dichloropropene	10061-01-5	1.74E-02	3.79E-07	4.40E-01			1.06E+00	1.69E-17
dibromochloromethane	124-48-1	1.78E-02	1.08E-07	1.54E+00			3.70E+00	1.40E-16
dichlorodifluoromethane	75-71-8	3.81E-02	3.33E-07	5.00E-01			1.20E+00	7.67E-17
dimethyl phthalate	131-11-3	7.50E-03	1.30E-07	1.29E+00			3.09E+00	1.16E-15
di-n-butyl phthalate	84-74-2	3.55E-01	4.38E-08	3.81E+00			9.14E+00	5.14E-14
ethylbenzene	100-41-4	1.94E-01	4.03E-07	4.14E-01			9.93E-01	2.48E-16
Freon 113	76-13-1	9.07E-02	1.41E-07	1.18E+00			2.83E+00	2.28E-16
HD	505-60-2	2.18E-02	2.04E-07	8.18E-01			1.96E+00	6.39E-17
hexane	110-54-3	6.98E-01	5.22E-07	3.20E-01	9.42E-01	8.95E-01	1.24E+00	1.38E-15
methylene chloride	75-09-2	1.24E-02	5.30E-07	3.14E-01			7.55E-01	1.45E-16
styrene	100-42-5	1.45E-01	4.14E-07	4.03E-01			9.67E-01	5.31E-16
tetrachloroethene	127-18-4	1.63E-01	1.87E-07	8.92E-01			2.14E+00	2.10E-16
toluene	108-88-3	1.14E-01	4.83E-07	3.45E-01			8.28E-01	1.85E-16
trans-1,3-dichloropropene	10061-02-6	4.98E-02	3.79E-07	4.40E-01			1.06E+00	5.17E-17
trichloroethene	79-01-6	5.29E-02	2.91E-07	5.72E-01			1.37E+00	6.88E-17
trichlorofluoromethane	75-69-4	5.86E-02	2.70E-07	6.18E-01			1.48E+00	6.13E-17
vinyl chloride	75-01-4	1.70E-02	7.08E-07	2.35E-01			5.65E-01	2.28E-17
xylenes	1330-20-7	2.10E-01	4.03E-07	4.13E-01			9.92E-01	6.19E-16
2,3,7,8-TCDF	51207-31-9							
Total PCDDs and PCDFs	NA	5.30E+00	2.49E-08	6.68E+00	1.99E+01	5.35E+00	2.94E+01	1.68E-21
antimony	7440-36-0							2.87E-20
cadmium	7440-43-9							1.50E-19
chromium (3+)	7440-47-3							2.45E-18
chromium (6+)	18540-29-9							2.45E-18
copper	7440-50-8							1.83E-18
lead	7439-92-1							2.27E-19
nickel	7440-02-0							5.73E-18
zinc	7440-66-6							1.67E-17

a. The dermally absorbed dose of total PCDDs/PCDFs per event are presented in units of mg TEQ/(cm^2-event)

TOTAL COPC UPTAKE FOR EACH EXPOSURE SCENARIO

Adult Resident Exposure Scenario													
		CARCINOGENIC EFFECTS:						NONCARCINOGENIC EFFECTS:					
		Direct Exposure		Indirect Exposure				Direct Exposure		Indirect Exposure			
COPC	CAS Number	Inhalation Cancer Slope Factor?	Inhalation Exposure (mg/kg-day)[a]	Oral Cancer Slope Factor?	Dermal Exposure (mg/kg-day)[a]	Total Ingestion Exposure (mg/kg-day)[a]	Total Indirect Exposure (mg/kg-day)[a]	Inhalation Reference Dose?	Inhalation Exposure (mg/kg-day)[b]	Oral Reference Dose?	Dermal Exposure (mg/kg-day)[b]	Total Ingestion Exposure (mg/kg-day)[b]	Total Indirect Exposure (mg/kg-day)[b]
1,1,1-trichloroethane	71-55-6		2.84E-13		3.51E-16	2.46E-14	2.49E-14	Yes	3.98E-12	Yes	8.18E-16	1.15E-13	1.16E-13
1,1-dichloroethane	75-34-3	Yes	1.35E-13	Yes	7.42E-17	4.15E-15	4.22E-15	Yes	1.89E-12	Yes	1.73E-16	2.96E-14	2.97E-14
1,1-dichloroethene	75-35-4		1.24E-13		1.20E-16	4.22E-15	4.34E-15	Yes	1.73E-12	Yes	2.81E-16	1.47E-14	1.50E-14
1,2-dichloroethane	107-06-2	Yes	1.37E-13	Yes	4.93E-17	7.23E-15	7.28E-15	Yes	1.91E-12	Yes	1.15E-16	8.32E-14	8.34E-14
1,2-dichloropropane	78-87-5	Yes	1.64E-13	Yes	1.16E-16	7.30E-15	7.42E-15	Yes	2.30E-12	Yes	2.71E-16	4.97E-14	5.00E-14
1,3-butadiene	106-99-0	Yes	1.18E-13	Yes	1.23E-16	3.97E-15	4.09E-15	Yes	1.66E-12		2.86E-16	9.70E-15	9.99E-15
2-butanone	78-93-3		2.02E-12		2.51E-16	3.18E-12	3.18E-12	Yes	2.83E-11	Yes	8.37E-16	4.40E-11	4.40E-11
acetone	67-64-1		3.20E-12		2.25E-16	2.67E-12	2.67E-12	Yes	4.48E-11	Yes	6.39E-16	3.67E-11	3.67E-11
benzene	71-43-2	Yes	2.34E-12	Yes	2.72E-15	9.37E-14	9.64E-14	Yes	3.28E-11	Yes	6.36E-15	4.65E-13	4.71E-13
benzoic acid	65-85-0		6.95E-12		2.08E-14	1.12E-08	1.12E-08		9.73E-11	Yes	2.08E-13	1.57E-07	1.57E-07
benzyl alcohol	100-51-6		2.96E-12		1.94E-14	3.66E-09	3.66E-09		4.14E-11	Yes	2.58E-13	5.12E-08	5.12E-08
bis(2-ethylhexyl)-phthalate	117-81-7	Yes	9.16E-13	Yes	9.95E-15	6.26E-10	6.26E-10		1.28E-11	Yes	3.07E-14	1.47E-09	1.47E-09
bromodichloromethane	75-27-4	Yes	5.84E-13	Yes	3.15E-16	2.75E-12	2.75E-12		8.17E-12	Yes	9.07E-16	3.82E-11	3.82E-11
bromomethane	74-83-9		6.88E-13		1.51E-16	1.13E-14	1.14E-14	Yes	9.63E-12	Yes	3.54E-16	1.09E-13	1.10E-13
carbon disulfide	75-15-0		1.62E-12		2.11E-15	6.22E-14	6.43E-14	Yes	2.26E-11	Yes	4.93E-15	1.75E-13	1.80E-13
carbon tetrachloride	56-23-5	Yes	7.93E-13	Yes	1.31E-15	1.06E-13	1.07E-13	Yes	1.11E-11	Yes	3.05E-15	3.95E-13	3.98E-13
chlorobenzene	108-90-7		1.85E-13		4.50E-16	6.09E-14	6.13E-14	Yes	2.59E-12	Yes	1.05E-15	4.91E-13	4.92E-13
chloroform	67-66-3	Yes	2.29E-12	Yes	1.38E-15	8.21E-14	8.35E-14	Yes	3.21E-11	Yes	3.23E-15	4.47E-13	4.50E-13
chloromethane	74-87-3		2.03E-12		5.70E-16	3.45E-14	3.50E-14	Yes	2.84E-11	Yes	1.33E-15	1.65E-13	1.66E-13
cis-1,3-dichloropropene	10061-01-5	Yes	1.65E-13	Yes	6.13E-17	3.18E-15	3.24E-15	Yes	2.31E-12	Yes	1.43E-16	1.96E-14	1.98E-14
dibromochloromethane	124-48-1	Yes	5.34E-13	Yes	3.07E-16	1.84E-11	1.84E-11		7.48E-12	Yes	1.35E-15	2.57E-10	2.57E-10
dichlorodifluoromethane	75-71-8		3.50E-13		2.77E-16	2.28E-14	2.31E-14	Yes	4.90E-12	Yes	6.49E-16	1.79E-13	1.80E-13
dimethyl phthalate	131-11-3		2.29E-12		2.61E-15	1.60E-10	1.60E-10		3.20E-11		1.03E-14	2.03E-09	2.03E-09
di-n-butyl phthalate	84-74-2		3.50E-12		1.86E-13	1.15E-07	1.15E-07		4.91E-11	Yes	5.53E-13	2.72E-07	2.72E-07
ethylbenzene	100-41-4	Yes	2.17E-13	Yes	8.96E-16	5.12E-14	5.21E-14	Yes	3.04E-12	Yes	2.09E-15	2.21E-13	2.23E-13
Freon 113	76-13-1		3.62E-13		8.27E-16	1.31E-13	1.32E-13	Yes	5.07E-12	Yes	1.93E-15	3.08E-13	3.09E-13
HD	505-60-2	Yes	2.79E-13	Yes	2.31E-16	4.36E-14	4.38E-14	Yes	3.91E-12	Yes	5.41E-16	1.45E-13	1.46E-13
hexane	110-54-3		4.26E-13		4.99E-15	3.07E-13	3.12E-13	Yes	5.96E-12	Yes	1.16E-14	7.18E-13	7.30E-13
methylene chloride	75-09-2	Yes	1.92E-12	Yes	5.25E-16	4.72E-14	4.77E-14	Yes	2.69E-11	Yes	1.23E-15	4.94E-13	4.95E-13
styrene	100-42-5		5.97E-13		1.96E-15	1.56E-11	1.56E-11	Yes	8.36E-12	Yes	5.47E-15	2.17E-10	2.17E-10
tetrachloroethene	127-18-4	Yes	2.09E-13	Yes	7.61E-16	7.48E-14	7.55E-14	Yes	2.93E-12	Yes	1.78E-15	2.49E-13	2.50E-13
toluene	108-88-3		2.66E-13		6.71E-16	3.06E-14	3.12E-14	Yes	3.73E-12	Yes	1.57E-15	1.37E-13	1.38E-13
trans-1,3-dichloropropene	10061-02-6	Yes	1.75E-13	Yes	1.87E-16	1.27E-14	1.29E-14	Yes	2.45E-12	Yes	4.37E-16	8.73E-14	8.78E-14
trichloroethene	79-01-6	Yes	2.22E-13	Yes	2.49E-16	1.42E-14	1.44E-14	Yes	3.10E-12	Yes	5.82E-16	5.82E-14	5.88E-14
trichlorofluoromethane	75-69-4		1.82E-13		2.22E-16	1.22E-14	1.24E-14	Yes	2.55E-12	Yes	5.18E-16	3.46E-14	3.52E-14
vinyl chloride	75-01-4	Yes	2.04E-13	Yes	8.25E-17	2.03E-15	2.11E-15	Yes	2.85E-12	Yes	1.93E-16	8.15E-15	8.34E-15
xylenes	1330-20-7		5.38E-13		2.24E-15	1.39E-13	1.41E-13	Yes	7.53E-12	Yes	5.24E-15	6.56E-13	6.62E-13
2,3,7,8-TCDF	51207-31-9												
Total PCDDs and PCDFs	NA	Yes	1.03E-20	Yes	4.53E-21	6.37E-16	6.37E-16	Yes	1.45E-19	Yes	1.49E-20	1.52E-15	1.52E-15
antimony	7440-36-0		2.31E-15		1.04E-19	9.51E-14	9.51E-14		3.23E-14	Yes	2.45E-19	2.22E-13	2.22E-13
cadmium	7440-43-9	Yes	1.21E-14		5.44E-19	5.06E-13	5.06E-13	Yes	1.69E-13	Yes	1.27E-18	1.18E-12	1.18E-12
chromium (3+)	7440-47-3		1.11E-13		8.89E-18	6.15E-12	6.15E-12		1.55E-12	Yes	2.08E-17	1.43E-11	1.43E-11
chromium (6+)	18540-29-9	Yes	1.11E-13	Yes	8.89E-18	6.15E-12	6.15E-12	Yes	1.55E-12	Yes	2.08E-17	1.43E-11	1.43E-11
copper	7440-50-8		1.65E-13		6.66E-18	9.85E-12	9.85E-12		2.31E-12	Yes	1.61E-17	2.31E-11	2.31E-11
lead	7439-92-1	Yes	5.53E-14	Yes	8.46E-19	2.30E-12	2.30E-12		7.74E-13		2.33E-18	5.37E-12	5.37E-12
nickel	7440-02-0	Yes	2.30E-13		2.08E-17	1.21E-11	1.21E-11	Yes	3.22E-12	Yes	4.88E-17	2.82E-11	2.82E-11
zinc	7440-66-6		2.24E-12		6.06E-17	1.01E-10	1.01E-10		3.14E-11	Yes	1.43E-16	2.35E-10	2.35E-10

a. Exposures to total PCDDs/PCDFs and total coplanar PCBs are presented in units of mg TEQ/(kg-day)

b. Exposures to total PCDDs/PCDFs are presented in units of mg TEQ/(kg-day)

TOTAL COPC UPTAKE FOR EACH EXPOSURE SCENARIO

Adult Subsistence Fisher Exposure Scenario													
		CARCINOGENIC EFFECTS:						NONCARCINOGENIC EFFECTS:					
		Direct Exposure		Indirect Exposure				Direct Exposure		Indirect Exposure			
COPC	CAS Number	Inhalation Cancer Slope Factor?	Inhalation Exposure (mg/kg-day)[a]	Oral Cancer Slope Factor?	Dermal Exposure (mg/kg-day)[a]	Total Ingestion Exposure (mg/kg-day)[a]	Total Indirect Exposure (mg/kg-day)[a]	Inhalation Reference Dose?	Inhalation Exposure (mg/kg-day)[b]	Oral Reference Dose?	Dermal Exposure (mg/kg-day)[b]	Total Ingestion Exposure (mg/kg-day)[b]	Total Indirect Exposure (mg/kg-day)[b]
1,1,1-trichloroethane	71-55-6		2.84E-13		3.51E-16	5.22E-14	5.26E-14	Yes	3.98E-12	Yes	8.18E-16	1.80E-13	1.81E-13
1,1-dichloroethane	75-34-3	Yes	1.35E-13	Yes	7.42E-17	7.76E-15	7.83E-15	Yes	1.89E-12	Yes	1.73E-16	3.80E-14	3.82E-14
1,1-dichloroethene	75-35-4		1.24E-13		1.20E-16	9.86E-15	9.98E-15	Yes	1.73E-12	Yes	2.81E-16	2.78E-14	2.81E-14
1,2-dichloroethane	107-06-2	Yes	1.37E-13	Yes	4.93E-17	9.47E-15	9.52E-15	Yes	1.91E-12	Yes	1.15E-16	8.85E-14	8.86E-14
1,2-dichloropropane	78-87-5	Yes	1.64E-13	Yes	1.16E-16	1.40E-14	1.41E-14	Yes	2.30E-12	Yes	2.71E-16	6.53E-14	6.55E-14
1,3-butadiene	106-99-0	Yes	1.18E-13	Yes	1.23E-16	7.89E-15	8.01E-15	Yes	1.66E-12		2.86E-16	1.88E-14	1.91E-14
2-butanone	78-93-3		2.02E-12		2.51E-16	3.23E-12	3.23E-12	Yes	2.83E-11	Yes	8.37E-16	4.42E-11	4.42E-11
acetone	67-64-1		3.20E-12		2.25E-16	2.77E-12	2.77E-12	Yes	4.48E-11	Yes	6.39E-16	3.69E-11	3.69E-11
benzene	71-43-2	Yes	2.34E-12	Yes	2.72E-15	2.02E-13	2.04E-13	Yes	3.28E-11	Yes	6.36E-15	7.17E-13	7.23E-13
benzoic acid	65-85-0		6.95E-12		2.08E-14	1.12E-08	1.12E-08		9.73E-11	Yes	2.08E-13	1.57E-07	1.57E-07
benzyl alcohol	100-51-6		2.96E-12		1.94E-14	3.66E-09	3.66E-09		4.14E-11	Yes	2.58E-13	5.12E-08	5.12E-08
bis(2-ethylhexyl)-phthalate	117-81-7	Yes	9.16E-13	Yes	9.95E-15	6.27E-10	6.27E-10		1.28E-11	Yes	3.07E-14	1.47E-09	1.47E-09
bromodichloromethane	75-27-4	Yes	5.84E-13	Yes	3.15E-16	2.78E-12	2.78E-12		8.17E-12	Yes	9.07E-16	3.83E-11	3.83E-11
bromomethane	74-83-9		6.88E-13		1.51E-16	1.73E-14	1.74E-14	Yes	9.63E-12	Yes	3.54E-16	1.23E-13	1.24E-13
carbon disulfide	75-15-0		1.62E-12		2.11E-15	1.51E-13	1.53E-13	Yes	2.26E-11	Yes	4.93E-15	3.83E-13	3.88E-13
carbon tetrachloride	56-23-5	Yes	7.93E-13	Yes	1.31E-15	2.37E-13	2.38E-13	Yes	1.11E-11	Yes	3.05E-15	7.01E-13	7.04E-13
chlorobenzene	108-90-7		1.85E-13		4.50E-16	9.18E-14	9.23E-14	Yes	2.59E-12	Yes	1.05E-15	5.63E-13	5.64E-13
chloroform	67-66-3	Yes	2.29E-12	Yes	1.38E-15	1.71E-13	1.73E-13	Yes	3.21E-11	Yes	3.23E-15	6.55E-13	6.58E-13
chloromethane	74-87-3		2.03E-12		5.70E-16	7.46E-14	7.52E-14	Yes	2.84E-11	Yes	1.33E-15	2.59E-13	2.60E-13
cis-1,3-dichloropropene	10061-01-5	Yes	1.65E-13	Yes	6.13E-17	6.32E-15	6.38E-15	Yes	2.31E-12	Yes	1.43E-16	2.70E-14	2.71E-14
dibromochloromethane	124-48-1	Yes	5.34E-13	Yes	3.07E-16	1.84E-11	1.84E-11		7.48E-12	Yes	1.35E-15	2.57E-10	2.57E-10
dichlorodifluoromethane	75-71-8		3.50E-13		2.77E-16	4.07E-14	4.10E-14	Yes	4.90E-12	Yes	6.49E-16	2.21E-13	2.22E-13
dimethyl phthalate	131-11-3		2.29E-12		2.61E-15	1.60E-10	1.60E-10		3.20E-11		1.03E-14	2.03E-09	2.03E-09
di-n-butyl phthalate	84-74-2		3.50E-12		1.86E-13	1.15E-07	1.15E-07		4.91E-11	Yes	5.53E-13	2.73E-07	2.73E-07
ethylbenzene	100-41-4	Yes	2.17E-13	Yes	8.96E-16	1.14E-13	1.15E-13	Yes	3.04E-12	Yes	2.09E-15	3.69E-13	3.71E-13
Freon 113	76-13-1		3.62E-13		8.27E-16	2.53E-13	2.54E-13	Yes	5.07E-12	Yes	1.93E-15	5.91E-13	5.93E-13
HD	505-60-2	Yes	2.79E-13	Yes	2.31E-16	8.33E-14	8.36E-14	Yes	3.91E-12	Yes	5.41E-16	2.38E-13	2.39E-13
hexane	110-54-3		4.26E-13		4.99E-15	7.66E-13	7.71E-13	Yes	5.96E-12	Yes	1.16E-14	1.79E-12	1.80E-12
methylene chloride	75-09-2	Yes	1.92E-12	Yes	5.25E-16	6.79E-14	6.84E-14	Yes	2.69E-11	Yes	1.23E-15	5.42E-13	5.44E-13
styrene	100-42-5		5.97E-13		1.96E-15	1.57E-11	1.58E-11	Yes	8.36E-12	Yes	5.47E-15	2.17E-10	2.17E-10
tetrachloroethene	127-18-4	Yes	2.09E-13	Yes	7.61E-16	1.77E-13	1.78E-13	Yes	2.93E-12	Yes	1.78E-15	4.87E-13	4.89E-13
toluene	108-88-3		2.66E-13		6.71E-16	6.78E-14	6.84E-14	Yes	3.73E-12	Yes	1.57E-15	2.23E-13	2.25E-13
trans-1,3-dichloropropene	10061-02-6	Yes	1.75E-13	Yes	1.87E-16	2.43E-14	2.45E-14	Yes	2.45E-12	Yes	4.37E-16	1.14E-13	1.15E-13
trichloroethene	79-01-6	Yes	2.22E-13	Yes	2.49E-16	3.22E-14	3.24E-14	Yes	3.10E-12	Yes	5.82E-16	1.00E-13	1.01E-13
trichlorofluoromethane	75-69-4		1.82E-13		2.22E-16	2.94E-14	2.97E-14	Yes	2.55E-12	Yes	5.18E-16	7.49E-14	7.54E-14
vinyl chloride	75-01-4	Yes	2.04E-13	Yes	8.25E-17	4.59E-15	4.67E-15	Yes	2.85E-12	Yes	1.93E-16	1.41E-14	1.43E-14
xylenes	1330-20-7		5.38E-13		2.24E-15	3.02E-13	3.05E-13	Yes	7.53E-12	Yes	5.24E-15	1.04E-12	1.04E-12
2,3,7,8-TCDF	51207-31-9												
Total PCDDs and PCDFs	NA	Yes	1.03E-20	Yes	4.53E-21	6.38E-16	6.38E-16	Yes	1.45E-19	Yes	1.49E-20	1.52E-15	1.52E-15
antimony	7440-36-0		2.31E-15		1.04E-19	9.55E-14	9.55E-14		3.23E-14	Yes	2.45E-19	2.23E-13	2.23E-13
cadmium	7440-43-9	Yes	1.21E-14		5.44E-19	5.47E-13	5.47E-13	Yes	1.69E-13	Yes	1.27E-18	1.28E-12	1.28E-12
chromium (3+)	7440-47-3		1.11E-13		8.89E-18	6.15E-12	6.15E-12		1.55E-12	Yes	2.08E-17	1.43E-11	1.43E-11
chromium (6+)	18540-29-9	Yes	1.11E-13	Yes	8.89E-18	6.15E-12	6.15E-12	Yes	1.55E-12	Yes	2.08E-17	1.43E-11	1.43E-11
copper	7440-50-8		1.65E-13		6.66E-18	9.85E-12	9.85E-12		2.31E-12	Yes	1.61E-17	2.31E-11	2.31E-11
lead	7439-92-1	Yes	5.53E-14	Yes	8.46E-19	2.30E-12	2.30E-12		7.74E-13		2.33E-18	5.37E-12	5.37E-12
nickel	7440-02-0	Yes	2.30E-13		2.08E-17	1.21E-11	1.21E-11	Yes	3.22E-12	Yes	4.88E-17	2.83E-11	2.83E-11
zinc	7440-66-6		2.24E-12		6.06E-17	1.18E-10	1.18E-10		3.14E-11	Yes	1.43E-16	2.75E-10	2.75E-10

a. Exposures to total PCDDs/PCDFs and total coplanar PCBs are presented in units of mg TEQ/(kg-day)

b. Exposures to total PCDDs/PCDFs are presented in units of mg TEQ/(kg-day)

TOTAL COPC UPTAKE FOR EACH EXPOSURE SCENARIO

Adult Subsistence Farmer Exposure Scenario													
		CARCINOGENIC EFFECTS:						NONCARCINOGENIC EFFECTS:					
		Direct Exposure		Indirect Exposure				Direct Exposure		Indirect Exposure			
COPC	CAS Number	Inhalation Cancer Slope Factor?	Inhalation Exposure (mg/kg-day)[a]	Oral Cancer Slope Factor?	Dermal Exposure (mg/kg-day)[a]	Total Ingestion Exposure (mg/kg-day)[a]	Total Indirect Exposure (mg/kg-day)[a]	Inhalation Reference Dose?	Inhalation Exposure (mg/kg-day)[b]	Oral Reference Dose?	Dermal Exposure (mg/kg-day)[b]	Total Ingestion Exposure (mg/kg-day)[b]	Total Indirect Exposure (mg/kg-day)[b]
1,1,1-trichloroethane	71-55-6		2.84E-13		4.67E-16	4.09E-14	4.13E-14	Yes	3.98E-12	Yes	8.18E-16	2.24E-13	2.24E-13
1,1-dichloroethane	75-34-3	Yes	1.35E-13	Yes	9.89E-17	7.53E-15	7.63E-15	Yes	1.89E-12	Yes	1.73E-16	6.54E-14	6.56E-14
1,1-dichloroethene	75-35-4		1.24E-13		1.60E-16	6.17E-15	6.33E-15	Yes	1.73E-12	Yes	2.81E-16	2.35E-14	2.37E-14
1,2-dichloroethane	107-06-2	Yes	1.37E-13	Yes	6.58E-17	1.63E-14	1.64E-14	Yes	1.91E-12	Yes	1.15E-16	2.03E-13	2.03E-13
1,2-dichloropropane	78-87-5	Yes	1.64E-13	Yes	1.54E-16	1.31E-14	1.32E-14	Yes	2.30E-12	Yes	2.71E-16	1.09E-13	1.09E-13
1,3-butadiene	106-99-0	Yes	1.18E-13	Yes	1.64E-16	7.93E-15	8.10E-15	Yes	1.66E-12		2.86E-16	1.50E-14	1.53E-14
2-butanone	78-93-3		2.02E-12		3.27E-16	7.90E-12	7.90E-12	Yes	2.83E-11	Yes	8.37E-16	1.10E-10	1.10E-10
acetone	67-64-1		3.20E-12		2.96E-16	6.61E-12	6.61E-12	Yes	4.48E-11	Yes	6.39E-16	9.15E-11	9.15E-11
benzene	71-43-2	Yes	2.34E-12	Yes	3.63E-15	1.50E-13	1.54E-13	Yes	3.28E-11	Yes	6.36E-15	9.09E-13	9.15E-13
benzoic acid	65-85-0		6.95E-12		2.31E-14	2.80E-08	2.80E-08		9.73E-11	Yes	2.08E-13	3.91E-07	3.91E-07
benzyl alcohol	100-51-6		2.96E-12		1.97E-14	9.14E-09	9.14E-09		4.14E-11	Yes	2.58E-13	1.28E-07	1.28E-07
bis(2-ethylhexyl)-phthalate	117-81-7	Yes	9.16E-13	Yes	1.30E-14	2.08E-09	2.08E-09		1.28E-11	Yes	3.07E-14	3.66E-09	3.66E-09
bromodichloromethane	75-27-4	Yes	5.84E-13	Yes	4.15E-16	6.85E-12	6.85E-12		8.17E-12	Yes	9.07E-16	9.55E-11	9.55E-11
bromomethane	74-83-9		6.88E-13		2.02E-16	2.33E-14	2.35E-14	Yes	9.63E-12	Yes	3.54E-16	2.59E-13	2.59E-13
carbon disulfide	75-15-0		1.62E-12		2.82E-15	8.61E-14	8.89E-14	Yes	2.26E-11	Yes	4.93E-15	2.30E-13	2.35E-13
carbon tetrachloride	56-23-5	Yes	7.93E-13	Yes	1.74E-15	1.67E-13	1.68E-13	Yes	1.11E-11	Yes	3.05E-15	6.80E-13	6.83E-13
chlorobenzene	108-90-7		1.85E-13		6.00E-16	1.37E-13	1.37E-13	Yes	2.59E-12	Yes	1.05E-15	1.15E-12	1.16E-12
chloroform	67-66-3	Yes	2.29E-12	Yes	1.84E-15	1.36E-13	1.38E-13	Yes	3.21E-11	Yes	3.23E-15	9.08E-13	9.11E-13
chloromethane	74-87-3		2.03E-12		7.60E-16	5.44E-14	5.52E-14	Yes	2.84E-11	Yes	1.33E-15	3.18E-13	3.19E-13
cis-1,3-dichloropropene	10061-01-5	Yes	1.65E-13	Yes	8.17E-17	5.48E-15	5.56E-15	Yes	2.31E-12	Yes	1.43E-16	4.17E-14	4.18E-14
dibromochloromethane	124-48-1	Yes	5.34E-13	Yes	3.92E-16	4.59E-11	4.59E-11		7.48E-12	Yes	1.35E-15	6.42E-10	6.42E-10
dichlorodifluoromethane	75-71-8		3.50E-13		3.70E-16	4.30E-14	4.33E-14	Yes	4.90E-12	Yes	6.49E-16	4.05E-13	4.06E-13
dimethyl phthalate	131-11-3		2.29E-12		3.36E-15	4.14E-10	4.14E-10		3.20E-11		1.03E-14	5.07E-09	5.07E-09
di-n-butyl phthalate	84-74-2		3.50E-12		2.45E-13	3.83E-07	3.83E-07		4.91E-11	Yes	5.53E-13	6.80E-07	6.80E-07
ethylbenzene	100-41-4	Yes	2.17E-13	Yes	1.19E-15	7.89E-14	8.01E-14	Yes	3.04E-12	Yes	2.09E-15	4.05E-13	4.07E-13
Freon 113	76-13-1		3.62E-13		1.10E-15	2.76E-13	2.77E-13	Yes	5.07E-12	Yes	1.93E-15	4.85E-13	4.87E-13
HD	505-60-2	Yes	2.79E-13	Yes	3.08E-16	8.91E-14	8.94E-14	Yes	3.91E-12	Yes	5.41E-16	2.70E-13	2.71E-13
hexane	110-54-3		4.26E-13		6.65E-15	4.09E-13	4.16E-13	Yes	5.96E-12	Yes	1.16E-14	7.23E-13	7.35E-13
methylene chloride	75-09-2	Yes	1.92E-12	Yes	7.00E-16	1.01E-13	1.02E-13	Yes	2.69E-11	Yes	1.23E-15	1.19E-12	1.19E-12
styrene	100-42-5		5.97E-13		2.59E-15	3.89E-11	3.89E-11	Yes	8.36E-12	Yes	5.47E-15	5.41E-10	5.41E-10
tetrachloroethene	127-18-4	Yes	2.09E-13	Yes	1.02E-15	1.08E-13	1.09E-13	Yes	2.93E-12	Yes	1.78E-15	3.82E-13	3.84E-13
toluene	108-88-3		2.66E-13		8.94E-16	4.75E-14	4.84E-14	Yes	3.73E-12	Yes	1.57E-15	2.54E-13	2.56E-13
trans-1,3-dichloropropene	10061-02-6	Yes	1.75E-13	Yes	2.49E-16	2.29E-14	2.31E-14	Yes	2.45E-12	Yes	4.37E-16	1.91E-13	1.92E-13
trichloroethene	79-01-6	Yes	2.22E-13	Yes	3.32E-16	2.15E-14	2.18E-14	Yes	3.10E-12	Yes	5.82E-16	1.03E-13	1.04E-13
trichlorofluoromethane	75-69-4		1.82E-13		2.96E-16	1.71E-14	1.74E-14	Yes	2.55E-12	Yes	5.18E-16	4.62E-14	4.68E-14
vinyl chloride	75-01-4	Yes	2.04E-13	Yes	1.10E-16	3.05E-15	3.16E-15	Yes	2.85E-12	Yes	1.93E-16	1.43E-14	1.45E-14
xylenes	1330-20-7		5.38E-13		2.99E-15	2.20E-13	2.23E-13	Yes	7.53E-12	Yes	5.24E-15	1.26E-12	1.26E-12
2,3,7,8-TCDF	51207-31-9												
Total PCDDs and PCDFs	NA	Yes	1.03E-20	Yes	5.55E-21	2.11E-15	2.11E-15	Yes	1.45E-19	Yes	1.49E-20	3.80E-15	3.80E-15
antimony	7440-36-0		2.31E-15		1.39E-19	3.17E-13	3.17E-13		3.23E-14	Yes	2.45E-19	5.54E-13	5.54E-13
cadmium	7440-43-9	Yes	1.21E-14		7.25E-19	1.63E-12	1.63E-12	Yes	1.69E-13	Yes	1.27E-18	2.86E-12	2.86E-12
chromium (3+)	7440-47-3		1.11E-13		1.18E-17	2.05E-11	2.05E-11		1.55E-12	Yes	2.08E-17	3.59E-11	3.59E-11
chromium (6+)	18540-29-9	Yes	1.11E-13	Yes	1.18E-17	2.05E-11	2.05E-11	Yes	1.55E-12	Yes	2.08E-17	3.59E-11	3.59E-11
copper	7440-50-8		1.65E-13		8.86E-18	3.28E-11	3.28E-11		2.31E-12	Yes	1.61E-17	5.76E-11	5.76E-11
lead	7439-92-1	Yes	5.53E-14	Yes	1.12E-18	7.67E-12	7.67E-12		7.74E-13		2.33E-18	1.34E-11	1.34E-11
nickel	7440-02-0	Yes	2.30E-13		2.77E-17	4.02E-11	4.02E-11	Yes	3.22E-12	Yes	4.88E-17	7.03E-11	7.03E-11
zinc	7440-66-6		2.24E-12		8.08E-17	3.13E-10	3.13E-10		3.14E-11	Yes	1.43E-16	5.48E-10	5.48E-10

a. Exposures to total PCDDs/PCDFs and total coplanar PCBs are presented in units of mg TEQ/(kg-day)

b. Exposures to total PCDDs/PCDFs are presented in units of mg TEQ/(kg-day)

TOTAL COPC UPTAKE FOR EACH EXPOSURE SCENARIO

Adult Worker Exposure Scenario													
		CARCINOGENIC EFFECTS:						NONCARCINOGENIC EFFECTS:					
		Direct Exposure		Indirect Exposure				Direct Exposure		Indirect Exposure			
COPC	CAS Number	Inhalation Cancer Slope Factor?	Inhalation Exposure (mg/kg-day)[a]	Oral Cancer Slope Factor?	Dermal Exposure (mg/kg-day)[a]	Total Ingestion Exposure (mg/kg-day)[a]	Total Indirect Exposure (mg/kg-day)[a]	Inhalation Reference Dose?	Inhalation Exposure (mg/kg-day)[b]	Oral Reference Dose?	Dermal Exposure (mg/kg-day)[b]	Total Ingestion Exposure (mg/kg-day)[b]	Total Indirect Exposure (mg/kg-day)[b]
1,1,1-trichloroethane	71-55-6		6.77E-14		4.60E-21	6.04E-21	1.06E-20	Yes	9.47E-13	Yes	6.44E-20	7.40E-20	1.38E-19
1,1-dichloroethane	75-34-3	Yes	3.21E-14	Yes	3.29E-21	2.49E-21	5.78E-21	Yes	4.49E-13	Yes	4.60E-20	3.05E-20	7.66E-20
1,1-dichloroethene	75-35-4		2.94E-14		4.92E-22	8.12E-22	1.30E-21	Yes	4.12E-13	Yes	6.89E-21	9.94E-21	1.68E-20
1,2-dichloroethane	107-06-2	Yes	3.25E-14	Yes	7.92E-21	6.00E-21	1.39E-20	Yes	4.55E-13	Yes	1.11E-19	7.35E-20	1.84E-19
1,2-dichloropropane	78-87-5	Yes	3.92E-14	Yes	1.14E-20	8.66E-21	2.01E-20	Yes	5.48E-13	Yes	1.60E-19	1.06E-19	2.66E-19
1,3-butadiene	106-99-0	Yes	2.82E-14	Yes	9.22E-22	6.99E-22	1.62E-21	Yes	3.94E-13		1.29E-20	8.56E-21	2.15E-20
2-butanone	78-93-3		4.82E-13		2.10E-17	1.59E-17	3.69E-17	Yes	6.75E-12	Yes	2.94E-16	1.95E-16	4.88E-16
acetone	67-64-1		7.61E-13		9.60E-18	7.27E-18	1.69E-17	Yes	1.07E-11	Yes	1.34E-16	8.91E-17	2.23E-16
benzene	71-43-2	Yes	5.58E-13	Yes	9.64E-20	7.30E-20	1.69E-19	Yes	7.81E-12	Yes	1.35E-18	8.94E-19	2.24E-18
benzoic acid	65-85-0		1.66E-12		5.31E-16	1.66E-15	2.19E-15		2.32E-11	Yes	7.43E-15	2.03E-14	2.78E-14
benzyl alcohol	100-51-6		7.05E-13		1.21E-15	1.10E-14	1.22E-14		9.87E-12	Yes	1.69E-14	1.34E-13	1.51E-13
bis(2-ethylhexyl)-phthalate	117-81-7	Yes	2.18E-13	Yes	5.77E-16	2.40E-16	8.17E-16		3.05E-12	Yes	8.08E-15	2.94E-15	1.10E-14
bromodichloromethane	75-27-4	Yes	1.39E-13	Yes	1.53E-18	5.13E-18	6.66E-18		1.95E-12	Yes	2.15E-17	6.28E-17	8.42E-17
bromomethane	74-83-9		1.64E-13		2.30E-20	1.75E-20	4.05E-20	Yes	2.29E-12	Yes	3.23E-19	2.14E-19	5.36E-19
carbon disulfide	75-15-0		3.85E-13		7.96E-21	6.03E-21	1.40E-20	Yes	5.38E-12	Yes	1.11E-19	7.39E-20	1.85E-19
carbon tetrachloride	56-23-5	Yes	1.89E-13	Yes	1.53E-20	1.52E-20	3.05E-20	Yes	2.64E-12	Yes	2.14E-19	1.86E-19	4.00E-19
chlorobenzene	108-90-7		4.41E-14		5.83E-20	3.87E-20	9.70E-20	Yes	6.18E-13	Yes	8.16E-19	4.74E-19	1.29E-18
chloroform	67-66-3	Yes	5.46E-13	Yes	8.06E-20	6.10E-20	1.42E-19	Yes	7.64E-12	Yes	1.13E-18	7.48E-19	1.88E-18
chloromethane	74-87-3		4.83E-13		1.85E-20	1.40E-20	3.25E-20	Yes	6.76E-12	Yes	2.59E-19	1.72E-19	4.31E-19
cis-1,3-dichloropropene	10061-01-5	Yes	3.93E-14	Yes	3.93E-22	1.71E-21	2.10E-21	Yes	5.51E-13	Yes	5.50E-21	2.09E-20	2.64E-20
dibromochloromethane	124-48-1	Yes	1.27E-13	Yes	1.39E-17	5.93E-17	7.31E-17		1.78E-12	Yes	1.94E-16	7.26E-16	9.20E-16
dichlorodifluoromethane	75-71-8		8.33E-14		4.07E-20	8.09E-20	1.22E-19	Yes	1.17E-12	Yes	5.69E-19	9.92E-19	1.56E-18
dimethyl phthalate	131-11-3		5.45E-13		4.02E-17	4.06E-16	4.46E-16		7.63E-12		5.62E-16	4.97E-15	5.53E-15
di-n-butyl phthalate	84-74-2		8.34E-13		1.00E-14	2.14E-15	1.22E-14		1.17E-11	Yes	1.41E-13	2.63E-14	1.67E-13
ethylbenzene	100-41-4	Yes	5.17E-14	Yes	4.52E-20	3.42E-20	7.95E-20	Yes	7.24E-13	Yes	6.33E-19	4.20E-19	1.05E-18
Freon 113	76-13-1		8.62E-14		7.63E-21	5.78E-21	1.34E-20	Yes	1.21E-12	Yes	1.07E-19	7.09E-20	1.78E-19
HD	505-60-2	Yes	6.65E-14	Yes	1.06E-19	8.03E-20	1.86E-19	Yes	9.31E-13	Yes	1.48E-18	9.83E-19	2.47E-18
hexane	110-54-3		1.01E-13		6.05E-21	4.58E-21	1.06E-20	Yes	1.42E-12	Yes	8.47E-20	5.61E-20	1.41E-19
methylene chloride	75-09-2	Yes	4.57E-13	Yes	3.51E-20	2.66E-20	6.16E-20	Yes	6.40E-12	Yes	4.91E-19	3.25E-19	8.16E-19
styrene	100-42-5		1.42E-13		8.29E-17	4.32E-17	1.26E-16	Yes	1.99E-12	Yes	1.16E-15	5.30E-16	1.69E-15
tetrachloroethene	127-18-4	Yes	4.98E-14	Yes	8.46E-21	6.41E-21	1.49E-20	Yes	6.98E-13	Yes	1.18E-19	7.85E-20	1.97E-19
toluene	108-88-3		6.34E-14		2.82E-20	2.14E-20	4.96E-20	Yes	8.88E-13	Yes	3.95E-19	2.62E-19	6.57E-19
trans-1,3-dichloropropene	10061-02-6	Yes	4.17E-14	Yes	3.94E-20	5.99E-20	9.93E-20	Yes	5.84E-13	Yes	5.52E-19	7.34E-19	1.29E-18
trichloroethene	79-01-6	Yes	5.28E-14	Yes	1.57E-20	1.19E-20	2.75E-20	Yes	7.39E-13	Yes	2.19E-19	1.45E-19	3.65E-19
trichlorofluoromethane	75-69-4		4.34E-14		5.14E-22	6.64E-22	1.18E-21	Yes	6.08E-13	Yes	7.19E-21	8.14E-21	1.53E-20
vinyl chloride	75-01-4	Yes	4.85E-14	Yes	4.46E-22	3.38E-22	7.83E-22	Yes	6.80E-13	Yes	6.24E-21	4.13E-21	1.04E-20
xylenes	1330-20-7		1.28E-13		6.14E-19	4.65E-19	1.08E-18	Yes	1.79E-12	Yes	8.59E-18	5.69E-18	1.43E-17
2,3,7,8-TCDF	51207-31-9												
Total PCDDs and PCDFs	NA	Yes	2.46E-21	Yes	1.90E-22	4.79E-22	6.68E-22	Yes	3.45E-20	Yes	7.67E-22	1.70E-21	2.46E-21
antimony	7440-36-0		5.49E-16		1.66E-22	2.96E-21	3.13E-21		7.68E-15	Yes	2.32E-21	3.63E-20	3.86E-20
cadmium	7440-43-9	Yes	2.87E-15		2.74E-22	2.08E-20	2.10E-20	Yes	4.02E-14	Yes	3.84E-21	2.54E-19	2.58E-19
chromium (3+)	7440-47-3		2.64E-14		2.74E-21	3.75E-20	4.02E-20		3.70E-13	Yes	3.84E-20	4.59E-19	4.97E-19
chromium (6+)	18540-29-9	Yes	2.64E-14	Yes	2.74E-21	3.75E-20	4.02E-20	Yes	3.70E-13	Yes	3.84E-20	4.59E-19	4.97E-19
copper	7440-50-8		3.93E-14		5.41E-20	1.34E-18	1.39E-18		5.50E-13	Yes	7.58E-19	1.64E-17	1.71E-17
lead	7439-92-1	Yes	1.32E-14	Yes	3.45E-20	1.42E-18	1.46E-18		1.84E-13		4.83E-19	1.74E-17	1.79E-17
nickel	7440-02-0	Yes	5.48E-14		3.32E-20	4.27E-19	4.60E-19	Yes	7.67E-13	Yes	4.65E-19	5.23E-18	5.70E-18
zinc	7440-66-6		5.33E-13		9.77E-20	3.97E-18	4.06E-18		7.46E-12	Yes	1.37E-18	4.86E-17	5.00E-17

a. Exposures to total PCDDs/PCDFs and total coplanar PCBs are presented in units of mg TEQ/(kg-day)

b. Exposures to total PCDDs/PCDFs are presented in units of mg TEQ/(kg-day)

TOTAL COPC UPTAKE FOR EACH EXPOSURE SCENARIO

Child Resident Exposure Scenario													
		CARCINOGENIC EFFECTS:						NONCARCINOGENIC EFFECTS:					
		Direct Exposure		Indirect Exposure				Direct Exposure		Indirect Exposure			
COPC	CAS Number	Inhalation Cancer Slope Factor?	Inhalation Exposure (mg/kg-day)[a]	Oral Cancer Slope Factor?	Dermal Exposure (mg/kg-day)[a]	Total Ingestion Exposure (mg/kg-day)[a]	Total Indirect Exposure (mg/kg-day)[a]	Inhalation Reference Dose?	Inhalation Exposure (mg/kg-day)[b]	Oral Reference Dose?	Dermal Exposure (mg/kg-day)[b]	Total Ingestion Exposure (mg/kg-day)[b]	Total Indirect Exposure (mg/kg-day)[b]
1,1,1-trichloroethane	71-55-6		7.96E-13		1.00E-16	2.17E-14	2.18E-14	Yes	1.11E-11	Yes	1.40E-15	3.04E-13	3.06E-13
1,1-dichloroethane	75-34-3	Yes	3.77E-13	Yes	2.12E-17	4.41E-15	4.43E-15	Yes	5.28E-12	Yes	2.96E-16	6.17E-14	6.20E-14
1,1-dichloroethene	75-35-4		3.46E-13		3.43E-17	2.34E-15	2.37E-15	Yes	4.85E-12	Yes	4.80E-16	3.27E-14	3.32E-14
1,2-dichloroethane	107-06-2	Yes	3.82E-13	Yes	1.41E-17	1.20E-14	1.20E-14	Yes	5.35E-12	Yes	1.98E-16	1.68E-13	1.69E-13
1,2-dichloropropane	78-87-5	Yes	4.61E-13	Yes	3.31E-17	7.62E-15	7.65E-15	Yes	6.45E-12	Yes	4.64E-16	1.07E-13	1.07E-13
1,3-butadiene	106-99-0	Yes	3.31E-13	Yes	3.50E-17	1.93E-15	1.96E-15	Yes	4.64E-12		4.90E-16	2.70E-14	2.75E-14
2-butanone	78-93-3		5.67E-12		1.88E-16	8.70E-12	8.70E-12	Yes	7.93E-11	Yes	2.63E-15	1.22E-10	1.22E-10
acetone	67-64-1		8.95E-12		1.17E-16	6.22E-12	6.22E-12	Yes	1.25E-10	Yes	1.64E-15	8.70E-11	8.70E-11
benzene	71-43-2	Yes	6.56E-12	Yes	7.77E-16	7.32E-14	7.40E-14	Yes	9.18E-11	Yes	1.09E-14	1.03E-12	1.04E-12
benzoic acid	65-85-0		1.95E-11		2.74E-14	2.11E-08	2.11E-08		2.73E-10	Yes	3.87E-13	2.97E-07	2.97E-07
benzyl alcohol	100-51-6		8.29E-12		3.26E-14	7.84E-09	7.84E-09		1.16E-10	Yes	5.11E-13	1.23E-07	1.23E-07
bis(2-ethylhexyl)-phthalate	117-81-7	Yes	2.56E-12	Yes	6.05E-15	4.07E-10	4.07E-10		3.59E-11	Yes	8.56E-14	5.69E-09	5.69E-09
bromodichloromethane	75-27-4	Yes	1.63E-12	Yes	1.17E-16	5.17E-12	5.17E-12		2.29E-11	Yes	1.64E-15	7.24E-11	7.24E-11
bromomethane	74-83-9		1.93E-12		4.33E-17	1.81E-14	1.81E-14	Yes	2.70E-11	Yes	6.06E-16	2.53E-13	2.54E-13
carbon disulfide	75-15-0		4.52E-12		6.03E-16	2.95E-14	3.01E-14	Yes	6.33E-11	Yes	8.44E-15	4.14E-13	4.22E-13
carbon tetrachloride	56-23-5	Yes	2.22E-12	Yes	3.73E-16	7.28E-14	7.32E-14	Yes	3.11E-11	Yes	5.22E-15	1.02E-12	1.02E-12
chlorobenzene	108-90-7		5.19E-13		1.29E-16	9.64E-14	9.65E-14	Yes	7.27E-12	Yes	1.80E-15	1.35E-12	1.35E-12
chloroform	67-66-3	Yes	6.42E-12	Yes	3.95E-16	6.95E-14	6.99E-14	Yes	8.99E-11	Yes	5.53E-15	9.73E-13	9.78E-13
chloromethane	74-87-3		5.68E-12		1.63E-16	2.74E-14	2.75E-14	Yes	7.95E-11	Yes	2.28E-15	3.83E-13	3.85E-13
cis-1,3-dichloropropene	10061-01-5	Yes	4.63E-13	Yes	1.75E-17	2.95E-15	2.97E-15	Yes	6.48E-12	Yes	2.45E-16	4.13E-14	4.15E-14
dibromochloromethane	124-48-1	Yes	1.50E-12	Yes	2.21E-16	3.41E-11	3.41E-11		2.10E-11	Yes	3.10E-15	4.79E-10	4.79E-10
dichlorodifluoromethane	75-71-8		9.79E-13		7.94E-17	3.00E-14	3.01E-14	Yes	1.37E-11	Yes	1.11E-15	4.20E-13	4.21E-13
dimethyl phthalate	131-11-3		6.41E-12		1.42E-15	2.97E-10	2.97E-10		8.97E-11		1.99E-14	4.18E-09	4.18E-09
di-n-butyl phthalate	84-74-2		9.81E-12		1.08E-13	7.60E-08	7.60E-08		1.37E-10	Yes	1.52E-12	1.06E-06	1.06E-06
ethylbenzene	100-41-4	Yes	6.08E-13	Yes	2.56E-16	3.43E-14	3.45E-14	Yes	8.51E-12	Yes	3.58E-15	4.80E-13	4.84E-13
Freon 113	76-13-1		1.01E-12		2.36E-16	6.17E-14	6.19E-14	Yes	1.42E-11	Yes	3.30E-15	8.64E-13	8.67E-13
HD	505-60-2	Yes	7.82E-13	Yes	6.66E-17	2.81E-14	2.82E-14	Yes	1.09E-11	Yes	9.32E-16	3.94E-13	3.95E-13
hexane	110-54-3		1.19E-12		1.42E-15	1.25E-13	1.27E-13	Yes	1.67E-11	Yes	1.99E-14	1.75E-12	1.77E-12
methylene chloride	75-09-2	Yes	5.38E-12	Yes	1.50E-16	7.18E-14	7.20E-14	Yes	7.53E-11	Yes	2.10E-15	1.01E-12	1.01E-12
styrene	100-42-5		1.67E-12		1.01E-15	5.97E-11	5.97E-11	Yes	2.34E-11	Yes	1.41E-14	8.38E-10	8.38E-10
tetrachloroethene	127-18-4	Yes	5.86E-13	Yes	2.17E-16	3.99E-14	4.02E-14	Yes	8.20E-12	Yes	3.04E-15	5.59E-13	5.62E-13
toluene	108-88-3		7.46E-13		1.92E-16	2.12E-14	2.14E-14	Yes	1.04E-11	Yes	2.68E-15	2.97E-13	3.00E-13
trans-1,3-dichloropropene	10061-02-6	Yes	4.91E-13	Yes	5.36E-17	1.48E-14	1.49E-14	Yes	6.87E-12	Yes	7.51E-16	2.08E-13	2.09E-13
trichloroethene	79-01-6	Yes	6.21E-13	Yes	7.12E-17	9.38E-15	9.46E-15	Yes	8.69E-12	Yes	9.96E-16	1.31E-13	1.32E-13
trichlorofluoromethane	75-69-4		5.11E-13		6.33E-17	6.24E-15	6.30E-15	Yes	7.15E-12	Yes	8.87E-16	8.73E-14	8.82E-14
vinyl chloride	75-01-4	Yes	5.71E-13	Yes	2.35E-17	1.31E-15	1.34E-15	Yes	7.99E-12	Yes	3.30E-16	1.84E-14	1.87E-14
xylenes	1330-20-7		1.51E-12		6.43E-16	1.05E-13	1.05E-13	Yes	2.11E-11	Yes	9.00E-15	1.47E-12	1.48E-12
2,3,7,8-TCDF	51207-31-9												
Total PCDDs and PCDFs	NA	Yes	2.90E-20	Yes	1.19E-21	4.11E-16	4.11E-16	Yes	4.06E-19	Yes	2.86E-20	5.94E-15	5.94E-15
antimony	7440-36-0		6.45E-15		3.06E-20	5.37E-14	5.37E-14		9.04E-14	Yes	4.28E-19	7.52E-13	7.52E-13
cadmium	7440-43-9	Yes	3.38E-14		1.57E-19	2.84E-13	2.84E-13	Yes	4.73E-13	Yes	2.19E-18	3.97E-12	3.97E-12
chromium (3+)	7440-47-3		3.10E-13		2.55E-18	3.45E-12	3.45E-12		4.35E-12	Yes	3.57E-17	4.84E-11	4.84E-11
chromium (6+)	18540-29-9	Yes	3.10E-13	Yes	2.55E-18	3.45E-12	3.45E-12	Yes	4.35E-12	Yes	3.57E-17	4.84E-11	4.84E-11
copper	7440-50-8		4.62E-13		2.19E-18	5.34E-12	5.34E-12		6.47E-12	Yes	3.07E-17	7.48E-11	7.48E-11
lead	7439-92-1	Yes	1.55E-13	Yes	4.26E-19	1.32E-12	1.32E-12		2.17E-12		5.97E-18	1.84E-11	1.84E-11
nickel	7440-02-0	Yes	6.44E-13		6.10E-18	6.65E-12	6.65E-12	Yes	9.02E-12	Yes	8.54E-17	9.31E-11	9.31E-11
zinc	7440-66-6		6.27E-12		1.78E-17	5.56E-11	5.56E-11		8.78E-11	Yes	2.50E-16	7.78E-10	7.78E-10

a. Exposures to total PCDDs/PCDFs and total coplanar PCBs are presented in units of mg TEQ/(kg-day)

b. Exposures to total PCDDs/PCDFs are presented in units of mg TEQ/(kg-day)

TOTAL COPC UPTAKE FOR EACH EXPOSURE SCENARIO

Child Subsistence Fisher Exposure Scenario													
		CARCINOGENIC EFFECTS:						NONCARCINOGENIC EFFECTS:					
		Direct Exposure		Indirect Exposure				Direct Exposure		Indirect Exposure			
COPC	CAS Number	Inhalation Cancer Slope Factor?	Inhalation Exposure (mg/kg-day)[a]	Oral Cancer Slope Factor?	Dermal Exposure (mg/kg-day)[a]	Total Ingestion Exposure (mg/kg-day)[a]	Total Indirect Exposure (mg/kg-day)[a]	Inhalation Reference Dose?	Inhalation Exposure (mg/kg-day)[b]	Oral Reference Dose?	Dermal Exposure (mg/kg-day)[b]	Total Ingestion Exposure (mg/kg-day)[b]	Total Indirect Exposure (mg/kg-day)[b]
1,1,1-trichloroethane	71-55-6		7.96E-13		1.00E-16	3.30E-14	3.31E-14	Yes	1.11E-11	Yes	1.40E-15	4.62E-13	4.63E-13
1,1-dichloroethane	75-34-3	Yes	3.77E-13	Yes	2.12E-17	5.88E-15	5.90E-15	Yes	5.28E-12	Yes	2.96E-16	8.23E-14	8.26E-14
1,1-dichloroethene	75-35-4		3.46E-13		3.43E-17	4.63E-15	4.67E-15	Yes	4.85E-12	Yes	4.80E-16	6.49E-14	6.53E-14
1,2-dichloroethane	107-06-2	Yes	3.82E-13	Yes	1.41E-17	1.29E-14	1.30E-14	Yes	5.35E-12	Yes	1.98E-16	1.81E-13	1.81E-13
1,2-dichloropropane	78-87-5	Yes	4.61E-13	Yes	3.31E-17	1.03E-14	1.04E-14	Yes	6.45E-12	Yes	4.64E-16	1.45E-13	1.45E-13
1,3-butadiene	106-99-0	Yes	3.31E-13	Yes	3.50E-17	3.52E-15	3.56E-15	Yes	4.64E-12		4.90E-16	4.93E-14	4.98E-14
2-butanone	78-93-3		5.67E-12		1.88E-16	8.72E-12	8.72E-12	Yes	7.93E-11	Yes	2.63E-15	1.22E-10	1.22E-10
acetone	67-64-1		8.95E-12		1.17E-16	6.26E-12	6.26E-12	Yes	1.25E-10	Yes	1.64E-15	8.76E-11	8.76E-11
benzene	71-43-2	Yes	6.56E-12	Yes	7.77E-16	1.17E-13	1.18E-13	Yes	9.18E-11	Yes	1.09E-14	1.64E-12	1.65E-12
benzoic acid	65-85-0		1.95E-11		2.74E-14	2.11E-08	2.11E-08		2.73E-10	Yes	3.87E-13	2.97E-07	2.97E-07
benzyl alcohol	100-51-6		8.29E-12		3.26E-14	7.84E-09	7.84E-09		1.16E-10	Yes	5.11E-13	1.23E-07	1.23E-07
bis(2-ethylhexyl)-phthalate	117-81-7	Yes	2.56E-12	Yes	6.05E-15	4.07E-10	4.07E-10		3.59E-11	Yes	8.56E-14	5.70E-09	5.70E-09
bromodichloromethane	75-27-4	Yes	1.63E-12	Yes	1.17E-16	5.18E-12	5.18E-12		2.29E-11	Yes	1.64E-15	7.26E-11	7.26E-11
bromomethane	74-83-9		1.93E-12		4.33E-17	2.05E-14	2.06E-14	Yes	2.70E-11	Yes	6.06E-16	2.87E-13	2.88E-13
carbon disulfide	75-15-0		4.52E-12		6.03E-16	6.57E-14	6.63E-14	Yes	6.33E-11	Yes	8.44E-15	9.20E-13	9.29E-13
carbon tetrachloride	56-23-5	Yes	2.22E-12	Yes	3.73E-16	1.26E-13	1.27E-13	Yes	3.11E-11	Yes	5.22E-15	1.77E-12	1.77E-12
chlorobenzene	108-90-7		5.19E-13		1.29E-16	1.09E-13	1.09E-13	Yes	7.27E-12	Yes	1.80E-15	1.53E-12	1.53E-12
chloroform	67-66-3	Yes	6.42E-12	Yes	3.95E-16	1.06E-13	1.06E-13	Yes	8.99E-11	Yes	5.53E-15	1.48E-12	1.49E-12
chloromethane	74-87-3		5.68E-12		1.63E-16	4.37E-14	4.39E-14	Yes	7.95E-11	Yes	2.28E-15	6.12E-13	6.14E-13
cis-1,3-dichloropropene	10061-01-5	Yes	4.63E-13	Yes	1.75E-17	4.23E-15	4.24E-15	Yes	6.48E-12	Yes	2.45E-16	5.92E-14	5.94E-14
dibromochloromethane	124-48-1	Yes	1.50E-12	Yes	2.21E-16	3.41E-11	3.41E-11		2.10E-11	Yes	3.10E-15	4.80E-10	4.80E-10
dichlorodifluoromethane	75-71-8		9.79E-13		7.94E-17	3.73E-14	3.74E-14	Yes	1.37E-11	Yes	1.11E-15	5.22E-13	5.23E-13
dimethyl phthalate	131-11-3		6.41E-12		1.42E-15	2.97E-10	2.97E-10		8.97E-11		1.99E-14	4.18E-09	4.18E-09
di-n-butyl phthalate	84-74-2		9.81E-12		1.08E-13	7.61E-08	7.61E-08		1.37E-10	Yes	1.52E-12	1.07E-06	1.07E-06
ethylbenzene	100-41-4	Yes	6.08E-13	Yes	2.56E-16	6.01E-14	6.03E-14	Yes	8.51E-12	Yes	3.58E-15	8.41E-13	8.44E-13
Freon 113	76-13-1		1.01E-12		2.36E-16	1.11E-13	1.11E-13	Yes	1.42E-11	Yes	3.30E-15	1.56E-12	1.56E-12
HD	505-60-2	Yes	7.82E-13	Yes	6.66E-17	4.43E-14	4.44E-14	Yes	1.09E-11	Yes	9.32E-16	6.20E-13	6.21E-13
hexane	110-54-3		1.19E-12		1.42E-15	3.12E-13	3.14E-13	Yes	1.67E-11	Yes	1.99E-14	4.37E-12	4.39E-12
methylene chloride	75-09-2	Yes	5.38E-12	Yes	1.50E-16	8.03E-14	8.04E-14	Yes	7.53E-11	Yes	2.10E-15	1.12E-12	1.13E-12
styrene	100-42-5		1.67E-12		1.01E-15	5.98E-11	5.98E-11	Yes	2.34E-11	Yes	1.41E-14	8.38E-10	8.38E-10
tetrachloroethene	127-18-4	Yes	5.86E-13	Yes	2.17E-16	8.16E-14	8.18E-14	Yes	8.20E-12	Yes	3.04E-15	1.14E-12	1.15E-12
toluene	108-88-3		7.46E-13		1.92E-16	3.64E-14	3.66E-14	Yes	1.04E-11	Yes	2.68E-15	5.10E-13	5.12E-13
trans-1,3-dichloropropene	10061-02-6	Yes	4.91E-13	Yes	5.36E-17	1.96E-14	1.96E-14	Yes	6.87E-12	Yes	7.51E-16	2.74E-13	2.75E-13
trichloroethene	79-01-6	Yes	6.21E-13	Yes	7.12E-17	1.67E-14	1.68E-14	Yes	8.69E-12	Yes	9.96E-16	2.34E-13	2.35E-13
trichlorofluoromethane	75-69-4		5.11E-13		6.33E-17	1.33E-14	1.33E-14	Yes	7.15E-12	Yes	8.87E-16	1.86E-13	1.87E-13
vinyl chloride	75-01-4	Yes	5.71E-13	Yes	2.35E-17	2.36E-15	2.38E-15	Yes	7.99E-12	Yes	3.30E-16	3.30E-14	3.33E-14
xylenes	1330-20-7		1.51E-12		6.43E-16	1.72E-13	1.72E-13	Yes	2.11E-11	Yes	9.00E-15	2.40E-12	2.41E-12
2,3,7,8-TCDF	51207-31-9												
Total PCDDs and PCDFs	NA	Yes	2.90E-20	Yes	1.19E-21	4.11E-16	4.11E-16	Yes	4.06E-19	Yes	2.86E-20	5.95E-15	5.95E-15
antimony	7440-36-0		6.45E-15		3.06E-20	5.38E-14	5.38E-14		9.04E-14	Yes	4.28E-19	7.54E-13	7.54E-13
cadmium	7440-43-9	Yes	3.38E-14		1.57E-19	3.00E-13	3.00E-13	Yes	4.73E-13	Yes	2.19E-18	4.21E-12	4.21E-12
chromium (3+)	7440-47-3		3.10E-13		2.55E-18	3.46E-12	3.46E-12		4.35E-12	Yes	3.57E-17	4.84E-11	4.84E-11
chromium (6+)	18540-29-9	Yes	3.10E-13	Yes	2.55E-18	3.46E-12	3.46E-12	Yes	4.35E-12	Yes	3.57E-17	4.84E-11	4.84E-11
copper	7440-50-8		4.62E-13		2.19E-18	5.34E-12	5.34E-12		6.47E-12	Yes	3.07E-17	7.48E-11	7.48E-11
lead	7439-92-1	Yes	1.55E-13	Yes	4.26E-19	1.32E-12	1.32E-12		2.17E-12		5.97E-18	1.84E-11	1.84E-11
nickel	7440-02-0	Yes	6.44E-13		6.10E-18	6.68E-12	6.68E-12	Yes	9.02E-12	Yes	8.54E-17	9.35E-11	9.35E-11
zinc	7440-66-6		6.27E-12		1.78E-17	6.26E-11	6.26E-11		8.78E-11	Yes	2.50E-16	8.76E-10	8.76E-10

a. Exposures to total PCDDs/PCDFs and total coplanar PCBs are presented in units of mg TEQ/(kg-day)

b. Exposures to total PCDDs/PCDFs are presented in units of mg TEQ/(kg-day)

TOTAL COPC UPTAKE FOR EACH EXPOSURE SCENARIO

Child Subsistence Farmer Exposure Scenario													
		CARCINOGENIC EFFECTS:						NONCARCINOGENIC EFFECTS:					
		Direct Exposure		Indirect Exposure				Direct Exposure		Indirect Exposure			
COPC	CAS Number	Inhalation Cancer Slope Factor?	Inhalation Exposure (mg/kg-day)[a]	Oral Cancer Slope Factor?	Dermal Exposure (mg/kg-day)[a]	Total Ingestion Exposure (mg/kg-day)[a]	Total Indirect Exposure (mg/kg-day)[a]	Inhalation Reference Dose?	Inhalation Exposure (mg/kg-day)[b]	Oral Reference Dose?	Dermal Exposure (mg/kg-day)[b]	Total Ingestion Exposure (mg/kg-day)[b]	Total Indirect Exposure (mg/kg-day)[b]
1,1,1-trichloroethane	71-55-6		7.96E-13		1.00E-16	4.30E-14	4.31E-14	Yes	1.11E-11	Yes	1.40E-15	6.02E-13	6.03E-13
1,1-dichloroethane	75-34-3	Yes	3.77E-13	Yes	2.12E-17	9.52E-15	9.54E-15	Yes	5.28E-12	Yes	2.96E-16	1.33E-13	1.34E-13
1,1-dichloroethene	75-35-4		3.46E-13		3.43E-17	3.52E-15	3.56E-15	Yes	4.85E-12	Yes	4.80E-16	4.93E-14	4.98E-14
1,2-dichloroethane	107-06-2	Yes	3.82E-13	Yes	1.41E-17	2.91E-14	2.92E-14	Yes	5.35E-12	Yes	1.98E-16	4.08E-13	4.08E-13
1,2-dichloropropane	78-87-5	Yes	4.61E-13	Yes	3.31E-17	1.63E-14	1.63E-14	Yes	6.45E-12	Yes	4.64E-16	2.28E-13	2.29E-13
1,3-butadiene	106-99-0	Yes	3.31E-13	Yes	3.50E-17	3.21E-15	3.24E-15	Yes	4.64E-12		4.90E-16	4.49E-14	4.54E-14
2-butanone	78-93-3		5.67E-12		1.88E-16	2.17E-11	2.17E-11	Yes	7.93E-11	Yes	2.63E-15	3.04E-10	3.04E-10
acetone	67-64-1		8.95E-12		1.17E-16	1.55E-11	1.55E-11	Yes	1.25E-10	Yes	1.64E-15	2.17E-10	2.17E-10
benzene	71-43-2	Yes	6.56E-12	Yes	7.77E-16	1.39E-13	1.39E-13	Yes	9.18E-11	Yes	1.09E-14	1.94E-12	1.95E-12
benzoic acid	65-85-0		1.95E-11		2.74E-14	5.26E-08	5.26E-08		2.73E-10	Yes	3.87E-13	7.42E-07	7.42E-07
benzyl alcohol	100-51-6		8.29E-12		3.26E-14	1.96E-08	1.96E-08		1.16E-10	Yes	5.11E-13	3.08E-07	3.08E-07
bis(2-ethylhexyl)-phthalate	117-81-7	Yes	2.56E-12	Yes	6.05E-15	1.02E-09	1.02E-09		3.59E-11	Yes	8.56E-14	1.42E-08	1.42E-08
bromodichloromethane	75-27-4	Yes	1.63E-12	Yes	1.17E-16	1.29E-11	1.29E-11		2.29E-11	Yes	1.64E-15	1.81E-10	1.81E-10
bromomethane	74-83-9		1.93E-12		4.33E-17	4.26E-14	4.26E-14	Yes	2.70E-11	Yes	6.06E-16	5.96E-13	5.97E-13
carbon disulfide	75-15-0		4.52E-12		6.03E-16	3.73E-14	3.79E-14	Yes	6.33E-11	Yes	8.44E-15	5.23E-13	5.31E-13
carbon tetrachloride	56-23-5	Yes	2.22E-12	Yes	3.73E-16	1.28E-13	1.29E-13	Yes	3.11E-11	Yes	5.22E-15	1.80E-12	1.80E-12
chlorobenzene	108-90-7		5.19E-13		1.29E-16	2.28E-13	2.28E-13	Yes	7.27E-12	Yes	1.80E-15	3.20E-12	3.20E-12
chloroform	67-66-3	Yes	6.42E-12	Yes	3.95E-16	1.37E-13	1.37E-13	Yes	8.99E-11	Yes	5.53E-15	1.92E-12	1.92E-12
chloromethane	74-87-3		5.68E-12		1.63E-16	5.16E-14	5.17E-14	Yes	7.95E-11	Yes	2.28E-15	7.22E-13	7.24E-13
cis-1,3-dichloropropene	10061-01-5	Yes	4.63E-13	Yes	1.75E-17	6.06E-15	6.08E-15	Yes	6.48E-12	Yes	2.45E-16	8.48E-14	8.51E-14
dibromochloromethane	124-48-1	Yes	1.50E-12	Yes	2.21E-16	8.53E-11	8.53E-11		2.10E-11	Yes	3.10E-15	1.20E-09	1.20E-09
dichlorodifluoromethane	75-71-8		9.79E-13		7.94E-17	6.76E-14	6.77E-14	Yes	1.37E-11	Yes	1.11E-15	9.46E-13	9.47E-13
dimethyl phthalate	131-11-3		6.41E-12		1.42E-15	7.42E-10	7.42E-10		8.97E-11		1.99E-14	1.04E-08	1.04E-08
di-n-butyl phthalate	84-74-2		9.81E-12		1.08E-13	1.90E-07	1.90E-07		1.37E-10	Yes	1.52E-12	2.66E-06	2.66E-06
ethylbenzene	100-41-4	Yes	6.08E-13	Yes	2.56E-16	5.99E-14	6.01E-14	Yes	8.51E-12	Yes	3.58E-15	8.38E-13	8.42E-13
Freon 113	76-13-1		1.01E-12		2.36E-16	1.05E-13	1.05E-13	Yes	1.42E-11	Yes	3.30E-15	1.47E-12	1.47E-12
HD	505-60-2	Yes	7.82E-13	Yes	6.66E-17	5.40E-14	5.41E-14	Yes	1.09E-11	Yes	9.32E-16	7.56E-13	7.57E-13
hexane	110-54-3		1.19E-12		1.42E-15	1.26E-13	1.27E-13	Yes	1.67E-11	Yes	1.99E-14	1.76E-12	1.78E-12
methylene chloride	75-09-2	Yes	5.38E-12	Yes	1.50E-16	1.71E-13	1.71E-13	Yes	7.53E-11	Yes	2.10E-15	2.39E-12	2.39E-12
styrene	100-42-5		1.67E-12		1.01E-15	1.49E-10	1.49E-10	Yes	2.34E-11	Yes	1.41E-14	2.09E-09	2.09E-09
tetrachloroethene	127-18-4	Yes	5.86E-13	Yes	2.17E-16	5.82E-14	5.84E-14	Yes	8.20E-12	Yes	3.04E-15	8.14E-13	8.17E-13
toluene	108-88-3		7.46E-13		1.92E-16	3.79E-14	3.81E-14	Yes	1.04E-11	Yes	2.68E-15	5.31E-13	5.33E-13
trans-1,3-dichloropropene	10061-02-6	Yes	4.91E-13	Yes	5.36E-17	3.23E-14	3.24E-14	Yes	6.87E-12	Yes	7.51E-16	4.53E-13	4.54E-13
trichloroethene	79-01-6	Yes	6.21E-13	Yes	7.12E-17	1.61E-14	1.62E-14	Yes	8.69E-12	Yes	9.96E-16	2.25E-13	2.26E-13
trichlorofluoromethane	75-69-4		5.11E-13		6.33E-17	8.54E-15	8.60E-15	Yes	7.15E-12	Yes	8.87E-16	1.20E-13	1.20E-13
vinyl chloride	75-01-4	Yes	5.71E-13	Yes	2.35E-17	2.21E-15	2.23E-15	Yes	7.99E-12	Yes	3.30E-16	3.09E-14	3.12E-14
xylenes	1330-20-7		1.51E-12		6.43E-16	1.95E-13	1.96E-13	Yes	2.11E-11	Yes	9.00E-15	2.73E-12	2.74E-12
2,3,7,8-TCDF	51207-31-9												
Total PCDDs and PCDFs	NA	Yes	2.90E-20	Yes	1.19E-21	1.03E-15	1.03E-15	Yes	4.06E-19	Yes	2.86E-20	1.49E-14	1.49E-14
antimony	7440-36-0		6.45E-15		3.06E-20	1.34E-13	1.34E-13		9.04E-14	Yes	4.28E-19	1.88E-12	1.88E-12
cadmium	7440-43-9	Yes	3.38E-14		1.57E-19	6.93E-13	6.93E-13	Yes	4.73E-13	Yes	2.19E-18	9.70E-12	9.70E-12
chromium (3+)	7440-47-3		3.10E-13		2.55E-18	8.64E-12	8.64E-12		4.35E-12	Yes	3.57E-17	1.21E-10	1.21E-10
chromium (6+)	18540-29-9	Yes	3.10E-13	Yes	2.55E-18	8.64E-12	8.64E-12	Yes	4.35E-12	Yes	3.57E-17	1.21E-10	1.21E-10
copper	7440-50-8		4.62E-13		2.19E-18	1.34E-11	1.34E-11		6.47E-12	Yes	3.07E-17	1.87E-10	1.87E-10
lead	7439-92-1	Yes	1.55E-13	Yes	4.26E-19	3.29E-12	3.29E-12		2.17E-12		5.97E-18	4.61E-11	4.61E-11
nickel	7440-02-0	Yes	6.44E-13		6.10E-18	1.66E-11	1.66E-11	Yes	9.02E-12	Yes	8.54E-17	2.32E-10	2.32E-10
zinc	7440-66-6		6.27E-12		1.78E-17	1.32E-10	1.32E-10		8.78E-11	Yes	2.50E-16	1.85E-09	1.85E-09

a. Exposures to total PCDDs/PCDFs and total coplanar PCBs are presented in units of mg TEQ/(kg-day)

b. Exposures to total PCDDs/PCDFs are presented in units of mg TEQ/(kg-day)

TOTAL COPC UPTAKE FOR EACH EXPOSURE SCENARIO

Infant Resident Exposure Scenario													
		CARCINOGENIC EFFECTS:						NONCARCINOGENIC EFFECTS:					
		Direct Exposure		Indirect Exposure				Direct Exposure		Indirect Exposure			
COPC	CAS Number	Inhalation Cancer Slope Factor?	Inhalation Exposure (mg/kg-day)[a]	Oral Cancer Slope Factor?	Dermal Exposure (mg/kg-day)[a]	Total Ingestion Exposure (mg/kg-day)[a]	Total Indirect Exposure (mg/kg-day)[a]	Inhalation Reference Dose?	Inhalation Exposure (mg/kg-day)[b]	Oral Reference Dose?	Dermal Exposure (mg/kg-day)[b]	Total Ingestion Exposure (mg/kg-day)[b]	Total Indirect Exposure (mg/kg-day)[b]
1,1,1-trichloroethane	71-55-6		8.95E-14		7.17E-21	9.61E-15	9.61E-15	Yes	6.27E-12	Yes	5.02E-19	6.72E-13	6.72E-13
1,1-dichloroethane	75-34-3	Yes	4.24E-14	Yes	5.13E-21	1.13E-15	1.13E-15	Yes	2.97E-12	Yes	3.59E-19	7.94E-14	7.94E-14
1,1-dichloroethene	75-35-4		3.89E-14		7.67E-22	6.28E-16	6.28E-16	Yes	2.73E-12	Yes	5.37E-20	4.40E-14	4.40E-14
1,2-dichloroethane	107-06-2	Yes	4.30E-14	Yes	1.24E-20	1.35E-13	1.35E-13	Yes	3.01E-12	Yes	8.65E-19	9.47E-12	9.47E-12
1,2-dichloropropane	78-87-5	Yes	5.18E-14	Yes	1.78E-20	1.95E-15	1.95E-15	Yes	3.63E-12	Yes	1.25E-18	1.37E-13	1.37E-13
1,3-butadiene	106-99-0	Yes	3.73E-14	Yes	1.44E-21	5.35E-16	5.35E-16	Yes	2.61E-12		1.01E-19	3.75E-14	3.75E-14
2-butanone	78-93-3		6.38E-13		3.27E-17	1.86E-12	1.86E-12	Yes	4.46E-11	Yes	2.29E-15	4.66E-10	4.66E-10
acetone	67-64-1		1.01E-12		1.50E-17	1.42E-12	1.42E-12	Yes	7.05E-11	Yes	1.05E-15	4.77E-10	4.77E-10
benzene	71-43-2	Yes	7.38E-13	Yes	1.50E-19	2.23E-12	2.23E-12	Yes	5.16E-11	Yes	1.05E-17	1.56E-10	1.56E-10
benzoic acid	65-85-0		2.19E-12		8.22E-16	5.30E-09	5.30E-09		1.53E-10	Yes	5.79E-14	3.74E-07	3.74E-07
benzyl alcohol	100-51-6		9.32E-13		1.68E-15	1.77E-09	1.77E-09		6.53E-11	Yes	1.32E-13	1.40E-07	1.40E-07
bis(2-ethylhexyl)-phthalate	117-81-7	Yes	2.88E-13	Yes	8.83E-16	2.72E-10	2.72E-10		2.02E-11	Yes	6.30E-14	1.90E-08	1.90E-08
bromodichloromethane	75-27-4	Yes	1.84E-13	Yes	2.39E-18	1.12E-12	1.12E-12		1.29E-11	Yes	1.67E-16	7.83E-11	7.83E-11
bromomethane	74-83-9		2.17E-13		3.59E-20	4.30E-15	4.30E-15	Yes	1.52E-11	Yes	2.51E-18	3.01E-13	3.01E-13
carbon disulfide	75-15-0		5.09E-13		1.24E-20	8.52E-15	8.52E-15	Yes	3.56E-11	Yes	8.69E-19	1.06E-10	1.06E-10
carbon tetrachloride	56-23-5	Yes	2.50E-13	Yes	2.39E-20	2.99E-14	2.99E-14	Yes	1.75E-11	Yes	1.67E-18	2.09E-12	2.09E-12
chlorobenzene	108-90-7		5.84E-14		9.09E-20	4.91E-14	4.91E-14	Yes	4.09E-12	Yes	6.36E-18	3.44E-12	3.44E-12
chloroform	67-66-3	Yes	7.22E-13	Yes	1.26E-19	2.18E-12	2.18E-12	Yes	5.06E-11	Yes	8.79E-18	1.52E-10	1.52E-10
chloromethane	74-87-3		6.39E-13		2.89E-20	7.05E-15	7.05E-15	Yes	4.47E-11	Yes	2.02E-18	1.33E-10	1.33E-10
cis-1,3-dichloropropene	10061-01-5	Yes	5.20E-14	Yes	6.12E-22	1.55E-13	1.55E-13	Yes	3.64E-12	Yes	4.29E-20	1.09E-11	1.09E-11
dibromochloromethane	124-48-1	Yes	1.68E-13	Yes	2.16E-17	6.47E-12	6.47E-12		1.18E-11	Yes	1.52E-15	4.55E-10	4.55E-10
dichlorodifluoromethane	75-71-8		1.10E-13		6.34E-20	6.49E-15	6.49E-15	Yes	7.71E-12	Yes	4.44E-18	2.40E-11	2.40E-11
dimethyl phthalate	131-11-3		7.21E-13		6.23E-17	5.95E-11	5.95E-11		5.05E-11		4.38E-15	4.18E-09	4.18E-09
di-n-butyl phthalate	84-74-2		1.10E-12		1.54E-14	5.26E-08	5.26E-08		7.73E-11	Yes	1.10E-12	3.68E-06	3.68E-06
ethylbenzene	100-41-4	Yes	6.84E-14	Yes	7.05E-20	2.26E-13	2.26E-13	Yes	4.79E-12	Yes	4.93E-18	1.58E-11	1.58E-11
Freon 113	76-13-1		1.14E-13		1.19E-20	1.78E-14	1.78E-14	Yes	7.98E-12	Yes	8.33E-19	2.62E-11	2.62E-11
HD	505-60-2	Yes	8.79E-14	Yes	1.65E-19	7.41E-15	7.41E-15	Yes	6.16E-12	Yes	1.16E-17	5.19E-13	5.19E-13
hexane	110-54-3		1.34E-13		9.43E-21	3.75E-14	3.75E-14	Yes	9.39E-12	Yes	6.60E-19	3.37E-11	3.37E-11
methylene chloride	75-09-2	Yes	6.05E-13	Yes	5.47E-20	1.83E-12	1.83E-12	Yes	4.23E-11	Yes	3.83E-18	1.28E-10	1.28E-10
styrene	100-42-5		1.88E-13		1.29E-16	4.02E-11	4.02E-11	Yes	1.32E-11	Yes	9.05E-15	3.87E-09	3.87E-09
tetrachloroethene	127-18-4	Yes	6.59E-14	Yes	1.32E-20	2.22E-13	2.22E-13	Yes	4.62E-12	Yes	9.23E-19	1.56E-11	1.56E-11
toluene	108-88-3		8.39E-14		4.40E-20	5.79E-15	5.79E-15	Yes	5.87E-12	Yes	3.08E-18	1.84E-11	1.84E-11
trans-1,3-dichloropropene	10061-02-6	Yes	5.52E-14	Yes	6.14E-20	1.72E-13	1.72E-13	Yes	3.86E-12	Yes	4.30E-18	1.21E-11	1.21E-11
trichloroethene	79-01-6	Yes	6.99E-14	Yes	2.44E-20	2.12E-13	2.12E-13	Yes	4.89E-12	Yes	1.71E-18	1.49E-11	1.49E-11
trichlorofluoromethane	75-69-4		5.75E-14		8.01E-22	2.21E-15	2.21E-15	Yes	4.02E-12	Yes	5.61E-20	1.22E-11	1.22E-11
vinyl chloride	75-01-4	Yes	6.42E-14	Yes	6.95E-22	3.53E-16	3.53E-16	Yes	4.50E-12	Yes	4.86E-20	2.47E-14	2.47E-14
xylenes	1330-20-7		1.69E-13		9.57E-19	2.81E-14	2.81E-14	Yes	1.19E-11	Yes	6.70E-17	4.00E-11	4.00E-11
2,3,7,8-TCDF	51207-31-9												
Total PCDDs and PCDFs	NA	Yes	3.26E-21	Yes	4.39E-23	1.62E-14	1.62E-14	Yes	2.28E-19	Yes	5.98E-21	1.13E-12	1.13E-12
antimony	7440-36-0		7.26E-16		2.59E-22	1.42E-14	1.42E-14		5.08E-14	Yes	1.81E-20	2.17E-12	2.17E-12
cadmium	7440-43-9	Yes	3.80E-15		4.27E-22	7.31E-14	7.31E-14	Yes	2.66E-13	Yes	2.99E-20	1.14E-11	1.14E-11
chromium (3+)	7440-47-3		3.49E-14		4.28E-21	1.23E-12	1.23E-12		2.44E-12	Yes	2.99E-19	1.60E-10	1.60E-10
chromium (6+)	18540-29-9	Yes	3.49E-14	Yes	4.28E-21	2.29E-12	2.29E-12	Yes	2.44E-12	Yes	2.99E-19	1.60E-10	1.60E-10
copper	7440-50-8		5.20E-14		8.43E-20	1.87E-12	1.87E-12		3.64E-12	Yes	5.91E-18	2.49E-10	2.49E-10
lead	7439-92-1	Yes	1.74E-14	Yes	5.37E-20	7.74E-13	7.74E-13		1.22E-12		3.77E-18	2.56E-11	2.56E-11
nickel	7440-02-0	Yes	7.25E-14		5.18E-20	2.18E-12	2.18E-12	Yes	5.07E-12	Yes	3.63E-18	2.98E-10	2.98E-10
zinc	7440-66-6		7.05E-13		1.52E-19	1.45E-11	1.45E-11		4.94E-11	Yes	1.07E-17	2.26E-09	2.26E-09

a. Exposures to total PCDDs/PCDFs and total coplanar PCBs are presented in units of mg TEQ/(kg-day)

b. Exposures to total PCDDs/PCDFs are presented in units of mg TEQ/(kg-day)

TOTAL COPC UPTAKE FOR EACH EXPOSURE SCENARIO

Infant Subsistence Fisher Exposure Scenario													
		CARCINOGENIC EFFECTS:						NONCARCINOGENIC EFFECTS:					
		Direct Exposure		Indirect Exposure				Direct Exposure		Indirect Exposure			
COPC	CAS Number	Inhalation Cancer Slope Factor?	Inhalation Exposure (mg/kg-day)[a]	Oral Cancer Slope Factor?	Dermal Exposure (mg/kg-day)[a]	Total Ingestion Exposure (mg/kg-day)[a]	Total Indirect Exposure (mg/kg-day)[a]	Inhalation Reference Dose?	Inhalation Exposure (mg/kg-day)[b]	Oral Reference Dose?	Dermal Exposure (mg/kg-day)[b]	Total Ingestion Exposure (mg/kg-day)[b]	Total Indirect Exposure (mg/kg-day)[b]
1,1,1-trichloroethane	71-55-6		8.95E-14		7.17E-21	1.30E-14	1.30E-14	Yes	6.27E-12	Yes	5.02E-19	9.09E-13	9.09E-13
1,1-dichloroethane	75-34-3	Yes	4.24E-14	Yes	5.13E-21	1.58E-15	1.58E-15	Yes	2.97E-12	Yes	3.59E-19	1.10E-13	1.10E-13
1,1-dichloroethene	75-35-4		3.89E-14		7.67E-22	1.32E-15	1.32E-15	Yes	2.73E-12	Yes	5.37E-20	9.22E-14	9.22E-14
1,2-dichloroethane	107-06-2	Yes	4.30E-14	Yes	1.24E-20	1.36E-13	1.36E-13	Yes	3.01E-12	Yes	8.65E-19	9.51E-12	9.51E-12
1,2-dichloropropane	78-87-5	Yes	5.18E-14	Yes	1.78E-20	2.77E-15	2.77E-15	Yes	3.63E-12	Yes	1.25E-18	1.94E-13	1.94E-13
1,3-butadiene	106-99-0	Yes	3.73E-14	Yes	1.44E-21	1.01E-15	1.01E-15	Yes	2.61E-12		1.01E-19	7.10E-14	7.10E-14
2-butanone	78-93-3		6.38E-13		3.27E-17	1.87E-12	1.87E-12	Yes	4.46E-11	Yes	2.29E-15	4.67E-10	4.67E-10
acetone	67-64-1		1.01E-12		1.50E-17	1.43E-12	1.43E-12	Yes	7.05E-11	Yes	1.05E-15	4.79E-10	4.79E-10
benzene	71-43-2	Yes	7.38E-13	Yes	1.50E-19	2.26E-12	2.26E-12	Yes	5.16E-11	Yes	1.05E-17	1.58E-10	1.58E-10
benzoic acid	65-85-0		2.19E-12		8.22E-16	5.30E-09	5.30E-09		1.53E-10	Yes	5.79E-14	3.74E-07	3.74E-07
benzyl alcohol	100-51-6		9.32E-13		1.68E-15	1.77E-09	1.77E-09		6.53E-11	Yes	1.32E-13	1.40E-07	1.40E-07
bis(2-ethylhexyl)-phthalate	117-81-7	Yes	2.88E-13	Yes	8.83E-16	2.72E-10	2.72E-10		2.02E-11	Yes	6.30E-14	1.90E-08	1.90E-08
bromodichloromethane	75-27-4	Yes	1.84E-13	Yes	2.39E-18	1.12E-12	1.12E-12		1.29E-11	Yes	1.67E-16	7.86E-11	7.86E-11
bromomethane	74-83-9		2.17E-13		3.59E-20	5.04E-15	5.04E-15	Yes	1.52E-11	Yes	2.51E-18	3.53E-13	3.53E-13
carbon disulfide	75-15-0		5.09E-13		1.24E-20	1.94E-14	1.94E-14	Yes	3.56E-11	Yes	8.69E-19	1.08E-10	1.08E-10
carbon tetrachloride	56-23-5	Yes	2.50E-13	Yes	2.39E-20	4.59E-14	4.59E-14	Yes	1.75E-11	Yes	1.67E-18	3.21E-12	3.21E-12
chlorobenzene	108-90-7		5.84E-14		9.09E-20	5.29E-14	5.29E-14	Yes	4.09E-12	Yes	6.36E-18	3.70E-12	3.70E-12
chloroform	67-66-3	Yes	7.22E-13	Yes	1.26E-19	2.20E-12	2.20E-12	Yes	5.06E-11	Yes	8.79E-18	1.54E-10	1.54E-10
chloromethane	74-87-3		6.39E-13		2.89E-20	1.20E-14	1.20E-14	Yes	4.47E-11	Yes	2.02E-18	1.34E-10	1.34E-10
cis-1,3-dichloropropene	10061-01-5	Yes	5.20E-14	Yes	6.12E-22	1.56E-13	1.56E-13	Yes	3.64E-12	Yes	4.29E-20	1.09E-11	1.09E-11
dibromochloromethane	124-48-1	Yes	1.68E-13	Yes	2.16E-17	6.48E-12	6.48E-12		1.18E-11	Yes	1.52E-15	4.55E-10	4.55E-10
dichlorodifluoromethane	75-71-8		1.10E-13		6.34E-20	8.69E-15	8.69E-15	Yes	7.71E-12	Yes	4.44E-18	2.44E-11	2.44E-11
dimethyl phthalate	131-11-3		7.21E-13		6.23E-17	5.95E-11	5.95E-11		5.05E-11		4.38E-15	4.19E-09	4.19E-09
di-n-butyl phthalate	84-74-2		1.10E-12		1.54E-14	5.26E-08	5.26E-08		7.73E-11	Yes	1.10E-12	3.68E-06	3.68E-06
ethylbenzene	100-41-4	Yes	6.84E-14	Yes	7.05E-20	2.43E-13	2.43E-13	Yes	4.79E-12	Yes	4.93E-18	1.70E-11	1.70E-11
Freon 113	76-13-1		1.14E-13		1.19E-20	3.27E-14	3.27E-14	Yes	7.98E-12	Yes	8.33E-19	2.86E-11	2.86E-11
HD	505-60-2	Yes	8.79E-14	Yes	1.65E-19	1.23E-14	1.23E-14	Yes	6.16E-12	Yes	1.16E-17	8.59E-13	8.59E-13
hexane	110-54-3		1.34E-13		9.43E-21	9.36E-14	9.36E-14	Yes	9.39E-12	Yes	6.60E-19	4.26E-11	4.26E-11
methylene chloride	75-09-2	Yes	6.05E-13	Yes	5.47E-20	1.84E-12	1.84E-12	Yes	4.23E-11	Yes	3.83E-18	1.29E-10	1.29E-10
styrene	100-42-5		1.88E-13		1.29E-16	4.02E-11	4.02E-11	Yes	1.32E-11	Yes	9.05E-15	3.87E-09	3.87E-09
tetrachloroethene	127-18-4	Yes	6.59E-14	Yes	1.32E-20	2.51E-13	2.51E-13	Yes	4.62E-12	Yes	9.23E-19	1.75E-11	1.75E-11
toluene	108-88-3		8.39E-14		4.40E-20	1.03E-14	1.03E-14	Yes	5.87E-12	Yes	3.08E-18	1.91E-11	1.91E-11
trans-1,3-dichloropropene	10061-02-6	Yes	5.52E-14	Yes	6.14E-20	1.75E-13	1.75E-13	Yes	3.86E-12	Yes	4.30E-18	1.23E-11	1.23E-11
trichloroethene	79-01-6	Yes	6.99E-14	Yes	2.44E-20	2.17E-13	2.17E-13	Yes	4.89E-12	Yes	1.71E-18	1.52E-11	1.52E-11
trichlorofluoromethane	75-69-4		5.75E-14		8.01E-22	4.31E-15	4.31E-15	Yes	4.02E-12	Yes	5.61E-20	1.25E-11	1.25E-11
vinyl chloride	75-01-4	Yes	6.42E-14	Yes	6.95E-22	6.66E-16	6.66E-16	Yes	4.50E-12	Yes	4.86E-20	4.66E-14	4.66E-14
xylenes	1330-20-7		1.69E-13		9.57E-19	4.82E-14	4.82E-14	Yes	1.19E-11	Yes	6.70E-17	4.32E-11	4.32E-11
2,3,7,8-TCDF	51207-31-9												
Total PCDDs and PCDFs	NA	Yes	3.26E-21	Yes	4.39E-23	1.62E-14	1.62E-14	Yes	2.28E-19	Yes	5.98E-21	1.13E-12	1.13E-12
antimony	7440-36-0		7.26E-16		2.59E-22	1.42E-14	1.42E-14		5.08E-14	Yes	1.81E-20	2.18E-12	2.18E-12
cadmium	7440-43-9	Yes	3.80E-15		4.27E-22	7.81E-14	7.81E-14	Yes	2.66E-13	Yes	2.99E-20	1.22E-11	1.22E-11
chromium (3+)	7440-47-3		3.49E-14		4.28E-21	1.23E-12	1.23E-12		2.44E-12	Yes	2.99E-19	1.60E-10	1.60E-10
chromium (6+)	18540-29-9	Yes	3.49E-14	Yes	4.28E-21	2.29E-12	2.29E-12	Yes	2.44E-12	Yes	2.99E-19	1.60E-10	1.60E-10
copper	7440-50-8		5.20E-14		8.43E-20	1.87E-12	1.87E-12		3.64E-12	Yes	5.91E-18	2.49E-10	2.49E-10
lead	7439-92-1	Yes	1.74E-14	Yes	5.37E-20	7.74E-13	7.74E-13		1.22E-12		3.77E-18	2.56E-11	2.56E-11
nickel	7440-02-0	Yes	7.25E-14		5.18E-20	2.19E-12	2.19E-12	Yes	5.07E-12	Yes	3.63E-18	2.99E-10	2.99E-10
zinc	7440-66-6		7.05E-13		1.52E-19	1.67E-11	1.67E-11		4.94E-11	Yes	1.07E-17	2.59E-09	2.59E-09

a. Exposures to total PCDDs/PCDFs and total coplanar PCBs are presented in units of mg TEQ/(kg-day)

b. Exposures to total PCDDs/PCDFs are presented in units of mg TEQ/(kg-day)

TOTAL COPC UPTAKE FOR EACH EXPOSURE SCENARIO

Infant Subsistence Farmer Exposure Scenario													
		CARCINOGENIC EFFECTS:						NONCARCINOGENIC EFFECTS:					
		Direct Exposure		Indirect Exposure				Direct Exposure		Indirect Exposure			
COPC	CAS Number	Inhalation Cancer Slope Factor?	Inhalation Exposure (mg/kg-day)[a]	Oral Cancer Slope Factor?	Dermal Exposure (mg/kg-day)[a]	Total Ingestion Exposure (mg/kg-day)[a]	Total Indirect Exposure (mg/kg-day)[a]	Inhalation Reference Dose?	Inhalation Exposure (mg/kg-day)[b]	Oral Reference Dose?	Dermal Exposure (mg/kg-day)[b]	Total Ingestion Exposure (mg/kg-day)[b]	Total Indirect Exposure (mg/kg-day)[b]
1,1,1-trichloroethane	71-55-6		8.95E-14		7.17E-21	2.06E-14	2.06E-14	Yes	6.27E-12	Yes	5.02E-19	1.44E-12	1.44E-12
1,1-dichloroethane	75-34-3	Yes	4.24E-14	Yes	5.13E-21	2.39E-15	2.39E-15	Yes	2.97E-12	Yes	3.59E-19	1.68E-13	1.68E-13
1,1-dichloroethene	75-35-4		3.89E-14		7.67E-22	8.83E-16	8.83E-16	Yes	2.73E-12	Yes	5.37E-20	6.18E-14	6.18E-14
1,2-dichloroethane	107-06-2	Yes	4.30E-14	Yes	1.24E-20	1.47E-13	1.47E-13	Yes	3.01E-12	Yes	8.65E-19	1.03E-11	1.03E-11
1,2-dichloropropane	78-87-5	Yes	5.18E-14	Yes	1.78E-20	4.06E-15	4.06E-15	Yes	3.63E-12	Yes	1.25E-18	2.84E-13	2.84E-13
1,3-butadiene	106-99-0	Yes	3.73E-14	Yes	1.44E-21	8.60E-16	8.60E-16	Yes	2.61E-12		1.01E-19	6.02E-14	6.02E-14
2-butanone	78-93-3		6.38E-13		3.27E-17	4.64E-12	4.64E-12	Yes	4.46E-11	Yes	2.29E-15	9.67E-10	9.67E-10
acetone	67-64-1		1.01E-12		1.50E-17	3.53E-12	3.53E-12	Yes	7.05E-11	Yes	1.05E-15	8.80E-10	8.80E-10
benzene	71-43-2	Yes	7.38E-13	Yes	1.50E-19	2.27E-12	2.27E-12	Yes	5.16E-11	Yes	1.05E-17	1.59E-10	1.59E-10
benzoic acid	65-85-0		2.19E-12		8.22E-16	1.33E-08	1.33E-08		1.53E-10	Yes	5.79E-14	9.35E-07	9.35E-07
benzyl alcohol	100-51-6		9.32E-13		1.68E-15	4.44E-09	4.44E-09		6.53E-11	Yes	1.32E-13	3.49E-07	3.49E-07
bis(2-ethylhexyl)-phthalate	117-81-7	Yes	2.88E-13	Yes	8.83E-16	6.80E-10	6.80E-10		2.02E-11	Yes	6.30E-14	4.76E-08	4.76E-08
bromodichloromethane	75-27-4	Yes	1.84E-13	Yes	2.39E-18	2.79E-12	2.79E-12		1.29E-11	Yes	1.67E-16	1.95E-10	1.95E-10
bromomethane	74-83-9		2.17E-13		3.59E-20	1.00E-14	1.00E-14	Yes	1.52E-11	Yes	2.51E-18	7.01E-13	7.01E-13
carbon disulfide	75-15-0		5.09E-13		1.24E-20	1.04E-14	1.04E-14	Yes	3.56E-11	Yes	8.69E-19	1.07E-10	1.07E-10
carbon tetrachloride	56-23-5	Yes	2.50E-13	Yes	2.39E-20	5.86E-14	5.86E-14	Yes	1.75E-11	Yes	1.67E-18	4.10E-12	4.10E-12
chlorobenzene	108-90-7		5.84E-14		9.09E-20	1.19E-13	1.19E-13	Yes	4.09E-12	Yes	6.36E-18	8.32E-12	8.32E-12
chloroform	67-66-3	Yes	7.22E-13	Yes	1.26E-19	2.22E-12	2.22E-12	Yes	5.06E-11	Yes	8.79E-18	1.56E-10	1.56E-10
chloromethane	74-87-3		6.39E-13		2.89E-20	1.27E-14	1.27E-14	Yes	4.47E-11	Yes	2.02E-18	1.34E-10	1.34E-10
cis-1,3-dichloropropene	10061-01-5	Yes	5.20E-14	Yes	6.12E-22	1.58E-13	1.58E-13	Yes	3.64E-12	Yes	4.29E-20	1.10E-11	1.10E-11
dibromochloromethane	124-48-1	Yes	1.68E-13	Yes	2.16E-17	1.62E-11	1.62E-11		1.18E-11	Yes	1.52E-15	1.14E-09	1.14E-09
dichlorodifluoromethane	75-71-8		1.10E-13		6.34E-20	1.40E-14	1.40E-14	Yes	7.71E-12	Yes	4.44E-18	2.56E-11	2.56E-11
dimethyl phthalate	131-11-3		7.21E-13		6.23E-17	1.49E-10	1.49E-10		5.05E-11		4.38E-15	1.05E-08	1.05E-08
di-n-butyl phthalate	84-74-2		1.10E-12		1.54E-14	1.31E-07	1.31E-07		7.73E-11	Yes	1.10E-12	9.20E-06	9.20E-06
ethylbenzene	100-41-4	Yes	6.84E-14	Yes	7.05E-20	2.45E-13	2.45E-13	Yes	4.79E-12	Yes	4.93E-18	1.71E-11	1.71E-11
Freon 113	76-13-1		1.14E-13		1.19E-20	2.98E-14	2.98E-14	Yes	7.98E-12	Yes	8.33E-19	2.79E-11	2.79E-11
HD	505-60-2	Yes	8.79E-14	Yes	1.65E-19	1.37E-14	1.37E-14	Yes	6.16E-12	Yes	1.16E-17	9.58E-13	9.58E-13
hexane	110-54-3		1.34E-13		9.43E-21	3.77E-14	3.77E-14	Yes	9.39E-12	Yes	6.60E-19	3.37E-11	3.37E-11
methylene chloride	75-09-2	Yes	6.05E-13	Yes	5.47E-20	1.90E-12	1.90E-12	Yes	4.23E-11	Yes	3.83E-18	1.33E-10	1.33E-10
styrene	100-42-5		1.88E-13		1.29E-16	1.01E-10	1.01E-10	Yes	1.32E-11	Yes	9.05E-15	9.60E-09	9.60E-09
tetrachloroethene	127-18-4	Yes	6.59E-14	Yes	1.32E-20	2.36E-13	2.36E-13	Yes	4.62E-12	Yes	9.23E-19	1.65E-11	1.65E-11
toluene	108-88-3		8.39E-14		4.40E-20	9.93E-15	9.93E-15	Yes	5.87E-12	Yes	3.08E-18	1.92E-11	1.92E-11
trans-1,3-dichloropropene	10061-02-6	Yes	5.52E-14	Yes	6.14E-20	1.83E-13	1.83E-13	Yes	3.86E-12	Yes	4.30E-18	1.28E-11	1.28E-11
trichloroethene	79-01-6	Yes	6.99E-14	Yes	2.44E-20	2.17E-13	2.17E-13	Yes	4.89E-12	Yes	1.71E-18	1.52E-11	1.52E-11
trichlorofluoromethane	75-69-4		5.75E-14		8.01E-22	3.41E-15	3.41E-15	Yes	4.02E-12	Yes	5.61E-20	1.23E-11	1.23E-11
vinyl chloride	75-01-4	Yes	6.42E-14	Yes	6.95E-22	5.71E-16	5.71E-16	Yes	4.50E-12	Yes	4.86E-20	4.00E-14	4.00E-14
xylenes	1330-20-7		1.69E-13		9.57E-19	5.03E-14	5.03E-14	Yes	1.19E-11	Yes	6.70E-17	4.43E-11	4.43E-11
2,3,7,8-TCDF	51207-31-9												
Total PCDDs and PCDFs	NA	Yes	3.26E-21	Yes	4.39E-23	4.04E-14	4.04E-14	Yes	2.28E-19	Yes	5.98E-21	2.83E-12	2.83E-12
antimony	7440-36-0		7.26E-16		2.59E-22	3.54E-14	3.54E-14		5.08E-14	Yes	1.81E-20	5.20E-12	5.20E-12
cadmium	7440-43-9	Yes	3.80E-15		4.27E-22	1.78E-13	1.78E-13	Yes	2.66E-13	Yes	2.99E-20	2.65E-11	2.65E-11
chromium (3+)	7440-47-3		3.49E-14		4.28E-21	3.09E-12	3.09E-12		2.44E-12	Yes	2.99E-19	3.90E-10	3.90E-10
chromium (6+)	18540-29-9	Yes	3.49E-14	Yes	4.28E-21	5.57E-12	5.57E-12	Yes	2.44E-12	Yes	2.99E-19	3.90E-10	3.90E-10
copper	7440-50-8		5.20E-14		8.43E-20	4.69E-12	4.69E-12		3.64E-12	Yes	5.91E-18	6.06E-10	6.06E-10
lead	7439-92-1	Yes	1.74E-14	Yes	5.37E-20	1.86E-12	1.86E-12		1.22E-12		3.77E-18	6.41E-11	6.41E-11
nickel	7440-02-0	Yes	7.25E-14		5.18E-20	5.43E-12	5.43E-12	Yes	5.07E-12	Yes	3.63E-18	7.22E-10	7.22E-10
zinc	7440-66-6		7.05E-13		1.52E-19	3.43E-11	3.43E-11		4.94E-11	Yes	1.07E-17	5.09E-09	5.09E-09

a. Exposures to total PCDDs/PCDFs and total coplanar PCBs are presented in units of mg TEQ/(kg-day)

b. Exposures to total PCDDs/PCDFs are presented in units of mg TEQ/(kg-day)

MEDIA CONCENTRATIONS OF COPCS

CONCENTRATIONS OF COPCS IN SOIL FOR EACH EXPOSURE SCENARIO

		Soil Loss Constants							Soil Concentrations					
		Due to Leaching	Due to Erosion	Due to Runoff	Due to Degradation	Due to Volatilization	Due to All Processes	Deposition Term	Highest Annual Average Soil Concentration	Soil Concentration Averaged Over 30 Year Exposure Duration	Soil Concentration Averaged Over 40 Year Exposure Duration	Soil Concentration Averaged Over 25 Year Exposure Duration	Soil Concentration Averaged Over 5 Year Exposure Duration	Soil Concentration Averaged Over 1 Year Exposure Duration
		(yr^{-1})	(yr^{-1})	(yr^{-1})	(yr^{-1})	(yr^{-1})	(yr^{-1})	(mg COPC/kg soil-yr)	(mg COPC/kg soil)[a]	(mg COPC/kg soil)	(mg COPC/kg soil)	(mg COPC/kg soil)	(mg COPC/kg soil)	(mg COPC/kg soil)
COPC	CAS No.	ksl	kse	ksr	ksg	ksv	ks	Ds	Cs_{ID}	Cs	Cs	Cs	Cs	Cs
1,1,1-trichloroethane	71-55-6	0.00	0	1.20	0.93	316,709.81	316,711.94	5.47E-08	1.73E-13	2.88E-14	2.16E-14	3.46E-14	1.73E-13	1.73E-13
1,1-dichloroethane	75-34-3	0.00	0	2.19	1.64	363,899.42	363,903.25	2.59E-08	7.13E-14	1.19E-14	8.91E-15	1.43E-14	7.13E-14	7.13E-14
1,1-dichloroethene	75-35-4	0.00	0	1.67	1.41	1,024,649.40	1,024,652.48	2.38E-08	2.32E-14	3.87E-15	2.90E-15	4.65E-15	2.32E-14	2.32E-14
1,2-dichloroethane	107-06-2	0.00	0	2.51	1.41	153,014.31	153,018.24	2.63E-08	1.72E-13	2.86E-14	2.15E-14	3.44E-14	1.72E-13	1.72E-13
1,2-dichloropropane	78-87-5	0.00	0	1.90	0.2	127,838.88	127,840.97	3.17E-08	2.48E-13	4.13E-14	3.10E-14	4.95E-14	2.48E-13	2.48E-13
1,3-butadiene	106-99-0	0.00	0	0.72	9.03375	1,138,884.74	1,138,894.50	2.28E-08	2.00E-14	3.33E-15	2.50E-15	4.00E-15	2.00E-14	2.00E-14
2-butanone	78-93-3	0.00	0	1.00	36.14	819.86	857.00	3.90E-07	4.55E-10	7.58E-11	5.68E-11	9.10E-11	4.55E-10	4.55E-10
acetone	67-64-1	0.00	0	1.92	36.14	2,920.84	2,958.90	6.16E-07	2.08E-10	3.47E-11	2.60E-11	4.16E-11	2.08E-10	2.08E-10
benzene	71-43-2	0.00	0	1.67	15.81	215,789.41	215,806.89	4.51E-07	2.09E-12	3.48E-13	2.61E-13	4.18E-13	2.09E-12	2.09E-12
benzoic acid	65-85-0	0.00	0	3.04	0	25.13	28.17	1.34E-06	4.75E-08	7.92E-09	5.94E-09	9.50E-09	4.72E-08	4.72E-08
benzyl alcohol	100-51-6	0.00	0	1.67	0	0.15	1.82	5.70E-07	3.13E-07	5.22E-08	3.92E-08	6.27E-08	2.79E-07	2.79E-07
bis(2-ethylhexyl)-phthalate	117-81-7	0.00	0	0.00	11.04	0.00	11.04	7.59E-08	6.88E-09	1.15E-09	8.59E-10	1.38E-09	6.75E-09	6.75E-09
bromodichloromethane	75-27-4	0.00	0	1.74	0	764.31	766.05	1.12E-07	1.47E-10	2.44E-11	1.83E-11	2.93E-11	1.47E-10	1.47E-10
bromomethane	74-83-9	0.00	0	1.90	9.03	265,224.80	265,235.73	1.32E-07	4.99E-13	8.32E-14	6.24E-14	9.99E-14	4.99E-13	4.99E-13
carbon disulfide	75-15-0	0.00	0	1.89	0	1,801,581.36	1,801,583.25	3.11E-07	1.73E-13	2.88E-14	2.16E-14	3.45E-14	1.73E-13	1.73E-13
carbon tetrachloride	56-23-5	0.00	0	0.88	0.7	351,308.37	351,309.94	1.53E-07	4.35E-13	7.25E-14	5.43E-14	8.70E-14	4.35E-13	4.35E-13
chlorobenzene	108-90-7	0.00	0	0.74	1.69	32,256.15	32,258.58	3.57E-08	1.11E-12	1.84E-13	1.38E-13	2.21E-13	1.11E-12	1.11E-12
chloroform	67-66-3	0.00	0	1.98	1.41	252,746.85	252,750.25	4.41E-07	1.75E-12	2.91E-13	2.18E-13	3.49E-13	1.75E-12	1.75E-12
chloromethane	74-87-3	0.00	0	2.19	9.03	973,259.29	973,270.51	3.90E-07	4.01E-13	6.69E-14	5.01E-14	8.02E-14	4.01E-13	4.01E-13
cis-1,3-dichloropropene	10061-01-5	0.00	0	1.89	22.4	650,648.04	650,672.32	3.18E-08	4.89E-14	8.15E-15	6.11E-15	9.78E-15	4.89E-14	4.89E-14
dibromochloromethane	124-48-1	0.00	0	0.51	1.41	58.78	60.69	1.03E-07	1.70E-09	2.83E-10	2.12E-10	3.39E-10	1.69E-09	1.69E-09
dichlorodifluoromethane	75-71-8	0.00	0	0.56	1.41	29,069.87	29,071.84	6.73E-08	2.32E-12	3.86E-13	2.90E-13	4.63E-13	2.32E-12	2.32E-12
dimethyl phthalate	131-11-3	0.00	0	0.89	36.14	0.92	37.96	4.41E-07	1.16E-08	1.93E-09	1.45E-09	2.32E-09	1.15E-08	1.15E-08
di-n-butyl phthalate	84-74-2	0.00	0	0.00	11	0.00	11.00	6.75E-07	6.13E-08	1.02E-08	7.67E-09	1.23E-08	6.02E-08	6.02E-08
ethylbenzene	100-41-4	0.00	0	0.49	25.29	42,648.74	42,674.52	4.18E-08	9.80E-13	1.63E-13	1.22E-13	1.96E-13	9.80E-13	9.80E-13
Freon 113	76-13-1	0.00	0	0.11	0.702625	421,043.73	421,044.54	6.97E-08	1.66E-13	2.76E-14	2.07E-14	3.31E-14	1.66E-13	1.66E-13
HD	505-60-2	0.00	0	0.17	23349	48.17	23,397.34	5.38E-08	2.30E-12	3.83E-13	2.87E-13	4.59E-13	2.30E-12	2.30E-12
hexane	110-54-3	0.00	0	0.03	0	624,969.56	624,969.58	8.20E-08	1.31E-13	2.19E-14	1.64E-14	2.62E-14	1.31E-13	1.31E-13
methylene chloride	75-09-2	0.00	0	2.69	9.03	486,489.52	486,501.24	3.70E-07	7.60E-13	1.27E-13	9.50E-14	1.52E-13	7.60E-13	7.60E-13
styrene	100-42-5	0.00	0	0.00	9.03	83.94	92.98	1.15E-07	1.24E-09	2.06E-10	1.55E-10	2.47E-10	1.23E-09	1.23E-09
tetrachloroethene	127-18-4	0.00	0	0.95	0.7	219,676.70	219,678.35	4.03E-08	1.83E-13	3.06E-14	2.29E-14	3.67E-14	1.83E-13	1.83E-13
toluene	108-88-3	0.00	0	0.86	11.5	83,811.07	83,823.42	5.13E-08	6.12E-13	1.02E-13	7.65E-14	1.22E-13	6.12E-13	6.12E-13
trans-1,3-dichloropropene	10061-02-6	0.00	0	0.46	0	19,687.98	19,688.45	3.37E-08	1.71E-12	2.86E-13	2.14E-13	3.43E-13	1.71E-12	1.71E-12
trichloroethene	79-01-6	0.00	0	0.91	0.7	125,792.23	125,793.85	4.27E-08	3.39E-13	5.66E-14	4.24E-14	6.79E-14	3.39E-13	3.39E-13
trichlorofluoromethane	75-69-4	0.00	0	1.13	0.7	1,847,653.05	1,847,654.89	3.51E-08	1.90E-14	3.17E-15	2.38E-15	3.80E-15	1.90E-14	1.90E-14
vinyl chloride	75-01-4	0.00	0	2.49	1.41	4,064,513.63	4,064,517.52	3.93E-08	9.66E-15	1.61E-15	1.21E-15	1.93E-15	9.66E-15	9.66E-15
xylenes	1330-20-7	0.00	0	0.11	9.03	7,772.27	7,781.41	1.03E-07	1.33E-11	2.22E-12	1.66E-12	2.66E-12	1.33E-11	1.33E-11
2,3,7,8-TCDF	51207-31-9	0.00	0	0.00	0.03	0.00	0.03	8.58E-15	3.96E-14	2.60E-14	2.33E-14	2.74E-14	2.03E-14	2.03E-14
Total PCDDs and PCDFs	NA													
antimony	7440-36-0	0.00	0	0.01	0	2,253.64	2,253.65	1.91E-10	8.48E-14	1.41E-14	1.06E-14	1.70E-14	8.48E-14	8.48E-14
cadmium	7440-43-9	0.00	0	0.01	0	1,683.23	1,683.23	1.00E-09	5.94E-13	9.91E-14	7.43E-14	1.19E-13	5.94E-13	5.94E-13
chromium (3+)	7440-47-3	0.00	0	0.02	0	8,571.24	8,571.26	9.19E-09	1.07E-12	1.79E-13	1.34E-13	2.14E-13	1.07E-12	1.07E-12
chromium (6+)	18540-29-9	0.00	0	0.02	0	8,571.24	8,571.26	9.19E-09	1.07E-12	1.79E-13	1.34E-13	2.14E-13	1.07E-12	1.07E-12
copper	7440-50-8	0.00	0	0.00	0	357.39	357.39	1.37E-08	3.83E-11	6.38E-12	4.79E-12	7.66E-12	3.83E-11	3.83E-11
lead	7439-92-1	0.00	0	0.00	0	112.68	112.68	4.58E-09	4.07E-11	6.78E-12	5.09E-12	8.14E-12	4.06E-11	4.06E-11
nickel	7440-02-0	0.00	0	0.01	0	1,560.22	1,560.22	1.91E-08	1.22E-11	2.04E-12	1.53E-12	2.44E-12	1.22E-11	1.22E-11
zinc	7440-66-6	0.00	0	0.01	0	1,635.71	1,635.72	1.86E-07	1.13E-10	1.89E-11	1.42E-11	2.27E-11	1.13E-10	1.13E-10

CONCENTRATIONS OF COPCS IN SOIL FOR EACH EXPOSURE SCENARIO (TEQ BASIS)

		Soil Concentrations					
		Highest Annual Average Soil Concentration	Soil Concentration Averaged Over 30 Year Exposure Duration	Soil Concentration Averaged Over 40 Year Exposure Duration	Soil Concentration Averaged Over 25 Year Exposure Duration	Soil Concentration Averaged Over 5 Year Exposure Duration	Soil Concentration Averaged Over 1 Year Exposure Duration
		(mg COPC TEQ/kg soil)[a]	(mg COPC TEQ/kg soil)[a]	(mg COPC TEQ/kg soil)[a]	(mg COPC TEQ/kg soil)[a]	(mg COPC TEQ/kg soil)[a]	(mg COPC TEQ/kg soil)[a]
COPC	CAS No.	Cs_{ID}	Cs	Cs	Cs	Cs	Cs
1,1,1-trichloroethane	71-55-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,1-dichloroethane	75-34-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,1-dichloroethene	75-35-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2-dichloroethane	107-06-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2-dichloropropane	78-87-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,3-butadiene	106-99-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-butanone	78-93-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
acetone	67-64-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzene	71-43-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzoic acid	65-85-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzyl alcohol	100-51-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bis(2-ethylhexyl)-phthalate	117-81-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bromodichloromethane	75-27-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bromomethane	74-83-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
carbon disulfide	75-15-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
carbon tetrachloride	56-23-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chlorobenzene	108-90-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloroform	67-66-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloromethane	74-87-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cis-1,3-dichloropropene	10061-01-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dibromochloromethane	124-48-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dichlorodifluoromethane	75-71-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dimethyl phthalate	131-11-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
di-n-butyl phthalate	84-74-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ethylbenzene	100-41-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Freon 113	76-13-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
HD	505-60-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
hexane	110-54-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methylene chloride	75-09-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
styrene	100-42-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
tetrachloroethene	127-18-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
toluene	108-88-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trans-1,3-dichloropropene	10061-02-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trichloroethene	79-01-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trichlorofluoromethane	75-69-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
vinyl chloride	75-01-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
xylenes	1330-20-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2,3,7,8-TCDF	51207-31-9	3.96E-15	2.60E-15	2.33E-15	2.74E-15	2.03E-15	2.03E-15
Total PCDDs and PCDFs	NA	3.96E-15	2.60E-15	2.33E-15	2.74E-15	2.03E-15	2.03E-15
antimony	7440-36-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cadmium	7440-43-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (3+)	7440-47-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (6+)	18540-29-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
copper	7440-50-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
lead	7439-92-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
zinc	7440-66-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

a. The concentration of individual PCDDs and PCDFs congeners and coplanar PCBs in soil are presented in units of mg COPC TEQ/kg soil. The concentration of total PCDDs and PCDFs as well as the concentration of total coplanar PCBs in soil are presented in units of mg TEQ/kg soil and are calculated as the sum of the concentrations of all individual PCDD and PCDF congeners in soil and the concentrations of all coplanar PCBs in soil, respectively.

CONCENTRATIONS OF COPCS IN PRODUCE FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Adult Resident and Adult Subsistence Fisher Exposure Scenarios								
		Aboveground Produce - Individual Uptake Mechanisms			Exposed Produce	Protected Produce	Belowground Produce	
		Due to Direct Deposition	Due to Air-to-Plant Transfer	Due to Direct Uptake from Soil	Due to All Processes	Due to All Processes	Due to Direct Uptake from Soil	Due to All Processes
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
COPC	CAS Number	Pd	Pv	Pr	P_{ag}	P_p	Pr_{bg}	P_{bg}
1,1,1-trichloroethane	71-55-6	0	1.83E-14	4.00E-14	5.83E-14	4.00E-14	2.55E-12	2.55E-12
1,1-dichloroethane	75-34-3	0	4.73E-15	4.19E-14	4.67E-14	4.19E-14	2.38E-12	2.38E-12
1,1-dichloroethene	75-35-4	0	1.95E-15	9.18E-15	1.11E-14	9.18E-15	3.10E-13	3.10E-13
1,2-dichloroethane	107-06-2	0	1.31E-14	1.51E-13	1.64E-13	1.51E-13	7.88E-12	7.88E-12
1,2-dichloropropane	78-87-5	0	1.88E-14	1.11E-13	1.30E-13	1.11E-13	3.69E-12	3.69E-12
1,3-butadiene	106-99-0	0	7.34E-13	9.13E-15	7.44E-13	9.13E-15	1.37E-14	1.37E-14
2-butanone	78-93-3	0	1.75E-13	6.35E-10	6.35E-10	6.35E-10	1.75E-09	1.75E-09
acetone	67-64-1	0	1.08E-13	2.91E-10	2.91E-10	2.91E-10	2.57E-09	2.57E-09
benzene	71-43-2	0	1.72E-13	8.25E-13	9.97E-13	8.25E-13	2.79E-11	2.79E-11
benzoic acid	65-85-0	0	5.65E-10	2.54E-08	2.60E-08	2.54E-08	1.68E-05	1.68E-05
benzyl alcohol	100-51-6	0	3.10E-10	4.38E-07	4.38E-07	4.38E-07	3.46E-06	3.46E-06
bis(2-ethylhexyl)-phthalate	117-81-7	2.07908E-08	0.00E+00	5.01E-11	2.08E-08	5.01E-11	9.77E-15	9.77E-15
bromodichloromethane	75-27-4	0	1.50E-13	5.79E-11	5.81E-11	5.79E-11	2.14E-09	2.14E-09
bromomethane	74-83-9	0	4.86E-15	6.62E-13	6.67E-13	6.62E-13	7.60E-12	7.60E-12
carbon disulfide	75-15-0	0	2.82E-14	5.96E-14	8.77E-14	5.96E-14	3.64E-12	3.64E-12
carbon tetrachloride	56-23-5	0	6.05E-14	6.75E-14	1.28E-13	6.75E-14	6.89E-12	6.89E-12
chlorobenzene	108-90-7	0	1.14E-13	1.72E-13	2.86E-13	1.72E-13	1.40E-11	1.40E-11
chloroform	67-66-3	0	1.99E-13	7.86E-13	9.85E-13	7.86E-13	2.93E-11	2.93E-11
chloromethane	74-87-3	0	5.09E-15	5.60E-13	5.65E-13	5.60E-13	8.32E-12	8.32E-12
cis-1,3-dichloropropene	10061-01-5	0	1.10E-15	3.75E-14	3.86E-14	3.75E-14	9.22E-13	9.22E-13
dibromochloromethane	124-48-1	0	3.85E-13	5.62E-10	5.63E-10	5.62E-10	4.88E-09	4.88E-09
dichlorodifluoromethane	75-71-8	0	4.84E-16	8.45E-13	8.46E-13	8.45E-13	6.66E-12	6.66E-12
dimethyl phthalate	131-11-3	0	2.38E-09	9.40E-09	1.18E-08	9.40E-09	5.69E-08	5.69E-08
di-n-butyl phthalate	84-74-2	0	4.70E-09	7.56E-10	5.46E-09	7.56E-10	1.90E-11	1.90E-11
ethylbenzene	100-41-4	0	1.31E-13	1.02E-13	2.33E-13	1.02E-13	1.27E-11	1.27E-11
Freon 113	76-13-1	0	2.68E-11	1.59E-14	2.68E-11	1.59E-14	5.93E-14	5.93E-14
HD	505-60-2	0	7.42E-12	6.01E-13	8.02E-12	6.01E-13	2.73E-12	2.73E-12
hexane	110-54-3	0	8.01E-15	4.81E-15	1.28E-14	4.81E-15	3.48E-13	3.48E-13
methylene chloride	75-09-2	0	5.04E-14	8.69E-13	9.19E-13	8.69E-13	4.56E-11	4.56E-11
styrene	100-42-5	0	8.24E-13	1.47E-10	1.48E-10	1.47E-10	8.14E-11	8.14E-11
tetrachloroethene	127-18-4	0	1.16E-13	1.28E-14	1.29E-13	1.28E-14	9.51E-12	9.51E-12
toluene	108-88-3	0	7.22E-14	1.09E-13	1.81E-13	1.09E-13	7.90E-12	7.90E-12
trans-1,3-dichloropropene	10061-02-6	0	3.23E-14	5.25E-13	5.57E-13	5.25E-13	4.93E-12	4.93E-12
trichloroethene	79-01-6	0	1.90E-14	9.00E-14	1.09E-13	9.00E-14	2.81E-12	2.81E-12
trichlorofluoromethane	75-69-4	0	2.06E-15	4.40E-15	6.46E-15	4.40E-15	2.57E-13	2.57E-13
vinyl chloride	75-01-4	0	5.57E-16	9.68E-15	1.02E-14	9.68E-15	3.95E-13	3.95E-13
xylenes	1330-20-7	0	4.46E-13	1.28E-12	1.73E-12	1.28E-12	3.66E-11	3.66E-11
2,3,7,8-TCDF	51207-31-9	2.34939E-15	0.00E+00	2.99E-16	2.65E-15	2.99E-16	3.89E-16	3.89E-16
Total PCDDs and PCDFs	NA							
antimony	7440-36-0	5.23387E-11	0.00E+00	4.51E-16	5.23E-11	4.51E-16	4.24E-16	4.24E-16
cadmium	7440-43-9	2.74004E-10	0.00E+00	1.24E-14	2.74E-10	1.24E-14	1.49E-14	1.49E-14
chromium (3+)	7440-47-3	2.51753E-09	0.00E+00	8.72E-16	2.52E-09	8.72E-16	8.04E-16	8.04E-16
chromium (6+)	18540-29-9	2.51753E-09	0.00E+00	8.72E-16	2.52E-09	8.72E-16	8.04E-16	8.04E-16
copper	7440-50-8	3.74762E-09	0.00E+00	1.72E-12	3.75E-09	1.72E-12	1.60E-12	1.60E-12
lead	7439-92-1	1.25563E-09	0.00E+00	9.22E-14	1.26E-09	9.22E-14	6.10E-14	6.10E-14
nickel	7440-02-0	5.22309E-09	0.00E+00	1.90E-14	5.22E-09	1.90E-14	1.22E-13	1.22E-13
zinc	7440-66-6	5.08442E-08	0.00E+00	1.83E-12	5.08E-08	1.83E-12	1.70E-11	1.70E-11

CONCENTRATIONS OF COPCS IN PRODUCE FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Adult Subsistence Farmer Exposure Scenario								
		Aboveground Produce - Individual Uptake Mechanisms			Exposed Produce	Protected Produce	Belowground Produce	
		Due to Direct Deposition	Due to Air-to-Plant Transfer	Due to Direct Uptake from Soil	Due to All Processes	Due to All Processes	Due to Direct Uptake from Soil	Due to All Processes
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
COPC	CAS Number	Pd	Pv	Pr	P_{ag}	P_p	Pr_{bg}	P_{bg}
1,1,1-trichloroethane	71-55-6	0	1.83E-14	3.00E-14	4.83E-14	3.00E-14	1.91E-12	1.91E-12
1,1-dichloroethane	75-34-3	0	4.73E-15	3.15E-14	3.62E-14	3.15E-14	1.78E-12	1.78E-12
1,1-dichloroethene	75-35-4	0	1.95E-15	6.88E-15	8.84E-15	6.88E-15	2.33E-13	2.33E-13
1,2-dichloroethane	107-06-2	0	1.31E-14	1.13E-13	1.26E-13	1.13E-13	5.91E-12	5.91E-12
1,2-dichloropropane	78-87-5	0	1.88E-14	8.36E-14	1.02E-13	8.36E-14	2.77E-12	2.77E-12
1,3-butadiene	106-99-0	0	7.34E-13	6.85E-15	7.41E-13	6.85E-15	1.02E-14	1.02E-14
2-butanone	78-93-3	0	1.75E-13	4.76E-10	4.77E-10	4.76E-10	1.31E-09	1.31E-09
acetone	67-64-1	0	1.08E-13	2.18E-10	2.18E-10	2.18E-10	1.93E-09	1.93E-09
benzene	71-43-2	0	1.72E-13	6.19E-13	7.91E-13	6.19E-13	2.09E-11	2.09E-11
benzoic acid	65-85-0	0	5.65E-10	1.91E-08	1.96E-08	1.91E-08	1.26E-05	1.26E-05
benzyl alcohol	100-51-6	0	3.10E-10	3.28E-07	3.29E-07	3.28E-07	2.59E-06	2.59E-06
bis(2-ethylhexyl)-phthalate	117-81-7	2.07908E-08	0.00E+00	3.76E-11	2.08E-08	3.76E-11	7.32E-15	7.32E-15
bromodichloromethane	75-27-4	0	1.50E-13	4.35E-11	4.36E-11	4.35E-11	1.60E-09	1.60E-09
bromomethane	74-83-9	0	4.86E-15	4.96E-13	5.01E-13	4.96E-13	5.70E-12	5.70E-12
carbon disulfide	75-15-0	0	2.82E-14	4.47E-14	7.29E-14	4.47E-14	2.73E-12	2.73E-12
carbon tetrachloride	56-23-5	0	6.05E-14	5.07E-14	1.11E-13	5.07E-14	5.17E-12	5.17E-12
chlorobenzene	108-90-7	0	1.14E-13	1.29E-13	2.43E-13	1.29E-13	1.05E-11	1.05E-11
chloroform	67-66-3	0	1.99E-13	5.89E-13	7.89E-13	5.89E-13	2.20E-11	2.20E-11
chloromethane	74-87-3	0	5.09E-15	4.20E-13	4.25E-13	4.20E-13	6.24E-12	6.24E-12
cis-1,3-dichloropropene	10061-01-5	0	1.10E-15	2.81E-14	2.92E-14	2.81E-14	6.92E-13	6.92E-13
dibromochloromethane	124-48-1	0	3.85E-13	4.22E-10	4.22E-10	4.22E-10	3.66E-09	3.66E-09
dichlorodifluoromethane	75-71-8	0	4.84E-16	6.34E-13	6.35E-13	6.34E-13	5.00E-12	5.00E-12
dimethyl phthalate	131-11-3	0	2.38E-09	7.05E-09	9.43E-09	7.05E-09	4.27E-08	4.27E-08
di-n-butyl phthalate	84-74-2	0	4.70E-09	5.67E-10	5.27E-09	5.67E-10	1.42E-11	1.42E-11
ethylbenzene	100-41-4	0	1.31E-13	7.66E-14	2.08E-13	7.66E-14	9.50E-12	9.50E-12
Freon 113	76-13-1	0	2.68E-11	1.19E-14	2.68E-11	1.19E-14	4.45E-14	4.45E-14
HD	505-60-2	0	7.42E-12	4.51E-13	7.87E-12	4.51E-13	2.04E-12	2.04E-12
hexane	110-54-3	0	8.01E-15	3.61E-15	1.16E-14	3.61E-15	2.61E-13	2.61E-13
methylene chloride	75-09-2	0	5.04E-14	6.52E-13	7.02E-13	6.52E-13	3.42E-11	3.42E-11
styrene	100-42-5	0	8.24E-13	1.10E-10	1.11E-10	1.10E-10	6.11E-11	6.11E-11
tetrachloroethene	127-18-4	0	1.16E-13	9.63E-15	1.25E-13	9.63E-15	7.13E-12	7.13E-12
toluene	108-88-3	0	7.22E-14	8.18E-14	1.54E-13	8.18E-14	5.93E-12	5.93E-12
trans-1,3-dichloropropene	10061-02-6	0	3.23E-14	3.94E-13	4.26E-13	3.94E-13	3.70E-12	3.70E-12
trichloroethene	79-01-6	0	1.90E-14	6.75E-14	8.64E-14	6.75E-14	2.11E-12	2.11E-12
trichlorofluoromethane	75-69-4	0	2.06E-15	3.30E-15	5.36E-15	3.30E-15	1.93E-13	1.93E-13
vinyl chloride	75-01-4	0	5.57E-16	7.26E-15	7.81E-15	7.26E-15	2.97E-13	2.97E-13
xylenes	1330-20-7	0	4.46E-13	9.61E-13	1.41E-12	9.61E-13	2.75E-11	2.75E-11
2,3,7,8-TCDF	51207-31-9	2.34939E-15	0.00E+00	2.68E-16	2.62E-15	2.68E-16	3.48E-16	3.48E-16
Total PCDDs and PCDFs	NA							
antimony	7440-36-0	5.23387E-11	0.00E+00	3.38E-16	5.23E-11	3.38E-16	3.18E-16	3.18E-16
cadmium	7440-43-9	2.74004E-10	0.00E+00	9.29E-15	2.74E-10	9.29E-15	1.11E-14	1.11E-14
chromium (3+)	7440-47-3	2.51753E-09	0.00E+00	6.54E-16	2.52E-09	6.54E-16	6.03E-16	6.03E-16
chromium (6+)	18540-29-9	2.51753E-09	0.00E+00	6.54E-16	2.52E-09	6.54E-16	6.03E-16	6.03E-16
copper	7440-50-8	3.74762E-09	0.00E+00	1.29E-12	3.75E-09	1.29E-12	1.20E-12	1.20E-12
lead	7439-92-1	1.25563E-09	0.00E+00	6.92E-14	1.26E-09	6.92E-14	4.58E-14	4.58E-14
nickel	7440-02-0	5.22309E-09	0.00E+00	1.42E-14	5.22E-09	1.42E-14	9.17E-14	9.17E-14
zinc	7440-66-6	5.08442E-08	0.00E+00	1.38E-12	5.08E-08	1.38E-12	1.28E-11	1.28E-11

CONCENTRATIONS OF COPCS IN PRODUCE FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Child Exposure Scenarios								
		Aboveground Produce - Individual Uptake Mechanisms			Exposed Produce	Protected Produce	Belowground Produce	
		Due to Direct Deposition	Due to Air-to-Plant Transfer	Due to Direct Uptake from Soil	Due to All Processes	Due to All Processes	Due to Direct Uptake from Soil	Due to All Processes
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
COPC	CAS Number	Pd	Pv	Pr	P_{ag}	P_p	Pr_{bg}	P_{bg}
1,1,1-trichloroethane	71-55-6	0	1.83E-14	2.40E-13	2.58E-13	2.40E-13	1.53E-11	1.53E-11
1,1-dichloroethane	75-34-3	0	4.73E-15	2.52E-13	2.56E-13	2.52E-13	1.43E-11	1.43E-11
1,1-dichloroethene	75-35-4	0	1.95E-15	5.51E-14	5.70E-14	5.51E-14	1.86E-12	1.86E-12
1,2-dichloroethane	107-06-2	0	1.31E-14	9.04E-13	9.17E-13	9.04E-13	4.73E-11	4.73E-11
1,2-dichloropropane	78-87-5	0	1.88E-14	6.69E-13	6.88E-13	6.69E-13	2.22E-11	2.22E-11
1,3-butadiene	106-99-0	0	7.34E-13	5.48E-14	7.89E-13	5.48E-14	8.19E-14	8.19E-14
2-butanone	78-93-3	0	1.75E-13	3.81E-09	3.81E-09	3.81E-09	1.05E-08	1.05E-08
acetone	67-64-1	0	1.08E-13	1.74E-09	1.74E-09	1.74E-09	1.54E-08	1.54E-08
benzene	71-43-2	0	1.72E-13	4.95E-12	5.12E-12	4.95E-12	1.68E-10	1.68E-10
benzoic acid	65-85-0	0	5.65E-10	1.51E-07	1.52E-07	1.51E-07	9.99E-05	9.99E-05
benzyl alcohol	100-51-6	0	3.10E-10	2.34E-06	2.34E-06	2.34E-06	1.85E-05	1.85E-05
bis(2-ethylhexyl)-phthalate	117-81-7	2.07908E-08	0.00E+00	2.95E-10	2.11E-08	2.95E-10	5.75E-14	5.75E-14
bromodichloromethane	75-27-4	0	1.50E-13	3.48E-10	3.48E-10	3.48E-10	1.28E-08	1.28E-08
bromomethane	74-83-9	0	4.86E-15	3.97E-12	3.98E-12	3.97E-12	4.56E-11	4.56E-11
carbon disulfide	75-15-0	0	2.82E-14	3.57E-13	3.86E-13	3.57E-13	2.18E-11	2.18E-11
carbon tetrachloride	56-23-5	0	6.05E-14	4.05E-13	4.66E-13	4.05E-13	4.14E-11	4.14E-11
chlorobenzene	108-90-7	0	1.14E-13	1.03E-12	1.15E-12	1.03E-12	8.37E-11	8.37E-11
chloroform	67-66-3	0	1.99E-13	4.72E-12	4.91E-12	4.72E-12	1.76E-10	1.76E-10
chloromethane	74-87-3	0	5.09E-15	3.36E-12	3.37E-12	3.36E-12	4.99E-11	4.99E-11
cis-1,3-dichloropropene	10061-01-5	0	1.10E-15	2.25E-13	2.26E-13	2.25E-13	5.53E-12	5.53E-12
dibromochloromethane	124-48-1	0	3.85E-13	3.36E-09	3.36E-09	3.36E-09	2.92E-08	2.92E-08
dichlorodifluoromethane	75-71-8	0	4.84E-16	5.07E-12	5.07E-12	5.07E-12	4.00E-11	4.00E-11
dimethyl phthalate	131-11-3	0	2.38E-09	5.61E-08	5.85E-08	5.61E-08	3.40E-07	3.40E-07
di-n-butyl phthalate	84-74-2	0	4.70E-09	4.46E-09	9.16E-09	4.46E-09	1.12E-10	1.12E-10
ethylbenzene	100-41-4	0	1.31E-13	6.12E-13	7.44E-13	6.12E-13	7.60E-11	7.60E-11
Freon 113	76-13-1	0	2.68E-11	9.56E-14	2.69E-11	9.56E-14	3.56E-13	3.56E-13
HD	505-60-2	0	7.42E-12	3.61E-12	1.10E-11	3.61E-12	1.64E-11	1.64E-11
hexane	110-54-3	0	8.01E-15	2.89E-14	3.69E-14	2.89E-14	2.09E-12	2.09E-12
methylene chloride	75-09-2	0	5.04E-14	5.21E-12	5.26E-12	5.21E-12	2.74E-10	2.74E-10
styrene	100-42-5	0	8.24E-13	8.81E-10	8.82E-10	8.81E-10	4.88E-10	4.88E-10
tetrachloroethene	127-18-4	0	1.16E-13	7.70E-14	1.93E-13	7.70E-14	5.70E-11	5.70E-11
toluene	108-88-3	0	7.22E-14	6.55E-13	7.27E-13	6.55E-13	4.74E-11	4.74E-11
trans-1,3-dichloropropene	10061-02-6	0	3.23E-14	3.15E-12	3.18E-12	3.15E-12	2.96E-11	2.96E-11
trichloroethene	79-01-6	0	1.90E-14	5.40E-13	5.59E-13	5.40E-13	1.69E-11	1.69E-11
trichlorofluoromethane	75-69-4	0	2.06E-15	2.64E-14	2.85E-14	2.64E-14	1.54E-12	1.54E-12
vinyl chloride	75-01-4	0	5.57E-16	5.81E-14	5.86E-14	5.81E-14	2.37E-12	2.37E-12
xylenes	1330-20-7	0	4.46E-13	7.69E-12	8.13E-12	7.69E-12	2.20E-10	2.20E-10
2,3,7,8-TCDF	51207-31-9	2.34939E-15	0.00E+00	2.34E-16	2.58E-15	2.34E-16	3.04E-16	3.04E-16
Total PCDDs and PCDFs	NA							
antimony	7440-36-0	5.23387E-11	0.00E+00	2.70E-15	5.23E-11	2.70E-15	2.54E-15	2.54E-15
cadmium	7440-43-9	2.74004E-10	0.00E+00	7.43E-14	2.74E-10	7.43E-14	8.91E-14	8.91E-14
chromium (3+)	7440-47-3	2.51753E-09	0.00E+00	5.23E-15	2.52E-09	5.23E-15	4.83E-15	4.83E-15
chromium (6+)	18540-29-9	2.51753E-09	0.00E+00	5.23E-15	2.52E-09	5.23E-15	4.83E-15	4.83E-15
copper	7440-50-8	3.74762E-09	0.00E+00	1.03E-11	3.76E-09	1.03E-11	9.57E-12	9.57E-12
lead	7439-92-1	1.25563E-09	0.00E+00	5.52E-13	1.26E-09	5.52E-13	3.66E-13	3.66E-13
nickel	7440-02-0	5.22309E-09	0.00E+00	1.14E-13	5.22E-09	1.14E-13	7.33E-13	7.33E-13
zinc	7440-66-6	5.08442E-08	0.00E+00	1.10E-11	5.09E-08	1.10E-11	1.02E-10	1.02E-10

CONCENTRATIONS OF COPCS IN PRODUCE FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Infant Exposure Scenarios								
		Aboveground Produce - Individual Uptake Mechanisms			Exposed Produce	Protected Produce	Belowground Produce	
		Due to Direct Deposition	Due to Air-to-Plant Transfer	Due to Direct Uptake from Soil	Due to All Processes	Due to All Processes	Due to Direct Uptake from Soil	Due to All Processes
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
COPC	CAS Number	Pd	Pv	Pr	P_{ag}	P_p	Pr_{bg}	P_{bg}
1,1,1-trichloroethane	71-55-6	0	1.83E-14	2.40E-13	2.58E-13	2.40E-13	1.53E-11	1.53E-11
1,1-dichloroethane	75-34-3	0	4.73E-15	2.52E-13	2.56E-13	2.52E-13	1.43E-11	1.43E-11
1,1-dichloroethene	75-35-4	0	1.95E-15	5.51E-14	5.70E-14	5.51E-14	1.86E-12	1.86E-12
1,2-dichloroethane	107-06-2	0	1.31E-14	9.04E-13	9.17E-13	9.04E-13	4.73E-11	4.73E-11
1,2-dichloropropane	78-87-5	0	1.88E-14	6.69E-13	6.88E-13	6.69E-13	2.22E-11	2.22E-11
1,3-butadiene	106-99-0	0	7.34E-13	5.48E-14	7.89E-13	5.48E-14	8.19E-14	8.19E-14
2-butanone	78-93-3	0	1.75E-13	3.81E-09	3.81E-09	3.81E-09	1.05E-08	1.05E-08
acetone	67-64-1	0	1.08E-13	1.74E-09	1.74E-09	1.74E-09	1.54E-08	1.54E-08
benzene	71-43-2	0	1.72E-13	4.95E-12	5.12E-12	4.95E-12	1.68E-10	1.68E-10
benzoic acid	65-85-0	0	5.65E-10	1.51E-07	1.52E-07	1.51E-07	9.99E-05	9.99E-05
benzyl alcohol	100-51-6	0	3.10E-10	2.34E-06	2.34E-06	2.34E-06	1.85E-05	1.85E-05
bis(2-ethylhexyl)-phthalate	117-81-7	2.07908E-08	0.00E+00	2.95E-10	2.11E-08	2.95E-10	5.75E-14	5.75E-14
bromodichloromethane	75-27-4	0	1.50E-13	3.48E-10	3.48E-10	3.48E-10	1.28E-08	1.28E-08
bromomethane	74-83-9	0	4.86E-15	3.97E-12	3.98E-12	3.97E-12	4.56E-11	4.56E-11
carbon disulfide	75-15-0	0	2.82E-14	3.57E-13	3.86E-13	3.57E-13	2.18E-11	2.18E-11
carbon tetrachloride	56-23-5	0	6.05E-14	4.05E-13	4.66E-13	4.05E-13	4.14E-11	4.14E-11
chlorobenzene	108-90-7	0	1.14E-13	1.03E-12	1.15E-12	1.03E-12	8.37E-11	8.37E-11
chloroform	67-66-3	0	1.99E-13	4.72E-12	4.91E-12	4.72E-12	1.76E-10	1.76E-10
chloromethane	74-87-3	0	5.09E-15	3.36E-12	3.37E-12	3.36E-12	4.99E-11	4.99E-11
cis-1,3-dichloropropene	10061-01-5	0	1.10E-15	2.25E-13	2.26E-13	2.25E-13	5.53E-12	5.53E-12
dibromochloromethane	124-48-1	0	3.85E-13	3.36E-09	3.36E-09	3.36E-09	2.92E-08	2.92E-08
dichlorodifluoromethane	75-71-8	0	4.84E-16	5.07E-12	5.07E-12	5.07E-12	4.00E-11	4.00E-11
dimethyl phthalate	131-11-3	0	2.38E-09	5.61E-08	5.85E-08	5.61E-08	3.40E-07	3.40E-07
di-n-butyl phthalate	84-74-2	0	4.70E-09	4.46E-09	9.16E-09	4.46E-09	1.12E-10	1.12E-10
ethylbenzene	100-41-4	0	1.31E-13	6.12E-13	7.44E-13	6.12E-13	7.60E-11	7.60E-11
Freon 113	76-13-1	0	2.68E-11	9.56E-14	2.69E-11	9.56E-14	3.56E-13	3.56E-13
HD	505-60-2	0	7.42E-12	3.61E-12	1.10E-11	3.61E-12	1.64E-11	1.64E-11
hexane	110-54-3	0	8.01E-15	2.89E-14	3.69E-14	2.89E-14	2.09E-12	2.09E-12
methylene chloride	75-09-2	0	5.04E-14	5.21E-12	5.26E-12	5.21E-12	2.74E-10	2.74E-10
styrene	100-42-5	0	8.24E-13	8.81E-10	8.82E-10	8.81E-10	4.88E-10	4.88E-10
tetrachloroethene	127-18-4	0	1.16E-13	7.70E-14	1.93E-13	7.70E-14	5.70E-11	5.70E-11
toluene	108-88-3	0	7.22E-14	6.55E-13	7.27E-13	6.55E-13	4.74E-11	4.74E-11
trans-1,3-dichloropropene	10061-02-6	0	3.23E-14	3.15E-12	3.18E-12	3.15E-12	2.96E-11	2.96E-11
trichloroethene	79-01-6	0	1.90E-14	5.40E-13	5.59E-13	5.40E-13	1.69E-11	1.69E-11
trichlorofluoromethane	75-69-4	0	2.06E-15	2.64E-14	2.85E-14	2.64E-14	1.54E-12	1.54E-12
vinyl chloride	75-01-4	0	5.57E-16	5.81E-14	5.86E-14	5.81E-14	2.37E-12	2.37E-12
xylenes	1330-20-7	0	4.46E-13	7.69E-12	8.13E-12	7.69E-12	2.20E-10	2.20E-10
2,3,7,8-TCDF	51207-31-9	2.34939E-15	0.00E+00	2.34E-16	2.58E-15	2.34E-16	3.04E-16	3.04E-16
Total PCDDs and PCDFs	NA							
antimony	7440-36-0	5.23387E-11	0.00E+00	2.70E-15	5.23E-11	2.70E-15	2.54E-15	2.54E-15
cadmium	7440-43-9	2.74004E-10	0.00E+00	7.43E-14	2.74E-10	7.43E-14	8.91E-14	8.91E-14
chromium (3+)	7440-47-3	2.51753E-09	0.00E+00	5.23E-15	2.52E-09	5.23E-15	4.83E-15	4.83E-15
chromium (6+)	18540-29-9	2.51753E-09	0.00E+00	5.23E-15	2.52E-09	5.23E-15	4.83E-15	4.83E-15
copper	7440-50-8	3.74762E-09	0.00E+00	1.03E-11	3.76E-09	1.03E-11	9.57E-12	9.57E-12
lead	7439-92-1	1.25563E-09	0.00E+00	5.52E-13	1.26E-09	5.52E-13	3.66E-13	3.66E-13
nickel	7440-02-0	5.22309E-09	0.00E+00	1.14E-13	5.22E-09	1.14E-13	7.33E-13	7.33E-13
zinc	7440-66-6	5.08442E-08	0.00E+00	1.10E-11	5.09E-08	1.10E-11	1.02E-10	1.02E-10

CONCENTRATIONS OF COPCS IN PRODUCE FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS: All Exposure Scenarios								
		Aboveground Produce - Individual Uptake Mechanisms			Exposed Produce	Protected Produce	Belowground Produce	
		Due to Direct Deposition	Due to Air-to-Plant Transfer	Due to Direct Uptake from Soil	Due to All Processes	Due to All Processes	Due to Direct Uptake from Soil	Due to All Processes
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
COPC	CAS Number	Pd	Pv	Pr	P_{ag}	P_p	Pr_{bg}	P_{bg}
1,1,1-trichloroethane	71-55-6	0	1.83E-14	2.40E-13	2.58E-13	2.40E-13	1.53E-11	1.53E-11
1,1-dichloroethane	75-34-3	0	4.73E-15	2.52E-13	2.56E-13	2.52E-13	1.43E-11	1.43E-11
1,1-dichloroethene	75-35-4	0	1.95E-15	5.51E-14	5.70E-14	5.51E-14	1.86E-12	1.86E-12
1,2-dichloroethane	107-06-2	0	1.31E-14	9.04E-13	9.17E-13	9.04E-13	4.73E-11	4.73E-11
1,2-dichloropropane	78-87-5	0	1.88E-14	6.69E-13	6.88E-13	6.69E-13	2.22E-11	2.22E-11
1,3-butadiene	106-99-0	0	7.34E-13	5.48E-14	7.89E-13	5.48E-14	8.19E-14	8.19E-14
2-butanone	78-93-3	0	1.75E-13	3.81E-09	3.81E-09	3.81E-09	1.05E-08	1.05E-08
acetone	67-64-1	0	1.08E-13	1.74E-09	1.74E-09	1.74E-09	1.54E-08	1.54E-08
benzene	71-43-2	0	1.72E-13	4.95E-12	5.12E-12	4.95E-12	1.68E-10	1.68E-10
benzoic acid	65-85-0	0	5.65E-10	1.53E-07	1.53E-07	1.53E-07	1.01E-04	1.01E-04
benzyl alcohol	100-51-6	0	3.10E-10	2.63E-06	2.63E-06	2.63E-06	2.07E-05	2.07E-05
bis(2-ethylhexyl)-phthalate	117-81-7	2.07908E-08	0.00E+00	3.00E-10	2.11E-08	3.00E-10	5.86E-14	5.86E-14
bromodichloromethane	75-27-4	0	1.50E-13	3.48E-10	3.48E-10	3.48E-10	1.28E-08	1.28E-08
bromomethane	74-83-9	0	4.86E-15	3.97E-12	3.98E-12	3.97E-12	4.56E-11	4.56E-11
carbon disulfide	75-15-0	0	2.82E-14	3.57E-13	3.86E-13	3.57E-13	2.18E-11	2.18E-11
carbon tetrachloride	56-23-5	0	6.05E-14	4.05E-13	4.66E-13	4.05E-13	4.14E-11	4.14E-11
chlorobenzene	108-90-7	0	1.14E-13	1.03E-12	1.15E-12	1.03E-12	8.37E-11	8.37E-11
chloroform	67-66-3	0	1.99E-13	4.72E-12	4.91E-12	4.72E-12	1.76E-10	1.76E-10
chloromethane	74-87-3	0	5.09E-15	3.36E-12	3.37E-12	3.36E-12	4.99E-11	4.99E-11
cis-1,3-dichloropropene	10061-01-5	0	1.10E-15	2.25E-13	2.26E-13	2.25E-13	5.53E-12	5.53E-12
dibromochloromethane	124-48-1	0	3.85E-13	3.37E-09	3.37E-09	3.37E-09	2.93E-08	2.93E-08
dichlorodifluoromethane	75-71-8	0	4.84E-16	5.07E-12	5.07E-12	5.07E-12	4.00E-11	4.00E-11
dimethyl phthalate	131-11-3	0	2.38E-09	5.64E-08	5.88E-08	5.64E-08	3.41E-07	3.41E-07
di-n-butyl phthalate	84-74-2	0	4.70E-09	4.54E-09	9.24E-09	4.54E-09	1.14E-10	1.14E-10
ethylbenzene	100-41-4	0	1.31E-13	6.12E-13	7.44E-13	6.12E-13	7.60E-11	7.60E-11
Freon 113	76-13-1	0	2.68E-11	9.56E-14	2.69E-11	9.56E-14	3.56E-13	3.56E-13
HD	505-60-2	0	7.42E-12	3.61E-12	1.10E-11	3.61E-12	1.64E-11	1.64E-11
hexane	110-54-3	0	8.01E-15	2.89E-14	3.69E-14	2.89E-14	2.09E-12	2.09E-12
methylene chloride	75-09-2	0	5.04E-14	5.21E-12	5.26E-12	5.21E-12	2.74E-10	2.74E-10
styrene	100-42-5	0	8.24E-13	8.83E-10	8.84E-10	8.83E-10	4.89E-10	4.89E-10
tetrachloroethene	127-18-4	0	1.16E-13	7.70E-14	1.93E-13	7.70E-14	5.70E-11	5.70E-11
toluene	108-88-3	0	7.22E-14	6.55E-13	7.27E-13	6.55E-13	4.74E-11	4.74E-11
trans-1,3-dichloropropene	10061-02-6	0	3.23E-14	3.15E-12	3.18E-12	3.15E-12	2.96E-11	2.96E-11
trichloroethene	79-01-6	0	1.90E-14	5.40E-13	5.59E-13	5.40E-13	1.69E-11	1.69E-11
trichlorofluoromethane	75-69-4	0	2.06E-15	2.64E-14	2.85E-14	2.64E-14	1.54E-12	1.54E-12
vinyl chloride	75-01-4	0	5.57E-16	5.81E-14	5.86E-14	5.81E-14	2.37E-12	2.37E-12
xylenes	1330-20-7	0	4.46E-13	7.69E-12	8.13E-12	7.69E-12	2.20E-10	2.20E-10
2,3,7,8-TCDF	51207-31-9	2.34939E-15	0.00E+00	4.55E-16	2.80E-15	4.55E-16	5.92E-16	5.92E-16
Total PCDDs and PCDFs	NA							
antimony	7440-36-0	5.23387E-11	0.00E+00	2.70E-15	5.23E-11	2.70E-15	2.54E-15	2.54E-15
cadmium	7440-43-9	2.74004E-10	0.00E+00	7.43E-14	2.74E-10	7.43E-14	8.92E-14	8.92E-14
chromium (3+)	7440-47-3	2.51753E-09	0.00E+00	5.23E-15	2.52E-09	5.23E-15	4.83E-15	4.83E-15
chromium (6+)	18540-29-9	2.51753E-09	0.00E+00	5.23E-15	2.52E-09	5.23E-15	4.83E-15	4.83E-15
copper	7440-50-8	3.74762E-09	0.00E+00	1.03E-11	3.76E-09	1.03E-11	9.57E-12	9.57E-12
lead	7439-92-1	1.25563E-09	0.00E+00	5.53E-13	1.26E-09	5.53E-13	3.66E-13	3.66E-13
nickel	7440-02-0	5.22309E-09	0.00E+00	1.14E-13	5.22E-09	1.14E-13	7.33E-13	7.33E-13
zinc	7440-66-6	5.08442E-08	0.00E+00	1.10E-11	5.09E-08	1.10E-11	1.02E-10	1.02E-10

CONCENTRATIONS OF COPCS IN PRODUCE FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS (TEQ BASIS): Adult Resident and Adult Subsistence Fisher Exposure Scenarios								
		Aboveground Produce - Individual Uptake Mechanisms			Exposed Produce	Protected Produce	Belowground Produce	
		Due to Direct Deposition	Due to Air-to-Plant Transfer	Due to Direct Uptake from Soil	Due to All Processes	Due to All Processes	Due to Direct Uptake from Soil	Due to All Processes
		(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]
COPC	CAS Number	Pd	Pv	Pr	Pag	Pp	Prbg	Pbg
1,1,1-trichloroethane	71-55-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,1-dichloroethane	75-34-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,1-dichloroethene	75-35-4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2-dichloroethane	107-06-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2-dichloropropane	78-87-5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,3-butadiene	106-99-0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-butanone	78-93-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
acetone	67-64-1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzene	71-43-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzoic acid	65-85-0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzyl alcohol	100-51-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bis(2-ethylhexyl)-phthalate	117-81-7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bromodichloromethane	75-27-4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bromomethane	74-83-9	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
carbon disulfide	75-15-0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
carbon tetrachloride	56-23-5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chlorobenzene	108-90-7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloroform	67-66-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloromethane	74-87-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cis-1,3-dichloropropene	10061-01-5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dibromochloromethane	124-48-1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dichlorodifluoromethane	75-71-8	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dimethyl phthalate	131-11-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
di-n-butyl phthalate	84-74-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ethylbenzene	100-41-4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Freon 113	76-13-1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
HD	505-60-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
hexane	110-54-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methylene chloride	75-09-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
styrene	100-42-5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
tetrachloroethene	127-18-4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
toluene	108-88-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trans-1,3-dichloropropene	10061-02-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trichloroethene	79-01-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trichlorofluoromethane	75-69-4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
vinyl chloride	75-01-4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
xylenes	1330-20-7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2,3,7,8-TCDF	51207-31-9	2.34939E-16	0.00E+00	2.99E-17	2.65E-16	2.99E-17	3.89E-17	3.89E-17
Total PCDDs and PCDFs	NA	2.34939E-16	0.00E+00	2.99E-17	2.65E-16	2.99E-17	3.89E-17	3.89E-17
antimony	7440-36-0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cadmium	7440-43-9	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (3+)	7440-47-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (6+)	18540-29-9	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
copper	7440-50-8	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
lead	7439-92-1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
zinc	7440-66-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

a. The concentration of individual PCDDs and PCDFs congeners and coplanar PCBs in produce are presented in units of mg COPC TEQ/kg. The concentration of total PCDDs and PCDFs as well as the concentration of total coplanar PCBs in produce are presented in units of mg TEQ/kg produce and are calculated as the sum of the concentrations of all individual PCDD and PCDF congeners in produce and the concentrations of all coplanar produce in plants, respectively.

CONCENTRATIONS OF COPCS IN PRODUCE FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS (TEQ BASIS): Adult Subsistence Farmer Exposure Scenario								
		Aboveground Produce - Individual Uptake Mechanisms			Exposed Produce	Protected Produce	Belowground Produce	
		Due to Direct Deposition	Due to Air-to-Plant Transfer	Due to Direct Uptake from Soil	Due to All Processes	Due to All Processes	Due to Direct Uptake from Soil	Due to All Processes
		(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]
COPC	CAS Number	Pd	Pv	Pr	Pag	Pp	Prbg	Pbg
1,1,1-trichloroethane	71-55-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,1-dichloroethane	75-34-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,1-dichloroethene	75-35-4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2-dichloroethane	107-06-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2-dichloropropane	78-87-5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,3-butadiene	106-99-0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-butanone	78-93-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
acetone	67-64-1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzene	71-43-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzoic acid	65-85-0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzyl alcohol	100-51-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bis(2-ethylhexyl)-phthalate	117-81-7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bromodichloromethane	75-27-4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bromomethane	74-83-9	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
carbon disulfide	75-15-0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
carbon tetrachloride	56-23-5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chlorobenzene	108-90-7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloroform	67-66-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloromethane	74-87-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cis-1,3-dichloropropene	10061-01-5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dibromochloromethane	124-48-1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dichlorodifluoromethane	75-71-8	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dimethyl phthalate	131-11-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
di-n-butyl phthalate	84-74-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ethylbenzene	100-41-4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Freon 113	76-13-1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
HD	505-60-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
hexane	110-54-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methylene chloride	75-09-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
styrene	100-42-5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
tetrachloroethene	127-18-4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
toluene	108-88-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trans-1,3-dichloropropene	10061-02-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trichloroethene	79-01-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trichlorofluoromethane	75-69-4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
vinyl chloride	75-01-4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
xylenes	1330-20-7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2,3,7,8-TCDF	51207-31-9	2.34939E-16	0.00E+00	2.68E-17	2.62E-16	2.68E-17	3.48E-17	3.48E-17
Total PCDDs and PCDFs	NA	2.34939E-16	0.00E+00	2.68E-17	2.62E-16	2.68E-17	3.48E-17	3.48E-17
antimony	7440-36-0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cadmium	7440-43-9	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (3+)	7440-47-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (6+)	18540-29-9	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
copper	7440-50-8	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
lead	7439-92-1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
zinc	7440-66-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

a. The concentration of individual PCDDs and PCDFs congeners and coplanar PCBs in produce are presented in units of mg COPC TEQ/kg. The concentration of total PCDDs and PCDFs as well as the concentration of total coplanar PCBs in produce are presented in units of mg TEQ/kg produce and are calculated as the sum of the concentrations of all individual PCDD and PCDF congeners in produce and the concentrations of all coplanar produce in plants, respectively.

CONCENTRATIONS OF COPCS IN PRODUCE FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS (TEQ BASIS): Child Exposure Scenarios								
		Aboveground Produce - Individual Uptake Mechanisms			Exposed Produce	Protected Produce	Belowground Produce	
		Due to Direct Deposition	Due to Air-to-Plant Transfer	Due to Direct Uptake from Soil	Due to All Processes	Due to All Processes	Due to Direct Uptake from Soil	Due to All Processes
		(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]
COPC	CAS Number	Pd	Pv	Pr	Pag	Pp	Prbg	Pbg
1,1,1-trichloroethane	71-55-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,1-dichloroethane	75-34-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,1-dichloroethene	75-35-4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2-dichloroethane	107-06-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2-dichloropropane	78-87-5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,3-butadiene	106-99-0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-butanone	78-93-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
acetone	67-64-1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzene	71-43-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzoic acid	65-85-0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzyl alcohol	100-51-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bis(2-ethylhexyl)-phthalate	117-81-7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bromodichloromethane	75-27-4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bromomethane	74-83-9	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
carbon disulfide	75-15-0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
carbon tetrachloride	56-23-5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chlorobenzene	108-90-7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloroform	67-66-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloromethane	74-87-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cis-1,3-dichloropropene	10061-01-5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dibromochloromethane	124-48-1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dichlorodifluoromethane	75-71-8	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dimethyl phthalate	131-11-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
di-n-butyl phthalate	84-74-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ethylbenzene	100-41-4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Freon 113	76-13-1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
HD	505-60-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
hexane	110-54-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methylene chloride	75-09-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
styrene	100-42-5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
tetrachloroethene	127-18-4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
toluene	108-88-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trans-1,3-dichloropropene	10061-02-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trichloroethene	79-01-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trichlorofluoromethane	75-69-4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
vinyl chloride	75-01-4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
xylenes	1330-20-7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2,3,7,8-TCDF	51207-31-9	2.34939E-16	0.00E+00	2.34E-17	2.58E-16	2.34E-17	3.04E-17	3.04E-17
Total PCDDs and PCDFs	NA	2.34939E-16	0.00E+00	2.34E-17	2.58E-16	2.34E-17	3.04E-17	3.04E-17
antimony	7440-36-0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cadmium	7440-43-9	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (3+)	7440-47-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (6+)	18540-29-9	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
copper	7440-50-8	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
lead	7439-92-1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
zinc	7440-66-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

a. The concentration of individual PCDDs and PCDFs congeners and coplanar PCBs in produce are presented in units of mg COPC TEQ/kg. The concentration of total PCDDs and PCDFs as well as the concentration of total coplanar PCBs in produce are presented in units of mg TEQ/kg produce and are calculated as the sum of the concentrations of all individual PCDD and PCDF congeners in produce and the concentrations of all coplanar produce in plants, respectively.

CONCENTRATIONS OF COPCS IN PRODUCE FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS (TEQ BASIS): Infant Exposure Scenarios								
		Aboveground Produce - Individual Uptake Mechanisms			Exposed Produce	Protected Produce	Belowground Produce	
		Due to Direct Deposition	Due to Air-to-Plant Transfer	Due to Direct Uptake from Soil	Due to All Processes	Due to All Processes	Due to Direct Uptake from Soil	Due to All Processes
		(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]
COPC	CAS Number	Pd	Pv	Pr	Pag	Pp	Prbg	Pbg
1,1,1-trichloroethane	71-55-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,1-dichloroethane	75-34-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,1-dichloroethene	75-35-4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2-dichloroethane	107-06-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2-dichloropropane	78-87-5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,3-butadiene	106-99-0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-butanone	78-93-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
acetone	67-64-1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzene	71-43-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzoic acid	65-85-0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzyl alcohol	100-51-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bis(2-ethylhexyl)-phthalate	117-81-7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bromodichloromethane	75-27-4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bromomethane	74-83-9	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
carbon disulfide	75-15-0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
carbon tetrachloride	56-23-5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chlorobenzene	108-90-7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloroform	67-66-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloromethane	74-87-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cis-1,3-dichloropropene	10061-01-5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dibromochloromethane	124-48-1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dichlorodifluoromethane	75-71-8	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dimethyl phthalate	131-11-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
di-n-butyl phthalate	84-74-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ethylbenzene	100-41-4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Freon 113	76-13-1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
HD	505-60-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
hexane	110-54-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methylene chloride	75-09-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
styrene	100-42-5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
tetrachloroethene	127-18-4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
toluene	108-88-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trans-1,3-dichloropropene	10061-02-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trichloroethene	79-01-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trichlorofluoromethane	75-69-4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
vinyl chloride	75-01-4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
xylenes	1330-20-7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2,3,7,8-TCDF	51207-31-9	2.34939E-16	0.00E+00	2.34E-17	2.58E-16	2.34E-17	3.04E-17	3.04E-17
Total PCDDs and PCDFs	NA	2.34939E-16	0.00E+00	2.34E-17	2.58E-16	2.34E-17	3.04E-17	3.04E-17
antimony	7440-36-0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cadmium	7440-43-9	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (3+)	7440-47-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (6+)	18540-29-9	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
copper	7440-50-8	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
lead	7439-92-1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
zinc	7440-66-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

a. The concentration of individual PCDDs and PCDFs congeners and coplanar PCBs in produce are presented in units of mg COPC TEQ/kg. The concentration of total PCDDs and PCDFs as well as the concentration of total coplanar PCBs in produce are presented in units of mg TEQ/kg produce and are calculated as the sum of the concentrations of all individual PCDD and PCDF congeners in produce and the concentrations of all coplanar produce in plants, respectively.

CONCENTRATIONS OF COPCS IN PRODUCE FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS: All Exposure Scenarios								
		Aboveground Produce - Individual Uptake Mechanisms			Exposed Produce	Protected Produce	Belowground Produce	
		Due to Direct Deposition	Due to Air-to-Plant Transfer	Due to Direct Uptake from Soil	Due to All Processes	Due to All Processes	Due to Direct Uptake from Soil	Due to All Processes
		(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]
COPC	CAS Number	Pd	Pv	Pr	Pag	Pp	Prbg	Pbg
1,1,1-trichloroethane	71-55-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,1-dichloroethane	75-34-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,1-dichloroethene	75-35-4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2-dichloroethane	107-06-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2-dichloropropane	78-87-5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,3-butadiene	106-99-0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-butanone	78-93-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
acetone	67-64-1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzene	71-43-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzoic acid	65-85-0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzyl alcohol	100-51-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bis(2-ethylhexyl)-phthalate	117-81-7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bromodichloromethane	75-27-4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bromomethane	74-83-9	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
carbon disulfide	75-15-0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
carbon tetrachloride	56-23-5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chlorobenzene	108-90-7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloroform	67-66-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloromethane	74-87-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cis-1,3-dichloropropene	10061-01-5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dibromochloromethane	124-48-1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dichlorodifluoromethane	75-71-8	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dimethyl phthalate	131-11-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
di-n-butyl phthalate	84-74-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ethylbenzene	100-41-4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Freon 113	76-13-1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
HD	505-60-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
hexane	110-54-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methylene chloride	75-09-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
styrene	100-42-5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
tetrachloroethene	127-18-4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
toluene	108-88-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trans-1,3-dichloropropene	10061-02-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trichloroethene	79-01-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trichlorofluoromethane	75-69-4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
vinyl chloride	75-01-4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
xylenes	1330-20-7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2,3,7,8-TCDF	51207-31-9	2.34939E-16	0.00E+00	4.55E-17	2.80E-16	4.55E-17	5.92E-17	5.92E-17
Total PCDDs and PCDFs	NA	2.34939E-16	0.00E+00	4.55E-17	2.80E-16	4.55E-17	5.92E-17	5.92E-17
antimony	7440-36-0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cadmium	7440-43-9	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (3+)	7440-47-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (6+)	18540-29-9	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
copper	7440-50-8	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
lead	7439-92-1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
zinc	7440-66-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

a. The concentration of individual PCDDs and PCDFs congeners and coplanar PCBs in produce are presented in units of mg COPC TEQ/kg. The concentration of total PCDDs and PCDFs as well as the concentration of total coplanar PCBs in produce are presented in units of mg TEQ/kg produce and are calculated as the sum of the concentrations of all individual PCDD and PCDF congeners in produce and the concentrations of all coplanar produce in plants, respectively.

CONCENTRATIONS OF COPCS IN ANIMAL FEED FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Adult Resident and Adult Subsistence Fisher Exposure Scenarios									
		Concentration Due to Individual Uptake Mechanisms					Forage	Silage	Grain[1]
		Due to Direct Deposition - Forage	Due to Direct Deposition - Silage	Due to Air-to-Plant Transfer - Forage	Due to Air-to-Plant Transfer - Silage	Due to Direct Uptake from Soil	Due to All Processes	Due to All Processes	Due to All Processes
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
COPC	CAS Number	Pd_{forage}	Pd_{silage}	Pv_{forage}	Pv_{silage}	Pr	P_{forage}	P_{silage}	P_{grain}
1,1,1-trichloroethane	71-55-6	0.00E+00	0.00E+00	1.83E-14	9.14E-15	4.00E-14	5.83E-14	4.92E-14	4.00E-14
1,1-dichloroethane	75-34-3	0.00E+00	0.00E+00	4.73E-15	2.37E-15	4.19E-14	4.67E-14	4.43E-14	4.19E-14
1,1-dichloroethene	75-35-4	0.00E+00	0.00E+00	1.95E-15	9.77E-16	9.18E-15	1.11E-14	1.02E-14	9.18E-15
1,2-dichloroethane	107-06-2	0.00E+00	0.00E+00	1.31E-14	6.57E-15	1.51E-13	1.64E-13	1.57E-13	1.51E-13
1,2-dichloropropane	78-87-5	0.00E+00	0.00E+00	1.88E-14	9.42E-15	1.11E-13	1.30E-13	1.21E-13	1.11E-13
1,3-butadiene	106-99-0	0.00E+00	0.00E+00	7.34E-13	3.67E-13	9.13E-15	7.44E-13	3.76E-13	9.13E-15
2-butanone	78-93-3	0.00E+00	0.00E+00	1.75E-13	8.75E-14	6.35E-10	6.35E-10	6.35E-10	6.35E-10
acetone	67-64-1	0.00E+00	0.00E+00	1.08E-13	5.42E-14	2.91E-10	2.91E-10	2.91E-10	2.91E-10
benzene	71-43-2	0.00E+00	0.00E+00	1.72E-13	8.58E-14	8.25E-13	9.97E-13	9.11E-13	8.25E-13
benzoic acid	65-85-0	0.00E+00	0.00E+00	5.65E-10	2.83E-10	2.54E-08	2.60E-08	2.57E-08	2.54E-08
benzyl alcohol	100-51-6	0.00E+00	0.00E+00	3.10E-10	1.55E-10	4.38E-07	4.38E-07	4.38E-07	4.38E-07
bis(2-ethylhexyl)-phthalate	117-81-7	2.33E-07	6.87E-08	0.00E+00	0.00E+00	5.01E-11	2.33E-07	6.87E-08	5.01E-11
bromodichloromethane	75-27-4	0.00E+00	0.00E+00	1.50E-13	7.48E-14	5.79E-11	5.81E-11	5.80E-11	5.79E-11
bromomethane	74-83-9	0.00E+00	0.00E+00	4.86E-15	2.43E-15	6.62E-13	6.67E-13	6.64E-13	6.62E-13
carbon disulfide	75-15-0	0.00E+00	0.00E+00	2.82E-14	1.41E-14	5.96E-14	8.77E-14	7.36E-14	5.96E-14
carbon tetrachloride	56-23-5	0.00E+00	0.00E+00	6.05E-14	3.02E-14	6.75E-14	1.28E-13	9.78E-14	6.75E-14
chlorobenzene	108-90-7	0.00E+00	0.00E+00	1.14E-13	5.72E-14	1.72E-13	2.86E-13	2.29E-13	1.72E-13
chloroform	67-66-3	0.00E+00	0.00E+00	1.99E-13	9.96E-14	7.86E-13	9.85E-13	8.85E-13	7.86E-13
chloromethane	74-87-3	0.00E+00	0.00E+00	5.09E-15	2.55E-15	5.60E-13	5.65E-13	5.63E-13	5.60E-13
cis-1,3-dichloropropene	10061-01-5	0.00E+00	0.00E+00	1.10E-15	5.52E-16	3.75E-14	3.86E-14	3.80E-14	3.75E-14
dibromochloromethane	124-48-1	0.00E+00	0.00E+00	3.85E-13	1.92E-13	5.62E-10	5.63E-10	5.63E-10	5.62E-10
dichlorodifluoromethane	75-71-8	0.00E+00	0.00E+00	4.84E-16	2.42E-16	8.45E-13	8.46E-13	8.46E-13	8.45E-13
dimethyl phthalate	131-11-3	0.00E+00	0.00E+00	2.38E-09	1.19E-09	9.40E-09	1.18E-08	1.06E-08	9.40E-09
di-n-butyl phthalate	84-74-2	0.00E+00	0.00E+00	4.70E-07	2.35E-07	7.56E-10	4.71E-07	2.36E-07	7.56E-10
ethylbenzene	100-41-4	0.00E+00	0.00E+00	1.31E-13	6.57E-14	1.02E-13	2.33E-13	1.68E-13	1.02E-13
Freon 113	76-13-1	0.00E+00	0.00E+00	2.68E-11	1.34E-11	1.59E-14	2.68E-11	1.34E-11	1.59E-14
HD	505-60-2	0.00E+00	0.00E+00	7.42E-12	3.71E-12	6.01E-13	8.02E-12	4.31E-12	6.01E-13
hexane	110-54-3	0.00E+00	0.00E+00	8.01E-15	4.01E-15	4.81E-15	1.28E-14	8.81E-15	4.81E-15
methylene chloride	75-09-2	0.00E+00	0.00E+00	5.04E-14	2.52E-14	8.69E-13	9.19E-13	8.94E-13	8.69E-13
styrene	100-42-5	0.00E+00	0.00E+00	8.24E-13	4.12E-13	1.47E-10	1.48E-10	1.48E-10	1.47E-10
tetrachloroethene	127-18-4	0.00E+00	0.00E+00	1.16E-13	5.79E-14	1.28E-14	1.29E-13	7.08E-14	1.28E-14
toluene	108-88-3	0.00E+00	0.00E+00	7.22E-14	3.61E-14	1.09E-13	1.81E-13	1.45E-13	1.09E-13
trans-1,3-dichloropropene	10061-02-6	0.00E+00	0.00E+00	3.23E-14	1.61E-14	5.25E-13	5.57E-13	5.41E-13	5.25E-13
trichloroethene	79-01-6	0.00E+00	0.00E+00	1.90E-14	9.49E-15	9.00E-14	1.09E-13	9.94E-14	9.00E-14
trichlorofluoromethane	75-69-4	0.00E+00	0.00E+00	2.06E-15	1.03E-15	4.40E-15	6.46E-15	5.43E-15	4.40E-15
vinyl chloride	75-01-4	0.00E+00	0.00E+00	5.57E-16	2.78E-16	9.68E-15	1.02E-14	9.95E-15	9.68E-15
xylenes	1330-20-7	0.00E+00	0.00E+00	4.46E-13	2.23E-13	1.28E-12	1.73E-12	1.50E-12	1.28E-12
2,3,7,8-TCDF	51207-31-9	2.63E-14	7.76E-15	0.00E+00	0.00E+00	2.99E-16	2.66E-14	8.06E-15	2.99E-16
Total PCDDs and PCDFs	NA								
antimony	7440-36-0	5.87E-10	1.73E-10	0.00E+00	0.00E+00	4.51E-16	5.87E-10	1.73E-10	4.51E-16
cadmium	7440-43-9	3.07E-09	9.05E-10	0.00E+00	0.00E+00	1.24E-14	3.07E-09	9.05E-10	1.24E-14
chromium (3+)	7440-47-3	2.82E-08	8.31E-09	0.00E+00	0.00E+00	8.72E-16	2.82E-08	8.31E-09	8.72E-16
chromium (6+)	18540-29-9	2.82E-08	8.31E-09	0.00E+00	0.00E+00	8.72E-16	2.82E-08	8.31E-09	8.72E-16
copper	7440-50-8	4.20E-08	1.24E-08	0.00E+00	0.00E+00	1.72E-12	4.20E-08	1.24E-08	1.72E-12
lead	7439-92-1	1.41E-08	4.15E-09	0.00E+00	0.00E+00	9.22E-14	1.41E-08	4.15E-09	9.22E-14
nickel	7440-02-0	5.86E-08	1.72E-08	0.00E+00	0.00E+00	1.90E-14	5.86E-08	1.72E-08	1.90E-14
zinc	7440-66-6	5.70E-07	1.68E-07	0.00E+00	0.00E+00	1.83E-12	5.70E-07	1.68E-07	1.83E-12

1. Grain was assumed grown on untilled land (Zs = 2cm). This causes a higher COPC concentration in grain, rather than using the default tilled soil depth of 20cm.

CONCENTRATIONS OF COPCS IN ANIMAL FEED FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Adult Farmer Exposure Scenario									
		Concentration Due to Individual Uptake Mechanisms					Forage	Silage	Grain[1]
		Due to Direct Deposition - Forage	Due to Direct Deposition - Silage	Due to Air-to-Plant Transfer - Forage	Due to Air-to-Plant Transfer - Silage	Due to Direct Uptake from Soil	Due to All Processes	Due to All Processes	Due to All Processes
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
COPC	CAS Number	Pd_{forage}	Pd_{silage}	Pv_{forage}	Pv_{silage}	Pr	P_{forage}	P_{silage}	P_{grain}
1,1,1-trichloroethane	71-55-6	0.00E+00	0.00E+00	1.83E-14	9.14E-15	3.00E-14	4.83E-14	3.92E-14	3.00E-14
1,1-dichloroethane	75-34-3	0.00E+00	0.00E+00	4.73E-15	2.37E-15	3.15E-14	3.62E-14	3.38E-14	3.15E-14
1,1-dichloroethene	75-35-4	0.00E+00	0.00E+00	1.95E-15	9.77E-16	6.88E-15	8.84E-15	7.86E-15	6.88E-15
1,2-dichloroethane	107-06-2	0.00E+00	0.00E+00	1.31E-14	6.57E-15	1.13E-13	1.26E-13	1.20E-13	1.13E-13
1,2-dichloropropane	78-87-5	0.00E+00	0.00E+00	1.88E-14	9.42E-15	8.36E-14	1.02E-13	9.30E-14	8.36E-14
1,3-butadiene	106-99-0	0.00E+00	0.00E+00	7.34E-13	3.67E-13	6.85E-15	7.41E-13	3.74E-13	6.85E-15
2-butanone	78-93-3	0.00E+00	0.00E+00	1.75E-13	8.75E-14	4.76E-10	4.77E-10	4.76E-10	4.76E-10
acetone	67-64-1	0.00E+00	0.00E+00	1.08E-13	5.42E-14	2.18E-10	2.18E-10	2.18E-10	2.18E-10
benzene	71-43-2	0.00E+00	0.00E+00	1.72E-13	8.58E-14	6.19E-13	7.91E-13	7.05E-13	6.19E-13
benzoic acid	65-85-0	0.00E+00	0.00E+00	5.65E-10	2.83E-10	1.91E-08	1.96E-08	1.93E-08	1.91E-08
benzyl alcohol	100-51-6	0.00E+00	0.00E+00	3.10E-10	1.55E-10	3.28E-07	3.29E-07	3.28E-07	3.28E-07
bis(2-ethylhexyl)-phthalate	117-81-7	2.33E-07	6.87E-08	0.00E+00	0.00E+00	3.76E-11	2.33E-07	6.87E-08	3.76E-11
bromodichloromethane	75-27-4	0.00E+00	0.00E+00	1.50E-13	7.48E-14	4.35E-11	4.36E-11	4.35E-11	4.35E-11
bromomethane	74-83-9	0.00E+00	0.00E+00	4.86E-15	2.43E-15	4.96E-13	5.01E-13	4.99E-13	4.96E-13
carbon disulfide	75-15-0	0.00E+00	0.00E+00	2.82E-14	1.41E-14	4.47E-14	7.29E-14	5.88E-14	4.47E-14
carbon tetrachloride	56-23-5	0.00E+00	0.00E+00	6.05E-14	3.02E-14	5.07E-14	1.11E-13	8.09E-14	5.07E-14
chlorobenzene	108-90-7	0.00E+00	0.00E+00	1.14E-13	5.72E-14	1.29E-13	2.43E-13	1.86E-13	1.29E-13
chloroform	67-66-3	0.00E+00	0.00E+00	1.99E-13	9.96E-14	5.89E-13	7.89E-13	6.89E-13	5.89E-13
chloromethane	74-87-3	0.00E+00	0.00E+00	5.09E-15	2.55E-15	4.20E-13	4.25E-13	4.23E-13	4.20E-13
cis-1,3-dichloropropene	10061-01-5	0.00E+00	0.00E+00	1.10E-15	5.52E-16	2.81E-14	2.92E-14	2.87E-14	2.81E-14
dibromochloromethane	124-48-1	0.00E+00	0.00E+00	3.85E-13	1.92E-13	4.22E-10	4.22E-10	4.22E-10	4.22E-10
dichlorodifluoromethane	75-71-8	0.00E+00	0.00E+00	4.84E-16	2.42E-16	6.34E-13	6.35E-13	6.34E-13	6.34E-13
dimethyl phthalate	131-11-3	0.00E+00	0.00E+00	2.38E-09	1.19E-09	7.05E-09	9.43E-09	8.24E-09	7.05E-09
di-n-butyl phthalate	84-74-2	0.00E+00	0.00E+00	4.70E-07	2.35E-07	5.67E-10	4.71E-07	2.36E-07	5.67E-10
ethylbenzene	100-41-4	0.00E+00	0.00E+00	1.31E-13	6.57E-14	7.66E-14	2.08E-13	1.42E-13	7.66E-14
Freon 113	76-13-1	0.00E+00	0.00E+00	2.68E-11	1.34E-11	1.19E-14	2.68E-11	1.34E-11	1.19E-14
HD	505-60-2	0.00E+00	0.00E+00	7.42E-12	3.71E-12	4.51E-13	7.87E-12	4.16E-12	4.51E-13
hexane	110-54-3	0.00E+00	0.00E+00	8.01E-15	4.01E-15	3.61E-15	1.16E-14	7.61E-15	3.61E-15
methylene chloride	75-09-2	0.00E+00	0.00E+00	5.04E-14	2.52E-14	6.52E-13	7.02E-13	6.77E-13	6.52E-13
styrene	100-42-5	0.00E+00	0.00E+00	8.24E-13	4.12E-13	1.10E-10	1.11E-10	1.11E-10	1.10E-10
tetrachloroethene	127-18-4	0.00E+00	0.00E+00	1.16E-13	5.79E-14	9.63E-15	1.25E-13	6.76E-14	9.63E-15
toluene	108-88-3	0.00E+00	0.00E+00	7.22E-14	3.61E-14	8.18E-14	1.54E-13	1.18E-13	8.18E-14
trans-1,3-dichloropropene	10061-02-6	0.00E+00	0.00E+00	3.23E-14	1.61E-14	3.94E-13	4.26E-13	4.10E-13	3.94E-13
trichloroethene	79-01-6	0.00E+00	0.00E+00	1.90E-14	9.49E-15	6.75E-14	8.64E-14	7.70E-14	6.75E-14
trichlorofluoromethane	75-69-4	0.00E+00	0.00E+00	2.06E-15	1.03E-15	3.30E-15	5.36E-15	4.33E-15	3.30E-15
vinyl chloride	75-01-4	0.00E+00	0.00E+00	5.57E-16	2.78E-16	7.26E-15	7.81E-15	7.53E-15	7.26E-15
xylenes	1330-20-7	0.00E+00	0.00E+00	4.46E-13	2.23E-13	9.61E-13	1.41E-12	1.18E-12	9.61E-13
2,3,7,8-TCDF	51207-31-9	2.63E-14	7.76E-15	0.00E+00	0.00E+00	2.68E-16	2.66E-14	8.03E-15	2.68E-16
Total PCDDs and PCDFs	NA								
antimony	7440-36-0	5.87E-10	1.73E-10	0.00E+00	0.00E+00	3.38E-16	5.87E-10	1.73E-10	3.38E-16
cadmium	7440-43-9	3.07E-09	9.05E-10	0.00E+00	0.00E+00	9.29E-15	3.07E-09	9.05E-10	9.29E-15
chromium (3+)	7440-47-3	2.82E-08	8.31E-09	0.00E+00	0.00E+00	6.54E-16	2.82E-08	8.31E-09	6.54E-16
chromium (6+)	18540-29-9	2.82E-08	8.31E-09	0.00E+00	0.00E+00	6.54E-16	2.82E-08	8.31E-09	6.54E-16
copper	7440-50-8	4.20E-08	1.24E-08	0.00E+00	0.00E+00	1.29E-12	4.20E-08	1.24E-08	1.29E-12
lead	7439-92-1	1.41E-08	4.15E-09	0.00E+00	0.00E+00	6.92E-14	1.41E-08	4.15E-09	6.92E-14
nickel	7440-02-0	5.86E-08	1.72E-08	0.00E+00	0.00E+00	1.42E-14	5.86E-08	1.72E-08	1.42E-14
zinc	7440-66-6	5.70E-07	1.68E-07	0.00E+00	0.00E+00	1.38E-12	5.70E-07	1.68E-07	1.38E-12

1. Grain was assumed grown on untilled land (Zs = 2cm). This causes a higher COPC concentration in grain, rather than using the default tilled soil depth of 20cm.

CONCENTRATIONS OF COPCS IN ANIMAL FEED FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Child Exposure Scenarios									
		Concentration Due to Individual Uptake Mechanisms					Forage	Silage	Grain[1]
		Due to Direct Deposition - Forage	Due to Direct Deposition - Silage	Due to Air-to-Plant Transfer - Forage	Due to Air-to-Plant Transfer - Silage	Due to Direct Uptake from Soil	Due to All Processes	Due to All Processes	Due to All Processes
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
COPC	CAS Number	Pd_{forage}	Pd_{silage}	Pv_{forage}	Pv_{silage}	Pr	P_{forage}	P_{silage}	P_{grain}
1,1,1-trichloroethane	71-55-6	0.00E+00	0.00E+00	1.83E-14	9.14E-15	2.40E-13	2.58E-13	2.49E-13	2.40E-13
1,1-dichloroethane	75-34-3	0.00E+00	0.00E+00	4.73E-15	2.37E-15	2.52E-13	2.56E-13	2.54E-13	2.52E-13
1,1-dichloroethene	75-35-4	0.00E+00	0.00E+00	1.95E-15	9.77E-16	5.51E-14	5.70E-14	5.60E-14	5.51E-14
1,2-dichloroethane	107-06-2	0.00E+00	0.00E+00	1.31E-14	6.57E-15	9.04E-13	9.17E-13	9.10E-13	9.04E-13
1,2-dichloropropane	78-87-5	0.00E+00	0.00E+00	1.88E-14	9.42E-15	6.69E-13	6.88E-13	6.78E-13	6.69E-13
1,3-butadiene	106-99-0	0.00E+00	0.00E+00	7.34E-13	3.67E-13	5.48E-14	7.89E-13	4.22E-13	5.48E-14
2-butanone	78-93-3	0.00E+00	0.00E+00	1.75E-13	8.75E-14	3.81E-09	3.81E-09	3.81E-09	3.81E-09
acetone	67-64-1	0.00E+00	0.00E+00	1.08E-13	5.42E-14	1.74E-09	1.74E-09	1.74E-09	1.74E-09
benzene	71-43-2	0.00E+00	0.00E+00	1.72E-13	8.58E-14	4.95E-12	5.12E-12	5.04E-12	4.95E-12
benzoic acid	65-85-0	0.00E+00	0.00E+00	5.65E-10	2.83E-10	1.51E-07	1.52E-07	1.52E-07	1.51E-07
benzyl alcohol	100-51-6	0.00E+00	0.00E+00	3.10E-10	1.55E-10	2.34E-06	2.34E-06	2.34E-06	2.34E-06
bis(2-ethylhexyl)-phthalate	117-81-7	2.33E-07	6.87E-08	0.00E+00	0.00E+00	2.95E-10	2.33E-07	6.90E-08	2.95E-10
bromodichloromethane	75-27-4	0.00E+00	0.00E+00	1.50E-13	7.48E-14	3.48E-10	3.48E-10	3.48E-10	3.48E-10
bromomethane	74-83-9	0.00E+00	0.00E+00	4.86E-15	2.43E-15	3.97E-12	3.98E-12	3.97E-12	3.97E-12
carbon disulfide	75-15-0	0.00E+00	0.00E+00	2.82E-14	1.41E-14	3.57E-13	3.86E-13	3.71E-13	3.57E-13
carbon tetrachloride	56-23-5	0.00E+00	0.00E+00	6.05E-14	3.02E-14	4.05E-13	4.66E-13	4.35E-13	4.05E-13
chlorobenzene	108-90-7	0.00E+00	0.00E+00	1.14E-13	5.72E-14	1.03E-12	1.15E-12	1.09E-12	1.03E-12
chloroform	67-66-3	0.00E+00	0.00E+00	1.99E-13	9.96E-14	4.72E-12	4.91E-12	4.81E-12	4.72E-12
chloromethane	74-87-3	0.00E+00	0.00E+00	5.09E-15	2.55E-15	3.36E-12	3.37E-12	3.36E-12	3.36E-12
cis-1,3-dichloropropene	10061-01-5	0.00E+00	0.00E+00	1.10E-15	5.52E-16	2.25E-13	2.26E-13	2.25E-13	2.25E-13
dibromochloromethane	124-48-1	0.00E+00	0.00E+00	3.85E-13	1.92E-13	3.36E-09	3.36E-09	3.36E-09	3.36E-09
dichlorodifluoromethane	75-71-8	0.00E+00	0.00E+00	4.84E-16	2.42E-16	5.07E-12	5.07E-12	5.07E-12	5.07E-12
dimethyl phthalate	131-11-3	0.00E+00	0.00E+00	2.38E-09	1.19E-09	5.61E-08	5.85E-08	5.73E-08	5.61E-08
di-n-butyl phthalate	84-74-2	0.00E+00	0.00E+00	4.70E-07	2.35E-07	4.46E-09	4.74E-07	2.39E-07	4.46E-09
ethylbenzene	100-41-4	0.00E+00	0.00E+00	1.31E-13	6.57E-14	6.12E-13	7.44E-13	6.78E-13	6.12E-13
Freon 113	76-13-1	0.00E+00	0.00E+00	2.68E-11	1.34E-11	9.56E-14	2.69E-11	1.35E-11	9.56E-14
HD	505-60-2	0.00E+00	0.00E+00	7.42E-12	3.71E-12	3.61E-12	1.10E-11	7.32E-12	3.61E-12
hexane	110-54-3	0.00E+00	0.00E+00	8.01E-15	4.01E-15	2.89E-14	3.69E-14	3.29E-14	2.89E-14
methylene chloride	75-09-2	0.00E+00	0.00E+00	5.04E-14	2.52E-14	5.21E-12	5.26E-12	5.24E-12	5.21E-12
styrene	100-42-5	0.00E+00	0.00E+00	8.24E-13	4.12E-13	8.81E-10	8.82E-10	8.82E-10	8.81E-10
tetrachloroethene	127-18-4	0.00E+00	0.00E+00	1.16E-13	5.79E-14	7.70E-14	1.93E-13	1.35E-13	7.70E-14
toluene	108-88-3	0.00E+00	0.00E+00	7.22E-14	3.61E-14	6.55E-13	7.27E-13	6.91E-13	6.55E-13
trans-1,3-dichloropropene	10061-02-6	0.00E+00	0.00E+00	3.23E-14	1.61E-14	3.15E-12	3.18E-12	3.17E-12	3.15E-12
trichloroethene	79-01-6	0.00E+00	0.00E+00	1.90E-14	9.49E-15	5.40E-13	5.59E-13	5.49E-13	5.40E-13
trichlorofluoromethane	75-69-4	0.00E+00	0.00E+00	2.06E-15	1.03E-15	2.64E-14	2.85E-14	2.74E-14	2.64E-14
vinyl chloride	75-01-4	0.00E+00	0.00E+00	5.57E-16	2.78E-16	5.81E-14	5.86E-14	5.83E-14	5.81E-14
xylenes	1330-20-7	0.00E+00	0.00E+00	4.46E-13	2.23E-13	7.69E-12	8.13E-12	7.91E-12	7.69E-12
2,3,7,8-TCDF	51207-31-9	2.63E-14	7.76E-15	0.00E+00	0.00E+00	2.34E-16	2.66E-14	7.99E-15	2.34E-16
Total PCDDs and PCDFs	NA								
antimony	7440-36-0	5.87E-10	1.73E-10	0.00E+00	0.00E+00	2.70E-15	5.87E-10	1.73E-10	2.70E-15
cadmium	7440-43-9	3.07E-09	9.05E-10	0.00E+00	0.00E+00	7.43E-14	3.07E-09	9.05E-10	7.43E-14
chromium (3+)	7440-47-3	2.82E-08	8.31E-09	0.00E+00	0.00E+00	5.23E-15	2.82E-08	8.31E-09	5.23E-15
chromium (6+)	18540-29-9	2.82E-08	8.31E-09	0.00E+00	0.00E+00	5.23E-15	2.82E-08	8.31E-09	5.23E-15
copper	7440-50-8	4.20E-08	1.24E-08	0.00E+00	0.00E+00	1.03E-11	4.20E-08	1.24E-08	1.03E-11
lead	7439-92-1	1.41E-08	4.15E-09	0.00E+00	0.00E+00	5.52E-13	1.41E-08	4.15E-09	5.52E-13
nickel	7440-02-0	5.86E-08	1.72E-08	0.00E+00	0.00E+00	1.14E-13	5.86E-08	1.72E-08	1.14E-13
zinc	7440-66-6	5.70E-07	1.68E-07	0.00E+00	0.00E+00	1.10E-11	5.70E-07	1.68E-07	1.10E-11

1. Grain was assumed grown on untilled land (Zs = 2cm). This causes a higher COPC concentration in grain, rather than using the default tilled soil depth of 20cm.

CONCENTRATIONS OF COPCS IN ANIMAL FEED FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Infant Exposure Scenarios									
		Concentration Due to Individual Uptake Mechanisms					Forage	Silage	Grain[1]
		Due to Direct Deposition - Forage	Due to Direct Deposition - Silage	Due to Air-to-Plant Transfer - Forage	Due to Air-to-Plant Transfer - Silage	Due to Direct Uptake from Soil	Due to All Processes	Due to All Processes	Due to All Processes
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
COPC	CAS Number	Pd_{forage}	Pd_{silage}	Pv_{forage}	Pv_{silage}	Pr	P_{forage}	P_{silage}	P_{grain}
1,1,1-trichloroethane	71-55-6	0.00E+00	0.00E+00	1.83E-14	9.14E-15	2.40E-13	2.58E-13	2.49E-13	2.40E-13
1,1-dichloroethane	75-34-3	0.00E+00	0.00E+00	4.73E-15	2.37E-15	2.52E-13	2.56E-13	2.54E-13	2.52E-13
1,1-dichloroethene	75-35-4	0.00E+00	0.00E+00	1.95E-15	9.77E-16	5.51E-14	5.70E-14	5.60E-14	5.51E-14
1,2-dichloroethane	107-06-2	0.00E+00	0.00E+00	1.31E-14	6.57E-15	9.04E-13	9.17E-13	9.10E-13	9.04E-13
1,2-dichloropropane	78-87-5	0.00E+00	0.00E+00	1.88E-14	9.42E-15	6.69E-13	6.88E-13	6.78E-13	6.69E-13
1,3-butadiene	106-99-0	0.00E+00	0.00E+00	7.34E-13	3.67E-13	5.48E-14	7.89E-13	4.22E-13	5.48E-14
2-butanone	78-93-3	0.00E+00	0.00E+00	1.75E-13	8.75E-14	3.81E-09	3.81E-09	3.81E-09	3.81E-09
acetone	67-64-1	0.00E+00	0.00E+00	1.08E-13	5.42E-14	1.74E-09	1.74E-09	1.74E-09	1.74E-09
benzene	71-43-2	0.00E+00	0.00E+00	1.72E-13	8.58E-14	4.95E-12	5.12E-12	5.04E-12	4.95E-12
benzoic acid	65-85-0	0.00E+00	0.00E+00	5.65E-10	2.83E-10	1.51E-07	1.52E-07	1.52E-07	1.51E-07
benzyl alcohol	100-51-6	0.00E+00	0.00E+00	3.10E-10	1.55E-10	2.34E-06	2.34E-06	2.34E-06	2.34E-06
bis(2-ethylhexyl)-phthalate	117-81-7	2.33E-07	6.87E-08	0.00E+00	0.00E+00	2.95E-10	2.33E-07	6.90E-08	2.95E-10
bromodichloromethane	75-27-4	0.00E+00	0.00E+00	1.50E-13	7.48E-14	3.48E-10	3.48E-10	3.48E-10	3.48E-10
bromomethane	74-83-9	0.00E+00	0.00E+00	4.86E-15	2.43E-15	3.97E-12	3.98E-12	3.97E-12	3.97E-12
carbon disulfide	75-15-0	0.00E+00	0.00E+00	2.82E-14	1.41E-14	3.57E-13	3.86E-13	3.71E-13	3.57E-13
carbon tetrachloride	56-23-5	0.00E+00	0.00E+00	6.05E-14	3.02E-14	4.05E-13	4.66E-13	4.35E-13	4.05E-13
chlorobenzene	108-90-7	0.00E+00	0.00E+00	1.14E-13	5.72E-14	1.03E-12	1.15E-12	1.09E-12	1.03E-12
chloroform	67-66-3	0.00E+00	0.00E+00	1.99E-13	9.96E-14	4.72E-12	4.91E-12	4.81E-12	4.72E-12
chloromethane	74-87-3	0.00E+00	0.00E+00	5.09E-15	2.55E-15	3.36E-12	3.37E-12	3.36E-12	3.36E-12
cis-1,3-dichloropropene	10061-01-5	0.00E+00	0.00E+00	1.10E-15	5.52E-16	2.25E-13	2.26E-13	2.25E-13	2.25E-13
dibromochloromethane	124-48-1	0.00E+00	0.00E+00	3.85E-13	1.92E-13	3.36E-09	3.36E-09	3.36E-09	3.36E-09
dichlorodifluoromethane	75-71-8	0.00E+00	0.00E+00	4.84E-16	2.42E-16	5.07E-12	5.07E-12	5.07E-12	5.07E-12
dimethyl phthalate	131-11-3	0.00E+00	0.00E+00	2.38E-09	1.19E-09	5.61E-08	5.85E-08	5.73E-08	5.61E-08
di-n-butyl phthalate	84-74-2	0.00E+00	0.00E+00	4.70E-07	2.35E-07	4.46E-09	4.74E-07	2.39E-07	4.46E-09
ethylbenzene	100-41-4	0.00E+00	0.00E+00	1.31E-13	6.57E-14	6.12E-13	7.44E-13	6.78E-13	6.12E-13
Freon 113	76-13-1	0.00E+00	0.00E+00	2.68E-11	1.34E-11	9.56E-14	2.69E-11	1.35E-11	9.56E-14
HD	505-60-2	0.00E+00	0.00E+00	7.42E-12	3.71E-12	3.61E-12	1.10E-11	7.32E-12	3.61E-12
hexane	110-54-3	0.00E+00	0.00E+00	8.01E-15	4.01E-15	2.89E-14	3.69E-14	3.29E-14	2.89E-14
methylene chloride	75-09-2	0.00E+00	0.00E+00	5.04E-14	2.52E-14	5.21E-12	5.26E-12	5.24E-12	5.21E-12
styrene	100-42-5	0.00E+00	0.00E+00	8.24E-13	4.12E-13	8.81E-10	8.82E-10	8.82E-10	8.81E-10
tetrachloroethene	127-18-4	0.00E+00	0.00E+00	1.16E-13	5.79E-14	7.70E-14	1.93E-13	1.35E-13	7.70E-14
toluene	108-88-3	0.00E+00	0.00E+00	7.22E-14	3.61E-14	6.55E-13	7.27E-13	6.91E-13	6.55E-13
trans-1,3-dichloropropene	10061-02-6	0.00E+00	0.00E+00	3.23E-14	1.61E-14	3.15E-12	3.18E-12	3.17E-12	3.15E-12
trichloroethene	79-01-6	0.00E+00	0.00E+00	1.90E-14	9.49E-15	5.40E-13	5.59E-13	5.49E-13	5.40E-13
trichlorofluoromethane	75-69-4	0.00E+00	0.00E+00	2.06E-15	1.03E-15	2.64E-14	2.85E-14	2.74E-14	2.64E-14
vinyl chloride	75-01-4	0.00E+00	0.00E+00	5.57E-16	2.78E-16	5.81E-14	5.86E-14	5.83E-14	5.81E-14
xylenes	1330-20-7	0.00E+00	0.00E+00	4.46E-13	2.23E-13	7.69E-12	8.13E-12	7.91E-12	7.69E-12
2,3,7,8-TCDF	51207-31-9	2.63E-14	7.76E-15	0.00E+00	0.00E+00	2.34E-16	2.66E-14	7.99E-15	2.34E-16
Total PCDDs and PCDFs	NA								
antimony	7440-36-0	5.87E-10	1.73E-10	0.00E+00	0.00E+00	2.70E-15	5.87E-10	1.73E-10	2.70E-15
cadmium	7440-43-9	3.07E-09	9.05E-10	0.00E+00	0.00E+00	7.43E-14	3.07E-09	9.05E-10	7.43E-14
chromium (3+)	7440-47-3	2.82E-08	8.31E-09	0.00E+00	0.00E+00	5.23E-15	2.82E-08	8.31E-09	5.23E-15
chromium (6+)	18540-29-9	2.82E-08	8.31E-09	0.00E+00	0.00E+00	5.23E-15	2.82E-08	8.31E-09	5.23E-15
copper	7440-50-8	4.20E-08	1.24E-08	0.00E+00	0.00E+00	1.03E-11	4.20E-08	1.24E-08	1.03E-11
lead	7439-92-1	1.41E-08	4.15E-09	0.00E+00	0.00E+00	5.52E-13	1.41E-08	4.15E-09	5.52E-13
nickel	7440-02-0	5.86E-08	1.72E-08	0.00E+00	0.00E+00	1.14E-13	5.86E-08	1.72E-08	1.14E-13
zinc	7440-66-6	5.70E-07	1.68E-07	0.00E+00	0.00E+00	1.10E-11	5.70E-07	1.68E-07	1.10E-11

1. Grain was assumed grown on untilled land (Zs = 2cm). This causes a higher COPC concentration in grain, rather than using the default tilled soil depth of 20cm.

CONCENTRATIONS OF COPCS IN ANIMAL FEED FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS: All Exposure Scenarios									
		Concentration Due to Individual Uptake Mechanisms					Forage	Silage	Grain[1]
		Due to Direct Deposition - Forage	Due to Direct Deposition - Silage	Due to Air-to-Plant Transfer - Forage	Due to Air-to-Plant Transfer - Silage	Due to Direct Uptake from Soil	Due to All Processes	Due to All Processes	Due to All Processes
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
COPC	CAS Number	Pd_{forage}	Pd_{silage}	Pv_{forage}	Pv_{silage}	Pr	P_{forage}	P_{silage}	P_{grain}
1,1,1-trichloroethane	71-55-6	0.00E+00	0.00E+00	1.83E-14	9.14E-15	2.40E-13	2.58E-13	2.49E-13	2.40E-13
1,1-dichloroethane	75-34-3	0.00E+00	0.00E+00	4.73E-15	2.37E-15	2.52E-13	2.56E-13	2.54E-13	2.52E-13
1,1-dichloroethene	75-35-4	0.00E+00	0.00E+00	1.95E-15	9.77E-16	5.51E-14	5.70E-14	5.60E-14	5.51E-14
1,2-dichloroethane	107-06-2	0.00E+00	0.00E+00	1.31E-14	6.57E-15	9.04E-13	9.17E-13	9.10E-13	9.04E-13
1,2-dichloropropane	78-87-5	0.00E+00	0.00E+00	1.88E-14	9.42E-15	6.69E-13	6.88E-13	6.78E-13	6.69E-13
1,3-butadiene	106-99-0	0.00E+00	0.00E+00	7.34E-13	3.67E-13	5.48E-14	7.89E-13	4.22E-13	5.48E-14
2-butanone	78-93-3	0.00E+00	0.00E+00	1.75E-13	8.75E-14	3.81E-09	3.81E-09	3.81E-09	3.81E-09
acetone	67-64-1	0.00E+00	0.00E+00	1.08E-13	5.42E-14	1.74E-09	1.74E-09	1.74E-09	1.74E-09
benzene	71-43-2	0.00E+00	0.00E+00	1.72E-13	8.58E-14	4.95E-12	5.12E-12	5.04E-12	4.95E-12
benzoic acid	65-85-0	0.00E+00	0.00E+00	5.65E-10	2.83E-10	1.53E-07	1.53E-07	1.53E-07	1.53E-07
benzyl alcohol	100-51-6	0.00E+00	0.00E+00	3.10E-10	1.55E-10	2.63E-06	2.63E-06	2.63E-06	2.63E-06
bis(2-ethylhexyl)-phthalate	117-81-7	2.33E-07	6.87E-08	0.00E+00	0.00E+00	3.00E-10	2.33E-07	6.90E-08	3.00E-10
bromodichloromethane	75-27-4	0.00E+00	0.00E+00	1.50E-13	7.48E-14	3.48E-10	3.48E-10	3.48E-10	3.48E-10
bromomethane	74-83-9	0.00E+00	0.00E+00	4.86E-15	2.43E-15	3.97E-12	3.98E-12	3.97E-12	3.97E-12
carbon disulfide	75-15-0	0.00E+00	0.00E+00	2.82E-14	1.41E-14	3.57E-13	3.86E-13	3.71E-13	3.57E-13
carbon tetrachloride	56-23-5	0.00E+00	0.00E+00	6.05E-14	3.02E-14	4.05E-13	4.66E-13	4.35E-13	4.05E-13
chlorobenzene	108-90-7	0.00E+00	0.00E+00	1.14E-13	5.72E-14	1.03E-12	1.15E-12	1.09E-12	1.03E-12
chloroform	67-66-3	0.00E+00	0.00E+00	1.99E-13	9.96E-14	4.72E-12	4.91E-12	4.81E-12	4.72E-12
chloromethane	74-87-3	0.00E+00	0.00E+00	5.09E-15	2.55E-15	3.36E-12	3.37E-12	3.36E-12	3.36E-12
cis-1,3-dichloropropene	10061-01-5	0.00E+00	0.00E+00	1.10E-15	5.52E-16	2.25E-13	2.26E-13	2.25E-13	2.25E-13
dibromochloromethane	124-48-1	0.00E+00	0.00E+00	3.85E-13	1.92E-13	3.37E-09	3.37E-09	3.37E-09	3.37E-09
dichlorodifluoromethane	75-71-8	0.00E+00	0.00E+00	4.84E-16	2.42E-16	5.07E-12	5.07E-12	5.07E-12	5.07E-12
dimethyl phthalate	131-11-3	0.00E+00	0.00E+00	2.38E-09	1.19E-09	5.64E-08	5.88E-08	5.76E-08	5.64E-08
di-n-butyl phthalate	84-74-2	0.00E+00	0.00E+00	4.70E-07	2.35E-07	4.54E-09	4.75E-07	2.40E-07	4.54E-09
ethylbenzene	100-41-4	0.00E+00	0.00E+00	1.31E-13	6.57E-14	6.12E-13	7.44E-13	6.78E-13	6.12E-13
Freon 113	76-13-1	0.00E+00	0.00E+00	2.68E-11	1.34E-11	9.56E-14	2.69E-11	1.35E-11	9.56E-14
HD	505-60-2	0.00E+00	0.00E+00	7.42E-12	3.71E-12	3.61E-12	1.10E-11	7.32E-12	3.61E-12
hexane	110-54-3	0.00E+00	0.00E+00	8.01E-15	4.01E-15	2.89E-14	3.69E-14	3.29E-14	2.89E-14
methylene chloride	75-09-2	0.00E+00	0.00E+00	5.04E-14	2.52E-14	5.21E-12	5.26E-12	5.24E-12	5.21E-12
styrene	100-42-5	0.00E+00	0.00E+00	8.24E-13	4.12E-13	8.83E-10	8.84E-10	8.84E-10	8.83E-10
tetrachloroethene	127-18-4	0.00E+00	0.00E+00	1.16E-13	5.79E-14	7.70E-14	1.93E-13	1.35E-13	7.70E-14
toluene	108-88-3	0.00E+00	0.00E+00	7.22E-14	3.61E-14	6.55E-13	7.27E-13	6.91E-13	6.55E-13
trans-1,3-dichloropropene	10061-02-6	0.00E+00	0.00E+00	3.23E-14	1.61E-14	3.15E-12	3.18E-12	3.17E-12	3.15E-12
trichloroethene	79-01-6	0.00E+00	0.00E+00	1.90E-14	9.49E-15	5.40E-13	5.59E-13	5.49E-13	5.40E-13
trichlorofluoromethane	75-69-4	0.00E+00	0.00E+00	2.06E-15	1.03E-15	2.64E-14	2.85E-14	2.74E-14	2.64E-14
vinyl chloride	75-01-4	0.00E+00	0.00E+00	5.57E-16	2.78E-16	5.81E-14	5.86E-14	5.83E-14	5.81E-14
xylenes	1330-20-7	0.00E+00	0.00E+00	4.46E-13	2.23E-13	7.69E-12	8.13E-12	7.91E-12	7.69E-12
2,3,7,8-TCDF	51207-31-9	2.63E-14	7.76E-15	0.00E+00	0.00E+00	4.55E-16	2.68E-14	8.21E-15	4.55E-16
Total PCDDs and PCDFs	NA								
antimony	7440-36-0	5.87E-10	1.73E-10	0.00E+00	0.00E+00	2.70E-15	5.87E-10	1.73E-10	2.70E-15
cadmium	7440-43-9	3.07E-09	9.05E-10	0.00E+00	0.00E+00	7.43E-14	3.07E-09	9.05E-10	7.43E-14
chromium (3+)	7440-47-3	2.82E-08	8.31E-09	0.00E+00	0.00E+00	5.23E-15	2.82E-08	8.31E-09	5.23E-15
chromium (6+)	18540-29-9	2.82E-08	8.31E-09	0.00E+00	0.00E+00	5.23E-15	2.82E-08	8.31E-09	5.23E-15
copper	7440-50-8	4.20E-08	1.24E-08	0.00E+00	0.00E+00	1.03E-11	4.20E-08	1.24E-08	1.03E-11
lead	7439-92-1	1.41E-08	4.15E-09	0.00E+00	0.00E+00	5.53E-13	1.41E-08	4.15E-09	5.53E-13
nickel	7440-02-0	5.86E-08	1.72E-08	0.00E+00	0.00E+00	1.14E-13	5.86E-08	1.72E-08	1.14E-13
zinc	7440-66-6	5.70E-07	1.68E-07	0.00E+00	0.00E+00	1.10E-11	5.70E-07	1.68E-07	1.10E-11

1. Grain was assumed grown on untilled land (Zs = 2cm). This causes a higher COPC concentration in grain, rather than using the default tilled soil depth of 20cm.

CONCENTRATIONS OF COPCS IN ANIMAL PRODUCTS FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Adult Resident and Adult Subsistence Fisher Exposure Scenarios						
		Beef Concentration	Pork Concentration	Poultry Concentration	Egg Concentration	Milk Concentration
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
COPC	CAS Number	A_{beef}	A_{pork}	$A_{poultry}$	A_{egg}	A_{milk}
1,1,1-trichloroethane	71-55-6	3.99E-12	1.53E-15	3.79E-14	2.17E-14	1.38E-12
1,1-dichloroethane	75-34-3	1.15E-15	5.22E-16	1.34E-17	7.68E-18	4.12E-16
1,1-dichloroethene	75-35-4	4.38E-13	1.88E-13	4.79E-15	2.73E-15	1.55E-16
1,2-dichloroethane	107-06-2	2.42E-15	1.11E-15	2.86E-17	1.63E-17	8.70E-16
1,2-dichloropropane	78-87-5	4.41E-15	1.94E-15	4.97E-17	2.83E-17	1.57E-15
1,3-butadiene	106-99-0	2.14E-14	1.93E-15	4.00E-18	2.29E-18	6.85E-15
2-butanone	78-93-3	7.89E-13	3.83E-13	9.95E-15	5.69E-15	2.86E-13
acetone	67-64-1	9.83E-14	4.77E-14	1.24E-15	7.07E-16	3.56E-14
benzene	71-43-2	3.92E-14	1.69E-14	4.30E-16	2.45E-16	1.39E-14
benzoic acid	65-85-0	1.74E-11	8.40E-12	2.19E-13	1.25E-13	6.28E-12
benzyl alcohol	100-51-6	3.09E-09	1.50E-09	3.90E-11	2.23E-11	1.12E-09
bis(2-ethylhexyl)-phthalate	117-81-7	8.87E-08	4.67E-09	1.04E-10	5.92E-11	2.82E-07
bromodichloromethane	75-27-4	2.35E-09	1.15E-09	3.02E-11	1.73E-11	8.46E-13
bromomethane	74-83-9	5.60E-15	2.71E-15	7.03E-17	4.01E-17	9.63E-15
carbon disulfide	75-15-0	3.91E-15	1.47E-15	3.62E-17	2.07E-17	1.36E-15
carbon tetrachloride	56-23-5	1.25E-11	4.06E-13	9.66E-14	5.52E-14	4.24E-12
chlorobenzene	108-90-7	2.83E-11	1.00E-12	2.46E-13	1.40E-13	9.70E-12
chloroform	67-66-3	3.31E-14	1.38E-14	3.50E-16	2.00E-16	1.17E-14
chloromethane	74-87-3	2.73E-15	1.31E-15	3.41E-17	1.95E-17	9.85E-16
cis-1,3-dichloropropene	10061-01-5	6.86E-13	3.28E-13	8.51E-15	4.86E-18	2.48E-16
dibromochloromethane	124-48-1	2.77E-08	1.36E-08	3.58E-10	2.05E-10	9.95E-12
dichlorodifluoromethane	75-71-8	3.75E-14	1.84E-11	4.84E-13	2.77E-13	1.35E-14
dimethyl phthalate	131-11-3	1.90E-07	7.91E-08	1.99E-09	1.14E-12	6.72E-11
di-n-butyl phthalate	84-74-2	1.72E-05	1.48E-06	1.01E-11	5.76E-10	5.50E-05
ethylbenzene	100-41-4	3.15E-14	9.29E-15	2.15E-16	1.23E-16	1.06E-14
Freon 113	76-13-1	3.48E-12	2.95E-13	3.61E-17	2.06E-17	1.11E-12
HD	505-60-2	4.32E-13	5.21E-14	5.00E-16	2.86E-16	1.39E-13
hexane	110-54-3	3.60E-15	1.07E-15	2.58E-17	1.47E-17	1.17E-15
methylene chloride	75-09-2	9.46E-15	4.42E-15	1.14E-16	6.52E-17	3.40E-15
styrene	100-42-5	2.01E-09	1.02E-09	2.73E-10	1.56E-10	7.08E-09
tetrachloroethene	127-18-4	2.17E-14	3.01E-15	3.89E-17	2.22E-17	7.00E-15
toluene	108-88-3	1.58E-14	5.60E-15	1.36E-16	7.80E-17	5.44E-15
trans-1,3-dichloropropene	10061-02-6	2.97E-14	1.40E-14	3.66E-16	2.09E-16	1.06E-14
trichloroethene	79-01-6	6.66E-15	2.88E-15	7.39E-17	4.21E-17	2.35E-15
trichlorofluoromethane	75-69-4	4.41E-13	1.68E-16	4.17E-15	2.38E-15	1.53E-13
vinyl chloride	75-01-4	1.26E-16	5.95E-17	1.53E-18	8.75E-19	4.56E-17
xylenes	1330-20-7	2.67E-13	1.12E-13	2.90E-15	1.66E-15	9.17E-14
2,3,7,8-TCDF	51207-31-9	9.77E-13	9.67E-14	1.70E-15	9.71E-16	3.04E-12
Total PCDDs and PCDFs	NA					
antimony	7440-36-0	5.60E-12	0.00E+00	0.00E+00	0.00E+00	8.46E-13
cadmium	7440-43-9	3.52E-12	2.42E-13	4.95E-16	1.16E-17	2.88E-13
chromium (3+)	7440-47-3	1.48E-09	0.00E+00	0.00E+00	0.00E+00	6.10E-10
chromium (6+)	18540-29-9	1.48E-09	0.00E+00	0.00E+00	0.00E+00	6.10E-10
copper	7440-50-8	4.01E-09	0.00E+00	0.00E+00	0.00E+00	9.08E-10
lead	7439-92-1	4.03E-11	0.00E+00	0.00E+00	0.00E+00	5.07E-11
nickel	7440-02-0	3.35E-09	0.00E+00	0.00E+00	0.00E+00	8.44E-10
zinc	7440-66-6	4.89E-10	3.01E-11	6.85E-15	6.85E-15	2.67E-10

CONCENTRATIONS OF COPCS IN ANIMAL PRODUCTS FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Adult Subsistence Farmer Exposure Scenario						
		Beef Concentration	Pork Concentration	Poultry Concentration	Egg Concentration	Milk Concentration
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
COPC	CAS Number	A_{beef}	A_{pork}	$A_{poultry}$	A_{egg}	A_{milk}
1,1,1-trichloroethane	71-55-6	3.26E-12	1.17E-15	2.84E-14	1.62E-14	1.12E-12
1,1-dichloroethane	75-34-3	8.91E-16	3.94E-16	1.01E-17	5.76E-18	3.17E-16
1,1-dichloroethene	75-35-4	3.45E-13	1.42E-13	3.59E-15	2.05E-15	1.22E-16
1,2-dichloroethane	107-06-2	1.86E-15	8.38E-16	2.14E-17	1.22E-17	6.66E-16
1,2-dichloropropane	78-87-5	3.45E-15	1.47E-15	3.72E-17	2.12E-17	1.22E-15
1,3-butadiene	106-99-0	2.13E-14	1.89E-15	3.00E-18	1.71E-18	6.82E-15
2-butanone	78-93-3	5.92E-13	2.87E-13	7.46E-15	4.27E-15	2.14E-13
acetone	67-64-1	7.38E-14	3.58E-14	9.32E-16	5.30E-16	2.67E-14
benzene	71-43-2	3.09E-14	1.28E-14	3.23E-16	1.84E-16	1.09E-14
benzoic acid	65-85-0	1.32E-11	6.31E-12	1.64E-13	9.39E-14	4.74E-12
benzyl alcohol	100-51-6	2.32E-09	1.13E-09	2.93E-11	1.67E-11	8.42E-10
bis(2-ethylhexyl)-phthalate	117-81-7	8.87E-08	4.66E-09	7.76E-11	4.44E-11	2.82E-07
bromodichloromethane	75-27-4	1.77E-09	8.64E-10	2.27E-11	1.30E-11	6.35E-13
bromomethane	74-83-9	4.21E-15	2.03E-15	5.27E-17	3.01E-17	7.23E-15
carbon disulfide	75-15-0	3.21E-15	1.13E-15	2.72E-17	1.55E-17	1.11E-15
carbon tetrachloride	56-23-5	1.07E-11	3.16E-13	7.25E-14	4.14E-14	3.60E-12
chlorobenzene	108-90-7	2.38E-11	7.75E-13	1.84E-13	1.05E-13	8.07E-12
chloroform	67-66-3	2.62E-14	1.05E-14	2.63E-16	1.50E-16	9.22E-15
chloromethane	74-87-3	2.05E-15	9.87E-16	2.55E-17	1.46E-17	7.40E-16
cis-1,3-dichloropropene	10061-01-5	5.19E-13	2.46E-13	6.38E-15	3.64E-18	1.87E-16
dibromochloromethane	124-48-1	2.08E-08	1.02E-08	2.69E-10	1.54E-10	7.47E-12
dichlorodifluoromethane	75-71-8	2.82E-14	1.38E-11	3.63E-13	2.07E-13	1.01E-14
dimethyl phthalate	131-11-3	1.51E-07	6.00E-08	1.49E-09	8.52E-13	5.31E-11
di-n-butyl phthalate	84-74-2	1.72E-05	1.47E-06	7.56E-12	4.32E-10	5.50E-05
ethylbenzene	100-41-4	2.76E-14	7.31E-15	1.61E-16	9.20E-17	9.23E-15
Freon 113	76-13-1	3.48E-12	2.94E-13	2.71E-17	1.55E-17	1.11E-12
HD	505-60-2	4.22E-13	4.74E-14	3.75E-16	2.14E-16	1.36E-13
hexane	110-54-3	3.19E-15	8.42E-16	1.94E-17	1.10E-17	1.03E-15
methylene chloride	75-09-2	7.20E-15	3.32E-15	8.54E-17	4.89E-17	2.58E-15
styrene	100-42-5	1.51E-09	7.62E-10	2.05E-10	1.17E-10	5.32E-09
tetrachloroethene	127-18-4	2.10E-14	2.66E-15	2.92E-17	1.67E-17	6.76E-15
toluene	108-88-3	1.33E-14	4.32E-15	1.02E-16	5.85E-17	4.52E-15
trans-1,3-dichloropropene	10061-02-6	2.26E-14	1.06E-14	2.75E-16	1.57E-16	8.06E-15
trichloroethene	79-01-6	5.24E-15	2.18E-15	5.54E-17	3.16E-17	1.84E-15
trichlorofluoromethane	75-69-4	3.62E-13	1.29E-16	3.13E-15	1.79E-15	1.25E-13
vinyl chloride	75-01-4	9.62E-17	4.47E-17	1.15E-18	6.56E-19	3.47E-17
xylenes	1330-20-7	2.14E-13	8.49E-14	2.18E-15	1.24E-15	7.34E-14
2,3,7,8-TCDF	51207-31-9	9.70E-13	9.15E-14	1.52E-15	8.69E-16	3.03E-12
Total PCDDs and PCDFs	NA					
antimony	7440-36-0	5.60E-12	0.00E+00	0.00E+00	0.00E+00	8.46E-13
cadmium	7440-43-9	3.52E-12	2.42E-13	3.71E-16	8.73E-18	2.88E-13
chromium (3+)	7440-47-3	1.48E-09	0.00E+00	0.00E+00	0.00E+00	6.10E-10
chromium (6+)	18540-29-9	1.48E-09	0.00E+00	0.00E+00	0.00E+00	6.10E-10
copper	7440-50-8	4.01E-09	0.00E+00	0.00E+00	0.00E+00	9.08E-10
lead	7439-92-1	4.03E-11	0.00E+00	0.00E+00	0.00E+00	5.07E-11
nickel	7440-02-0	3.35E-09	0.00E+00	0.00E+00	0.00E+00	8.44E-10
zinc	7440-66-6	4.89E-10	3.01E-11	5.14E-15	5.14E-15	2.67E-10

CONCENTRATIONS OF COPCS IN ANIMAL PRODUCTS FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Child Exposure Scenarios						
		Beef Concentration	Pork Concentration	Poultry Concentration	Egg Concentration	Milk Concentration
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
COPC	CAS Number	A_{beef}	A_{pork}	$A_{poultry}$	A_{egg}	A_{milk}
1,1,1-trichloroethane	71-55-6	1.84E-11	8.69E-15	2.27E-13	1.30E-13	6.55E-12
1,1-dichloroethane	75-34-3	6.43E-15	3.09E-15	8.04E-17	4.61E-17	2.31E-15
1,1-dichloroethene	75-35-4	2.30E-12	1.10E-12	2.87E-14	1.64E-14	8.24E-16
1,2-dichloroethane	107-06-2	1.37E-14	6.61E-15	1.72E-16	9.80E-17	4.95E-15
1,2-dichloropropane	78-87-5	2.37E-14	1.14E-14	2.98E-16	1.70E-16	8.53E-15
1,3-butadiene	106-99-0	2.30E-14	2.69E-15	2.40E-17	1.37E-17	7.41E-15
2-butanone	78-93-3	4.73E-12	2.30E-12	5.97E-14	3.41E-14	1.71E-12
acetone	67-64-1	5.90E-13	2.86E-13	7.45E-15	4.24E-15	2.14E-13
benzene	71-43-2	2.06E-13	9.88E-14	2.58E-15	1.47E-15	7.40E-14
benzoic acid	65-85-0	1.02E-10	4.99E-11	1.30E-12	7.46E-13	3.69E-11
benzyl alcohol	100-51-6	1.65E-08	8.02E-09	2.08E-10	1.19E-10	5.99E-09
bis(2-ethylhexyl)-phthalate	117-81-7	8.90E-08	4.83E-09	6.10E-10	3.48E-10	2.83E-07
bromodichloromethane	75-27-4	1.41E-08	6.91E-09	1.81E-10	1.04E-10	5.07E-12
bromomethane	74-83-9	3.34E-14	1.62E-14	4.22E-16	2.41E-16	5.75E-14
carbon disulfide	75-15-0	1.79E-14	8.37E-15	2.17E-16	1.24E-16	6.40E-15
carbon tetrachloride	56-23-5	4.86E-11	2.21E-12	5.80E-13	3.31E-13	1.70E-11
chlorobenzene	108-90-7	1.20E-10	5.61E-12	1.47E-12	8.43E-13	4.23E-11
chloroform	67-66-3	1.69E-13	8.05E-14	2.10E-15	1.20E-15	6.08E-14
chloromethane	74-87-3	1.62E-14	7.88E-15	2.04E-16	1.17E-16	5.88E-15
cis-1,3-dichloropropene	10061-01-5	4.03E-12	1.96E-12	5.10E-14	2.91E-17	1.46E-15
dibromochloromethane	124-48-1	1.66E-07	8.15E-08	2.14E-09	1.22E-09	5.95E-11
dichlorodifluoromethane	75-71-8	2.25E-13	1.11E-10	2.90E-12	1.66E-12	8.09E-14
dimethyl phthalate	131-11-3	9.68E-07	4.58E-07	1.19E-08	6.78E-12	3.48E-10
di-n-butyl phthalate	84-74-2	1.75E-05	1.64E-06	5.94E-11	3.39E-09	5.58E-05
ethylbenzene	100-41-4	1.09E-13	4.90E-14	1.29E-15	7.36E-16	3.80E-14
Freon 113	76-13-1	3.50E-12	3.01E-13	2.17E-16	1.24E-16	1.12E-12
HD	505-60-2	6.24E-13	1.47E-13	3.00E-15	1.71E-15	2.08E-13
hexane	110-54-3	1.18E-14	5.58E-15	1.55E-16	8.83E-17	3.89E-15
methylene chloride	75-09-2	5.45E-14	2.63E-14	6.83E-16	3.91E-16	1.97E-14
styrene	100-42-5	1.20E-08	6.07E-09	1.64E-09	9.34E-10	4.23E-08
tetrachloroethene	127-18-4	3.53E-14	1.01E-14	2.33E-16	1.33E-16	1.17E-14
toluene	108-88-3	6.72E-14	3.12E-14	8.19E-16	4.68E-16	2.37E-14
trans-1,3-dichloropropene	10061-02-6	1.71E-13	8.36E-14	2.20E-15	1.26E-15	6.12E-14
trichloroethene	79-01-6	3.50E-14	1.69E-14	4.43E-16	2.53E-16	1.25E-14
trichlorofluoromethane	75-69-4	2.03E-12	9.57E-16	2.50E-14	1.43E-14	7.21E-13
vinyl chloride	75-01-4	7.28E-16	3.54E-16	9.17E-18	5.25E-18	2.64E-16
xylenes	1330-20-7	1.31E-12	6.45E-13	1.74E-14	9.96E-15	4.57E-13
2,3,7,8-TCDF	51207-31-9	9.64E-13	8.60E-14	1.33E-15	7.59E-16	3.01E-12
Total PCDDs and PCDFs	NA					
antimony	7440-36-0	5.60E-12	0.00E+00	0.00E+00	0.00E+00	8.46E-13
cadmium	7440-43-9	3.52E-12	2.42E-13	2.97E-15	6.98E-17	2.88E-13
chromium (3+)	7440-47-3	1.48E-09	0.00E+00	0.00E+00	0.00E+00	6.10E-10
chromium (6+)	18540-29-9	1.48E-09	0.00E+00	0.00E+00	0.00E+00	6.10E-10
copper	7440-50-8	4.01E-09	0.00E+00	0.00E+00	0.00E+00	9.09E-10
lead	7439-92-1	4.03E-11	0.00E+00	0.00E+00	0.00E+00	5.07E-11
nickel	7440-02-0	3.35E-09	0.00E+00	0.00E+00	0.00E+00	8.44E-10
zinc	7440-66-6	4.89E-10	3.01E-11	4.11E-14	4.11E-14	2.67E-10

CONCENTRATIONS OF COPCS IN ANIMAL PRODUCTS FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Infant Exposure Scenarios						
		Beef Concentration	Pork Concentration	Poultry Concentration	Egg Concentration	Milk Concentration
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
COPC	CAS Number	A_{beef}	A_{pork}	$A_{poultry}$	A_{egg}	A_{milk}
1,1,1-trichloroethane	71-55-6	1.84E-11	8.69E-15	2.27E-13	1.30E-13	6.55E-12
1,1-dichloroethane	75-34-3	6.43E-15	3.09E-15	8.04E-17	4.61E-17	2.31E-15
1,1-dichloroethene	75-35-4	2.30E-12	1.10E-12	2.87E-14	1.64E-14	8.24E-16
1,2-dichloroethane	107-06-2	1.37E-14	6.61E-15	1.72E-16	9.80E-17	4.95E-15
1,2-dichloropropane	78-87-5	2.37E-14	1.14E-14	2.98E-16	1.70E-16	8.53E-15
1,3-butadiene	106-99-0	2.30E-14	2.69E-15	2.40E-17	1.37E-17	7.41E-15
2-butanone	78-93-3	4.73E-12	2.30E-12	5.97E-14	3.41E-14	1.71E-12
acetone	67-64-1	5.90E-13	2.86E-13	7.45E-15	4.24E-15	2.14E-13
benzene	71-43-2	2.06E-13	9.88E-14	2.58E-15	1.47E-15	7.40E-14
benzoic acid	65-85-0	1.02E-10	4.99E-11	1.30E-12	7.46E-13	3.69E-11
benzyl alcohol	100-51-6	1.65E-08	8.02E-09	2.08E-10	1.19E-10	5.99E-09
bis(2-ethylhexyl)-phthalate	117-81-7	8.90E-08	4.83E-09	6.10E-10	3.48E-10	2.83E-07
bromodichloromethane	75-27-4	1.41E-08	6.91E-09	1.81E-10	1.04E-10	5.07E-12
bromomethane	74-83-9	3.34E-14	1.62E-14	4.22E-16	2.41E-16	5.75E-14
carbon disulfide	75-15-0	1.79E-14	8.37E-15	2.17E-16	1.24E-16	6.40E-15
carbon tetrachloride	56-23-5	4.86E-11	2.21E-12	5.80E-13	3.31E-13	1.70E-11
chlorobenzene	108-90-7	1.20E-10	5.61E-12	1.47E-12	8.43E-13	4.23E-11
chloroform	67-66-3	1.69E-13	8.05E-14	2.10E-15	1.20E-15	6.08E-14
chloromethane	74-87-3	1.62E-14	7.88E-15	2.04E-16	1.17E-16	5.88E-15
cis-1,3-dichloropropene	10061-01-5	4.03E-12	1.96E-12	5.10E-14	2.91E-17	1.46E-15
dibromochloromethane	124-48-1	1.66E-07	8.15E-08	2.14E-09	1.22E-09	5.95E-11
dichlorodifluoromethane	75-71-8	2.25E-13	1.11E-10	2.90E-12	1.66E-12	8.09E-14
dimethyl phthalate	131-11-3	9.68E-07	4.58E-07	1.19E-08	6.78E-12	3.48E-10
di-n-butyl phthalate	84-74-2	1.75E-05	1.64E-06	5.94E-11	3.39E-09	5.58E-05
ethylbenzene	100-41-4	1.09E-13	4.90E-14	1.29E-15	7.36E-16	3.80E-14
Freon 113	76-13-1	3.50E-12	3.01E-13	2.17E-16	1.24E-16	1.12E-12
HD	505-60-2	6.24E-13	1.47E-13	3.00E-15	1.71E-15	2.08E-13
hexane	110-54-3	1.18E-14	5.58E-15	1.55E-16	8.83E-17	3.89E-15
methylene chloride	75-09-2	5.45E-14	2.63E-14	6.83E-16	3.91E-16	1.97E-14
styrene	100-42-5	1.20E-08	6.07E-09	1.64E-09	9.34E-10	4.23E-08
tetrachloroethene	127-18-4	3.53E-14	1.01E-14	2.33E-16	1.33E-16	1.17E-14
toluene	108-88-3	6.72E-14	3.12E-14	8.19E-16	4.68E-16	2.37E-14
trans-1,3-dichloropropene	10061-02-6	1.71E-13	8.36E-14	2.20E-15	1.26E-15	6.12E-14
trichloroethene	79-01-6	3.50E-14	1.69E-14	4.43E-16	2.53E-16	1.25E-14
trichlorofluoromethane	75-69-4	2.03E-12	9.57E-16	2.50E-14	1.43E-14	7.21E-13
vinyl chloride	75-01-4	7.28E-16	3.54E-16	9.17E-18	5.25E-18	2.64E-16
xylenes	1330-20-7	1.31E-12	6.45E-13	1.74E-14	9.96E-15	4.57E-13
2,3,7,8-TCDF	51207-31-9	9.64E-13	8.60E-14	1.33E-15	7.59E-16	3.01E-12
Total PCDDs and PCDFs	NA					
antimony	7440-36-0	5.60E-12	0.00E+00	0.00E+00	0.00E+00	8.46E-13
cadmium	7440-43-9	3.52E-12	2.42E-13	2.97E-15	6.98E-17	2.88E-13
chromium (3+)	7440-47-3	1.48E-09	0.00E+00	0.00E+00	0.00E+00	6.10E-10
chromium (6+)	18540-29-9	1.48E-09	0.00E+00	0.00E+00	0.00E+00	6.10E-10
copper	7440-50-8	4.01E-09	0.00E+00	0.00E+00	0.00E+00	9.09E-10
lead	7439-92-1	4.03E-11	0.00E+00	0.00E+00	0.00E+00	5.07E-11
nickel	7440-02-0	3.35E-09	0.00E+00	0.00E+00	0.00E+00	8.44E-10
zinc	7440-66-6	4.89E-10	3.01E-11	4.11E-14	4.11E-14	2.67E-10

CONCENTRATIONS OF COPCS IN ANIMAL PRODUCTS FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS: All Exposure Scenarios						
		Beef Concentration	Pork Concentration	Poultry Concentration	Egg Concentration	Milk Concentration
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
COPC	CAS Number	A_{beef}	A_{pork}	$A_{poultry}$	A_{egg}	A_{milk}
1,1,1-trichloroethane	71-55-6	1.84E-11	8.69E-15	2.27E-13	1.30E-13	6.55E-12
1,1-dichloroethane	75-34-3	6.43E-15	3.09E-15	8.04E-17	4.61E-17	2.31E-15
1,1-dichloroethene	75-35-4	2.30E-12	1.10E-12	2.87E-14	1.64E-14	8.24E-16
1,2-dichloroethane	107-06-2	1.37E-14	6.61E-15	1.72E-16	9.80E-17	4.95E-15
1,2-dichloropropane	78-87-5	2.37E-14	1.14E-14	2.98E-16	1.70E-16	8.53E-15
1,3-butadiene	106-99-0	2.30E-14	2.69E-15	2.40E-17	1.37E-17	7.41E-15
2-butanone	78-93-3	4.73E-12	2.30E-12	5.97E-14	3.41E-14	1.71E-12
acetone	67-64-1	5.90E-13	2.86E-13	7.45E-15	4.24E-15	2.14E-13
benzene	71-43-2	2.06E-13	9.88E-14	2.58E-15	1.47E-15	7.40E-14
benzoic acid	65-85-0	1.03E-10	5.03E-11	1.31E-12	7.51E-13	3.72E-11
benzyl alcohol	100-51-6	1.85E-08	9.01E-09	2.34E-10	1.34E-10	6.73E-09
bis(2-ethylhexyl)-phthalate	117-81-7	8.90E-08	4.83E-09	6.21E-10	3.55E-10	2.83E-07
bromodichloromethane	75-27-4	1.41E-08	6.91E-09	1.81E-10	1.04E-10	5.07E-12
bromomethane	74-83-9	3.34E-14	1.62E-14	4.22E-16	2.41E-16	5.75E-14
carbon disulfide	75-15-0	1.79E-14	8.37E-15	2.17E-16	1.24E-16	6.40E-15
carbon tetrachloride	56-23-5	4.86E-11	2.21E-12	5.80E-13	3.31E-13	1.70E-11
chlorobenzene	108-90-7	1.20E-10	5.61E-12	1.47E-12	8.43E-13	4.23E-11
chloroform	67-66-3	1.69E-13	8.05E-14	2.10E-15	1.20E-15	6.08E-14
chloromethane	74-87-3	1.62E-14	7.88E-15	2.04E-16	1.17E-16	5.88E-15
cis-1,3-dichloropropene	10061-01-5	4.03E-12	1.96E-12	5.10E-14	2.91E-17	1.46E-15
dibromochloromethane	124-48-1	1.66E-07	8.18E-08	2.15E-09	1.23E-09	5.97E-11
dichlorodifluoromethane	75-71-8	2.25E-13	1.11E-10	2.90E-12	1.66E-12	8.09E-14
dimethyl phthalate	131-11-3	9.73E-07	4.60E-07	1.19E-08	6.82E-12	3.50E-10
di-n-butyl phthalate	84-74-2	1.75E-05	1.64E-06	6.05E-11	3.46E-09	5.58E-05
ethylbenzene	100-41-4	1.09E-13	4.90E-14	1.29E-15	7.36E-16	3.80E-14
Freon 113	76-13-1	3.50E-12	3.01E-13	2.17E-16	1.24E-16	1.12E-12
HD	505-60-2	6.24E-13	1.47E-13	3.00E-15	1.71E-15	2.08E-13
hexane	110-54-3	1.18E-14	5.58E-15	1.55E-16	8.83E-17	3.89E-15
methylene chloride	75-09-2	5.45E-14	2.63E-14	6.83E-16	3.91E-16	1.97E-14
styrene	100-42-5	1.20E-08	6.09E-09	1.64E-09	9.36E-10	4.23E-08
tetrachloroethene	127-18-4	3.53E-14	1.01E-14	2.33E-16	1.33E-16	1.17E-14
toluene	108-88-3	6.72E-14	3.12E-14	8.19E-16	4.68E-16	2.37E-14
trans-1,3-dichloropropene	10061-02-6	1.71E-13	8.36E-14	2.20E-15	1.26E-15	6.12E-14
trichloroethene	79-01-6	3.50E-14	1.69E-14	4.43E-16	2.53E-16	1.25E-14
trichlorofluoromethane	75-69-4	2.03E-12	9.57E-16	2.50E-14	1.43E-14	7.21E-13
vinyl chloride	75-01-4	7.28E-16	3.54E-16	9.17E-18	5.25E-18	2.64E-16
xylenes	1330-20-7	1.31E-12	6.45E-13	1.74E-14	9.96E-15	4.57E-13
2,3,7,8-TCDF	51207-31-9	1.01E-12	1.22E-13	2.59E-15	1.48E-15	3.11E-12
Total PCDDs and PCDFs	NA					
antimony	7440-36-0	5.60E-12	0.00E+00	0.00E+00	0.00E+00	8.46E-13
cadmium	7440-43-9	3.52E-12	2.42E-13	2.97E-15	6.98E-17	2.88E-13
chromium (3+)	7440-47-3	1.48E-09	0.00E+00	0.00E+00	0.00E+00	6.10E-10
chromium (6+)	18540-29-9	1.48E-09	0.00E+00	0.00E+00	0.00E+00	6.10E-10
copper	7440-50-8	4.01E-09	0.00E+00	0.00E+00	0.00E+00	9.09E-10
lead	7439-92-1	4.03E-11	0.00E+00	0.00E+00	0.00E+00	5.07E-11
nickel	7440-02-0	3.35E-09	0.00E+00	0.00E+00	0.00E+00	8.44E-10
zinc	7440-66-6	4.89E-10	3.01E-11	4.11E-14	4.11E-14	2.67E-10

CONCENTRATIONS OF COPCS IN ANIMAL PRODUCTS FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS (TEQ BASIS): Adult Resident and Adult Subsistence Fisher Exposure Scenarios						
		Beef Concentration	Pork Concentration	Poultry Concentration	Egg Concentration	Milk Concentration
		(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]
COPC	CAS Number	A_{beef}	A_{pork}	$A_{poultry}$	A_{egg}	A_{milk}
1,1,1-trichloroethane	71-55-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,1-dichloroethane	75-34-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,1-dichloroethene	75-35-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2-dichloroethane	107-06-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2-dichloropropane	78-87-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,3-butadiene	106-99-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-butanone	78-93-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
acetone	67-64-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzene	71-43-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzoic acid	65-85-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzyl alcohol	100-51-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bis(2-ethylhexyl)-phthalate	117-81-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bromodichloromethane	75-27-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bromomethane	74-83-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
carbon disulfide	75-15-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
carbon tetrachloride	56-23-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chlorobenzene	108-90-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloroform	67-66-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloromethane	74-87-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cis-1,3-dichloropropene	10061-01-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dibromochloromethane	124-48-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dichlorodifluoromethane	75-71-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dimethyl phthalate	131-11-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
di-n-butyl phthalate	84-74-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ethylbenzene	100-41-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Freon 113	76-13-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
HD	505-60-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
hexane	110-54-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methylene chloride	75-09-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
styrene	100-42-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
tetrachloroethene	127-18-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
toluene	108-88-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trans-1,3-dichloropropene	10061-02-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trichloroethene	79-01-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trichlorofluoromethane	75-69-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
vinyl chloride	75-01-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
xylenes	1330-20-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2,3,7,8-TCDF	51207-31-9	9.77E-14	9.67E-15	1.70E-16	9.71E-17	3.04E-13
Total PCDDs and PCDFs	NA	9.77E-14	9.67E-15	1.70E-16	9.71E-17	3.04E-13
antimony	7440-36-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cadmium	7440-43-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (3+)	7440-47-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (6+)	18540-29-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
copper	7440-50-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
lead	7439-92-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
zinc	7440-66-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

a. The concentration of individual PCDDs and PCDFs congeners and coplanar PCBs in animal products are presented in units of mg COPC TEQ/kg. The concentration of total PCDDs and PCDFs as well as the concentration of total coplanar PCBs in animal products are presented in units of mg TEQ/kg produce and are calculated as the sum of the concentrations of all individual PCDD and PCDF congeners in animal products and the concentrations of all coplanar produce in animal products, respectively.

CONCENTRATIONS OF COPCS IN ANIMAL PRODUCTS FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS (TEQ BASIS): Adult Subsistence Farmer Exposure Scenario						
		Beef Concentration	Pork Concentration	Poultry Concentration	Egg Concentration	Milk Concentration
		(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]
COPC	CAS Number	A_{beef}	A_{pork}	$A_{poultry}$	A_{egg}	A_{milk}
1,1,1-trichloroethane	71-55-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,1-dichloroethane	75-34-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,1-dichloroethene	75-35-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2-dichloroethane	107-06-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2-dichloropropane	78-87-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,3-butadiene	106-99-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-butanone	78-93-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
acetone	67-64-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzene	71-43-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzoic acid	65-85-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzyl alcohol	100-51-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bis(2-ethylhexyl)-phthalate	117-81-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bromodichloromethane	75-27-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bromomethane	74-83-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
carbon disulfide	75-15-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
carbon tetrachloride	56-23-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chlorobenzene	108-90-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloroform	67-66-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloromethane	74-87-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cis-1,3-dichloropropene	10061-01-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dibromochloromethane	124-48-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dichlorodifluoromethane	75-71-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dimethyl phthalate	131-11-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
di-n-butyl phthalate	84-74-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ethylbenzene	100-41-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Freon 113	76-13-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
HD	505-60-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
hexane	110-54-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methylene chloride	75-09-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
styrene	100-42-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
tetrachloroethene	127-18-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
toluene	108-88-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trans-1,3-dichloropropene	10061-02-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trichloroethene	79-01-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trichlorofluoromethane	75-69-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
vinyl chloride	75-01-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
xylenes	1330-20-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2,3,7,8-TCDF	51207-31-9	9.70E-14	9.15E-15	1.52E-16	8.69E-17	3.03E-13
Total PCDDs and PCDFs	NA	9.70E-14	9.15E-15	1.52E-16	8.69E-17	3.03E-13
antimony	7440-36-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cadmium	7440-43-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (3+)	7440-47-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (6+)	18540-29-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
copper	7440-50-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
lead	7439-92-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
zinc	7440-66-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

a. The concentration of individual PCDDs and PCDFs congeners and coplanar PCBs in animal products are presented in units of mg COPC TEQ/kg. The concentration of total PCDDs and PCDFs as well as the concentration of total coplanar PCBs in animal products are presented in units of mg TEQ/kg produce and are calculated as the sum of the concentrations of all individual PCDD and PCDF congeners in animal products and the concentrations of all coplanar produce in animal products, respectively.

CONCENTRATIONS OF COPCS IN ANIMAL PRODUCTS FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS (TEQ BASIS): Child Exposure Scenarios						
COPC	CAS Number	Beef Concentration (mg TEQ/kg)[a] A_{beef}	Pork Concentration (mg TEQ/kg)[a] A_{pork}	Poultry Concentration (mg TEQ/kg)[a] $A_{poultry}$	Egg Concentration (mg TEQ/kg)[a] A_{egg}	Milk Concentration (mg TEQ/kg)[a] A_{milk}
1,1,1-trichloroethane	71-55-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,1-dichloroethane	75-34-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,1-dichloroethene	75-35-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2-dichloroethane	107-06-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2-dichloropropane	78-87-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,3-butadiene	106-99-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-butanone	78-93-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
acetone	67-64-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzene	71-43-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzoic acid	65-85-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzyl alcohol	100-51-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bis(2-ethylhexyl)-phthalate	117-81-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bromodichloromethane	75-27-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bromomethane	74-83-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
carbon disulfide	75-15-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
carbon tetrachloride	56-23-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chlorobenzene	108-90-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloroform	67-66-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloromethane	74-87-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cis-1,3-dichloropropene	10061-01-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dibromochloromethane	124-48-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dichlorodifluoromethane	75-71-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dimethyl phthalate	131-11-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
di-n-butyl phthalate	84-74-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ethylbenzene	100-41-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Freon 113	76-13-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
HD	505-60-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
hexane	110-54-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methylene chloride	75-09-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
styrene	100-42-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
tetrachloroethene	127-18-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
toluene	108-88-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trans-1,3-dichloropropene	10061-02-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trichloroethene	79-01-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trichlorofluoromethane	75-69-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
vinyl chloride	75-01-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
xylenes	1330-20-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2,3,7,8-TCDF	51207-31-9	9.64E-14	8.60E-15	1.33E-16	7.59E-17	3.01E-13
Total PCDDs and PCDFs	NA	9.64E-14	8.60E-15	1.33E-16	7.59E-17	3.01E-13
antimony	7440-36-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cadmium	7440-43-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (3+)	7440-47-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (6+)	18540-29-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
copper	7440-50-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
lead	7439-92-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
zinc	7440-66-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

a. The concentration of individual PCDDs and PCDFs congeners and coplanar PCBs in animal products are presented in units of mg COPC TEQ/kg. The concentration of total PCDDs and PCDFs as well as the concentration of total coplanar PCBs in animal products are presented in units of mg TEQ/kg produce and are calculated as the sum of the concentrations of all individual PCDD and PCDF congeners in animal products and the concentrations of all coplanar produce in animal products, respectively.

CONCENTRATIONS OF COPCS IN ANIMAL PRODUCTS FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS (TEQ BASIS): Infant Exposure Scenarios						
		Beef Concentration	Pork Concentration	Poultry Concentration	Egg Concentration	Milk Concentration
		(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]
COPC	CAS Number	A_{beef}	A_{pork}	$A_{poultry}$	A_{egg}	A_{milk}
1,1,1-trichloroethane	71-55-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,1-dichloroethane	75-34-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,1-dichloroethene	75-35-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2-dichloroethane	107-06-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2-dichloropropane	78-87-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,3-butadiene	106-99-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-butanone	78-93-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
acetone	67-64-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzene	71-43-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzoic acid	65-85-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzyl alcohol	100-51-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bis(2-ethylhexyl)-phthalate	117-81-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bromodichloromethane	75-27-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bromomethane	74-83-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
carbon disulfide	75-15-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
carbon tetrachloride	56-23-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chlorobenzene	108-90-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloroform	67-66-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloromethane	74-87-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cis-1,3-dichloropropene	10061-01-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dibromochloromethane	124-48-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dichlorodifluoromethane	75-71-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dimethyl phthalate	131-11-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
di-n-butyl phthalate	84-74-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ethylbenzene	100-41-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Freon 113	76-13-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
HD	505-60-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
hexane	110-54-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methylene chloride	75-09-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
styrene	100-42-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
tetrachloroethene	127-18-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
toluene	108-88-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trans-1,3-dichloropropene	10061-02-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trichloroethene	79-01-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trichlorofluoromethane	75-69-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
vinyl chloride	75-01-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
xylenes	1330-20-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2,3,7,8-TCDF	51207-31-9	9.64E-14	8.60E-15	1.33E-16	7.59E-17	3.01E-13
Total PCDDs and PCDFs	NA	9.64E-14	8.60E-15	1.33E-16	7.59E-17	3.01E-13
antimony	7440-36-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cadmium	7440-43-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (3+)	7440-47-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (6+)	18540-29-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
copper	7440-50-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
lead	7439-92-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
zinc	7440-66-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

a. The concentration of individual PCDDs and PCDFs congeners and coplanar PCBs in animal products are presented in units of mg COPC TEQ/kg. The concentration of total PCDDs and PCDFs as well as the concentration of total coplanar PCBs in animal products are presented in units of mg TEQ/kg produce and are calculated as the sum of the concentrations of all individual PCDD and PCDF congeners in animal products and the concentrations of all coplanar produce in animal products, respectively.

CONCENTRATIONS OF COPCS IN ANIMAL PRODUCTS FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS (TEQ BASIS): All Exposure Scenarios						
COPC	CAS Number	Beef Concentration (mg TEQ/kg)[a] A_{beef}	Pork Concentration (mg TEQ/kg)[a] A_{pork}	Poultry Concentration (mg TEQ/kg)[a] $A_{poultry}$	Egg Concentration (mg TEQ/kg)[a] A_{egg}	Milk Concentration (mg TEQ/kg)[a] A_{milk}
1,1,1-trichloroethane	71-55-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,1-dichloroethane	75-34-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,1-dichloroethene	75-35-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2-dichloroethane	107-06-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2-dichloropropane	78-87-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,3-butadiene	106-99-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-butanone	78-93-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
acetone	67-64-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzene	71-43-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzoic acid	65-85-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzyl alcohol	100-51-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bis(2-ethylhexyl)-phthalate	117-81-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bromodichloromethane	75-27-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bromomethane	74-83-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
carbon disulfide	75-15-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
carbon tetrachloride	56-23-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chlorobenzene	108-90-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloroform	67-66-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloromethane	74-87-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cis-1,3-dichloropropene	10061-01-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dibromochloromethane	124-48-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dichlorodifluoromethane	75-71-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dimethyl phthalate	131-11-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
di-n-butyl phthalate	84-74-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ethylbenzene	100-41-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Freon 113	76-13-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
HD	505-60-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
hexane	110-54-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methylene chloride	75-09-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
styrene	100-42-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
tetrachloroethene	127-18-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
toluene	108-88-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trans-1,3-dichloropropene	10061-02-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trichloroethene	79-01-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trichlorofluoromethane	75-69-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
vinyl chloride	75-01-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
xylenes	1330-20-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2,3,7,8-TCDF	51207-31-9	1.01E-13	1.22E-14	2.59E-16	1.48E-16	3.11E-13
Total PCDDs and PCDFs	NA	1.01E-13	1.22E-14	2.59E-16	1.48E-16	3.11E-13
antimony	7440-36-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cadmium	7440-43-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (3+)	7440-47-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (6+)	18540-29-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
copper	7440-50-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
lead	7439-92-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
zinc	7440-66-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

a. The concentration of individual PCDDs and PCDFs congeners and coplanar PCBs in animal products are presented in units of mg COPC TEQ/kg. The concentration of total PCDDs and PCDFs as well as the concentration of total coplanar PCBs in animal products are presented in units of mg TEQ/kg produce and are calculated as the sum of the concentrations of all individual PCDD and PCDF congeners in animal products and the concentrations of all coplanar produce in animal products, respectively.

CONCENTRATIONS OF COPCS IN SURFACE WATER AND FISH FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Adult Resident and Adult Subsistence Fisher Exposure Scenarios												
		Diffusive Mass Transfer Coefficient			Erosion Loading Supporting Calculation		Contaminant Load To The Waterbody					
		Liquid Phase Transfer Coefficient	Gas Phase Transfer Coefficient	Overall Transfer Rate	Unit Soil Loss	Watershed Sediment Delivery Ratio	Due to Direct Deposition	Due to Impervious Runoff	Due to Pervious Runoff	Due to Erosion	Due to Diffusion	Due to All Processes
		(m/yr)	(m/yr)	(m/yr)	(kg/m^2-yr)	(dimensionless)	(g/yr)	(g/yr)	(g/yr)	(g/yr)	(g/yr)	(g/yr)
COPC	CAS Number	K_L	K_G	K_v	X_s	SD	L_{Dep}	L_{RI}	L_R	L_E	L_{Dif}	L_T
1,1,1-trichloroethane	71-55-6	1.65E+02	4.85E+05	1.87E+02	3.86E-01	3.59E-01	3.70E-06	4.55E-06	6.25E-10	4.49E-12	1.16E-08	8.26E-06
1,1-dichloroethane	75-34-3	1.85E+02	4.69E+05	2.11E+02	3.86E-01	3.59E-01	1.75E-06	2.16E-06	4.71E-10	9.25E-13	1.88E-08	3.93E-06
1,1-dichloroethene	75-35-4	1.84E+02	5.33E+05	2.09E+02	3.86E-01	3.59E-01	1.61E-06	1.98E-06	1.17E-10	4.60E-13	3.70E-09	3.59E-06
1,2-dichloroethane	107-06-2	1.78E+02	5.87E+05	2.01E+02	3.86E-01	3.59E-01	1.78E-06	2.19E-06	1.30E-09	1.49E-12	1.04E-07	4.07E-06
1,2-dichloropropane	78-87-5	1.64E+02	4.85E+05	1.86E+02	3.86E-01	3.59E-01	2.14E-06	2.64E-06	1.42E-09	4.17E-12	4.05E-08	4.82E-06
1,3-butadiene	106-99-0	2.40E+02	6.92E+05	2.72E+02	3.86E-01	3.59E-01	1.54E-06	1.89E-06	4.37E-11	6.45E-13	1.62E-09	3.43E-06
2-butanone	78-93-3	1.77E+02	4.96E+05	1.74E+02	3.86E-01	3.59E-01	2.63E-05	3.24E-05	1.37E-06	1.30E-08	2.34E-05	8.35E-05
acetone	67-64-1	1.96E+02	6.61E+05	1.88E+02	3.86E-01	3.59E-01	4.16E-05	5.12E-05	1.21E-06	3.43E-09	5.71E-05	1.51E-04
benzene	71-43-2	1.82E+02	5.25E+05	2.07E+02	3.86E-01	3.59E-01	3.05E-05	3.75E-05	1.05E-08	4.14E-11	3.20E-07	6.83E-05
benzoic acid	65-85-0	1.54E+02	2.62E+04	3.42E+00	3.86E-01	3.59E-01	9.04E-05	1.11E-04	4.36E-04	8.55E-08	3.08E-05	6.68E-04
benzyl alcohol	100-51-6	1.80E+02	2.62E+04	4.09E-01	3.86E-01	3.59E-01	3.85E-05	4.74E-05	1.58E-03	6.20E-06	1.33E-05	1.69E-03
bis(2-ethylhexyl)-phthalate	117-81-7	9.15E+01	2.84E+05	1.30E+00	3.86E-01	3.59E-01	7.89E-06	9.72E-06	3.82E-12	2.87E-07	0.00E+00	1.79E-05
bromodichloromethane	75-27-4	1.80E+02	2.62E+04	1.85E+02	3.86E-01	3.59E-01	7.59E-06	9.35E-06	7.70E-07	2.77E-09	2.50E-07	1.80E-05
bromomethane	74-83-9	2.04E+02	4.63E+05	2.31E+02	3.86E-01	3.59E-01	8.95E-06	1.10E-05	2.86E-09	8.41E-12	9.47E-08	2.01E-05
carbon disulfide	75-15-0	1.80E+02	5.87E+05	2.04E+02	3.86E-01	3.59E-01	2.10E-05	2.59E-05	9.83E-10	2.93E-12	4.08E-08	4.69E-05
carbon tetrachloride	56-23-5	1.65E+02	4.85E+05	1.87E+02	3.86E-01	3.59E-01	1.03E-05	1.27E-05	1.15E-09	1.32E-11	1.84E-08	2.30E-05
chlorobenzene	108-90-7	1.64E+02	4.63E+05	1.85E+02	3.86E-01	3.59E-01	2.41E-06	2.97E-06	2.47E-09	3.55E-11	3.45E-08	5.42E-06
chloroform	67-66-3	1.80E+02	5.87E+05	2.04E+02	3.86E-01	3.59E-01	2.98E-05	3.67E-05	1.05E-08	2.74E-11	4.68E-07	6.70E-05
chloromethane	74-87-3	1.35E+02	6.68E+05	1.53E+02	3.86E-01	3.59E-01	2.64E-05	3.25E-05	2.65E-09	5.20E-12	1.30E-07	5.90E-05
cis-1,3-dichloropropene	10061-01-5	1.80E+02	4.18E+05	2.04E+02	3.86E-01	3.59E-01	2.15E-06	2.65E-06	2.78E-10	8.29E-13	6.95E-09	4.80E-06
dibromochloromethane	124-48-1	1.80E+02	2.62E+04	1.68E+02	3.86E-01	3.59E-01	6.95E-06	8.56E-06	2.60E-06	5.95E-08	4.26E-07	1.86E-05
dichlorodifluoromethane	75-71-8	1.80E+02	2.62E+04	2.04E+02	3.86E-01	3.59E-01	4.55E-06	5.60E-06	3.93E-09	7.97E-11	7.72E-10	1.02E-05
dimethyl phthalate	131-11-3	1.32E+02	3.92E+05	1.89E+00	3.86E-01	3.59E-01	2.98E-05	3.67E-05	3.13E-05	3.48E-07	1.53E-04	2.51E-04
di-n-butyl phthalate	84-74-2	1.53E+02	3.29E+05	2.38E+01	3.86E-01	3.59E-01	4.56E-05	5.61E-05	1.51E-08	2.56E-06	1.72E-04	2.76E-04
ethylbenzene	100-41-4	1.52E+02	4.72E+05	1.73E+02	3.86E-01	3.59E-01	2.82E-06	3.48E-06	1.45E-09	3.46E-11	1.76E-08	6.32E-06
Freon 113	76-13-1	1.38E+02	3.97E+05	1.56E+02	3.86E-01	3.59E-01	4.71E-06	5.80E-06	5.36E-11	6.68E-12	3.99E-10	1.05E-05
HD	505-60-2	1.48E+02	4.29E+05	1.34E+02	3.86E-01	3.59E-01	3.63E-06	4.47E-06	1.19E-09	9.08E-11	4.20E-06	1.23E-05
hexane	110-54-3	1.95E+02	5.61E+05	2.22E+02	3.86E-01	3.59E-01	5.54E-06	6.82E-06	1.13E-11	5.43E-12	1.94E-10	1.24E-05
methylene chloride	75-09-2	1.99E+02	5.76E+05	2.26E+02	3.86E-01	3.59E-01	2.50E-05	3.08E-05	6.17E-09	4.84E-12	7.31E-07	5.65E-05
styrene	100-42-5	1.55E+02	4.55E+05	1.75E+02	3.86E-01	3.59E-01	7.77E-06	9.57E-06	1.32E-08	5.16E-08	1.44E-07	1.75E-05
tetrachloroethene	127-18-4	1.57E+02	4.59E+05	1.79E+02	3.86E-01	3.59E-01	2.72E-06	3.35E-06	5.29E-10	5.36E-12	7.70E-09	6.08E-06
toluene	108-88-3	1.62E+02	5.21E+05	1.84E+02	3.86E-01	3.59E-01	3.46E-06	4.27E-06	1.58E-09	1.87E-11	2.76E-08	7.76E-06
trans-1,3-dichloropropene	10061-02-6	1.74E+02	5.02E+05	1.97E+02	3.86E-01	3.59E-01	2.28E-06	2.81E-06	2.40E-09	6.12E-11	3.61E-08	5.12E-06
trichloroethene	79-01-6	1.69E+02	4.89E+05	1.91E+02	3.86E-01	3.59E-01	2.88E-06	3.55E-06	9.36E-10	1.01E-11	1.58E-08	6.45E-06
trichlorofluoromethane	75-69-4	1.76E+02	5.21E+05	2.00E+02	3.86E-01	3.59E-01	2.37E-06	2.92E-06	6.51E-11	5.11E-13	1.39E-09	5.30E-06
vinyl chloride	75-01-4	2.06E+02	5.95E+05	2.34E+02	3.86E-01	3.59E-01	2.65E-06	3.27E-06	7.25E-11	8.77E-14	6.57E-09	5.92E-06
xylenes	1330-20-7	1.77E+02	5.13E+05	2.01E+02	3.86E-01	3.59E-01	6.99E-06	8.61E-06	4.31E-09	5.37E-10	6.05E-08	1.57E-05
2,3,7,8-TCDF	51207-31-9	1.29E+02	2.17E+05	7.29E+01	3.86E-01	3.59E-01	8.92E-13	1.10E-12	2.57E-14	6.52E-12	0.00E+00	8.54E-12
Total PCDDs and PCDFs	NA											
antimony	7440-36-0	1.74E+02	4.81E+05	1.98E+02	3.86E-01	3.59E-01	1.99E-08	2.45E-08	2.40E-12	3.53E-12	0.00E+00	4.43E-08
cadmium	7440-43-9	1.74E+02	4.82E+05	1.98E+02	3.86E-01	3.59E-01	1.04E-07	1.28E-07	1.01E-11	2.48E-11	0.00E+00	2.32E-07
chromium (3+)	7440-47-3	2.26E+02	6.70E+05	2.57E+02	3.86E-01	3.59E-01	9.55E-07	1.18E-06	7.16E-11	4.45E-11	0.00E+00	2.13E-06
chromium (6+)	18540-29-9	2.26E+02	6.70E+05	2.57E+02	3.86E-01	3.59E-01	9.55E-07	1.18E-06	7.16E-11	4.45E-11	0.00E+00	2.13E-06
copper	7440-50-8	2.23E+02	6.44E+05	2.53E+02	3.86E-01	3.59E-01	1.42E-06	1.75E-06	1.14E-10	1.60E-09	0.00E+00	3.18E-06
lead	7439-92-1	1.74E+02	4.81E+05	1.98E+02	3.86E-01	3.59E-01	4.77E-07	5.87E-07	5.78E-11	1.70E-09	0.00E+00	1.07E-06
nickel	7440-02-0	1.74E+02	4.81E+05	1.98E+02	3.86E-01	3.59E-01	1.98E-06	2.44E-06	2.40E-10	5.10E-10	0.00E+00	4.43E-06
zinc	7440-66-6	1.74E+02	4.81E+05	1.98E+02	3.86E-01	3.59E-01	1.93E-05	2.38E-05	2.33E-09	4.73E-09	0.00E+00	4.31E-05

CONCENTRATIONS OF COPCS IN SURFACE WATER AND FISH FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Adult Resident and Adult Subsistence Fisher Exposure Scenarios												
			Waterbody Dissipation Rate Constant					Concentration in Water				Concentration in Fish
COPC	CAS Number	Oral Cancer Slope Factor?	Fraction in Water Column (dimensionless) f_{wc}	Fraction in Benthic Sediment (dimensionless) f_{bs}	Water Column Volatilization Rate Constant (yr^{-1}) k_v	Benthic Burial Rate Constant (yr^{-1}) k_b	Overall Total Waterbody Dissipation Rate Constant (yr^{-1}) k_{wt}	Total Waterbody Concentration Including Water Column and Bed Sediment (mg/ℓ) C_{wtot}	Total Concentration in Water Column (mg/ℓ) C_{wctot}	Dissolved Phase Water Concentration (mg/ℓ) C_{dw}	Concentration Sorbed to Bed Sediment (mg/kg) C_{sb}	Fish Concentration (mg/kg) C_{fish}
1,1,1-trichloroethane	71-55-6		9.65E-01	3.47E-02	3.72E+01	1.95E-01	3.59E+01	1.88E-12	1.83E-12	1.82E-12		3.07E-11
1,1-dichloroethane	75-34-3	Yes	9.84E-01	1.62E-02	4.18E+01	1.95E-01	4.12E+01	8.35E-13	8.26E-13	8.26E-13		4.01E-12
1,1-dichloroethene	75-35-4		9.81E-01	1.88E-02	4.16E+01	1.95E-01	4.09E+01	7.67E-13	7.57E-13	7.57E-13		6.25E-12
1,2-dichloroethane	107-06-2	Yes	9.87E-01	1.26E-02	4.00E+01	1.95E-01	3.95E+01	8.78E-13	8.72E-13	8.72E-13		2.49E-12
1,2-dichloropropane	78-87-5	Yes	9.85E-01	1.47E-02	3.69E+01	1.95E-01	3.64E+01	1.08E-12	1.07E-12	1.07E-12		7.39E-12
1,3-butadiene	106-99-0	Yes	9.86E-01	1.42E-02	5.41E+01	1.95E-01	5.34E+01	6.45E-13	6.39E-13	6.39E-13		4.34E-12
2-butanone	78-93-3		9.96E-01	4.06E-03	3.46E+01	1.95E-01	3.45E+01	1.90E-11	1.90E-11	1.90E-11		6.00E-11
acetone	67-64-1		9.96E-01	3.71E-03	3.74E+01	1.95E-01	3.72E+01	3.33E-11	3.34E-11	3.34E-11		1.05E-10
benzene	71-43-2	Yes	9.82E-01	1.81E-02	4.11E+01	1.95E-01	4.03E+01	1.47E-11	1.45E-11	1.45E-11		1.20E-10
benzoic acid	65-85-0		9.96E-01	3.73E-03	6.80E-01	1.95E-01	6.79E-01	2.47E-10	2.48E-10	2.48E-10		7.83E-10
benzyl alcohol	100-51-6		9.94E-01	6.44E-03	8.13E-02	1.95E-01	8.21E-02	6.32E-10	6.32E-10	6.32E-10		1.98E-10
bis(2-ethylhexyl)-phthalate	117-81-7	Yes	3.91E-02	9.61E-01	2.39E-01	1.95E-01	1.97E-01	1.56E-10	6.14E-12	5.67E-12		1.10E-09
bromodichloromethane	75-27-4	Yes	9.83E-01	1.66E-02	3.67E+01	1.95E-01	3.61E+01	4.03E-12	3.99E-12	3.99E-12		3.30E-11
bromomethane	74-83-9		9.94E-01	5.73E-03	4.60E+01	1.95E-01	4.58E+01	4.04E-12	4.04E-12	4.04E-12		6.67E-12
carbon disulfide	75-15-0		9.81E-01	1.91E-02	4.06E+01	1.95E-01	3.98E+01	1.01E-11	1.00E-11	1.00E-11		9.86E-11
carbon tetrachloride	56-23-5	Yes	9.61E-01	3.85E-02	3.72E+01	1.95E-01	3.58E+01	5.26E-12	5.09E-12	5.09E-12		1.46E-10
chlorobenzene	108-90-7		9.46E-01	5.42E-02	3.69E+01	1.95E-01	3.49E+01	1.26E-12	1.20E-12	1.20E-12		3.44E-11
chloroform	67-66-3	Yes	9.84E-01	1.59E-02	4.05E+01	1.95E-01	3.98E+01	1.44E-11	1.43E-11	1.43E-11		9.89E-11
chloromethane	74-87-3		9.95E-01	5.07E-03	3.04E+01	1.95E-01	3.02E+01	1.41E-11	1.41E-11	1.41E-11		4.46E-11
cis-1,3-dichloropropene	10061-01-5	Yes	9.90E-01	9.98E-03	4.06E+01	1.95E-01	4.01E+01	1.03E-12	1.02E-12	1.02E-12		3.48E-12
dibromochloromethane	124-48-1	Yes	9.80E-01	2.00E-02	3.34E+01	1.95E-01	3.27E+01	4.35E-12	4.29E-12	4.29E-12		4.46E-11
dichlorodifluoromethane	75-71-8		9.82E-01	1.80E-02	4.06E+01	1.95E-01	3.98E+01	2.19E-12	2.16E-12	2.16E-12		1.99E-11
dimethyl phthalate	131-11-3		9.88E-01	1.17E-02	3.75E-01	1.95E-01	3.73E-01	9.40E-11	9.35E-11	9.35E-11		2.96E-10
di-n-butyl phthalate	84-74-2		7.25E-01	2.75E-01	4.72E+00	1.95E-01	3.48E+00	1.30E-10	9.50E-11	9.49E-11		1.71E-07
ethylbenzene	100-41-4	Yes	9.50E-01	4.99E-02	3.43E+01	1.95E-01	3.26E+01	1.51E-12	1.44E-12	1.44E-12		7.01E-11
Freon 113	76-13-1		9.13E-01	8.67E-02	3.11E+01	1.95E-01	2.84E+01	2.71E-12	2.49E-12	2.49E-12		1.35E-10
HD	505-60-2	Yes	9.44E-01	5.64E-02	2.66E+01	1.95E-01	2.51E+01	3.24E-12	3.08E-12	3.08E-12		4.41E-11
hexane	110-54-3		7.38E-01	2.62E-01	4.40E+01	1.95E-01	3.25E+01	3.42E-12	2.54E-12	2.54E-12		5.09E-10
methylene chloride	75-09-2	Yes	9.94E-01	5.96E-03	4.49E+01	1.95E-01	4.46E+01	1.15E-11	1.15E-11	1.15E-11		2.30E-11
styrene	100-42-5		8.18E-01	1.82E-01	3.48E+01	1.95E-01	2.85E+01	4.84E-12	3.98E-12	3.98E-12		1.62E-10
tetrachloroethene	127-18-4	Yes	9.37E-01	6.30E-02	3.55E+01	1.95E-01	3.33E+01	1.45E-12	1.37E-12	1.37E-12		1.13E-10
toluene	108-88-3		9.64E-01	3.59E-02	3.66E+01	1.95E-01	3.53E+01	1.78E-12	1.73E-12	1.73E-12		4.13E-11
trans-1,3-dichloropropene	10061-02-6	Yes	9.78E-01	2.18E-02	3.92E+01	1.95E-01	3.83E+01	1.13E-12	1.11E-12	1.11E-12		1.28E-11
trichloroethene	79-01-6	Yes	9.74E-01	2.55E-02	3.81E+01	1.95E-01	3.71E+01	1.44E-12	1.41E-12	1.41E-12		1.99E-11
trichlorofluoromethane	75-69-4		9.70E-01	3.01E-02	3.97E+01	1.95E-01	3.86E+01	1.17E-12	1.14E-12	1.14E-12		1.91E-11
vinyl chloride	75-01-4	Yes	9.93E-01	7.27E-03	4.66E+01	1.95E-01	4.63E+01	1.19E-12	1.19E-12	1.19E-12		2.84E-12
xylenes	1330-20-7		9.13E-01	8.68E-02	4.00E+01	1.95E-01	3.65E+01	3.66E-12	3.36E-12	3.36E-12		1.82E-10
2,3,7,8-TCDF	51207-31-9		8.43E-03	9.92E-01	9.17E+00	1.95E-01	2.71E-01	2.36E-16	2.00E-18	1.26E-18	3.92E-14	6.17E-15
Total PCDDs and PCDFs	NA	Yes										
antimony	7440-36-0		7.85E-01	2.15E-01	3.94E+01	1.95E-01	3.10E+01	1.21E-14	9.57E-15	9.56E-15		3.82E-13
cadmium	7440-43-9		6.88E-01	3.12E-01	3.94E+01	1.95E-01	2.71E+01	7.23E-14	5.01E-14	5.00E-14		4.54E-11
chromium (3+)	7440-47-3		8.95E-01	1.05E-01	5.11E+01	1.95E-01	4.57E+01	4.54E-13	4.09E-13	4.09E-13		1.29E-12
chromium (6+)	18540-29-9	Yes	8.95E-01	1.05E-01	5.11E+01	1.95E-01	4.57E+01	4.54E-13	4.09E-13	4.09E-13		1.29E-12
copper	7440-50-8		2.80E-01	7.20E-01	5.02E+01	1.95E-01	1.42E+01	2.17E-12	6.11E-13	6.08E-13		1.92E-12
lead	7439-92-1	Yes	1.57E-01	8.43E-01	3.90E+01	1.95E-01	6.31E+00	1.44E-12	2.28E-13	2.26E-13		2.04E-14
nickel	7440-02-0		7.18E-01	2.82E-01	3.94E+01	1.95E-01	2.83E+01	1.32E-12	9.55E-13	9.54E-13		7.44E-11
zinc	7440-66-6		7.27E-01	2.73E-01	3.94E+01	1.95E-01	2.87E+01	1.27E-11	9.29E-12	9.29E-12		1.91E-08

CONCENTRATIONS OF COPCS IN SURFACE WATER AND FISH FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS (TEQ BASIS):
Adult Resident and Adult Subsistence Fisher Exposure Scenarios

		Concentration in Water				Concentration in Fish
		Total Waterbody Concentration Including Water Column and Bed Sediment	Total Concentration in Water Column	Dissolved Phase Water Concentration	Concentration Sorbed to Bed Sediment	Fish Concentration
		(mg TEQ/ℓ)[a]	(mg TEQ/ℓ)[a]	(mg TEQ/ℓ)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]
COPC	CAS Number	C_{wtot}	C_{wctot}	C_{dw}	C_{sb}	C_{fish}
1,1,1-trichloroethane	71-55-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,1-dichloroethane	75-34-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,1-dichloroethene	75-35-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2-dichloroethane	107-06-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2-dichloropropane	78-87-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,3-butadiene	106-99-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-butanone	78-93-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
acetone	67-64-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzene	71-43-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzoic acid	65-85-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzyl alcohol	100-51-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bis(2-ethylhexyl)-phthalate	117-81-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bromodichloromethane	75-27-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bromomethane	74-83-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
carbon disulfide	75-15-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
carbon tetrachloride	56-23-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chlorobenzene	108-90-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloroform	67-66-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloromethane	74-87-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cis-1,3-dichloropropene	10061-01-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dibromochloromethane	124-48-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dichlorodifluoromethane	75-71-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dimethyl phthalate	131-11-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
di-n-butyl phthalate	84-74-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ethylbenzene	100-41-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Freon 113	76-13-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
HD	505-60-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
hexane	110-54-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methylene chloride	75-09-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
styrene	100-42-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
tetrachloroethene	127-18-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
toluene	108-88-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trans-1,3-dichloropropene	10061-02-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trichloroethene	79-01-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trichlorofluoromethane	75-69-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
vinyl chloride	75-01-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
xylenes	1330-20-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2,3,7,8-TCDF	51207-31-9	2.36E-17	2.00E-19	1.26E-19	3.92E-15	6.17E-16
Total PCDDs and PCDFs	NA	2.36E-17	2.00E-19	1.26E-19	3.92E-15	6.17E-16
antimony	7440-36-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cadmium	7440-43-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (3+)	7440-47-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (6+)	18540-29-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
copper	7440-50-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
lead	7439-92-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
zinc	7440-66-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

a. The concentration of individual PCDDs and PCDFs congeners and coplanar PCBs in water and fish are presented in units of mg COPC TEQ/kg. The concentration of total PCDDs and PCDFs as well as the concentration of total coplanar PCBs in water and fish are presented in units of mg TEQ/kg produce and are calculated as the sum of the concentrations of all individual PCDD and PCDF congeners in water or fish and the concentrations of all coplanar produce in water and fish, respectively.

CONCENTRATIONS OF COPCS IN SURFACE WATER AND FISH FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Adult Subsistence Farmer Exposure Scenario												
		Diffusive Mass Transfer Coefficient			Erosion Loading Supporting Calculation		Contaminant Load To The Waterbody					
		Liquid Phase Transfer Coefficient	Gas Phase Transfer Coefficient	Overall Transfer Rate	Unit Soil Loss	Watershed Sediment Delivery Ratio	Due to Direct Deposition	Due to Impervious Runoff	Due to Pervious Runoff	Due to Erosion	Due to Diffusion	Due to All Processes
		(m/yr)	(m/yr)	(m/yr)	(kg/m^2-yr)	(dimensionless)	(g/yr)	(g/yr)	(g/yr)	(g/yr)	(g/yr)	(g/yr)
COPC	CAS Number	K_L	K_G	K_v	X_s	SD	L_{Dep}	L_{RI}	L_R	L_E	L_{Dif}	L_T
1,1,1-trichloroethane	71-55-6	164.78	484504.19	187.25	0.39	0.36	3.70E-06	4.55E-06	4.69E-10	3.37E-12	1.16E-08	8.26E-06
1,1-dichloroethane	75-34-3	185.48	468559.52	210.51	0.39	0.36	1.75E-06	2.16E-06	3.53E-10	6.93E-13	1.88E-08	3.93E-06
1,1-dichloroethene	75-35-4	184.29	533257.08	209.46	0.39	0.36	1.61E-06	1.98E-06	8.79E-11	3.45E-13	3.70E-09	3.59E-06
1,2-dichloroethane	107-06-2	178.31	587498.13	201.20	0.39	0.36	1.78E-06	2.19E-06	9.78E-10	1.12E-12	1.04E-07	4.07E-06
1,2-dichloropropane	78-87-5	163.90	485336.19	185.79	0.39	0.36	2.14E-06	2.64E-06	1.06E-09	3.13E-12	4.05E-08	4.82E-06
1,3-butadiene	106-99-0	239.55	692203.00	272.32	0.39	0.36	1.54E-06	1.89E-06	3.28E-11	4.84E-13	1.62E-09	3.43E-06
2-butanone	78-93-3	177.10	496089.19	174.20	0.39	0.36	2.63E-05	3.24E-05	1.03E-06	9.76E-09	2.34E-05	8.32E-05
acetone	67-64-1	195.98	660977.51	187.89	0.39	0.36	4.16E-05	5.12E-05	9.05E-07	2.57E-09	5.71E-05	1.51E-04
benzene	71-43-2	181.91	525288.08	206.51	0.39	0.36	3.05E-05	3.75E-05	7.90E-09	3.10E-11	3.20E-07	6.83E-05
benzoic acid	65-85-0	154.20	26157.37	3.42	0.39	0.36	9.04E-05	1.11E-04	3.27E-04	6.41E-08	3.08E-05	5.59E-04
benzyl alcohol	100-51-6	179.51	26157.37	0.41	0.39	0.36	3.85E-05	4.74E-05	1.19E-03	4.65E-06	1.33E-05	1.29E-03
bis(2-ethylhexyl)-phthalate	117-81-7	91.54	283759.18	1.30	0.39	0.36	7.89E-06	9.72E-06	2.86E-12	2.15E-07	0.00E+00	1.78E-05
bromodichloromethane	75-27-4	179.51	26157.37	184.72	0.39	0.36	7.59E-06	9.35E-06	5.78E-07	2.08E-09	2.50E-07	1.78E-05
bromomethane	74-83-9	203.97	462617.63	231.50	0.39	0.36	8.95E-06	1.10E-05	2.14E-09	6.31E-12	9.47E-08	2.01E-05
carbon disulfide	75-15-0	179.51	587498.13	204.04	0.39	0.36	2.10E-05	2.59E-05	7.37E-10	2.19E-12	4.08E-08	4.69E-05
carbon tetrachloride	56-23-5	164.78	484504.19	187.29	0.39	0.36	1.03E-05	1.27E-05	8.62E-10	9.87E-12	1.84E-08	2.30E-05
chlorobenzene	108-90-7	163.52	463468.76	185.48	0.39	0.36	2.41E-06	2.97E-06	1.85E-09	2.66E-11	3.45E-08	5.42E-06
chloroform	67-66-3	179.51	587498.13	203.68	0.39	0.36	2.98E-05	3.67E-05	7.85E-09	2.05E-11	4.68E-07	6.70E-05
chloromethane	74-87-3	134.51	668101.45	152.84	0.39	0.36	2.64E-05	3.25E-05	1.99E-09	3.90E-12	1.30E-07	5.90E-05
cis-1,3-dichloropropene	10061-01-5	179.51	418118.09	203.98	0.39	0.36	2.15E-06	2.65E-06	2.09E-10	6.21E-13	6.95E-09	4.80E-06
dibromochloromethane	124-48-1	179.51	26157.37	168.07	0.39	0.36	6.95E-06	8.56E-06	1.95E-06	4.46E-08	4.26E-07	1.79E-05
dichlorodifluoromethane	75-71-8	179.51	26157.37	203.99	0.39	0.36	4.55E-06	5.60E-06	2.95E-09	5.97E-11	7.72E-10	1.02E-05
dimethyl phthalate	131-11-3	131.58	391748.68	1.89	0.39	0.36	2.98E-05	3.67E-05	2.35E-05	2.61E-07	1.53E-04	2.43E-04
di-n-butyl phthalate	84-74-2	152.77	329140.86	23.78	0.39	0.36	4.56E-05	5.61E-05	1.13E-08	1.92E-06	1.72E-04	2.75E-04
ethylbenzene	100-41-4	151.98	471938.27	172.62	0.39	0.36	2.82E-06	3.48E-06	1.09E-09	2.60E-11	1.76E-08	6.32E-06
Freon 113	76-13-1	137.52	397383.06	156.35	0.39	0.36	4.71E-06	5.80E-06	4.02E-11	5.01E-12	3.99E-10	1.05E-05
HD	505-60-2	147.91	428791.43	133.93	0.39	0.36	3.63E-06	4.47E-06	8.90E-10	6.81E-11	4.20E-06	1.23E-05
hexane	110-54-3	194.83	560700.85	221.51	0.39	0.36	5.54E-06	6.82E-06	8.48E-12	4.07E-12	1.94E-10	1.24E-05
methylene chloride	75-09-2	199.42	576088.85	225.86	0.39	0.36	2.50E-05	3.08E-05	4.63E-09	3.63E-12	7.31E-07	5.65E-05
styrene	100-42-5	154.58	454922.32	175.21	0.39	0.36	7.77E-06	9.57E-06	9.87E-09	3.87E-08	1.44E-07	1.75E-05
tetrachloroethene	127-18-4	157.16	459205.33	178.60	0.39	0.36	2.72E-06	3.35E-06	3.97E-10	4.02E-12	7.70E-09	6.08E-06
toluene	108-88-3	162.26	521281.19	184.27	0.39	0.36	3.46E-06	4.27E-06	1.19E-09	1.40E-11	2.76E-08	7.76E-06
trans-1,3-dichloropropene	10061-02-6	173.78	502150.50	197.10	0.39	0.36	2.28E-06	2.81E-06	1.80E-09	4.59E-11	3.61E-08	5.12E-06
trichloroethene	79-01-6	168.52	488657.20	191.44	0.39	0.36	2.88E-06	3.55E-06	7.02E-10	7.58E-12	1.58E-08	6.45E-06
trichlorofluoromethane	75-69-4	175.89	521281.19	199.95	0.39	0.36	2.37E-06	2.92E-06	4.88E-11	3.83E-13	1.39E-09	5.30E-06
vinyl chloride	75-01-4	206.22	595044.00	234.39	0.39	0.36	2.65E-06	3.27E-06	5.43E-11	6.58E-14	6.57E-09	5.92E-06
xylenes	1330-20-7	177.22	513221.49	201.23	0.39	0.36	6.99E-06	8.61E-06	3.23E-09	4.03E-10	6.05E-08	1.57E-05
2,3,7,8-TCDF	51207-31-9	128.90	216875.06	72.94	0.39	0.36	8.92E-13	1.10E-12	2.30E-14	5.84E-12	0.00E+00	7.85E-12
Total PCDDs and PCDFs	NA											
antimony	7440-36-0	174.30	481169.11	198.10	0.39	0.36	1.99E-08	2.45E-08	1.80E-12	2.65E-12	0.00E+00	4.43E-08
cadmium	7440-43-9	174.30	482421.10	198.12	0.39	0.36	1.04E-07	1.28E-07	7.58E-12	1.86E-11	0.00E+00	2.32E-07
chromium (3+)	7440-47-3	225.98	669876.60	256.84	0.39	0.36	9.55E-07	1.18E-06	5.37E-11	3.34E-11	0.00E+00	2.13E-06
chromium (6+)	18540-29-9	225.98	669876.60	256.84	0.39	0.36	9.55E-07	1.18E-06	5.37E-11	3.34E-11	0.00E+00	2.13E-06
copper	7440-50-8	222.99	644347.48	253.43	0.39	0.36	1.42E-06	1.75E-06	8.53E-11	1.20E-09	0.00E+00	3.18E-06
lead	7439-92-1	174.30	481169.11	198.10	0.39	0.36	4.77E-07	5.87E-07	4.33E-11	1.27E-09	0.00E+00	1.06E-06
nickel	7440-02-0	174.30	481169.11	198.10	0.39	0.36	1.98E-06	2.44E-06	1.80E-10	3.82E-10	0.00E+00	4.43E-06
zinc	7440-66-6	174.30	481169.11	198.10	0.39	0.36	1.93E-05	2.38E-05	1.75E-09	3.55E-09	0.00E+00	4.31E-05

CONCENTRATIONS OF COPCS IN SURFACE WATER AND FISH FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS:
Adult Subsistence Farmer Exposure Scenario

			Waterbody Dissipation Rate Constant					Concentration in Water				Concentration in Fish
COPC	CAS Number	Oral Cancer Slope Factor?	Fraction in Water Column (dimensionless) f_{wc}	Fraction in Benthic Sediment (dimensionless) f_{bs}	Water Column Volatilization Rate Constant (yr^{-1}) k_v	Benthic Burial Rate Constant (yr^{-1}) k_b	Overall Total Waterbody Dissipation Rate Constant (yr^{-1}) k_{wt}	Total Waterbody Concentration Including Water Column and Bed Sediment (mg/ℓ) C_{wtot}	Total Concentration in Water Column (mg/ℓ) C_{wctot}	Dissolved Phase Water Concentration (mg/ℓ) C_{dw}	Concentration Sorbed to Bed Sediment (mg/kg) C_{sb}	Fish Concentration (mg/kg) C_{fish}
1,1,1-trichloroethane	71-55-6		9.65E-01	3.47E-02	37.22	1.95E-01	3.59E+01	1.88E-12	1.83E-12	1.82E-12		3.07E-11
1,1-dichloroethane	75-34-3	Yes	9.84E-01	1.62E-02	41.85	1.95E-01	4.12E+01	8.35E-13	8.26E-13	8.26E-13		4.01E-12
1,1-dichloroethene	75-35-4		9.81E-01	1.88E-02	41.64	1.95E-01	4.09E+01	7.67E-13	7.57E-13	7.57E-13		6.25E-12
1,2-dichloroethane	107-06-2	Yes	9.87E-01	1.26E-02	40.00	1.95E-01	3.95E+01	8.78E-13	8.72E-13	8.72E-13		2.49E-12
1,2-dichloropropane	78-87-5	Yes	9.85E-01	1.47E-02	36.94	1.95E-01	3.64E+01	1.08E-12	1.07E-12	1.07E-12		7.39E-12
1,3-butadiene	106-99-0	Yes	9.86E-01	1.42E-02	54.14	1.95E-01	5.34E+01	6.45E-13	6.39E-13	6.39E-13		4.34E-12
2-butanone	78-93-3		9.96E-01	4.06E-03	34.63	1.95E-01	3.45E+01	1.89E-11	1.89E-11	1.89E-11		5.98E-11
acetone	67-64-1		9.96E-01	3.71E-03	37.35	1.95E-01	3.72E+01	3.32E-11	3.33E-11	3.33E-11		1.05E-10
benzene	71-43-2	Yes	9.82E-01	1.81E-02	41.05	1.95E-01	4.03E+01	1.47E-11	1.45E-11	1.45E-11		1.20E-10
benzoic acid	65-85-0		9.96E-01	3.73E-03	0.68	1.95E-01	6.79E-01	2.07E-10	2.07E-10	2.07E-10		6.55E-10
benzyl alcohol	100-51-6		9.94E-01	6.44E-03	0.08	1.95E-01	8.21E-02	4.83E-10	4.83E-10	4.83E-10		1.52E-10
bis(2-ethylhexyl)-phthalate	117-81-7	Yes	3.91E-02	9.61E-01	0.24	1.95E-01	1.97E-01	1.56E-10	6.11E-12	5.64E-12		1.10E-09
bromodichloromethane	75-27-4	Yes	9.83E-01	1.66E-02	36.72	1.95E-01	3.61E+01	3.99E-12	3.95E-12	3.95E-12		3.26E-11
bromomethane	74-83-9		9.94E-01	5.73E-03	46.02	1.95E-01	4.58E+01	4.04E-12	4.04E-12	4.04E-12		6.67E-12
carbon disulfide	75-15-0		9.81E-01	1.91E-02	40.56	1.95E-01	3.98E+01	1.01E-11	1.00E-11	1.00E-11		9.86E-11
carbon tetrachloride	56-23-5	Yes	9.61E-01	3.85E-02	37.23	1.95E-01	3.58E+01	5.26E-12	5.09E-12	5.09E-12		1.46E-10
chlorobenzene	108-90-7		9.46E-01	5.42E-02	36.87	1.95E-01	3.49E+01	1.26E-12	1.20E-12	1.20E-12		3.44E-11
chloroform	67-66-3	Yes	9.84E-01	1.59E-02	40.49	1.95E-01	3.98E+01	1.44E-11	1.43E-11	1.43E-11		9.89E-11
chloromethane	74-87-3		9.95E-01	5.07E-03	30.39	1.95E-01	3.02E+01	1.41E-11	1.41E-11	1.41E-11		4.46E-11
cis-1,3-dichloropropene	10061-01-5	Yes	9.90E-01	9.98E-03	40.55	1.95E-01	4.01E+01	1.03E-12	1.02E-12	1.02E-12		3.48E-12
dibromochloromethane	124-48-1	Yes	9.80E-01	2.00E-02	33.41	1.95E-01	3.27E+01	4.20E-12	4.14E-12	4.14E-12		4.30E-11
dichlorodifluoromethane	75-71-8		9.82E-01	1.80E-02	40.55	1.95E-01	3.98E+01	2.19E-12	2.16E-12	2.16E-12		1.99E-11
dimethyl phthalate	131-11-3		9.88E-01	1.17E-02	0.38	1.95E-01	3.73E-01	9.10E-11	9.05E-11	9.05E-11		2.87E-10
di-n-butyl phthalate	84-74-2		7.25E-01	2.75E-01	4.72	1.95E-01	3.48E+00	1.30E-10	9.48E-11	9.47E-11		1.70E-07
ethylbenzene	100-41-4	Yes	9.50E-01	4.99E-02	34.31	1.95E-01	3.26E+01	1.51E-12	1.44E-12	1.44E-12		7.01E-11
Freon 113	76-13-1		9.13E-01	8.67E-02	31.07	1.95E-01	2.84E+01	2.71E-12	2.49E-12	2.49E-12		1.35E-10
HD	505-60-2	Yes	9.44E-01	5.64E-02	26.62	1.95E-01	2.51E+01	3.24E-12	3.08E-12	3.08E-12		4.41E-11
hexane	110-54-3		7.38E-01	2.62E-01	43.99	1.95E-01	3.25E+01	3.42E-12	2.54E-12	2.54E-12		5.09E-10
methylene chloride	75-09-2	Yes	9.94E-01	5.96E-03	44.90	1.95E-01	4.46E+01	1.15E-11	1.15E-11	1.15E-11		2.30E-11
styrene	100-42-5		8.18E-01	1.82E-01	34.81	1.95E-01	2.85E+01	4.83E-12	3.98E-12	3.98E-12		1.62E-10
tetrachloroethene	127-18-4	Yes	9.37E-01	6.30E-02	35.50	1.95E-01	3.33E+01	1.45E-12	1.37E-12	1.37E-12		1.13E-10
toluene	108-88-3		9.64E-01	3.59E-02	36.63	1.95E-01	3.53E+01	1.78E-12	1.73E-12	1.73E-12		4.13E-11
trans-1,3-dichloropropene	10061-02-6	Yes	9.78E-01	2.18E-02	39.18	1.95E-01	3.83E+01	1.13E-12	1.11E-12	1.11E-12		1.28E-11
trichloroethene	79-01-6	Yes	9.74E-01	2.55E-02	38.06	1.95E-01	3.71E+01	1.44E-12	1.41E-12	1.41E-12		1.99E-11
trichlorofluoromethane	75-69-4		9.70E-01	3.01E-02	39.75	1.95E-01	3.86E+01	1.17E-12	1.14E-12	1.14E-12		1.91E-11
vinyl chloride	75-01-4	Yes	9.93E-01	7.27E-03	46.60	1.95E-01	4.63E+01	1.19E-12	1.19E-12	1.19E-12		2.84E-12
xylenes	1330-20-7		9.13E-01	8.68E-02	39.99	1.95E-01	3.65E+01	3.66E-12	3.36E-12	3.36E-12		1.82E-10
2,3,7,8-TCDF	51207-31-9		8.43E-03	9.92E-01	9.17	1.95E-01	2.71E-01	2.17E-16	1.84E-18	1.16E-18	3.60E-14	5.68E-15
Total PCDDs and PCDFs	NA	Yes										
antimony	7440-36-0		7.85E-01	2.15E-01	39.37	1.95E-01	3.10E+01	1.21E-14	9.57E-15	9.56E-15		3.82E-13
cadmium	7440-43-9		6.88E-01	3.12E-01	39.36	1.95E-01	2.71E+01	7.23E-14	5.01E-14	5.00E-14		4.54E-11
chromium (3+)	7440-47-3		8.95E-01	1.05E-01	51.05	1.95E-01	4.57E+01	4.54E-13	4.09E-13	4.09E-13		1.29E-12
chromium (6+)	18540-29-9	Yes	8.95E-01	1.05E-01	51.05	1.95E-01	4.57E+01	4.54E-13	4.09E-13	4.09E-13		1.29E-12
copper	7440-50-8		2.80E-01	7.20E-01	50.17	1.95E-01	1.42E+01	2.17E-12	6.11E-13	6.08E-13		1.92E-12
lead	7439-92-1	Yes	1.57E-01	8.43E-01	39.03	1.95E-01	6.31E+00	1.44E-12	2.28E-13	2.26E-13		2.03E-14
nickel	7440-02-0		7.18E-01	2.82E-01	39.36	1.95E-01	2.83E+01	1.32E-12	9.54E-13	9.54E-13		7.44E-11
zinc	7440-66-6		7.27E-01	2.73E-01	39.36	1.95E-01	2.87E+01	1.27E-11	9.29E-12	9.29E-12		1.91E-08

CONCENTRATIONS OF COPCS IN SURFACE WATER AND FISH FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS (TEQ BASIS):
Adult Subsistence Farmer Exposure Scenario

		Concentration in Water				Concentration in Fish
		Total Waterbody Concentration Including Water Column and Bed Sediment	Total Concentration in Water Column	Dissolved Phase Water Concentration	Concentration Sorbed to Bed Sediment	Fish Concentration
		(mg TEQ/ℓ)[a]	(mg TEQ/ℓ)[a]	(mg TEQ/ℓ)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]
COPC	CAS Number	C_{wtot}	C_{wctot}	C_{dw}	C_{sb}	C_{fish}
1,1,1-trichloroethane	71-55-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,1-dichloroethane	75-34-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,1-dichloroethene	75-35-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2-dichloroethane	107-06-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2-dichloropropane	78-87-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,3-butadiene	106-99-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-butanone	78-93-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
acetone	67-64-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzene	71-43-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzoic acid	65-85-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzyl alcohol	100-51-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bis(2-ethylhexyl)-phthalate	117-81-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bromodichloromethane	75-27-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bromomethane	74-83-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
carbon disulfide	75-15-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
carbon tetrachloride	56-23-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chlorobenzene	108-90-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloroform	67-66-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloromethane	74-87-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cis-1,3-dichloropropene	10061-01-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dibromochloromethane	124-48-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dichlorodifluoromethane	75-71-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dimethyl phthalate	131-11-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
di-n-butyl phthalate	84-74-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ethylbenzene	100-41-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Freon 113	76-13-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
HD	505-60-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
hexane	110-54-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methylene chloride	75-09-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
styrene	100-42-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
tetrachloroethene	127-18-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
toluene	108-88-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trans-1,3-dichloropropene	10061-02-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trichloroethene	79-01-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trichlorofluoromethane	75-69-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
vinyl chloride	75-01-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
xylenes	1330-20-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2,3,7,8-TCDF	51207-31-9	2.17E-17	1.84E-19	1.16E-19	3.60E-15	5.68E-16
Total PCDDs and PCDFs	NA	2.17E-17	1.84E-19	1.16E-19	3.60E-15	5.68E-16
antimony	7440-36-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cadmium	7440-43-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (3+)	7440-47-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (6+)	18540-29-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
copper	7440-50-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
lead	7439-92-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
zinc	7440-66-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

a. The concentration of individual PCDDs and PCDFs congeners and coplanar PCBs in water and fish are presented in units of mg COPC TEQ/kg. The concentration of total PCDDs and PCDFs as well as the concentration of total coplanar PCBs in water and fish are presented in units of mg TEQ/kg produce and are calculated as the sum of the concentrations of all individual PCDD and PCDF congeners in water or fish and the concentrations of all coplanar produce in water and fish, respectively.

CONCENTRATIONS OF COPCS IN SURFACE WATER AND FISH FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Child Exposure Scenarios												
		Diffusive Mass Transfer Coefficient			Erosion Loading Supporting Calculation		Contaminant Load To The Waterbody					
		Liquid Phase Transfer Coefficient	Gas Phase Transfer Coefficient	Overall Transfer Rate	Unit Soil Loss	Watershed Sediment Delivery Ratio	Due to Direct Deposition	Due to Impervious Runoff	Due to Pervious Runoff	Due to Erosion	Due to Diffusion	Due to All Processes
		(m/yr)	(m/yr)	(m/yr)	(kg/m^2-yr)	(dimensionless)	(g/yr)	(g/yr)	(g/yr)	(g/yr)	(g/yr)	(g/yr)
COPC	CAS Number	K_L	K_G	K_v	X_s	SD	L_{Dep}	L_{RI}	L_R	L_E	L_{Dif}	L_T
1,1,1-trichloroethane	71-55-6	164.78	484504.19	187.25	0.39	0.36	3.70E-06	4.55E-06	3.75E-09	2.70E-11	1.16E-08	8.26E-06
1,1-dichloroethane	75-34-3	185.48	468559.52	210.51	0.39	0.36	1.75E-06	2.16E-06	2.83E-09	5.55E-12	1.88E-08	3.93E-06
1,1-dichloroethene	75-35-4	184.29	533257.08	209.46	0.39	0.36	1.61E-06	1.98E-06	7.03E-10	2.76E-12	3.70E-09	3.59E-06
1,2-dichloroethane	107-06-2	178.31	587498.13	201.20	0.39	0.36	1.78E-06	2.19E-06	7.82E-09	8.96E-12	1.04E-07	4.07E-06
1,2-dichloropropane	78-87-5	163.90	485336.19	185.79	0.39	0.36	2.14E-06	2.64E-06	8.50E-09	2.50E-11	4.05E-08	4.82E-06
1,3-butadiene	106-99-0	239.55	692203.00	272.32	0.39	0.36	1.54E-06	1.89E-06	2.62E-10	3.87E-12	1.62E-09	3.43E-06
2-butanone	78-93-3	177.10	496089.19	174.20	0.39	0.36	2.63E-05	3.24E-05	8.23E-06	7.81E-08	2.34E-05	9.04E-05
acetone	67-64-1	195.98	660977.51	187.89	0.39	0.36	4.16E-05	5.12E-05	7.24E-06	2.06E-08	5.71E-05	1.57E-04
benzene	71-43-2	181.91	525288.08	206.51	0.39	0.36	3.05E-05	3.75E-05	6.32E-08	2.48E-10	3.20E-07	6.84E-05
benzoic acid	65-85-0	154.20	26157.37	3.42	0.39	0.36	9.04E-05	1.11E-04	2.60E-03	5.09E-07	3.08E-05	2.83E-03
benzyl alcohol	100-51-6	179.51	26157.37	0.41	0.39	0.36	3.85E-05	4.74E-05	8.44E-03	3.31E-05	1.33E-05	8.57E-03
bis(2-ethylhexyl)-phthalate	117-81-7	91.54	283759.18	1.30	0.39	0.36	7.89E-06	9.72E-06	2.25E-11	1.69E-06	0.00E+00	1.93E-05
bromodichloromethane	75-27-4	179.51	26157.37	184.72	0.39	0.36	7.59E-06	9.35E-06	4.62E-06	1.66E-08	2.50E-07	2.18E-05
bromomethane	74-83-9	203.97	462617.63	231.50	0.39	0.36	8.95E-06	1.10E-05	1.71E-08	5.05E-11	9.47E-08	2.01E-05
carbon disulfide	75-15-0	179.51	587498.13	204.04	0.39	0.36	2.10E-05	2.59E-05	5.90E-09	1.76E-11	4.08E-08	4.69E-05
carbon tetrachloride	56-23-5	164.78	484504.19	187.29	0.39	0.36	1.03E-05	1.27E-05	6.90E-09	7.89E-11	1.84E-08	2.31E-05
chlorobenzene	108-90-7	163.52	463468.76	185.48	0.39	0.36	2.41E-06	2.97E-06	1.48E-08	2.13E-10	3.45E-08	5.43E-06
chloroform	67-66-3	179.51	587498.13	203.68	0.39	0.36	2.98E-05	3.67E-05	6.28E-08	1.64E-10	4.68E-07	6.71E-05
chloromethane	74-87-3	134.51	668101.45	152.84	0.39	0.36	2.64E-05	3.25E-05	1.59E-08	3.12E-11	1.30E-07	5.90E-05
cis-1,3-dichloropropene	10061-01-5	179.51	418118.09	203.98	0.39	0.36	2.15E-06	2.65E-06	1.67E-09	4.97E-12	6.95E-09	4.80E-06
dibromochloromethane	124-48-1	179.51	26157.37	168.07	0.39	0.36	6.95E-06	8.56E-06	1.55E-05	3.56E-07	4.26E-07	3.18E-05
dichlorodifluoromethane	75-71-8	179.51	26157.37	203.99	0.39	0.36	4.55E-06	5.60E-06	2.36E-08	4.78E-10	7.72E-10	1.02E-05
dimethyl phthalate	131-11-3	131.58	391748.68	1.89	0.39	0.36	2.98E-05	3.67E-05	1.87E-04	2.08E-06	1.53E-04	4.08E-04
di-n-butyl phthalate	84-74-2	152.77	329140.86	23.78	0.39	0.36	4.56E-05	5.61E-05	8.88E-08	1.51E-05	1.72E-04	2.89E-04
ethylbenzene	100-41-4	151.98	471938.27	172.62	0.39	0.36	2.82E-06	3.48E-06	8.70E-09	2.08E-10	1.76E-08	6.33E-06
Freon 113	76-13-1	137.52	397383.06	156.35	0.39	0.36	4.71E-06	5.80E-06	3.22E-10	4.01E-11	3.99E-10	1.05E-05
HD	505-60-2	147.91	428791.43	133.93	0.39	0.36	3.63E-06	4.47E-06	7.12E-09	5.45E-10	4.20E-06	1.23E-05
hexane	110-54-3	194.83	560700.85	221.51	0.39	0.36	5.54E-06	6.82E-06	6.79E-11	3.26E-11	1.94E-10	1.24E-05
methylene chloride	75-09-2	199.42	576088.85	225.86	0.39	0.36	2.50E-05	3.08E-05	3.70E-08	2.91E-11	7.31E-07	5.65E-05
styrene	100-42-5	154.58	454922.32	175.21	0.39	0.36	7.77E-06	9.57E-06	7.88E-08	3.09E-07	1.44E-07	1.79E-05
tetrachloroethene	127-18-4	157.16	459205.33	178.60	0.39	0.36	2.72E-06	3.35E-06	3.17E-09	3.22E-11	7.70E-09	6.09E-06
toluene	108-88-3	162.26	521281.19	184.27	0.39	0.36	3.46E-06	4.27E-06	9.51E-09	1.12E-10	2.76E-08	7.77E-06
trans-1,3-dichloropropene	10061-02-6	173.78	502150.50	197.10	0.39	0.36	2.28E-06	2.81E-06	1.44E-08	3.67E-10	3.61E-08	5.14E-06
trichloroethene	79-01-6	168.52	488657.20	191.44	0.39	0.36	2.88E-06	3.55E-06	5.62E-09	6.06E-11	1.58E-08	6.46E-06
trichlorofluoromethane	75-69-4	175.89	521281.19	199.95	0.39	0.36	2.37E-06	2.92E-06	3.90E-10	3.06E-12	1.39E-09	5.30E-06
vinyl chloride	75-01-4	206.22	595044.00	234.39	0.39	0.36	2.65E-06	3.27E-06	4.35E-10	5.26E-13	6.57E-09	5.93E-06
xylenes	1330-20-7	177.22	513221.49	201.23	0.39	0.36	6.99E-06	8.61E-06	2.59E-08	3.22E-09	6.05E-08	1.57E-05
2,3,7,8-TCDF	51207-31-9	128.90	216875.06	72.94	0.39	0.36	8.92E-13	1.10E-12	2.01E-14	5.10E-12	0.00E+00	7.11E-12
Total PCDDs and PCDFs	NA											
antimony	7440-36-0	174.30	481169.11	198.10	0.39	0.36	1.99E-08	2.45E-08	1.44E-11	2.12E-11	0.00E+00	4.44E-08
cadmium	7440-43-9	174.30	482421.10	198.12	0.39	0.36	1.04E-07	1.28E-07	6.06E-11	1.49E-10	0.00E+00	2.32E-07
chromium (3+)	7440-47-3	225.98	669876.60	256.84	0.39	0.36	9.55E-07	1.18E-06	4.30E-10	2.67E-10	0.00E+00	2.13E-06
chromium (6+)	18540-29-9	225.98	669876.60	256.84	0.39	0.36	9.55E-07	1.18E-06	4.30E-10	2.67E-10	0.00E+00	2.13E-06
copper	7440-50-8	222.99	644347.48	253.43	0.39	0.36	1.42E-06	1.75E-06	6.82E-10	9.59E-09	0.00E+00	3.18E-06
lead	7439-92-1	174.30	481169.11	198.10	0.39	0.36	4.77E-07	5.87E-07	3.46E-10	1.02E-08	0.00E+00	1.07E-06
nickel	7440-02-0	174.30	481169.11	198.10	0.39	0.36	1.98E-06	2.44E-06	1.44E-09	3.06E-09	0.00E+00	4.43E-06
zinc	7440-66-6	174.30	481169.11	198.10	0.39	0.36	1.93E-05	2.38E-05	1.40E-08	2.84E-08	0.00E+00	4.31E-05

CONCENTRATIONS OF COPCS IN SURFACE WATER AND FISH FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Child Exposure Scenarios

COPC	CAS Number	Oral Cancer Slope Factor?	Waterbody Dissipation Rate Constant: Fraction in Water Column (dimensionless) f_{wc}	Fraction in Benthic Sediment (dimensionless) f_{bs}	Water Column Volatilization Rate Constant (yr^{-1}) k_v	Benthic Burial Rate Constant (yr^{-1}) k_b	Overall Total Waterbody Dissipation Rate Constant (yr^{-1}) k_{wt}	Concentration in Water: Total Waterbody Concentration Including Water Column and Bed Sediment (mg/ℓ) C_{wtot}	Total Concentration in Water Column (mg/ℓ) C_{wctot}	Dissolved Phase Water Concentration (mg/ℓ) C_{dw}	Concentration Sorbed to Bed Sediment (mg/kg) C_{sb}	Concentration in Fish: Fish Concentration (mg/kg) C_{fish}
1,1,1-trichloroethane	71-55-6		9.65E-01	3.47E-02	37.22	1.95E-01	3.59E+01	1.88E-12	1.83E-12	1.83E-12		3.07E-11
1,1-dichloroethane	75-34-3	Yes	9.84E-01	1.62E-02	41.85	1.95E-01	4.12E+01	8.35E-13	8.27E-13	8.27E-13		4.01E-12
1,1-dichloroethene	75-35-4		9.81E-01	1.88E-02	41.64	1.95E-01	4.09E+01	7.67E-13	7.57E-13	7.57E-13		6.25E-12
1,2-dichloroethane	107-06-2	Yes	9.87E-01	1.26E-02	40.00	1.95E-01	3.95E+01	8.79E-13	8.74E-13	8.73E-13		2.49E-12
1,2-dichloropropane	78-87-5	Yes	9.85E-01	1.47E-02	36.94	1.95E-01	3.64E+01	1.08E-12	1.07E-12	1.07E-12		7.40E-12
1,3-butadiene	106-99-0	Yes	9.86E-01	1.42E-02	54.14	1.95E-01	5.34E+01	6.45E-13	6.39E-13	6.39E-13		4.35E-12
2-butanone	78-93-3		9.96E-01	4.06E-03	34.63	1.95E-01	3.45E+01	2.05E-11	2.06E-11	2.06E-11		6.50E-11
acetone	67-64-1		9.96E-01	3.71E-03	37.35	1.95E-01	3.72E+01	3.46E-11	3.47E-11	3.47E-11		1.10E-10
benzene	71-43-2	Yes	9.82E-01	1.81E-02	41.05	1.95E-01	4.03E+01	1.47E-11	1.45E-11	1.45E-11		1.20E-10
benzoic acid	65-85-0		9.96E-01	3.73E-03	0.68	1.95E-01	6.79E-01	1.05E-09	1.05E-09	1.05E-09		3.31E-09
benzyl alcohol	100-51-6		9.94E-01	6.44E-03	0.08	1.95E-01	8.21E-02	3.21E-09	3.21E-09	3.21E-09		1.01E-09
bis(2-ethylhexyl)-phthalate	117-81-7	Yes	3.91E-02	9.61E-01	0.24	1.95E-01	1.97E-01	1.68E-10	6.62E-12	6.11E-12		1.19E-09
bromodichloromethane	75-27-4	Yes	9.83E-01	1.66E-02	36.72	1.95E-01	3.61E+01	4.90E-12	4.85E-12	4.85E-12		4.01E-11
bromomethane	74-83-9		9.94E-01	5.73E-03	46.02	1.95E-01	4.58E+01	4.04E-12	4.04E-12	4.04E-12		6.67E-12
carbon disulfide	75-15-0		9.81E-01	1.91E-02	40.56	1.95E-01	3.98E+01	1.01E-11	1.00E-11	1.00E-11		9.86E-11
carbon tetrachloride	56-23-5	Yes	9.61E-01	3.85E-02	37.23	1.95E-01	3.58E+01	5.26E-12	5.09E-12	5.09E-12		1.46E-10
chlorobenzene	108-90-7		9.46E-01	5.42E-02	36.87	1.95E-01	3.49E+01	1.27E-12	1.20E-12	1.20E-12		3.44E-11
chloroform	67-66-3	Yes	9.84E-01	1.59E-02	40.49	1.95E-01	3.98E+01	1.44E-11	1.43E-11	1.43E-11		9.90E-11
chloromethane	74-87-3		9.95E-01	5.07E-03	30.39	1.95E-01	3.02E+01	1.41E-11	1.41E-11	1.41E-11		4.46E-11
cis-1,3-dichloropropene	10061-01-5	Yes	9.90E-01	9.98E-03	40.55	1.95E-01	4.01E+01	1.03E-12	1.02E-12	1.02E-12		3.48E-12
dibromochloromethane	124-48-1	Yes	9.80E-01	2.00E-02	33.41	1.95E-01	3.27E+01	7.45E-12	7.34E-12	7.34E-12		7.64E-11
dichlorodifluoromethane	75-71-8		9.82E-01	1.80E-02	40.55	1.95E-01	3.98E+01	2.20E-12	2.17E-12	2.17E-12		1.99E-11
dimethyl phthalate	131-11-3		9.88E-01	1.17E-02	0.38	1.95E-01	3.73E-01	1.53E-10	1.52E-10	1.52E-10		4.82E-10
di-n-butyl phthalate	84-74-2		7.25E-01	2.75E-01	4.72	1.95E-01	3.48E+00	1.36E-10	9.94E-11	9.92E-11		1.79E-07
ethylbenzene	100-41-4	Yes	9.50E-01	4.99E-02	34.31	1.95E-01	3.26E+01	1.51E-12	1.45E-12	1.44E-12		7.02E-11
Freon 113	76-13-1		9.13E-01	8.67E-02	31.07	1.95E-01	2.84E+01	2.71E-12	2.49E-12	2.49E-12		1.35E-10
HD	505-60-2	Yes	9.44E-01	5.64E-02	26.62	1.95E-01	2.51E+01	3.25E-12	3.08E-12	3.08E-12		4.41E-11
hexane	110-54-3		7.38E-01	2.62E-01	43.99	1.95E-01	3.25E+01	3.42E-12	2.54E-12	2.54E-12		5.09E-10
methylene chloride	75-09-2	Yes	9.94E-01	5.96E-03	44.90	1.95E-01	4.46E+01	1.15E-11	1.15E-11	1.15E-11		2.30E-11
styrene	100-42-5		8.18E-01	1.82E-01	34.81	1.95E-01	2.85E+01	4.93E-12	4.05E-12	4.05E-12		1.65E-10
tetrachloroethene	127-18-4	Yes	9.37E-01	6.30E-02	35.50	1.95E-01	3.33E+01	1.45E-12	1.37E-12	1.37E-12		1.13E-10
toluene	108-88-3		9.64E-01	3.59E-02	36.63	1.95E-01	3.53E+01	1.78E-12	1.73E-12	1.73E-12		4.13E-11
trans-1,3-dichloropropene	10061-02-6	Yes	9.78E-01	2.18E-02	39.18	1.95E-01	3.83E+01	1.13E-12	1.11E-12	1.11E-12		1.29E-11
trichloroethene	79-01-6	Yes	9.74E-01	2.55E-02	38.06	1.95E-01	3.71E+01	1.44E-12	1.41E-12	1.41E-12		1.99E-11
trichlorofluoromethane	75-69-4		9.70E-01	3.01E-02	39.75	1.95E-01	3.86E+01	1.17E-12	1.14E-12	1.14E-12		1.91E-11
vinyl chloride	75-01-4	Yes	9.93E-01	7.27E-03	46.60	1.95E-01	4.63E+01	1.19E-12	1.19E-12	1.19E-12		2.84E-12
xylenes	1330-20-7		9.13E-01	8.68E-02	39.99	1.95E-01	3.65E+01	3.66E-12	3.36E-12	3.36E-12		1.82E-10
2,3,7,8-TCDF	51207-31-9		8.43E-03	9.92E-01	9.17	1.95E-01	2.71E-01	1.96E-16	1.67E-18	1.05E-18	3.26E-14	5.14E-15
Total PCDDs and PCDFs	NA	Yes										
antimony	7440-36-0		7.85E-01	2.15E-01	39.37	1.95E-01	3.10E+01	1.21E-14	9.57E-15	9.57E-15		3.83E-13
cadmium	7440-43-9		6.88E-01	3.12E-01	39.36	1.95E-01	2.71E+01	7.24E-14	5.01E-14	5.01E-14		4.54E-11
chromium (3+)	7440-47-3		8.95E-01	1.05E-01	51.05	1.95E-01	4.57E+01	4.54E-13	4.09E-13	4.09E-13		1.29E-12
chromium (6+)	18540-29-9	Yes	8.95E-01	1.05E-01	51.05	1.95E-01	4.57E+01	4.54E-13	4.09E-13	4.09E-13		1.29E-12
copper	7440-50-8		2.80E-01	7.20E-01	50.17	1.95E-01	1.42E+01	2.18E-12	6.13E-13	6.10E-13		1.93E-12
lead	7439-92-1	Yes	1.57E-01	8.43E-01	39.03	1.95E-01	6.31E+00	1.45E-12	2.30E-13	2.28E-13		2.05E-14
nickel	7440-02-0		7.18E-01	2.82E-01	39.36	1.95E-01	2.83E+01	1.32E-12	9.55E-13	9.55E-13		7.45E-11
zinc	7440-66-6		7.27E-01	2.73E-01	39.36	1.95E-01	2.87E+01	1.27E-11	9.30E-12	9.29E-12		1.91E-08

CONCENTRATIONS OF COPCS IN SURFACE WATER AND FISH FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS (TEQ BASIS):
Child Exposure Scenarios

		Concentration in Water				Concentration in Fish
		Total Waterbody Concentration Including Water Column and Bed Sediment	Total Concentration in Water Column	Dissolved Phase Water Concentration	Concentration Sorbed to Bed Sediment	Fish Concentration
		(mg TEQ/ℓ)[a]	(mg TEQ/ℓ)[a]	(mg TEQ/ℓ)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]
COPC	CAS Number	C_{wtot}	C_{wctot}	C_{dw}	C_{sb}	C_{fish}
1,1,1-trichloroethane	71-55-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,1-dichloroethane	75-34-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,1-dichloroethene	75-35-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2-dichloroethane	107-06-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2-dichloropropane	78-87-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,3-butadiene	106-99-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-butanone	78-93-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
acetone	67-64-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzene	71-43-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzoic acid	65-85-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzyl alcohol	100-51-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bis(2-ethylhexyl)-phthalate	117-81-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bromodichloromethane	75-27-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bromomethane	74-83-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
carbon disulfide	75-15-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
carbon tetrachloride	56-23-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chlorobenzene	108-90-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloroform	67-66-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloromethane	74-87-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cis-1,3-dichloropropene	10061-01-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dibromochloromethane	124-48-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dichlorodifluoromethane	75-71-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dimethyl phthalate	131-11-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
di-n-butyl phthalate	84-74-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ethylbenzene	100-41-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Freon 113	76-13-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
HD	505-60-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
hexane	110-54-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methylene chloride	75-09-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
styrene	100-42-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
tetrachloroethene	127-18-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
toluene	108-88-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trans-1,3-dichloropropene	10061-02-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trichloroethene	79-01-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trichlorofluoromethane	75-69-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
vinyl chloride	75-01-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
xylenes	1330-20-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2,3,7,8-TCDF	51207-31-9	1.96E-17	1.67E-19	1.05E-19	3.26E-15	5.14E-16
Total PCDDs and PCDFs	NA	1.96E-17	1.67E-19	1.05E-19	3.26E-15	5.14E-16
antimony	7440-36-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cadmium	7440-43-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (3+)	7440-47-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (6+)	18540-29-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
copper	7440-50-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
lead	7439-92-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
zinc	7440-66-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

a. The concentration of individual PCDDs and PCDFs congeners and coplanar PCBs in water and fish are presented in units of mg COPC TEQ/kg. The concentration of total PCDDs and PCDFs as well as the concentration of total coplanar PCBs in water and fish are presented in units of mg TEQ/kg produce and are calculated as the sum of the concentrations of all individual PCDD and PCDF congeners in water or fish and the concentrations of all coplanar produce in water and fish, respectively.

CONCENTRATIONS OF COPCS IN SURFACE WATER AND FISH FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Infant Exposure Scenarios												
		Diffusive Mass Transfer Coefficient			Erosion Loading Supporting Calculation		Contaminant Load To The Waterbody					
		Liquid Phase Transfer Coefficient	Gas Phase Transfer Coefficient	Overall Transfer Rate	Unit Soil Loss	Watershed Sediment Delivery Ratio	Due to Direct Deposition	Due to Impervious Runoff	Due to Pervious Runoff	Due to Erosion	Due to Diffusion	Due to All Processes
		(m/yr)	(m/yr)	(m/yr)	(kg/m^2-yr)	(dimensionless)	(g/yr)	(g/yr)	(g/yr)	(g/yr)	(g/yr)	(g/yr)
COPC	CAS Number	K_L	K_G	K_v	X_s	SD	L_{Dep}	L_{RI}	L_R	L_E	L_{Dif}	L_T
1,1,1-trichloroethane	71-55-6	164.78	484504.19	187.25	0.39	0.36	3.70E-06	4.55E-06	3.75E-09	2.70E-11	1.16E-08	8.26E-06
1,1-dichloroethane	75-34-3	185.48	468559.52	210.51	0.39	0.36	1.75E-06	2.16E-06	2.83E-09	5.55E-12	1.88E-08	3.93E-06
1,1-dichloroethene	75-35-4	184.29	533257.08	209.46	0.39	0.36	1.61E-06	1.98E-06	7.03E-10	2.76E-12	3.70E-09	3.59E-06
1,2-dichloroethane	107-06-2	178.31	587498.13	201.20	0.39	0.36	1.78E-06	2.19E-06	7.82E-09	8.96E-12	1.04E-07	4.07E-06
1,2-dichloropropane	78-87-5	163.90	485336.19	185.79	0.39	0.36	2.14E-06	2.64E-06	8.50E-09	2.50E-11	4.05E-08	4.82E-06
1,3-butadiene	106-99-0	239.55	692203.00	272.32	0.39	0.36	1.54E-06	1.89E-06	2.62E-10	3.87E-12	1.62E-09	3.43E-06
2-butanone	78-93-3	177.10	496089.19	174.20	0.39	0.36	2.63E-05	3.24E-05	8.23E-06	7.81E-08	2.34E-05	9.04E-05
acetone	67-64-1	195.98	660977.51	187.89	0.39	0.36	4.16E-05	5.12E-05	7.24E-06	2.06E-08	5.71E-05	1.57E-04
benzene	71-43-2	181.91	525288.08	206.51	0.39	0.36	3.05E-05	3.75E-05	6.32E-08	2.48E-10	3.20E-07	6.84E-05
benzoic acid	65-85-0	154.20	26157.37	3.42	0.39	0.36	9.04E-05	1.11E-04	2.60E-03	5.09E-07	3.08E-05	2.83E-03
benzyl alcohol	100-51-6	179.51	26157.37	0.41	0.39	0.36	3.85E-05	4.74E-05	8.44E-03	3.31E-05	1.33E-05	8.57E-03
bis(2-ethylhexyl)-phthalate	117-81-7	91.54	283759.18	1.30	0.39	0.36	7.89E-06	9.72E-06	2.25E-11	1.69E-06	0.00E+00	1.93E-05
bromodichloromethane	75-27-4	179.51	26157.37	184.72	0.39	0.36	7.59E-06	9.35E-06	4.62E-06	1.66E-08	2.50E-07	2.18E-05
bromomethane	74-83-9	203.97	462617.63	231.50	0.39	0.36	8.95E-06	1.10E-05	1.71E-08	5.05E-11	9.47E-08	2.01E-05
carbon disulfide	75-15-0	179.51	587498.13	204.04	0.39	0.36	2.10E-05	2.59E-05	5.90E-09	1.76E-11	4.08E-08	4.69E-05
carbon tetrachloride	56-23-5	164.78	484504.19	187.29	0.39	0.36	1.03E-05	1.27E-05	6.90E-09	7.89E-11	1.84E-08	2.31E-05
chlorobenzene	108-90-7	163.52	463468.76	185.48	0.39	0.36	2.41E-06	2.97E-06	1.48E-08	2.13E-10	3.45E-08	5.43E-06
chloroform	67-66-3	179.51	587498.13	203.68	0.39	0.36	2.98E-05	3.67E-05	6.28E-08	1.64E-10	4.68E-07	6.71E-05
chloromethane	74-87-3	134.51	668101.45	152.84	0.39	0.36	2.64E-05	3.25E-05	1.59E-08	3.12E-11	1.30E-07	5.90E-05
cis-1,3-dichloropropene	10061-01-5	179.51	418118.09	203.98	0.39	0.36	2.15E-06	2.65E-06	1.67E-09	4.97E-12	6.95E-09	4.80E-06
dibromochloromethane	124-48-1	179.51	26157.37	168.07	0.39	0.36	6.95E-06	8.56E-06	1.55E-05	3.56E-07	4.26E-07	3.18E-05
dichlorodifluoromethane	75-71-8	179.51	26157.37	203.99	0.39	0.36	4.55E-06	5.60E-06	2.36E-08	4.78E-10	7.72E-10	1.02E-05
dimethyl phthalate	131-11-3	131.58	391748.68	1.89	0.39	0.36	2.98E-05	3.67E-05	1.87E-04	2.08E-06	1.53E-04	4.08E-04
di-n-butyl phthalate	84-74-2	152.77	329140.86	23.78	0.39	0.36	4.56E-05	5.61E-05	8.88E-08	1.51E-05	1.72E-04	2.89E-04
ethylbenzene	100-41-4	151.98	471938.27	172.62	0.39	0.36	2.82E-06	3.48E-06	8.70E-09	2.08E-10	1.76E-08	6.33E-06
Freon 113	76-13-1	137.52	397383.06	156.35	0.39	0.36	4.71E-06	5.80E-06	3.22E-10	4.01E-11	3.99E-10	1.05E-05
HD	505-60-2	147.91	428791.43	133.93	0.39	0.36	3.63E-06	4.47E-06	7.12E-09	5.45E-10	4.20E-06	1.23E-05
hexane	110-54-3	194.83	560700.85	221.51	0.39	0.36	5.54E-06	6.82E-06	6.79E-11	3.26E-11	1.94E-10	1.24E-05
methylene chloride	75-09-2	199.42	576088.85	225.86	0.39	0.36	2.50E-05	3.08E-05	3.70E-08	2.91E-11	7.31E-07	5.65E-05
styrene	100-42-5	154.58	454922.32	175.21	0.39	0.36	7.77E-06	9.57E-06	7.88E-08	3.09E-07	1.44E-07	1.79E-05
tetrachloroethene	127-18-4	157.16	459205.33	178.60	0.39	0.36	2.72E-06	3.35E-06	3.17E-09	3.22E-11	7.70E-09	6.09E-06
toluene	108-88-3	162.26	521281.19	184.27	0.39	0.36	3.46E-06	4.27E-06	9.51E-09	1.12E-10	2.76E-08	7.77E-06
trans-1,3-dichloropropene	10061-02-6	173.78	502150.50	197.10	0.39	0.36	2.28E-06	2.81E-06	1.44E-08	3.67E-10	3.61E-08	5.14E-06
trichloroethene	79-01-6	168.52	488657.20	191.44	0.39	0.36	2.88E-06	3.55E-06	5.62E-09	6.06E-11	1.58E-08	6.46E-06
trichlorofluoromethane	75-69-4	175.89	521281.19	199.95	0.39	0.36	2.37E-06	2.92E-06	3.90E-10	3.06E-12	1.39E-09	5.30E-06
vinyl chloride	75-01-4	206.22	595044.00	234.39	0.39	0.36	2.65E-06	3.27E-06	4.35E-10	5.26E-13	6.57E-09	5.93E-06
xylenes	1330-20-7	177.22	513221.49	201.23	0.39	0.36	6.99E-06	8.61E-06	2.59E-08	3.22E-09	6.05E-08	1.57E-05
2,3,7,8-TCDF	51207-31-9	128.90	216875.06	72.94	0.39	0.36	8.92E-13	1.10E-12	2.01E-14	5.10E-12	0.00E+00	7.11E-12
Total PCDDs and PCDFs	NA											
antimony	7440-36-0	174.30	481169.11	198.10	0.39	0.36	1.99E-08	2.45E-08	1.44E-11	2.12E-11	0.00E+00	4.44E-08
cadmium	7440-43-9	174.30	482421.10	198.12	0.39	0.36	1.04E-07	1.28E-07	6.06E-11	1.49E-10	0.00E+00	2.32E-07
chromium (3+)	7440-47-3	225.98	669876.60	256.84	0.39	0.36	9.55E-07	1.18E-06	4.30E-10	2.67E-10	0.00E+00	2.13E-06
chromium (6+)	18540-29-9	225.98	669876.60	256.84	0.39	0.36	9.55E-07	1.18E-06	4.30E-10	2.67E-10	0.00E+00	2.13E-06
copper	7440-50-8	222.99	644347.48	253.43	0.39	0.36	1.42E-06	1.75E-06	6.82E-10	9.59E-09	0.00E+00	3.18E-06
lead	7439-92-1	174.30	481169.11	198.10	0.39	0.36	4.77E-07	5.87E-07	3.46E-10	1.02E-08	0.00E+00	1.07E-06
nickel	7440-02-0	174.30	481169.11	198.10	0.39	0.36	1.98E-06	2.44E-06	1.44E-09	3.06E-09	0.00E+00	4.43E-06
zinc	7440-66-6	174.30	481169.11	198.10	0.39	0.36	1.93E-05	2.38E-05	1.40E-08	2.84E-08	0.00E+00	4.31E-05

CONCENTRATIONS OF COPCS IN SURFACE WATER AND FISH FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Infant Exposure Scenarios

COPC	CAS Number	Oral Cancer Slope Factor?	Waterbody Dissipation Rate Constant: Fraction in Water Column (dimensionless) f_{wc}	Fraction in Benthic Sediment (dimensionless) f_{bs}	Water Column Volatilization Rate Constant (yr^{-1}) k_v	Benthic Burial Rate Constant (yr^{-1}) k_b	Overall Total Waterbody Dissipation Rate Constant (yr^{-1}) k_{wt}	Concentration in Water: Total Waterbody Concentration Including Water Column and Bed Sediment (mg/ℓ) C_{wtot}	Total Concentration in Water Column (mg/ℓ) C_{wctot}	Dissolved Phase Water Concentration (mg/ℓ) C_{dw}	Concentration Sorbed to Bed Sediment (mg/kg) C_{sb}	Concentration in Fish: Fish Concentration (mg/kg) C_{fish}
1,1,1-trichloroethane	71-55-6		9.65E-01	3.47E-02	37.22	1.95E-01	3.59E+01	1.88E-12	1.83E-12	1.83E-12		3.07E-11
1,1-dichloroethane	75-34-3	Yes	9.84E-01	1.62E-02	41.85	1.95E-01	4.12E+01	8.35E-13	8.27E-13	8.27E-13		4.01E-12
1,1-dichloroethene	75-35-4		9.81E-01	1.88E-02	41.64	1.95E-01	4.09E+01	7.67E-13	7.57E-13	7.57E-13		6.25E-12
1,2-dichloroethane	107-06-2	Yes	9.87E-01	1.26E-02	40.00	1.95E-01	3.95E+01	8.79E-13	8.74E-13	8.73E-13		2.49E-12
1,2-dichloropropane	78-87-5	Yes	9.85E-01	1.47E-02	36.94	1.95E-01	3.64E+01	1.08E-12	1.07E-12	1.07E-12		7.40E-12
1,3-butadiene	106-99-0	Yes	9.86E-01	1.42E-02	54.14	1.95E-01	5.34E+01	6.45E-13	6.39E-13	6.39E-13		4.35E-12
2-butanone	78-93-3		9.96E-01	4.06E-03	34.63	1.95E-01	3.45E+01	2.05E-11	2.06E-11	2.06E-11		6.50E-11
acetone	67-64-1		9.96E-01	3.71E-03	37.35	1.95E-01	3.72E+01	3.46E-11	3.47E-11	3.47E-11		1.10E-10
benzene	71-43-2	Yes	9.82E-01	1.81E-02	41.05	1.95E-01	4.03E+01	1.47E-11	1.45E-11	1.45E-11		1.20E-10
benzoic acid	65-85-0		9.96E-01	3.73E-03	0.68	1.95E-01	6.79E-01	1.05E-09	1.05E-09	1.05E-09		3.31E-09
benzyl alcohol	100-51-6		9.94E-01	6.44E-03	0.08	1.95E-01	8.21E-02	3.21E-09	3.21E-09	3.21E-09		1.01E-09
bis(2-ethylhexyl)-phthalate	117-81-7	Yes	3.91E-02	9.61E-01	0.24	1.95E-01	1.97E-01	1.68E-10	6.62E-12	6.11E-12		1.19E-09
bromodichloromethane	75-27-4	Yes	9.83E-01	1.66E-02	36.72	1.95E-01	3.61E+01	4.90E-12	4.85E-12	4.85E-12		4.01E-11
bromomethane	74-83-9		9.94E-01	5.73E-03	46.02	1.95E-01	4.58E+01	4.04E-12	4.04E-12	4.04E-12		6.67E-12
carbon disulfide	75-15-0		9.81E-01	1.91E-02	40.56	1.95E-01	3.98E+01	1.01E-11	1.00E-11	1.00E-11		9.86E-11
carbon tetrachloride	56-23-5	Yes	9.61E-01	3.85E-02	37.23	1.95E-01	3.58E+01	5.26E-12	5.09E-12	5.09E-12		1.46E-10
chlorobenzene	108-90-7		9.46E-01	5.42E-02	36.87	1.95E-01	3.49E+01	1.27E-12	1.20E-12	1.20E-12		3.44E-11
chloroform	67-66-3	Yes	9.84E-01	1.59E-02	40.49	1.95E-01	3.98E+01	1.44E-11	1.43E-11	1.43E-11		9.90E-11
chloromethane	74-87-3		9.95E-01	5.07E-03	30.39	1.95E-01	3.02E+01	1.41E-11	1.41E-11	1.41E-11		4.46E-11
cis-1,3-dichloropropene	10061-01-5	Yes	9.90E-01	9.98E-03	40.55	1.95E-01	4.01E+01	1.03E-12	1.02E-12	1.02E-12		3.48E-12
dibromochloromethane	124-48-1	Yes	9.80E-01	2.00E-02	33.41	1.95E-01	3.27E+01	7.45E-12	7.34E-12	7.34E-12		7.64E-11
dichlorodifluoromethane	75-71-8		9.82E-01	1.80E-02	40.55	1.95E-01	3.98E+01	2.20E-12	2.17E-12	2.17E-12		1.99E-11
dimethyl phthalate	131-11-3		9.88E-01	1.17E-02	0.38	1.95E-01	3.73E-01	1.53E-10	1.52E-10	1.52E-10		4.82E-10
di-n-butyl phthalate	84-74-2		7.25E-01	2.75E-01	4.72	1.95E-01	3.48E+00	1.36E-10	9.94E-11	9.92E-11		1.79E-07
ethylbenzene	100-41-4	Yes	9.50E-01	4.99E-02	34.31	1.95E-01	3.26E+01	1.51E-12	1.45E-12	1.44E-12		7.02E-11
Freon 113	76-13-1		9.13E-01	8.67E-02	31.07	1.95E-01	2.84E+01	2.71E-12	2.49E-12	2.49E-12		1.35E-10
HD	505-60-2	Yes	9.44E-01	5.64E-02	26.62	1.95E-01	2.51E+01	3.25E-12	3.08E-12	3.08E-12		4.41E-11
hexane	110-54-3		7.38E-01	2.62E-01	43.99	1.95E-01	3.25E+01	3.42E-12	2.54E-12	2.54E-12		5.09E-10
methylene chloride	75-09-2	Yes	9.94E-01	5.96E-03	44.90	1.95E-01	4.46E+01	1.15E-11	1.15E-11	1.15E-11		2.30E-11
styrene	100-42-5		8.18E-01	1.82E-01	34.81	1.95E-01	2.85E+01	4.93E-12	4.05E-12	4.05E-12		1.65E-10
tetrachloroethene	127-18-4	Yes	9.37E-01	6.30E-02	35.50	1.95E-01	3.33E+01	1.45E-12	1.37E-12	1.37E-12		1.13E-10
toluene	108-88-3		9.64E-01	3.59E-02	36.63	1.95E-01	3.53E+01	1.78E-12	1.73E-12	1.73E-12		4.13E-11
trans-1,3-dichloropropene	10061-02-6	Yes	9.78E-01	2.18E-02	39.18	1.95E-01	3.83E+01	1.13E-12	1.11E-12	1.11E-12		1.29E-11
trichloroethene	79-01-6	Yes	9.74E-01	2.55E-02	38.06	1.95E-01	3.71E+01	1.44E-12	1.41E-12	1.41E-12		1.99E-11
trichlorofluoromethane	75-69-4		9.70E-01	3.01E-02	39.75	1.95E-01	3.86E+01	1.17E-12	1.14E-12	1.14E-12		1.91E-11
vinyl chloride	75-01-4	Yes	9.93E-01	7.27E-03	46.60	1.95E-01	4.63E+01	1.19E-12	1.19E-12	1.19E-12		2.84E-12
xylenes	1330-20-7		9.13E-01	8.68E-02	39.99	1.95E-01	3.65E+01	3.66E-12	3.36E-12	3.36E-12		1.82E-10
2,3,7,8-TCDF	51207-31-9		8.43E-03	9.92E-01	9.17	1.95E-01	2.71E-01	1.96E-16	1.67E-18	1.05E-18	3.26E-14	5.14E-15
Total PCDDs and PCDFs	NA	Yes										
antimony	7440-36-0		7.85E-01	2.15E-01	39.37	1.95E-01	3.10E+01	1.21E-14	9.57E-15	9.57E-15		3.83E-13
cadmium	7440-43-9		6.88E-01	3.12E-01	39.36	1.95E-01	2.71E+01	7.24E-14	5.01E-14	5.01E-14		4.54E-11
chromium (3+)	7440-47-3		8.95E-01	1.05E-01	51.05	1.95E-01	4.57E+01	4.54E-13	4.09E-13	4.09E-13		1.29E-12
chromium (6+)	18540-29-9	Yes	8.95E-01	1.05E-01	51.05	1.95E-01	4.57E+01	4.54E-13	4.09E-13	4.09E-13		1.29E-12
copper	7440-50-8		2.80E-01	7.20E-01	50.17	1.95E-01	1.42E+01	2.18E-12	6.13E-13	6.10E-13		1.93E-12
lead	7439-92-1	Yes	1.57E-01	8.43E-01	39.03	1.95E-01	6.31E+00	1.45E-12	2.30E-13	2.28E-13		2.05E-14
nickel	7440-02-0		7.18E-01	2.82E-01	39.36	1.95E-01	2.83E+01	1.32E-12	9.55E-13	9.55E-13		7.45E-11
zinc	7440-66-6		7.27E-01	2.73E-01	39.36	1.95E-01	2.87E+01	1.27E-11	9.30E-12	9.29E-12		1.91E-08

CONCENTRATIONS OF COPCS IN SURFACE WATER AND FISH FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS (TEQ BASIS):
Infant Exposure Scenarios

		Concentration in Water				Concentration in Fish
		Total Waterbody Concentration Including Water Column and Bed Sediment	Total Concentration in Water Column	Dissolved Phase Water Concentration	Concentration Sorbed to Bed Sediment	Fish Concentration
		(mg TEQ/ℓ)[a]	(mg TEQ/ℓ)[a]	(mg TEQ/ℓ)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]
COPC	CAS Number	C_{wtot}	C_{wctot}	C_{dw}	C_{sb}	C_{fish}
1,1,1-trichloroethane	71-55-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,1-dichloroethane	75-34-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,1-dichloroethene	75-35-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2-dichloroethane	107-06-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2-dichloropropane	78-87-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,3-butadiene	106-99-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-butanone	78-93-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
acetone	67-64-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzene	71-43-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzoic acid	65-85-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzyl alcohol	100-51-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bis(2-ethylhexyl)-phthalate	117-81-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bromodichloromethane	75-27-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bromomethane	74-83-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
carbon disulfide	75-15-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
carbon tetrachloride	56-23-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chlorobenzene	108-90-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloroform	67-66-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloromethane	74-87-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cis-1,3-dichloropropene	10061-01-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dibromochloromethane	124-48-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dichlorodifluoromethane	75-71-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dimethyl phthalate	131-11-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
di-n-butyl phthalate	84-74-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ethylbenzene	100-41-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Freon 113	76-13-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
HD	505-60-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
hexane	110-54-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methylene chloride	75-09-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
styrene	100-42-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
tetrachloroethene	127-18-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
toluene	108-88-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trans-1,3-dichloropropene	10061-02-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trichloroethene	79-01-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trichlorofluoromethane	75-69-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
vinyl chloride	75-01-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
xylenes	1330-20-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2,3,7,8-TCDF	51207-31-9	1.96E-17	1.67E-19	1.05E-19	3.26E-15	5.14E-16
Total PCDDs and PCDFs	NA	1.96E-17	1.67E-19	1.05E-19	3.26E-15	5.14E-16
antimony	7440-36-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cadmium	7440-43-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (3+)	7440-47-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (6+)	18540-29-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
copper	7440-50-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
lead	7439-92-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
zinc	7440-66-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

a. The concentration of individual PCDDs and PCDFs congeners and coplanar PCBs in water and fish are presented in units of mg COPC TEQ/kg. The concentration of total PCDDs and PCDFs as well as the concentration of total coplanar PCBs in water and fish are presented in units of mg TEQ/kg produce and are calculated as the sum of the concentrations of all individual PCDD and PCDF congeners in water or fish and the concentrations of all coplanar produce in water and fish, respectively.

CONCENTRATIONS OF COPCS IN SURFACE WATER AND FISH FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS: All Exposure Scenarios												
		Diffusive Mass Transfer Coefficient			Erosion Loading Supporting Calculation		Contaminant Load To The Waterbody					
		Liquid Phase Transfer Coefficient	Gas Phase Transfer Coefficient	Overall Transfer Rate	Unit Soil Loss	Watershed Sediment Delivery Ratio	Due to Direct Deposition	Due to Impervious Runoff	Due to Pervious Runoff	Due to Erosion	Due to Diffusion	Due to All Processes
		(m/yr)	(m/yr)	(m/yr)	(kg/m^2-yr)	(dimensionless)	(g/yr)	(g/yr)	(g/yr)	(g/yr)	(g/yr)	(g/yr)
COPC	CAS Number	K_L	K_G	K_v	X_s	SD	L_{Dep}	L_{RI}	L_R	L_E	L_{Dif}	L_T
1,1,1-trichloroethane	71-55-6	164.78	484504.19	187.25	0.39	0.36	3.70E-06	4.55E-06	3.75E-09	2.70E-11	1.16E-08	8.26E-06
1,1-dichloroethane	75-34-3	185.48	468559.52	210.51	0.39	0.36	1.75E-06	2.16E-06	2.83E-09	5.55E-12	1.88E-08	3.93E-06
1,1-dichloroethene	75-35-4	184.29	533257.08	209.46	0.39	0.36	1.61E-06	1.98E-06	7.03E-10	2.76E-12	3.70E-09	3.59E-06
1,2-dichloroethane	107-06-2	178.31	587498.13	201.20	0.39	0.36	1.78E-06	2.19E-06	7.82E-09	8.96E-12	1.04E-07	4.07E-06
1,2-dichloropropane	78-87-5	163.90	485336.19	185.79	0.39	0.36	2.14E-06	2.64E-06	8.50E-09	2.50E-11	4.05E-08	4.82E-06
1,3-butadiene	106-99-0	239.55	692203.00	272.32	0.39	0.36	1.54E-06	1.89E-06	2.62E-10	3.87E-12	1.62E-09	3.43E-06
2-butanone	78-93-3	177.10	496089.19	174.20	0.39	0.36	2.63E-05	3.24E-05	8.24E-06	7.81E-08	2.34E-05	9.04E-05
acetone	67-64-1	195.98	660977.51	187.89	0.39	0.36	4.16E-05	5.12E-05	7.24E-06	2.06E-08	5.71E-05	1.57E-04
benzene	71-43-2	181.91	525288.08	206.51	0.39	0.36	3.05E-05	3.75E-05	6.32E-08	2.48E-10	3.20E-07	6.84E-05
benzoic acid	65-85-0	154.20	26157.37	3.42	0.39	0.36	9.04E-05	1.11E-04	2.61E-03	5.13E-07	3.08E-05	2.85E-03
benzyl alcohol	100-51-6	179.51	26157.37	0.41	0.39	0.36	3.85E-05	4.74E-05	9.48E-03	3.72E-05	1.33E-05	9.62E-03
bis(2-ethylhexyl)-phthalate	117-81-7	91.54	283759.18	1.30	0.39	0.36	7.89E-06	9.72E-06	2.29E-11	1.72E-06	0.00E+00	1.93E-05
bromodichloromethane	75-27-4	179.51	26157.37	184.72	0.39	0.36	7.59E-06	9.35E-06	4.62E-06	1.66E-08	2.50E-07	2.18E-05
bromomethane	74-83-9	203.97	462617.63	231.50	0.39	0.36	8.95E-06	1.10E-05	1.71E-08	5.05E-11	9.47E-08	2.01E-05
carbon disulfide	75-15-0	179.51	587498.13	204.04	0.39	0.36	2.10E-05	2.59E-05	5.90E-09	1.76E-11	4.08E-08	4.69E-05
carbon tetrachloride	56-23-5	164.78	484504.19	187.29	0.39	0.36	1.03E-05	1.27E-05	6.90E-09	7.89E-11	1.84E-08	2.31E-05
chlorobenzene	108-90-7	163.52	463468.76	185.48	0.39	0.36	2.41E-06	2.97E-06	1.48E-08	2.13E-10	3.45E-08	5.43E-06
chloroform	67-66-3	179.51	587498.13	203.68	0.39	0.36	2.98E-05	3.67E-05	6.28E-08	1.64E-10	4.68E-07	6.71E-05
chloromethane	74-87-3	134.51	668101.45	152.84	0.39	0.36	2.64E-05	3.25E-05	1.59E-08	3.12E-11	1.30E-07	5.90E-05
cis-1,3-dichloropropene	10061-01-5	179.51	418118.09	203.98	0.39	0.36	2.15E-06	2.65E-06	1.67E-09	4.97E-12	6.95E-09	4.80E-06
dibromochloromethane	124-48-1	179.51	26157.37	168.07	0.39	0.36	6.95E-06	8.56E-06	1.56E-05	3.57E-07	4.26E-07	3.19E-05
dichlorodifluoromethane	75-71-8	179.51	26157.37	203.99	0.39	0.36	4.55E-06	5.60E-06	2.36E-08	4.78E-10	7.72E-10	1.02E-05
dimethyl phthalate	131-11-3	131.58	391748.68	1.89	0.39	0.36	2.98E-05	3.67E-05	1.88E-04	2.09E-06	1.53E-04	4.09E-04
di-n-butyl phthalate	84-74-2	152.77	329140.86	23.78	0.39	0.36	4.56E-05	5.61E-05	9.04E-08	1.54E-05	1.72E-04	2.89E-04
ethylbenzene	100-41-4	151.98	471938.27	172.62	0.39	0.36	2.82E-06	3.48E-06	8.70E-09	2.08E-10	1.76E-08	6.33E-06
Freon 113	76-13-1	137.52	397383.06	156.35	0.39	0.36	4.71E-06	5.80E-06	3.22E-10	4.01E-11	3.99E-10	1.05E-05
HD	505-60-2	147.91	428791.43	133.93	0.39	0.36	3.63E-06	4.47E-06	7.12E-09	5.45E-10	4.20E-06	1.23E-05
hexane	110-54-3	194.83	560700.85	221.51	0.39	0.36	5.54E-06	6.82E-06	6.79E-11	3.26E-11	1.94E-10	1.24E-05
methylene chloride	75-09-2	199.42	576088.85	225.86	0.39	0.36	2.50E-05	3.08E-05	3.70E-08	2.91E-11	7.31E-07	5.65E-05
styrene	100-42-5	154.58	454922.32	175.21	0.39	0.36	7.77E-06	9.57E-06	7.90E-08	3.10E-07	1.44E-07	1.79E-05
tetrachloroethene	127-18-4	157.16	459205.33	178.60	0.39	0.36	2.72E-06	3.35E-06	3.17E-09	3.22E-11	7.70E-09	6.09E-06
toluene	108-88-3	162.26	521281.19	184.27	0.39	0.36	3.46E-06	4.27E-06	9.51E-09	1.12E-10	2.76E-08	7.77E-06
trans-1,3-dichloropropene	10061-02-6	173.78	502150.50	197.10	0.39	0.36	2.28E-06	2.81E-06	1.44E-08	3.67E-10	3.61E-08	5.14E-06
trichloroethene	79-01-6	168.52	488657.20	191.44	0.39	0.36	2.88E-06	3.55E-06	5.62E-09	6.06E-11	1.58E-08	6.46E-06
trichlorofluoromethane	75-69-4	175.89	521281.19	199.95	0.39	0.36	2.37E-06	2.92E-06	3.90E-10	3.06E-12	1.39E-09	5.30E-06
vinyl chloride	75-01-4	206.22	595044.00	234.39	0.39	0.36	2.65E-06	3.27E-06	4.35E-10	5.26E-13	6.57E-09	5.93E-06
xylenes	1330-20-7	177.22	513221.49	201.23	0.39	0.36	6.99E-06	8.61E-06	2.59E-08	3.22E-09	6.05E-08	1.57E-05
2,3,7,8-TCDF	51207-31-9	128.90	216875.06	72.94	0.39	0.36	8.92E-13	1.10E-12	3.91E-14	9.93E-12	0.00E+00	1.20E-11
Total PCDDs and PCDFs	NA											
antimony	7440-36-0	174.30	481169.11	198.10	0.39	0.36	1.99E-08	2.45E-08	1.44E-11	2.12E-11	0.00E+00	4.44E-08
cadmium	7440-43-9	174.30	482421.10	198.12	0.39	0.36	1.04E-07	1.28E-07	6.06E-11	1.49E-10	0.00E+00	2.32E-07
chromium (3+)	7440-47-3	225.98	669876.60	256.84	0.39	0.36	9.55E-07	1.18E-06	4.30E-10	2.67E-10	0.00E+00	2.13E-06
chromium (6+)	18540-29-9	225.98	669876.60	256.84	0.39	0.36	9.55E-07	1.18E-06	4.30E-10	2.67E-10	0.00E+00	2.13E-06
copper	7440-50-8	222.99	644347.48	253.43	0.39	0.36	1.42E-06	1.75E-06	6.82E-10	9.60E-09	0.00E+00	3.18E-06
lead	7439-92-1	174.30	481169.11	198.10	0.39	0.36	4.77E-07	5.87E-07	3.47E-10	1.02E-08	0.00E+00	1.07E-06
nickel	7440-02-0	174.30	481169.11	198.10	0.39	0.36	1.98E-06	2.44E-06	1.44E-09	3.06E-09	0.00E+00	4.43E-06
zinc	7440-66-6	174.30	481169.11	198.10	0.39	0.36	1.93E-05	2.38E-05	1.40E-08	2.84E-08	0.00E+00	4.31E-05

CONCENTRATIONS OF COPCS IN SURFACE WATER AND FISH FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS: All Exposure Scenarios												
			Waterbody Dissipation Rate Constant					Concentration in Water				Concentration in Fish
COPC	CAS Number	Oral Cancer Slope Factor?	Fraction in Water Column (dimensionless) f_{wc}	Fraction in Benthic Sediment (dimensionless) f_{bs}	Water Column Volatilization Rate Constant (yr^{-1}) k_v	Benthic Burial Rate Constant (yr^{-1}) k_b	Overall Total Waterbody Dissipation Rate Constant (yr^{-1}) k_{wt}	Total Waterbody Concentration Including Water Column and Bed Sediment (mg/ℓ) C_{wtot}	Total Concentration in Water Column (mg/ℓ) C_{wctot}	Dissolved Phase Water Concentration (mg/ℓ) C_{dw}	Concentration Sorbed to Bed Sediment (mg/kg) C_{sb}	Fish Concentration (mg/kg) C_{fish}
1,1,1-trichloroethane	71-55-6	Yes	9.65E-01	3.47E-02	37.22	1.95E-01	3.59E+01	1.88E-12	1.83E-12	1.83E-12		3.07E-11
1,1-dichloroethane	75-34-3	Yes	9.84E-01	1.62E-02	41.85	1.95E-01	4.12E+01	8.35E-13	8.27E-13	8.27E-13		4.01E-12
1,1-dichloroethene	75-35-4	Yes	9.81E-01	1.88E-02	41.64	1.95E-01	4.09E+01	7.67E-13	7.57E-13	7.57E-13		6.25E-12
1,2-dichloroethane	107-06-2	Yes	9.87E-01	1.26E-02	40.00	1.95E-01	3.95E+01	8.79E-13	8.74E-13	8.73E-13		2.49E-12
1,2-dichloropropane	78-87-5	Yes	9.85E-01	1.47E-02	36.94	1.95E-01	3.64E+01	1.08E-12	1.07E-12	1.07E-12		7.40E-12
1,3-butadiene	106-99-0		9.86E-01	1.42E-02	54.14	1.95E-01	5.34E+01	6.45E-13	6.39E-13	6.39E-13		4.35E-12
2-butanone	78-93-3	Yes	9.96E-01	4.06E-03	34.63	1.95E-01	3.45E+01	2.05E-11	2.06E-11	2.06E-11		6.50E-11
acetone	67-64-1	Yes	9.96E-01	3.71E-03	37.35	1.95E-01	3.72E+01	3.46E-11	3.47E-11	3.47E-11		1.10E-10
benzene	71-43-2	Yes	9.82E-01	1.81E-02	41.05	1.95E-01	4.03E+01	1.47E-11	1.45E-11	1.45E-11		1.20E-10
benzoic acid	65-85-0	Yes	9.96E-01	3.73E-03	0.68	1.95E-01	6.79E-01	1.05E-09	1.06E-09	1.06E-09		3.33E-09
benzyl alcohol	100-51-6	Yes	9.94E-01	6.44E-03	0.08	1.95E-01	8.21E-02	3.61E-09	3.60E-09	3.60E-09		1.13E-09
bis(2-ethylhexyl)-phthalate	117-81-7	Yes	3.91E-02	9.61E-01	0.24	1.95E-01	1.97E-01	1.69E-10	6.63E-12	6.12E-12		1.19E-09
bromodichloromethane	75-27-4	Yes	9.83E-01	1.66E-02	36.72	1.95E-01	3.61E+01	4.90E-12	4.85E-12	4.85E-12		4.01E-11
bromomethane	74-83-9	Yes	9.94E-01	5.73E-03	46.02	1.95E-01	4.58E+01	4.04E-12	4.04E-12	4.04E-12		6.67E-12
carbon disulfide	75-15-0	Yes	9.81E-01	1.91E-02	40.56	1.95E-01	3.98E+01	1.01E-11	1.00E-11	1.00E-11		9.86E-11
carbon tetrachloride	56-23-5	Yes	9.61E-01	3.85E-02	37.23	1.95E-01	3.58E+01	5.26E-12	5.09E-12	5.09E-12		1.46E-10
chlorobenzene	108-90-7	Yes	9.46E-01	5.42E-02	36.87	1.95E-01	3.49E+01	1.27E-12	1.20E-12	1.20E-12		3.44E-11
chloroform	67-66-3	Yes	9.84E-01	1.59E-02	40.49	1.95E-01	3.98E+01	1.44E-11	1.43E-11	1.43E-11		9.90E-11
chloromethane	74-87-3	Yes	9.95E-01	5.07E-03	30.39	1.95E-01	3.02E+01	1.41E-11	1.41E-11	1.41E-11		4.46E-11
cis-1,3-dichloropropene	10061-01-5	Yes	9.90E-01	9.98E-03	40.55	1.95E-01	4.01E+01	1.03E-12	1.02E-12	1.02E-12		3.48E-12
dibromochloromethane	124-48-1	Yes	9.80E-01	2.00E-02	33.41	1.95E-01	3.27E+01	7.46E-12	7.36E-12	7.36E-12		7.65E-11
dichlorodifluoromethane	75-71-8	Yes	9.82E-01	1.80E-02	40.55	1.95E-01	3.98E+01	2.20E-12	2.17E-12	2.17E-12		1.99E-11
dimethyl phthalate	131-11-3		9.88E-01	1.17E-02	0.38	1.95E-01	3.73E-01	1.53E-10	1.53E-10	1.52E-10		4.83E-10
di-n-butyl phthalate	84-74-2	Yes	7.25E-01	2.75E-01	4.72	1.95E-01	3.48E+00	1.36E-10	9.95E-11	9.93E-11		1.79E-07
ethylbenzene	100-41-4	Yes	9.50E-01	4.99E-02	34.31	1.95E-01	3.26E+01	1.51E-12	1.45E-12	1.44E-12		7.02E-11
Freon 113	76-13-1	Yes	9.13E-01	8.67E-02	31.07	1.95E-01	2.84E+01	2.71E-12	2.49E-12	2.49E-12		1.35E-10
HD	505-60-2	Yes	9.44E-01	5.64E-02	26.62	1.95E-01	2.51E+01	3.25E-12	3.08E-12	3.08E-12		4.41E-11
hexane	110-54-3	Yes	7.38E-01	2.62E-01	43.99	1.95E-01	3.25E+01	3.42E-12	2.54E-12	2.54E-12		5.09E-10
methylene chloride	75-09-2	Yes	9.94E-01	5.96E-03	44.90	1.95E-01	4.46E+01	1.15E-11	1.15E-11	1.15E-11		2.30E-11
styrene	100-42-5	Yes	8.18E-01	1.82E-01	34.81	1.95E-01	2.85E+01	4.93E-12	4.06E-12	4.05E-12		1.65E-10
tetrachloroethene	127-18-4	Yes	9.37E-01	6.30E-02	35.50	1.95E-01	3.33E+01	1.45E-12	1.37E-12	1.37E-12		1.13E-10
toluene	108-88-3	Yes	9.64E-01	3.59E-02	36.63	1.95E-01	3.53E+01	1.78E-12	1.73E-12	1.73E-12		4.13E-11
trans-1,3-dichloropropene	10061-02-6	Yes	9.78E-01	2.18E-02	39.18	1.95E-01	3.83E+01	1.13E-12	1.11E-12	1.11E-12		1.29E-11
trichloroethene	79-01-6	Yes	9.74E-01	2.55E-02	38.06	1.95E-01	3.71E+01	1.44E-12	1.41E-12	1.41E-12		1.99E-11
trichlorofluoromethane	75-69-4	Yes	9.70E-01	3.01E-02	39.75	1.95E-01	3.86E+01	1.17E-12	1.14E-12	1.14E-12		1.91E-11
vinyl chloride	75-01-4	Yes	9.93E-01	7.27E-03	46.60	1.95E-01	4.63E+01	1.19E-12	1.19E-12	1.19E-12		2.84E-12
xylenes	1330-20-7	Yes	9.13E-01	8.68E-02	39.99	1.95E-01	3.65E+01	3.66E-12	3.36E-12	3.36E-12		1.82E-10
2,3,7,8-TCDF	51207-31-9		8.43E-03	9.92E-01	9.17	1.95E-01	2.71E-01	3.30E-16	2.80E-18	1.77E-18	5.49E-14	8.65E-15
Total PCDDs and PCDFs	NA	Yes										
antimony	7440-36-0	Yes	7.85E-01	2.15E-01	39.37	1.95E-01	3.10E+01	1.21E-14	9.57E-15	9.57E-15		3.83E-13
cadmium	7440-43-9	Yes	6.88E-01	3.12E-01	39.36	1.95E-01	2.71E+01	7.24E-14	5.01E-14	5.01E-14		4.54E-11
chromium (3+)	7440-47-3	Yes	8.95E-01	1.05E-01	51.05	1.95E-01	4.57E+01	4.54E-13	4.09E-13	4.09E-13		1.29E-12
chromium (6+)	18540-29-9	Yes	8.95E-01	1.05E-01	51.05	1.95E-01	4.57E+01	4.54E-13	4.09E-13	4.09E-13		1.29E-12
copper	7440-50-8	Yes	2.80E-01	7.20E-01	50.17	1.95E-01	1.42E+01	2.18E-12	6.13E-13	6.10E-13		1.93E-12
lead	7439-92-1		1.57E-01	8.43E-01	39.03	1.95E-01	6.31E+00	1.45E-12	2.30E-13	2.28E-13		2.05E-14
nickel	7440-02-0	Yes	7.18E-01	2.82E-01	39.36	1.95E-01	2.83E+01	1.32E-12	9.55E-13	9.55E-13		7.45E-11
zinc	7440-66-6	Yes	7.27E-01	2.73E-01	39.36	1.95E-01	2.87E+01	1.27E-11	9.30E-12	9.29E-12		1.91E-08

CONCENTRATIONS OF COPCS IN SURFACE WATER AND FISH FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS (TEQ BASIS):
All Exposure Scenarios

		Concentration in Water				Concentration in Fish
		Total Waterbody Concentration Including Water Column and Bed Sediment	Total Concentration in Water Column	Dissolved Phase Water Concentration	Concentration Sorbed to Bed Sediment	Fish Concentration
		(mg TEQ/ℓ)[a]	(mg TEQ/ℓ)[a]	(mg TEQ/ℓ)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]
COPC	CAS Number	C_{wtot}	C_{wctot}	C_{dw}	C_{sb}	C_{fish}
1,1,1-trichloroethane	71-55-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,1-dichloroethane	75-34-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,1-dichloroethene	75-35-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2-dichloroethane	107-06-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2-dichloropropane	78-87-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,3-butadiene	106-99-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-butanone	78-93-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
acetone	67-64-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzene	71-43-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzoic acid	65-85-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzyl alcohol	100-51-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bis(2-ethylhexyl)-phthalate	117-81-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bromodichloromethane	75-27-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bromomethane	74-83-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
carbon disulfide	75-15-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
carbon tetrachloride	56-23-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chlorobenzene	108-90-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloroform	67-66-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloromethane	74-87-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cis-1,3-dichloropropene	10061-01-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dibromochloromethane	124-48-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dichlorodifluoromethane	75-71-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dimethyl phthalate	131-11-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
di-n-butyl phthalate	84-74-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ethylbenzene	100-41-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Freon 113	76-13-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
HD	505-60-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
hexane	110-54-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methylene chloride	75-09-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
styrene	100-42-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
tetrachloroethene	127-18-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
toluene	108-88-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trans-1,3-dichloropropene	10061-02-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trichloroethene	79-01-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trichlorofluoromethane	75-69-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
vinyl chloride	75-01-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
xylenes	1330-20-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2,3,7,8-TCDF	51207-31-9	3.30E-17	2.80E-19	1.77E-19	5.49E-15	8.65E-16
Total PCDDs and PCDFs	NA	3.30E-17	2.80E-19	1.77E-19	5.49E-15	8.65E-16
antimony	7440-36-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cadmium	7440-43-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (3+)	7440-47-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (6+)	18540-29-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
copper	7440-50-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
lead	7439-92-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
zinc	7440-66-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

a. The concentration of individual PCDDs and PCDFs congeners and coplanar PCBs in water and fish are presented in units of mg COPC TEQ/kg. The concentration of total PCDDs and PCDFs as well as the concentration of total coplanar PCBs in water and fish are presented in units of mg TEQ/kg produce and are calculated as the sum of the concentrations of all individual PCDD and PCDF congeners in water or fish and the concentrations of all coplanar produce in water and fish, respectively.

CONCENTRATIONS OF COPCS IN BREAST MILK FOR INFANT EXPOSURE SCENARIOS

CARCINOGENIC EFFECTS: Infant Resident Exposure Scenario										
COPC	CAS Number	Fraction Stored in Maternal Fat (dimensionless) f_1	Biological Half-Life (days) h	Concentration in Milk Fat (mg/kg) $C_{milkfat}$	Fraction Stored in Whole Blood (dimensionless) f_{bl}	Red Blood Cells-Blood Plasma Partition Coefficient (dimensionless) Pc_{RBC}	Fraction Stored in Blood Plasma (dimensionless) f_{pl}	Blood Plasma-Breast Milk Partition Coefficient (dimensionless) Pc_{bm}	Concentration in Milk Aqueous Phase (mg/kg) $C_{aqueous}$	Concentration in Milk (mg/kg) C_{milk}
1,1,1-trichloroethane	71-55-6									
1,1-dichloroethane	75-34-3									
1,1-dichloroethene	75-35-4									
1,2-dichloroethane	107-06-2	0.5000	5.0000	2.40E-11	0.5000	1	0.325	1	1.02E-10	9.86E-11
1,2-dichloropropane	78-87-5									
1,3-butadiene	106-99-0									
2-butanone	78-93-3									
acetone	67-64-1									
benzene	71-43-2	0.5000	5.0000	4.00E-10	0.5000	1	0.325	1	1.70E-09	1.64E-09
benzoic acid	65-85-0									
benzyl alcohol	100-51-6									
bis(2-ethylhexyl)-phthalate	117-81-7									
bromodichloromethane	75-27-4									
bromomethane	74-83-9									
carbon disulfide	75-15-0									
carbon tetrachloride	56-23-5									
chlorobenzene	108-90-7									
chloroform	67-66-3	0.5000	5.0000	3.91E-10	0.5000	1	0.325	1	1.66E-09	1.61E-09
chloromethane	74-87-3									
cis-1,3-dichloropropene	10061-01-5	0.5000	5.0000	2.80E-11	0.5000	1	0.325	1	1.19E-10	1.15E-10
dibromochloromethane	124-48-1									
dichlorodifluoromethane	75-71-8									
dimethyl phthalate	131-11-3									
di-n-butyl phthalate	84-74-2									
ethylbenzene	100-41-4	0.5000	5.0000	3.92E-11	0.5000	1	0.325	1	1.66E-10	1.61E-10
Freon 113	76-13-1									
HD	505-60-2									
hexane	110-54-3									
methylene chloride	75-09-2	0.5000	5.0000	3.29E-10	0.5000	1	0.325	1	1.40E-09	1.35E-09
styrene	100-42-5									
tetrachloroethene	127-18-4	0.5000	5.0000	3.82E-11	0.5000	1	0.325	1	1.62E-10	1.57E-10
toluene	108-88-3									
trans-1,3-dichloropropene	10061-02-6	0.5000	5.0000	3.06E-11	0.5000	1	0.325	1	1.30E-10	1.26E-10
trichloroethene	79-01-6	0.5000	5.0000	3.80E-11	0.5000	1	0.325	1	1.61E-10	1.56E-10
trichlorofluoromethane	75-69-4									
vinyl chloride	75-01-4									
xylenes	1330-20-7									
2,3,7,8-TCDF	51207-31-9									
Total PCDDs and PCDFs	NA									
antimony	7440-36-0									
cadmium	7440-43-9									
chromium (3+)	7440-47-3									
chromium (6+)	18540-29-9	0.5000	5.0000	1.91E-10	0.5000	1	0.325	1	8.10E-10	7.85E-10
copper	7440-50-8									
lead	7439-92-1	0.5000	5.0000	7.39E-11	0.5000	1	0.325	1	3.13E-10	3.04E-10
nickel	7440-02-0									
zinc	7440-66-6									

CONCENTRATIONS OF COPCS IN BREAST MILK FOR INFANT EXPOSURE SCENARIOS

CARCINOGENIC EFFECTS: Infant Subsistence Farmer Exposure Scenario										
COPC	CAS Number	Fraction Stored in Maternal Fat (dimensionless) f_1	Biological Half-Life (days) h	Concentration in Milk Fat (mg/kg) $C_{milkfat}$	Fraction Stored in Whole Blood (dimensionless) f_{bl}	Red Blood Cells-Blood Plasma Partition Coefficient (dimensionless) Pc_{RBC}	Fraction Stored in Blood Plasma (dimensionless) f_{pl}	Blood Plasma-Breast Milk Partition Coefficient (dimensionless) Pc_{bm}	Concentration in Milk Aqueous Phase (mg/kg) $C_{aqueous}$	Concentration in Milk (mg/kg) C_{milk}
1,1,1-trichloroethane	71-55-6									
1,1-dichloroethane	75-34-3									
1,1-dichloroethene	75-35-4									
1,2-dichloroethane	107-06-2	0.5000	5.0000	2.54E-11	0.5000	1	0.325	1	1.08E-10	1.04E-10
1,2-dichloropropane	78-87-5									
1,3-butadiene	106-99-0									
2-butanone	78-93-3									
acetone	67-64-1									
benzene	71-43-2	0.5000	5.0000	4.05E-10	0.5000	1	0.325	1	1.72E-09	1.67E-09
benzoic acid	65-85-0									
benzyl alcohol	100-51-6									
bis(2-ethylhexyl)-phthalate	117-81-7									
bromodichloromethane	75-27-4									
bromomethane	74-83-9									
carbon disulfide	75-15-0									
carbon tetrachloride	56-23-5									
chlorobenzene	108-90-7									
chloroform	67-66-3	0.5000	5.0000	3.97E-10	0.5000	1	0.325	1	1.68E-09	1.63E-09
chloromethane	74-87-3									
cis-1,3-dichloropropene	10061-01-5	0.5000	5.0000	2.83E-11	0.5000	1	0.325	1	1.20E-10	1.16E-10
dibromochloromethane	124-48-1									
dichlorodifluoromethane	75-71-8									
dimethyl phthalate	131-11-3									
di-n-butyl phthalate	84-74-2									
ethylbenzene	100-41-4	0.5000	5.0000	4.15E-11	0.5000	1	0.325	1	1.76E-10	1.70E-10
Freon 113	76-13-1									
HD	505-60-2									
hexane	110-54-3									
methylene chloride	75-09-2	0.5000	5.0000	3.37E-10	0.5000	1	0.325	1	1.43E-09	1.39E-09
styrene	100-42-5									
tetrachloroethene	127-18-4	0.5000	5.0000	3.98E-11	0.5000	1	0.325	1	1.69E-10	1.64E-10
toluene	108-88-3									
trans-1,3-dichloropropene	10061-02-6	0.5000	5.0000	3.18E-11	0.5000	1	0.325	1	1.35E-10	1.31E-10
trichloroethene	79-01-6	0.5000	5.0000	3.86E-11	0.5000	1	0.325	1	1.64E-10	1.59E-10
trichlorofluoromethane	75-69-4									
vinyl chloride	75-01-4									
xylenes	1330-20-7									
2,3,7,8-TCDF	51207-31-9									
Total PCDDs and PCDFs	NA									
antimony	7440-36-0									
cadmium	7440-43-9									
chromium (3+)	7440-47-3									
chromium (6+)	18540-29-9	0.5000	5.0000	4.50E-10	0.5000	1	0.325	1	1.91E-09	1.85E-09
copper	7440-50-8									
lead	7439-92-1	0.5000	5.0000	1.71E-10	0.5000	1	0.325	1	7.24E-10	7.02E-10
nickel	7440-02-0									
zinc	7440-66-6									

CONCENTRATIONS OF COPCS IN BREAST MILK FOR INFANT EXPOSURE SCENARIOS

CARCINOGENIC EFFECTS: Infant Subsistence Fisher Exposure Scenario										
COPC	CAS Number	Fraction Stored in Maternal Fat (dimensionless) f_f	Biological Half-Life (days) h	Concentration in Milk Fat (mg/kg) $C_{milkfat}$	Fraction Stored in Whole Blood (dimensionless) f_{bl}	Red Blood Cells-Blood Plasma Partition Coefficient (dimensionless) Pc_{RBC}	Fraction Stored in Blood Plasma (dimensionless) f_{pl}	Blood Plasma-Breast Milk Partition Coefficient (dimensionless) Pc_{bm}	Concentration in Milk Aqueous Phase (mg/kg) $C_{aqueous}$	Concentration in Milk (mg/kg) C_{milk}
1,1,1-trichloroethane	71-55-6									
1,1-dichloroethane	75-34-3									
1,1-dichloroethene	75-35-4									
1,2-dichloroethane	107-06-2	0.5000	5.0000	2.40E-11	0.5000	1	0.325	1	1.02E-10	9.88E-11
1,2-dichloropropane	78-87-5									
1,3-butadiene	106-99-0									
2-butanone	78-93-3									
acetone	67-64-1									
benzene	71-43-2	0.5000	5.0000	4.03E-10	0.5000	1	0.325	1	1.71E-09	1.66E-09
benzoic acid	65-85-0									
benzyl alcohol	100-51-6									
bis(2-ethylhexyl)-phthalate	117-81-7									
bromodichloromethane	75-27-4									
bromomethane	74-83-9									
carbon disulfide	75-15-0									
carbon tetrachloride	56-23-5									
chlorobenzene	108-90-7									
chloroform	67-66-3	0.5000	5.0000	3.94E-10	0.5000	1	0.325	1	1.67E-09	1.62E-09
chloromethane	74-87-3									
cis-1,3-dichloropropene	10061-01-5	0.5000	5.0000	2.81E-11	0.5000	1	0.325	1	1.19E-10	1.16E-10
dibromochloromethane	124-48-1									
dichlorodifluoromethane	75-71-8									
dimethyl phthalate	131-11-3									
di-n-butyl phthalate	84-74-2									
ethylbenzene	100-41-4	0.5000	5.0000	4.10E-11	0.5000	1	0.325	1	1.74E-10	1.69E-10
Freon 113	76-13-1									
HD	505-60-2									
hexane	110-54-3									
methylene chloride	75-09-2	0.5000	5.0000	3.30E-10	0.5000	1	0.325	1	1.40E-09	1.36E-09
styrene	100-42-5									
tetrachloroethene	127-18-4	0.5000	5.0000	4.11E-11	0.5000	1	0.325	1	1.74E-10	1.69E-10
toluene	108-88-3									
trans-1,3-dichloropropene	10061-02-6	0.5000	5.0000	3.09E-11	0.5000	1	0.325	1	1.31E-10	1.27E-10
trichloroethene	79-01-6	0.5000	5.0000	3.85E-11	0.5000	1	0.325	1	1.63E-10	1.58E-10
trichlorofluoromethane	75-69-4									
vinyl chloride	75-01-4									
xylenes	1330-20-7									
2,3,7,8-TCDF	51207-31-9									
Total PCDDs and PCDFs	NA									
antimony	7440-36-0									
cadmium	7440-43-9									
chromium (3+)	7440-47-3									
chromium (6+)	18540-29-9	0.5000	5.0000	1.91E-10	0.5000	1	0.325	1	8.10E-10	7.85E-10
copper	7440-50-8									
lead	7439-92-1	0.5000	5.0000	7.39E-11	0.5000	1	0.325	1	3.13E-10	3.04E-10
nickel	7440-02-0									
zinc	7440-66-6									

CONCENTRATIONS OF COPCS IN BREAST MILK FOR INFANT EXPOSURE SCENARIOS

CARCINOGENIC EFFECTS (TEQ BASIS): Infant Resident Exposure Scenario										
COPC	CAS Number	Fraction Stored in Maternal Fat (dimensionless) f_f	Biological Half-Life (days) h	Concentration in Milk Fat (mg/kg) $C_{milkfat}$	Fraction Stored in Whole Blood (dimensionless) f_{bl}	Red Blood Cells-Blood Plasma Partition Coefficient (dimensionless) Pc_{RBC}	Fraction Stored in Blood Plasma (dimensionless) f_{pl}	Blood Plasma-Breast Milk Partition Coefficient (dimensionless) Pc_{bm}	Concentration in Milk Aqueous Phase (mg/kg) $C_{aqueous}$	Concentration in Milk (mg TEQ/kg)[A] C_{milk}
1,1,1-trichloroethane	71-55-6									
1,1-dichloroethane	75-34-3									
1,1-dichloroethene	75-35-4									
1,2-dichloroethane	107-06-2									
1,2-dichloropropane	78-87-5									
1,3-butadiene	106-99-0									
2-butanone	78-93-3									
acetone	67-64-1									
benzene	71-43-2									
benzoic acid	65-85-0									
benzyl alcohol	100-51-6									
bis(2-ethylhexyl)-phthalate	117-81-7									
bromodichloromethane	75-27-4									
bromomethane	74-83-9									
carbon disulfide	75-15-0									
carbon tetrachloride	56-23-5									
chlorobenzene	108-90-7									
chloroform	67-66-3									
chloromethane	74-87-3									
cis-1,3-dichloropropene	10061-01-5									
dibromochloromethane	124-48-1									
dichlorodifluoromethane	75-71-8									
dimethyl phthalate	131-11-3									
di-n-butyl phthalate	84-74-2									
ethylbenzene	100-41-4									
Freon 113	76-13-1									
HD	505-60-2									
hexane	110-54-3									
methylene chloride	75-09-2									
styrene	100-42-5									
tetrachloroethene	127-18-4									
toluene	108-88-3									
trans-1,3-dichloropropene	10061-02-6									
trichloroethene	79-01-6									
trichlorofluoromethane	75-69-4									
vinyl chloride	75-01-4									
xylenes	1330-20-7									
2,3,7,8-TCDF	51207-31-9									
Total PCDDs and PCDFs	NA	0.9000	3650.0000	2.40E-11	0.1000	1	0.065	1	1.13E-11	1.18E-11
antimony	7440-36-0									
cadmium	7440-43-9									
chromium (3+)	7440-47-3									
chromium (6+)	18540-29-9									
copper	7440-50-8									
lead	7439-92-1									
nickel	7440-02-0									
zinc	7440-66-6									

a. The concentration of individual PCDDs and PCDFs congeners and coplanar PCBs in breast milk are presented in units of mg COPC TEQ/kg. The concentration of total PCDDs and PCDFs as well as the concentration of total coplanar PCBs in breast milk are presented in units of mg TEQ/kg produce and are calculated as the sum of the concentrations of all individual PCDD and PCDF congeners in breast milk and the concentrations of all coplanar produce in breast milk, respectively.

CONCENTRATIONS OF COPCS IN BREAST MILK FOR INFANT EXPOSURE SCENARIOS

CARCINOGENIC EFFECTS (TEQ BASIS): Infant Subsistence Farmer Exposure Scenario										
COPC	CAS Number	Fraction Stored in Maternal Fat (dimensionless) f_f	Biological Half-Life (days) h	Concentration in Milk Fat (mg/kg) $C_{milkfat}$	Fraction Stored in Whole Blood (dimensionless) f_{bl}	Red Blood Cells-Blood Plasma Partition Coefficient (dimensionless) Pc_{RBC}	Fraction Stored in Blood Plasma (dimensionless) f_{pl}	Blood Plasma-Breast Milk Partition Coefficient (dimensionless) Pc_{bm}	Concentration in Milk Aqueous Phase (mg/kg) $C_{aqueous}$	Concentration in Milk (mg/kg) C_{milk}
1,1,1-trichloroethane	71-55-6									
1,1-dichloroethane	75-34-3									
1,1-dichloroethene	75-35-4									
1,2-dichloroethane	107-06-2									
1,2-dichloropropane	78-87-5									
1,3-butadiene	106-99-0									
2-butanone	78-93-3									
acetone	67-64-1									
benzene	71-43-2									
benzoic acid	65-85-0									
benzyl alcohol	100-51-6									
bis(2-ethylhexyl)-phthalate	117-81-7									
bromodichloromethane	75-27-4									
bromomethane	74-83-9									
carbon disulfide	75-15-0									
carbon tetrachloride	56-23-5									
chlorobenzene	108-90-7									
chloroform	67-66-3									
chloromethane	74-87-3									
cis-1,3-dichloropropene	10061-01-5									
dibromochloromethane	124-48-1									
dichlorodifluoromethane	75-71-8									
dimethyl phthalate	131-11-3									
di-n-butyl phthalate	84-74-2									
ethylbenzene	100-41-4									
Freon 113	76-13-1									
HD	505-60-2									
hexane	110-54-3									
methylene chloride	75-09-2									
styrene	100-42-5									
tetrachloroethene	127-18-4									
toluene	108-88-3									
trans-1,3-dichloropropene	10061-02-6									
trichloroethene	79-01-6									
trichlorofluoromethane	75-69-4									
vinyl chloride	75-01-4									
xylenes	1330-20-7									
2,3,7,8-TCDF	51207-31-9									
Total PCDDs and PCDFs	NA	0.9000	3650.0000	6.01E-11	0.1000	1	0.065	1	2.83E-11	2.96E-11
antimony	7440-36-0									
cadmium	7440-43-9									
chromium (3+)	7440-47-3									
chromium (6+)	18540-29-9									
copper	7440-50-8									
lead	7439-92-1									
nickel	7440-02-0									
zinc	7440-66-6									

a. The concentration of individual PCDDs and PCDFs congeners and coplanar PCBs in breast milk are presented in units of mg COPC TEQ/kg. The concentration of total PCDDs and PCDFs as well as the concentration of total coplanar PCBs in breast milk are presented in units of mg TEQ/kg produce and are calculated as the sum of the concentrations of all individual PCDD and PCDF congeners in breast milk and the concentrations of all coplanar produce in breast milk, respectively.

CONCENTRATIONS OF COPCS IN BREAST MILK FOR INFANT EXPOSURE SCENARIOS

CARCINOGENIC EFFECTS (TEQ BASIS): Infant Subsistence Fisher Exposure Scenario										
COPC	CAS Number	Fraction Stored in Maternal Fat (dimensionless) f_f	Biological Half-Life (days) h	Concentration in Milk Fat (mg/kg) $C_{milkfat}$	Fraction Stored in Whole Blood (dimensionless) f_{bl}	Red Blood Cells-Blood Plasma Partition Coefficient (dimensionless) Pc_{RBC}	Fraction Stored in Blood Plasma (dimensionless) f_{pl}	Blood Plasma-Breast Milk Partition Coefficient (dimensionless) Pc_{bm}	Concentration in Milk Aqueous Phase (mg/kg) $C_{aqueous}$	Concentration in Milk (mg/kg) C_{milk}
1,1,1-trichloroethane	71-55-6									
1,1-dichloroethane	75-34-3									
1,1-dichloroethene	75-35-4									
1,2-dichloroethane	107-06-2									
1,2-dichloropropane	78-87-5									
1,3-butadiene	106-99-0									
2-butanone	78-93-3									
acetone	67-64-1									
benzene	71-43-2									
benzoic acid	65-85-0									
benzyl alcohol	100-51-6									
bis(2-ethylhexyl)-phthalate	117-81-7									
bromodichloromethane	75-27-4									
bromomethane	74-83-9									
carbon disulfide	75-15-0									
carbon tetrachloride	56-23-5									
chlorobenzene	108-90-7									
chloroform	67-66-3									
chloromethane	74-87-3									
cis-1,3-dichloropropene	10061-01-5									
dibromochloromethane	124-48-1									
dichlorodifluoromethane	75-71-8									
dimethyl phthalate	131-11-3									
di-n-butyl phthalate	84-74-2									
ethylbenzene	100-41-4									
Freon 113	76-13-1									
HD	505-60-2									
hexane	110-54-3									
methylene chloride	75-09-2									
styrene	100-42-5									
tetrachloroethene	127-18-4									
toluene	108-88-3									
trans-1,3-dichloropropene	10061-02-6									
trichloroethene	79-01-6									
trichlorofluoromethane	75-69-4									
vinyl chloride	75-01-4									
xylenes	1330-20-7									
2,3,7,8-TCDF	51207-31-9									
Total PCDDs and PCDFs	NA	0.9000	3650.0000	2.41E-11	0.1000	1	0.065	1	1.13E-11	1.18E-11
antimony	7440-36-0									
cadmium	7440-43-9									
chromium (3+)	7440-47-3									
chromium (6+)	18540-29-9									
copper	7440-50-8									
lead	7439-92-1									
nickel	7440-02-0									
zinc	7440-66-6									

a. The concentration of individual PCDDs and PCDFs congeners and coplanar PCBs in breast milk are presented in units of mg COPC TEQ/kg. The concentration of total PCDDs and PCDFs as well as the concentration of total coplanar PCBs in breast milk are presented in units of mg TEQ/kg produce and are calculated as the sum of the concentrations of all individual PCDD and PCDF congeners in breast milk and the concentrations of all coplanar produce in breast milk, respectively.

CONCENTRATIONS OF COPCS IN BREAST MILK FOR INFANT EXPOSURE SCENARIOS

NONCARCINOGENIC EFFECTS: Infant Resident Exposure Scenario										
COPC	CAS Number	Fraction Stored in Maternal Fat (dimensionless) f_f	Biological Half-Life (days) h	Concentration in Milk Fat (mg/kg) $C_{milkfat}$	Fraction Stored in Whole Blood (dimensionless) f_{bl}	Red Blood Cells-Blood Plasma Partition Coefficient (dimensionless) Pc_{RBC}	Fraction Stored in Blood Plasma (dimensionless) f_{pl}	Blood Plasma-Breast Milk Partition Coefficient (dimensionless) Pc_{bm}	Concentration in Milk Aqueous Phase (mg/kg) $C_{aqueous}$	Concentration in Milk (mg/kg) C_{milk}
1,1,1-trichloroethane	71-55-6									
1,1-dichloroethane	75-34-3									
1,1-dichloroethene	75-35-4									
1,2-dichloroethane	107-06-2	0.5000	5.0000	2.40E-11	0.5000	1	0.325	1	1.02E-10	9.86E-11
1,2-dichloropropane	78-87-5									
1,3-butadiene	106-99-0									
2-butanone	78-93-3	0.5000	5.0000	8.70E-10	0.5000	1	0.325	1	3.69E-09	3.58E-09
acetone	67-64-1	0.5000	5.0000	9.79E-10	0.5000	1	0.325	1	4.15E-09	4.02E-09
benzene	71-43-2	0.5000	5.0000	4.00E-10	0.5000	1	0.325	1	1.70E-09	1.64E-09
benzoic acid	65-85-0									
benzyl alcohol	100-51-6									
bis(2-ethylhexyl)-phthalate	117-81-7									
bromodichloromethane	75-27-4									
bromomethane	74-83-9									
carbon disulfide	75-15-0	0.5000	5.0000	2.74E-10	0.5000	1	0.325	1	1.16E-09	1.13E-09
carbon tetrachloride	56-23-5									
chlorobenzene	108-90-7									
chloroform	67-66-3	0.5000	5.0000	3.91E-10	0.5000	1	0.325	1	1.66E-09	1.61E-09
chloromethane	74-87-3	0.5000	5.0000	3.43E-10	0.5000	1	0.325	1	1.46E-09	1.41E-09
cis-1,3-dichloropropene	10061-01-5	0.5000	5.0000	2.80E-11	0.5000	1	0.325	1	1.19E-10	1.15E-10
dibromochloromethane	124-48-1									
dichlorodifluoromethane	75-71-8	0.5000	5.0000	6.10E-11	0.5000	1	0.325	1	2.59E-10	2.51E-10
dimethyl phthalate	131-11-3									
di-n-butyl phthalate	84-74-2									
ethylbenzene	100-41-4	0.5000	5.0000	3.92E-11	0.5000	1	0.325	1	1.66E-10	1.61E-10
Freon 113	76-13-1	0.5000	5.0000	6.46E-11	0.5000	1	0.325	1	2.74E-10	2.66E-10
HD	505-60-2									
hexane	110-54-3	0.5000	5.0000	8.04E-11	0.5000	1	0.325	1	3.41E-10	3.31E-10
methylene chloride	75-09-2	0.5000	5.0000	3.29E-10	0.5000	1	0.325	1	1.40E-09	1.35E-09
styrene	100-42-5	0.5000	5.0000	2.70E-09	0.5000	1	0.325	1	1.15E-08	1.11E-08
tetrachloroethene	127-18-4	0.5000	5.0000	3.82E-11	0.5000	1	0.325	1	1.62E-10	1.57E-10
toluene	108-88-3	0.5000	5.0000	4.65E-11	0.5000	1	0.325	1	1.97E-10	1.91E-10
trans-1,3-dichloropropene	10061-02-6	0.5000	5.0000	3.06E-11	0.5000	1	0.325	1	1.30E-10	1.26E-10
trichloroethene	79-01-6	0.5000	5.0000	3.80E-11	0.5000	1	0.325	1	1.61E-10	1.56E-10
trichlorofluoromethane	75-69-4	0.5000	5.0000	3.11E-11	0.5000	1	0.325	1	1.32E-10	1.28E-10
vinyl chloride	75-01-4									
xylenes	1330-20-7	0.5000	5.0000	9.84E-11	0.5000	1	0.325	1	4.17E-10	4.05E-10
2,3,7,8-TCDF	51207-31-9									
Total PCDDs and PCDFs	NA									
antimony	7440-36-0	0.5000	5.0000	3.06E-12	0.5000	1	0.325	1	1.30E-11	1.26E-11
cadmium	7440-43-9	0.5000	5.0000	1.62E-11	0.5000	1	0.325	1	6.88E-11	6.67E-11
chromium (3+)	7440-47-3	0.5000	5.0000	1.91E-10	0.5000	1	0.325	1	8.10E-10	7.85E-10
chromium (6+)	18540-29-9	0.5000	5.0000	1.91E-10	0.5000	1	0.325	1	8.10E-10	7.85E-10
copper	7440-50-8	0.5000	5.0000	3.05E-10	0.5000	1	0.325	1	1.29E-09	1.25E-09
lead	7439-92-1									
nickel	7440-02-0	0.5000	5.0000	3.77E-10	0.5000	1	0.325	1	1.60E-09	1.55E-09
zinc	7440-66-6	0.5000	5.0000	3.20E-09	0.5000	1	0.325	1	1.36E-08	1.32E-08

CONCENTRATIONS OF COPCS IN BREAST MILK FOR INFANT EXPOSURE SCENARIOS

NONCARCINOGENIC EFFECTS: Infant Subsistence Farmer Exposure Scenario										
COPC	CAS Number	Fraction Stored in Maternal Fat (dimensionless) f_f	Biological Half-Life (days) h	Concentration in Milk Fat (mg/kg) $C_{milkfat}$	Fraction Stored in Whole Blood (dimensionless) f_{bl}	Red Blood Cells-Blood Plasma Partition Coefficient (dimensionless) Pc_{RBC}	Fraction Stored in Blood Plasma (dimensionless) f_{pl}	Blood Plasma-Breast Milk Partition Coefficient (dimensionless) Pc_{bm}	Concentration in Milk Aqueous Phase (mg/kg) $C_{aqueous}$	Concentration in Milk (mg/kg) C_{milk}
1,1,1-trichloroethane	71-55-6									
1,1-dichloroethane	75-34-3									
1,1-dichloroethene	75-35-4									
1,2-dichloroethane	107-06-2	0.5000	5.0000	2.54E-11	0.5000	1	0.325	1	1.08E-10	1.04E-10
1,2-dichloropropane	78-87-5									
1,3-butadiene	106-99-0									
2-butanone	78-93-3	0.5000	5.0000	1.66E-09	0.5000	1	0.325	1	7.05E-09	6.83E-09
acetone	67-64-1	0.5000	5.0000	1.64E-09	0.5000	1	0.325	1	6.94E-09	6.73E-09
benzene	71-43-2	0.5000	5.0000	4.05E-10	0.5000	1	0.325	1	1.72E-09	1.67E-09
benzoic acid	65-85-0									
benzyl alcohol	100-51-6									
bis(2-ethylhexyl)-phthalate	117-81-7									
bromodichloromethane	75-27-4									
bromomethane	74-83-9									
carbon disulfide	75-15-0	0.5000	5.0000	2.75E-10	0.5000	1	0.325	1	1.16E-09	1.13E-09
carbon tetrachloride	56-23-5									
chlorobenzene	108-90-7									
chloroform	67-66-3	0.5000	5.0000	3.97E-10	0.5000	1	0.325	1	1.68E-09	1.63E-09
chloromethane	74-87-3	0.5000	5.0000	3.45E-10	0.5000	1	0.325	1	1.46E-09	1.42E-09
cis-1,3-dichloropropene	10061-01-5	0.5000	5.0000	2.83E-11	0.5000	1	0.325	1	1.20E-10	1.16E-10
dibromochloromethane	124-48-1									
dichlorodifluoromethane	75-71-8	0.5000	5.0000	6.37E-11	0.5000	1	0.325	1	2.70E-10	2.62E-10
dimethyl phthalate	131-11-3									
di-n-butyl phthalate	84-74-2									
ethylbenzene	100-41-4	0.5000	5.0000	4.15E-11	0.5000	1	0.325	1	1.76E-10	1.70E-10
Freon 113	76-13-1	0.5000	5.0000	6.68E-11	0.5000	1	0.325	1	2.83E-10	2.74E-10
HD	505-60-2									
hexane	110-54-3	0.5000	5.0000	8.05E-11	0.5000	1	0.325	1	3.41E-10	3.31E-10
methylene chloride	75-09-2	0.5000	5.0000	3.37E-10	0.5000	1	0.325	1	1.43E-09	1.39E-09
styrene	100-42-5	0.5000	5.0000	6.61E-09	0.5000	1	0.325	1	2.80E-08	2.71E-08
tetrachloroethene	127-18-4	0.5000	5.0000	3.98E-11	0.5000	1	0.325	1	1.69E-10	1.64E-10
toluene	108-88-3	0.5000	5.0000	4.79E-11	0.5000	1	0.325	1	2.03E-10	1.97E-10
trans-1,3-dichloropropene	10061-02-6	0.5000	5.0000	3.18E-11	0.5000	1	0.325	1	1.35E-10	1.31E-10
trichloroethene	79-01-6	0.5000	5.0000	3.86E-11	0.5000	1	0.325	1	1.64E-10	1.59E-10
trichlorofluoromethane	75-69-4	0.5000	5.0000	3.13E-11	0.5000	1	0.325	1	1.33E-10	1.28E-10
vinyl chloride	75-01-4									
xylenes	1330-20-7	0.5000	5.0000	1.06E-10	0.5000	1	0.325	1	4.48E-10	4.34E-10
2,3,7,8-TCDF	51207-31-9									
Total PCDDs and PCDFs	NA									
antimony	7440-36-0	0.5000	5.0000	7.05E-12	0.5000	1	0.325	1	2.99E-11	2.90E-11
cadmium	7440-43-9	0.5000	5.0000	3.64E-11	0.5000	1	0.325	1	1.54E-10	1.50E-10
chromium (3+)	7440-47-3	0.5000	5.0000	4.50E-10	0.5000	1	0.325	1	1.91E-09	1.85E-09
chromium (6+)	18540-29-9	0.5000	5.0000	4.50E-10	0.5000	1	0.325	1	1.91E-09	1.85E-09
copper	7440-50-8	0.5000	5.0000	7.21E-10	0.5000	1	0.325	1	3.05E-09	2.96E-09
lead	7439-92-1									
nickel	7440-02-0	0.5000	5.0000	8.84E-10	0.5000	1	0.325	1	3.75E-09	3.63E-09
zinc	7440-66-6	0.5000	5.0000	6.96E-09	0.5000	1	0.325	1	2.95E-08	2.86E-08

CONCENTRATIONS OF COPCS IN BREAST MILK FOR INFANT EXPOSURE SCENARIOS

NONCARCINOGENIC EFFECTS: Infant Subsistence Fisher Exposure Scenario										
COPC	CAS Number	Fraction Stored in Maternal Fat (dimensionless) f_f	Biological Half-Life (days) h	Concentration in Milk Fat (mg/kg) $C_{milkfat}$	Fraction Stored in Whole Blood (dimensionless) f_{bl}	Red Blood Cells-Blood Plasma Partition Coefficient (dimensionless) Pc_{RBC}	Fraction Stored in Blood Plasma (dimensionless) f_{pl}	Blood Plasma-Breast Milk Partition Coefficient (dimensionless) Pc_{bm}	Concentration in Milk Aqueous Phase (mg/kg) $C_{aqueous}$	Concentration in Milk (mg/kg) C_{milk}
1,1,1-trichloroethane	71-55-6									
1,1-dichloroethane	75-34-3									
1,1-dichloroethene	75-35-4									
1,2-dichloroethane	107-06-2	0.5000	5.0000	2.40E-11	0.5000	1	0.325	1	1.02E-10	9.88E-11
1,2-dichloropropane	78-87-5									
1,3-butadiene	106-99-0									
2-butanone	78-93-3	0.5000	5.0000	8.72E-10	0.5000	1	0.325	1	3.70E-09	3.58E-09
acetone	67-64-1	0.5000	5.0000	9.82E-10	0.5000	1	0.325	1	4.16E-09	4.04E-09
benzene	71-43-2	0.5000	5.0000	4.03E-10	0.5000	1	0.325	1	1.71E-09	1.66E-09
benzoic acid	65-85-0									
benzyl alcohol	100-51-6									
bis(2-ethylhexyl)-phthalate	117-81-7									
bromodichloromethane	75-27-4									
bromomethane	74-83-9									
carbon disulfide	75-15-0	0.5000	5.0000	2.77E-10	0.5000	1	0.325	1	1.17E-09	1.14E-09
carbon tetrachloride	56-23-5									
chlorobenzene	108-90-7									
chloroform	67-66-3	0.5000	5.0000	3.94E-10	0.5000	1	0.325	1	1.67E-09	1.62E-09
chloromethane	74-87-3	0.5000	5.0000	3.44E-10	0.5000	1	0.325	1	1.46E-09	1.42E-09
cis-1,3-dichloropropene	10061-01-5	0.5000	5.0000	2.81E-11	0.5000	1	0.325	1	1.19E-10	1.16E-10
dibromochloromethane	124-48-1									
dichlorodifluoromethane	75-71-8	0.5000	5.0000	6.15E-11	0.5000	1	0.325	1	2.61E-10	2.53E-10
dimethyl phthalate	131-11-3									
di-n-butyl phthalate	84-74-2									
ethylbenzene	100-41-4	0.5000	5.0000	4.10E-11	0.5000	1	0.325	1	1.74E-10	1.69E-10
Freon 113	76-13-1	0.5000	5.0000	6.80E-11	0.5000	1	0.325	1	2.88E-10	2.80E-10
HD	505-60-2									
hexane	110-54-3	0.5000	5.0000	9.33E-11	0.5000	1	0.325	1	3.96E-10	3.83E-10
methylene chloride	75-09-2	0.5000	5.0000	3.30E-10	0.5000	1	0.325	1	1.40E-09	1.36E-09
styrene	100-42-5	0.5000	5.0000	2.71E-09	0.5000	1	0.325	1	1.15E-08	1.11E-08
tetrachloroethene	127-18-4	0.5000	5.0000	4.11E-11	0.5000	1	0.325	1	1.74E-10	1.69E-10
toluene	108-88-3	0.5000	5.0000	4.75E-11	0.5000	1	0.325	1	2.02E-10	1.95E-10
trans-1,3-dichloropropene	10061-02-6	0.5000	5.0000	3.09E-11	0.5000	1	0.325	1	1.31E-10	1.27E-10
trichloroethene	79-01-6	0.5000	5.0000	3.85E-11	0.5000	1	0.325	1	1.63E-10	1.58E-10
trichlorofluoromethane	75-69-4	0.5000	5.0000	3.16E-11	0.5000	1	0.325	1	1.34E-10	1.30E-10
vinyl chloride	75-01-4									
xylenes	1330-20-7	0.5000	5.0000	1.03E-10	0.5000	1	0.325	1	4.37E-10	4.23E-10
2,3,7,8-TCDF	51207-31-9									
Total PCDDs and PCDFs	NA									
antimony	7440-36-0	0.5000	5.0000	3.07E-12	0.5000	1	0.325	1	1.30E-11	1.26E-11
cadmium	7440-43-9	0.5000	5.0000	1.74E-11	0.5000	1	0.325	1	7.37E-11	7.14E-11
chromium (3+)	7440-47-3	0.5000	5.0000	1.91E-10	0.5000	1	0.325	1	8.10E-10	7.85E-10
chromium (6+)	18540-29-9	0.5000	5.0000	1.91E-10	0.5000	1	0.325	1	8.10E-10	7.85E-10
copper	7440-50-8	0.5000	5.0000	3.05E-10	0.5000	1	0.325	1	1.29E-09	1.25E-09
lead	7439-92-1									
nickel	7440-02-0	0.5000	5.0000	3.79E-10	0.5000	1	0.325	1	1.61E-09	1.56E-09
zinc	7440-66-6	0.5000	5.0000	3.69E-09	0.5000	1	0.325	1	1.56E-08	1.52E-08

CONCENTRATIONS OF COPCS IN BREAST MILK FOR INFANT EXPOSURE SCENARIOS

NONCARCINOGENIC EFFECTS (TEQ BASIS): Infant Resident Exposure Scenario										
COPC	CAS Number	Fraction Stored in Maternal Fat (dimensionless) f_1	Biological Half-Life (days) h	Concentration in Milk Fat (mg/kg) $C_{milkfat}$	Fraction Stored in Whole Blood (dimensionless) f_{bl}	Red Blood Cells-Blood Plasma Partition Coefficient (dimensionless) Pc_{RBC}	Fraction Stored in Blood Plasma (dimensionless) f_{pl}	Blood Plasma-Breast Milk Partition Coefficient (dimensionless) Pc_{bm}	Concentration in Milk Aqueous Phase (mg/kg) $C_{aqueous}$	Concentration in Milk (mg/kg) C_{milk}
1,1,1-trichloroethane	71-55-6									
1,1-dichloroethane	75-34-3									
1,1-dichloroethene	75-35-4									
1,2-dichloroethane	107-06-2									
1,2-dichloropropane	78-87-5									
1,3-butadiene	106-99-0									
2-butanone	78-93-3									
acetone	67-64-1									
benzene	71-43-2									
benzoic acid	65-85-0									
benzyl alcohol	100-51-6									
bis(2-ethylhexyl)-phthalate	117-81-7									
bromodichloromethane	75-27-4									
bromomethane	74-83-9									
carbon disulfide	75-15-0									
carbon tetrachloride	56-23-5									
chlorobenzene	108-90-7									
chloroform	67-66-3									
chloromethane	74-87-3									
cis-1,3-dichloropropene	10061-01-5									
dibromochloromethane	124-48-1									
dichlorodifluoromethane	75-71-8									
dimethyl phthalate	131-11-3									
di-n-butyl phthalate	84-74-2									
ethylbenzene	100-41-4									
Freon 113	76-13-1									
HD	505-60-2									
hexane	110-54-3									
methylene chloride	75-09-2									
styrene	100-42-5									
tetrachloroethene	127-18-4									
toluene	108-88-3									
trans-1,3-dichloropropene	10061-02-6									
trichloroethene	79-01-6									
trichlorofluoromethane	75-69-4									
vinyl chloride	75-01-4									
xylenes	1330-20-7									
2,3,7,8-TCDF	51207-31-9									
Total PCDDs and PCDFs	NA	0.9000	3650.0000	2.40E-11	0.1000	1	0.065	1	1.13E-11	1.18E-11
antimony	7440-36-0									
cadmium	7440-43-9									
chromium (3+)	7440-47-3									
chromium (6+)	18540-29-9									
copper	7440-50-8									
lead	7439-92-1									
nickel	7440-02-0									
zinc	7440-66-6									

a. The concentration of individual PCDDs and PCDFs congeners and coplanar PCBs in breast milk are presented in units of mg COPC TEQ/kg. The concentration of total PCDDs and PCDFs as well as the concentration of total coplanar PCBs in breast milk are presented in units of mg TEQ/kg produce and are calculated as the sum of the concentrations of all individual PCDD and PCDF congeners in breast milk and the concentrations of all coplanar produce in breast milk, respectively.

CONCENTRATIONS OF COPCS IN BREAST MILK FOR INFANT EXPOSURE SCENARIOS

NONCARCINOGENIC EFFECTS (TEQ BASIS): Infant Subsistence Farmer Exposure Scenario										
COPC	CAS Number	Fraction Stored in Maternal Fat (dimensionless) f_1	Biological Half-Life (days) h	Concentration in Milk Fat (mg/kg) $C_{milkfat}$	Fraction Stored in Whole Blood (dimensionless) f_{bl}	Red Blood Cells-Blood Plasma Partition Coefficient (dimensionless) Pc_{RBC}	Fraction Stored in Blood Plasma (dimensionless) f_{pl}	Blood Plasma-Breast Milk Partition Coefficient (dimensionless) Pc_{bm}	Concentration in Milk Aqueous Phase (mg/kg) $C_{aqueous}$	Concentration in Milk (mg/kg) C_{milk}
1,1,1-trichloroethane	71-55-6									
1,1-dichloroethane	75-34-3									
1,1-dichloroethene	75-35-4									
1,2-dichloroethane	107-06-2									
1,2-dichloropropane	78-87-5									
1,3-butadiene	106-99-0									
2-butanone	78-93-3									
acetone	67-64-1									
benzene	71-43-2									
benzoic acid	65-85-0									
benzyl alcohol	100-51-6									
bis(2-ethylhexyl)-phthalate	117-81-7									
bromodichloromethane	75-27-4									
bromomethane	74-83-9									
carbon disulfide	75-15-0									
carbon tetrachloride	56-23-5									
chlorobenzene	108-90-7									
chloroform	67-66-3									
chloromethane	74-87-3									
cis-1,3-dichloropropene	10061-01-5									
dibromochloromethane	124-48-1									
dichlorodifluoromethane	75-71-8									
dimethyl phthalate	131-11-3									
di-n-butyl phthalate	84-74-2									
ethylbenzene	100-41-4									
Freon 113	76-13-1									
HD	505-60-2									
hexane	110-54-3									
methylene chloride	75-09-2									
styrene	100-42-5									
tetrachloroethene	127-18-4									
toluene	108-88-3									
trans-1,3-dichloropropene	10061-02-6									
trichloroethene	79-01-6									
trichlorofluoromethane	75-69-4									
vinyl chloride	75-01-4									
xylenes	1330-20-7									
2,3,7,8-TCDF	51207-31-9									
Total PCDDs and PCDFs	NA	0.9000	3650.0000	6.01E-11	0.1000	1	0.065	1	2.83E-11	2.96E-11
antimony	7440-36-0									
cadmium	7440-43-9									
chromium (3+)	7440-47-3									
chromium (6+)	18540-29-9									
copper	7440-50-8									
lead	7439-92-1									
nickel	7440-02-0									
zinc	7440-66-6									

a. The concentration of individual PCDDs and PCDFs congeners and coplanar PCBs in breast milk are presented in units of mg COPC TEQ/kg. The concentration of total PCDDs and PCDFs as well as the concentration of total coplanar PCBs in breast milk are presented in units of mg TEQ/kg produce and are calculated as the sum of the concentrations of all individual PCDD and PCDF congeners in breast milk and the concentrations of all coplanar produce in breast milk, respectively.

CONCENTRATIONS OF COPCS IN BREAST MILK FOR INFANT EXPOSURE SCENARIOS

NONCARCINOGENIC EFFECTS (TEQ BASIS): Infant Subsistence Fisher Exposure Scenario										
COPC	CAS Number	Fraction Stored in Maternal Fat (dimensionless) f_1	Biological Half-Life (days) h	Concentration in Milk Fat (mg/kg) $C_{milkfat}$	Fraction Stored in Whole Blood (dimensionless) f_{bl}	Red Blood Cells-Blood Plasma Partition Coefficient (dimensionless) Pc_{RBC}	Fraction Stored in Blood Plasma (dimensionless) f_{pl}	Blood Plasma-Breast Milk Partition Coefficient (dimensionless) Pc_{bm}	Concentration in Milk Aqueous Phase (mg/kg) $C_{aqueous}$	Concentration in Milk (mg/kg) C_{milk}
1,1,1-trichloroethane	71-55-6									
1,1-dichloroethane	75-34-3									
1,1-dichloroethene	75-35-4									
1,2-dichloroethane	107-06-2									
1,2-dichloropropane	78-87-5									
1,3-butadiene	106-99-0									
2-butanone	78-93-3									
acetone	67-64-1									
benzene	71-43-2									
benzoic acid	65-85-0									
benzyl alcohol	100-51-6									
bis(2-ethylhexyl)-phthalate	117-81-7									
bromodichloromethane	75-27-4									
bromomethane	74-83-9									
carbon disulfide	75-15-0									
carbon tetrachloride	56-23-5									
chlorobenzene	108-90-7									
chloroform	67-66-3									
chloromethane	74-87-3									
cis-1,3-dichloropropene	10061-01-5									
dibromochloromethane	124-48-1									
dichlorodifluoromethane	75-71-8									
dimethyl phthalate	131-11-3									
di-n-butyl phthalate	84-74-2									
ethylbenzene	100-41-4									
Freon 113	76-13-1									
HD	505-60-2									
hexane	110-54-3									
methylene chloride	75-09-2									
styrene	100-42-5									
tetrachloroethene	127-18-4									
toluene	108-88-3									
trans-1,3-dichloropropene	10061-02-6									
trichloroethene	79-01-6									
trichlorofluoromethane	75-69-4									
vinyl chloride	75-01-4									
xylenes	1330-20-7									
2,3,7,8-TCDF	51207-31-9									
Total PCDDs and PCDFs	NA	0.9000	3650.0000	2.41E-11	0.1000	1	0.065	1	1.13E-11	1.18E-11
antimony	7440-36-0									
cadmium	7440-43-9									
chromium (3+)	7440-47-3									
chromium (6+)	18540-29-9									
copper	7440-50-8									
lead	7439-92-1									
nickel	7440-02-0									
zinc	7440-66-6									

a. The concentration of individual PCDDs and PCDFs congeners and coplanar PCBs in breast milk are presented in units of mg COPC TEQ/kg. The concentration of total PCDDs and PCDFs as well as the concentration of total coplanar PCBs in breast milk are presented in units of mg TEQ/kg produce and are calculated as the sum of the concentrations of all individual PCDD and PCDF congeners in breast milk and the concentrations of all coplanar produce in breast milk, respectively.

APPENDIX D

OUTPUT TABLES FROM THE CHRONIC RISK CALCULATOR SPREADSHEETS FOR TDC

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OVERVIEW OF RECEPTOR-PATHWAY CARCINOGENIC RISK AND NONCARCINOGENIC HEALTH HAZARD

OVERVIEW OF RECEPTOR-PATHWAY CARCINOGENIC RISK AND NONCARCINOGENIC HEALTH HAZARDS

Carcinogenic Risks from Receptor-Pathway Combinations										
	Pathway									
Receptor	Inhalation	Dermal Contact with Surface Water	Dermal Contact with Soil	Incidental Ingestion of Soil	Incidental Ingestion of Surface Water	Ingestion of Produce	Ingestion of Terrestrial Animal Products	Ingestion of Fish	Ingestion of Breast Milk	All Pathways
Adult Resident	4.97E-10	2.42E-13	1.02E-15	5.57E-15	5.28E-14	1.49E-10	1.35E-09	1.26E-11	n/a	2.00E-09
Adult Subsistence Fisher	4.97E-10	2.42E-13	1.02E-15	5.57E-15	5.28E-14	1.49E-10	1.35E-09	3.14E-11	n/a	2.02E-09
Adult Subsistence Farmer	4.97E-10	3.23E-13	1.12E-15	6.41E-15	7.04E-14	4.91E-10	4.47E-09	1.67E-11	n/a	5.48E-09
Adult Worker	1.18E-10	n/a	1.12E-15	1.79E-15	n/a	n/a	n/a	n/a	n/a	1.18E-10
Child Resident	1.39E-09	6.92E-14	3.27E-15	1.21E-14	4.11E-14	9.37E-11	8.06E-10	5.13E-12	n/a	2.29E-09
Child Subsistence Fisher	1.39E-09	6.92E-14	3.27E-15	1.21E-14	4.11E-14	9.37E-11	8.06E-10	1.28E-11	n/a	2.30E-09
Child Subsistence Farmer	1.39E-09	6.92E-14	3.27E-15	1.21E-14	4.11E-14	2.34E-10	2.01E-09	5.13E-12	n/a	3.64E-09
Infant Resident	1.56E-10	n/a	9.19E-16	3.63E-15	n/a	2.37E-11	5.34E-10	1.54E-12	2.07E-08	2.14E-08
Infant Subsistence Fisher	1.56E-10	n/a	9.19E-16	3.63E-15	n/a	2.37E-11	5.34E-10	3.84E-12	2.07E-08	2.14E-08
Infant Subsistence Farmer	1.56E-10	n/a	9.19E-16	3.63E-15	n/a	5.93E-11	1.33E-09	1.54E-12	5.15E-08	5.30E-08
Resident Lifetime (I)[1]	1.27E-09	2.63E-13	5.00E-15	2.02E-14	8.34E-14	2.36E-10	2.42E-09	1.67E-11	2.07E-08	2.46E-08
Resident Lifetime (II)[2]	1.39E-09	2.71E-13	4.12E-15	1.67E-14	8.51E-14	2.18E-10	1.93E-09	1.56E-11	n/a	3.55E-09
Subsistence Fisher Lifetime (I)[1]	1.27E-09	2.63E-13	5.00E-15	2.02E-14	8.34E-14	2.36E-10	2.42E-09	4.18E-11	2.07E-08	2.47E-08
Subsistence Fisher Lifetime (II)[2]	1.39E-09	2.71E-13	4.12E-15	1.67E-14	8.51E-14	2.18E-10	1.93E-09	3.90E-11	n/a	3.57E-09
Subsistence Farmer Lifetime (I)[3]	1.27E-09	3.43E-13	5.14E-15	2.12E-14	1.01E-13	7.11E-10	7.15E-09	2.09E-11	5.15E-08	6.06E-08
Subsistence Farmer Lifetime (II)[4]	1.39E-09	3.51E-13	4.25E-15	1.77E-14	1.03E-13	6.64E-10	5.93E-09	1.98E-11	n/a	8.00E-09

1. Lifetime exposure consists of: 1 year of inhalation exposure as an infant and 4 years of inhalation exposure as a child (5 years of total inhalation exposure); 1 year of indirect exposure as an infant, 5 years of indirect exposure as a child, and 24 years of indirect exposure as an adult (30 years of total indirect exposure)

2. Lifetime exposure consists of: 5 years of inhalation exposure as a child (5 years of total inhalation exposure); 5 years of indirect exposure as a child and 25 years of indirect exposure as an adult (30 years of total indirect exposure)

3. Lifetime exposure consists of: 1 year of inhalation exposure as an infant and 4 years of inhalation exposure as a child (5 years of total inhalation exposure); 1 year of indirect exposure as an infant, 5 years of indirect exposure as a child, and 34 years of indirect exposure as an adult (40 years of total indirect exposure)

4. Lifetime exposure consists of: 5 years of inhalation exposure as a child (5 years of total inhalation exposure); 5 years of indirect exposure as a child and 35 years of indirect exposure as an adult (40 years of total indirect exposure)

OVERVIEW OF RECEPTOR-PATHWAY CARCINOGENIC RISK AND NONCARCINOGENIC HEALTH HAZARDS

Noncarcinogenic Hazards from Receptor-Pathway Combinations										
	Pathway									
Receptor	Inhalation	Dermal Contact with Surface Water	Dermal Contact with Soil	Incidental Ingestion of Soil	Incidental Ingestion of Surface Water	Ingestion of Produce	Ingestion of Terrestrial Animal Products	Ingestion of Fish	Ingestion of Breast Milk	All Pathways
Adult Resident	4.87E-04	4.76E-09	8.14E-11	5.02E-10	1.36E-09	4.57E-06	3.32E-05	2.11E-05	n/a	5.46E-04
Adult Subsistence Fisher	4.87E-04	4.76E-09	8.14E-11	5.02E-10	1.36E-09	4.57E-06	3.32E-05	5.27E-05	n/a	5.78E-04
Adult Subsistence Farmer	4.87E-04	4.76E-09	8.14E-11	5.02E-10	1.36E-09	1.14E-05	8.31E-05	2.11E-05	n/a	6.03E-04
Adult Worker	1.16E-04	n/a	1.15E-10	2.15E-10	n/a	n/a	n/a	n/a	n/a	1.16E-04
Child Resident	1.36E-03	8.15E-09	5.33E-10	4.69E-09	6.37E-09	1.51E-05	1.18E-04	5.15E-05	n/a	1.55E-03
Child Subsistence Fisher	1.36E-03	8.15E-09	5.33E-10	4.69E-09	6.37E-09	1.51E-05	1.18E-04	1.29E-04	n/a	1.63E-03
Child Subsistence Farmer	1.36E-03	8.15E-09	5.33E-10	4.69E-09	6.37E-09	3.78E-05	2.95E-04	5.15E-05	n/a	1.75E-03
Infant Resident	7.67E-04	n/a	7.50E-10	7.03E-09	n/a	1.90E-05	3.88E-04	7.72E-05	1.59E-02	1.72E-02
Infant Subsistence Fisher	7.67E-04	n/a	7.50E-10	7.03E-09	n/a	1.90E-05	3.88E-04	1.93E-04	1.61E-02	1.75E-02
Infant Subsistence Farmer	7.67E-04	n/a	7.50E-10	7.03E-09	n/a	4.75E-05	9.71E-04	7.72E-05	3.96E-02	4.15E-02
Resident Lifetime (I)[1]	1.86E-03	1.29E-08	1.36E-09	1.22E-08	7.73E-09	3.87E-05	5.40E-04	1.50E-04	1.59E-02	1.85E-02
Resident Lifetime (II)[2]	1.36E-03	1.29E-08	6.14E-10	5.19E-09	7.73E-09	1.97E-05	1.51E-04	7.25E-05	n/a	1.61E-03
Subsistence Fisher Lifetime (I)[1]	1.86E-03	1.29E-08	1.36E-09	1.22E-08	7.73E-09	3.87E-05	5.40E-04	3.74E-04	1.61E-02	1.89E-02
Subsistence Fisher Lifetime (II)[2]	1.36E-03	1.29E-08	6.14E-10	5.19E-09	7.73E-09	1.97E-05	1.51E-04	1.81E-04	n/a	1.72E-03
Subsistence Farmer Lifetime (I)[3]	1.86E-03	1.29E-08	1.36E-09	1.22E-08	7.73E-09	9.67E-05	1.35E-03	1.50E-04	3.96E-02	4.31E-02
Subsistence Farmer Lifetime (II)[4]	1.36E-03	1.29E-08	6.14E-10	5.19E-09	7.73E-09	4.92E-05	3.79E-04	7.25E-05	n/a	1.86E-03

1. Lifetime exposure consists of: 1 year of inhalation exposure as an infant and 4 years of inhalation exposure as a child (5 years of total inhalation exposure); 1 year of indirect exposure as an infant, 5 years of indirect exposure as a child, and 24 years of indirect exposure as an adult (30 years of total indirect exposure)

2. Lifetime exposure consists of: 5 years of inhalation exposure as a child (5 years of total inhalation exposure); 5 years of indirect exposure as a child and 25 years of indirect exposure as an adult (30 years of total indirect exposure)

3. Lifetime exposure consists of: 1 year of inhalation exposure as an infant and 4 years of inhalation exposure as a child (5 years of total inhalation exposure); 1 year of indirect exposure as an infant, 5 years of indirect exposure as a child, and 34 years of indirect exposure as an adult (40 years of total indirect exposure)

4. Lifetime exposure consists of: 5 years of inhalation exposure as a child (5 years of total inhalation exposure); 5 years of indirect exposure as a child and 35 years of indirect exposure as an adult (40 years of total indirect exposure)

PARAMETERS USED IN THE MULTIPLE PATHWAY HEALTH RISK ASSESSMENT

MODELED VALUES:

During Years of PCAPP Operation (0 to tD)																					
									Air Modeling Results						Watershed Modeling						
COPC	CAS No.	Carcinogen?	PCDD and PCDF Group Identifier	PCDD and PCDF Compound Identifier	Coplanar PCB Group Identifier	Coplanar PCB Compound Identifier	Stack emissions (g/sec) Q	Fraction of air conc. that is in the vapor phase (unitless) F_v	Adjusted Vapor Phase Air Concentration ($\mu g/m^3$) Cyv	Adjusted Particle Phase Air Concentration ($\mu g/m^3$) Cyp	Adjusted Dry Deposition from Vapor Phase (g/m^2) Dydv	Adjusted Wet Deposition from Vapor Phase (g/m^2) Dywv	Adjusted Dry Deposition from Particle Phase (g/m^2) Dydp	Adjusted Wet Deposition from Particle Phase (g/m^2) Dywp	Adjusted Vapor Phase Air Concentration ($\mu g/m^3$) Cywv	Adjusted Particle Phase Air Concentration ($\mu g/m^3$) Cywp	Adjusted Dry Deposition from Vapor Phase (g/m^2) Dydv	Adjusted Wet Deposition from Vapor Phase (g/m^2) Dywwv	Adjusted Dry Deposition from Particle Phase (g/m^2) Dywdp	Adjusted Wet Deposition from Particle Phase (g/m^2) Dywwp
1,4-dioxane	123-91-1	Yes	N	N	N	N	1	1	7.00E-06	0.00E+00	7.29E-07	4.52E-09	0.00E+00	0.00E+00	3.10E-06	0.00E+00	1.61E-07	9.04E-10	0.00E+00	0.00E+00
2-butanone	78-93-3	Not a known carc.	N	N	N	N	1	1	1.34E-05	0.00E+00	1.40E-06	8.67E-09	0.00E+00	0.00E+00	5.93E-06	0.00E+00	3.09E-07	1.73E-09	0.00E+00	0.00E+00
2-ethyl 1,3-butadiene	3404-63-5	No toxicity data avail.	N	N	N	N	1	1	1.32E-06	0.00E+00	1.38E-07	8.53E-10	0.00E+00	0.00E+00	5.84E-07	0.00E+00	3.04E-08	1.71E-10	0.00E+00	0.00E+00
acetone	67-64-1	Not a known carc.	N	N	N	N	1	1	1.92E-04	0.00E+00	2.01E-05	1.24E-07	0.00E+00	0.00E+00	8.51E-05	0.00E+00	4.43E-06	2.49E-08	0.00E+00	0.00E+00
benzene	71-43-2	Yes	N	N	N	N	1	1	1.49E-04	0.00E+00	1.55E-05	9.61E-08	0.00E+00	0.00E+00	6.58E-05	0.00E+00	3.43E-06	1.92E-08	0.00E+00	0.00E+00
bis(2-ethylhexyl)-phthalate	117-81-7	Yes	N	N	N	N	1	0.131	0.00E+00	3.45E-06	0.00E+00	0.00E+00	1.52E-07	0.00E+00	0.00E+00	1.52E-06	0.00E+00	0.00E+00	5.21E-08	0.00E+00
chloromethane	74-87-3	Not a known carc.	N	N	N	N	1	1	1.46E-06	0.00E+00	1.52E-07	9.42E-10	0.00E+00	0.00E+00	6.45E-07	0.00E+00	3.36E-08	1.88E-10	0.00E+00	0.00E+00
dichlorodifluoromethane	75-71-8	No data	N	N	N	N	1	1	1.69E-06	0.00E+00	1.76E-07	1.09E-09	0.00E+00	0.00E+00	7.48E-07	0.00E+00	3.90E-08	2.19E-10	0.00E+00	0.00E+00
di-n-butyl phthalate	84-74-2	No data	N	N	N	N	1	1	4.29E-07	0.00E+00	4.47E-08	2.77E-10	0.00E+00	0.00E+00	1.90E-07	0.00E+00	9.88E-09	5.54E-11	0.00E+00	0.00E+00
di-n-octyl phthalate	117-84-0	No data	N	N	N	N	1	0.852	0.00E+00	2.57E-06	0.00E+00	0.00E+00	1.13E-07	0.00E+00	0.00E+00	1.14E-06	0.00E+00	0.00E+00	3.88E-08	0.00E+00
ethane	74-84-0	No toxicity data avail.	N	N	N	N	1	1	2.80E-03	0.00E+00	2.92E-04	1.81E-06	0.00E+00	0.00E+00	1.24E-03	0.00E+00	6.45E-05	3.62E-07	0.00E+00	0.00E+00
HD	505-60-2	Yes	N	N	N	N	1	1	4.58E-07	0.00E+00	4.77E-08	2.96E-10	0.00E+00	0.00E+00	2.03E-07	0.00E+00	1.06E-08	5.92E-11	0.00E+00	0.00E+00
methane	74-82-8	No toxicity data avail.	N	N	N	N	1	1	1.41E-02	0.00E+00	1.47E-03	9.14E-06	0.00E+00	0.00E+00	6.25E-03	0.00E+00	3.26E-04	1.83E-06	0.00E+00	0.00E+00
naphthalene	91-20-3	Yes	N	N	N	N	1	1	2.56E-06	0.00E+00	2.67E-07	1.66E-09	0.00E+00	0.00E+00	1.13E-06	0.00E+00	5.91E-08	3.32E-10	0.00E+00	0.00E+00
propene	115-07-1	Not a known carc.	N	N	N	N	1	1	1.43E-04	0.00E+00	1.49E-05	9.25E-08	0.00E+00	0.00E+00	6.33E-05	0.00E+00	3.30E-06	1.85E-08	0.00E+00	0.00E+00
toluene	108-88-3	Not a known carc.	N	N	N	N	1	1	5.63E-05	0.00E+00	5.86E-06	3.64E-08	0.00E+00	0.00E+00	2.49E-05	0.00E+00	1.30E-06	7.27E-09	0.00E+00	0.00E+00
trichlorofluoromethane	75-69-4	No data	N	N	N	N	1	1	7.58E-07	0.00E+00	7.90E-08	4.90E-10	0.00E+00	0.00E+00	3.35E-07	0.00E+00	1.75E-08	9.80E-11	0.00E+00	0.00E+00
xylenes	1330-20-7	Not a known carc.	N	N	N	N	1	1	8.80E-07	0.00E+00	9.17E-08	5.69E-10	0.00E+00	0.00E+00	3.89E-07	0.00E+00	2.03E-08	1.14E-10	0.00E+00	0.00E+00
1,2,3,4,6,7,8-HpCDD	35822-46-9	Yes	N	Y	N	N	1	0.003	0.00E+00	8.58E-13	0.00E+00	0.00E+00	3.79E-14	0.00E+00	0.00E+00	3.80E-13	0.00E+00	0.00E+00	1.30E-14	0.00E+00
1,2,3,4,6,7,8,9-OCDD	3268-87-9	Yes	N	Y	N	N	1	0.002	0.00E+00	5.25E-12	0.00E+00	0.00E+00	2.32E-13	0.00E+00	0.00E+00	2.32E-12	0.00E+00	0.00E+00	7.93E-14	0.00E+00
1,2,3,4,6,7,8-HpCDF	67562-39-4	Yes	N	Y	N	N	1	0.01	0.00E+00	5.01E-13	0.00E+00	0.00E+00	2.21E-14	0.00E+00	0.00E+00	2.21E-13	0.00E+00	0.00E+00	7.57E-15	0.00E+00
1,2,3,4,6,7,8,9-OCDF	39001-02-0	Yes	N	Y	N	N	1	0.002	0.00E+00	1.70E-12	0.00E+00	0.00E+00	7.51E-14	0.00E+00	0.00E+00	7.53E-13	0.00E+00	0.00E+00	2.57E-14	0.00E+00
Total PCDDs and PCDFs	NA	Yes	Y	N	N	N	1	NA		0.00E+00			0.00E+00	0.00E+00		0.00E+00			0.00E+00	0.00E+00
ammonia	7664-41-7	Not a known carc.	N	N	N	N	1	1	1.68E-06	0.00E+00	1.75E-07	1.09E-09	0.00E+00	0.00E+00	7.45E-07	0.00E+00	3.88E-08	2.18E-10	0.00E+00	0.00E+00
aluminum	91728-14-2	No data	N	N	N	N	1	1	4.18E-06	0.00E+00	4.36E-07	2.70E-09	0.00E+00	0.00E+00	1.85E-06	0.00E+00	9.63E-08	5.41E-10	0.00E+00	0.00E+00
antimony	7440-36-0	No data	N	N	N	N	1	0.009	0.00E+00	1.98E-07	0.00E+00	0.00E+00	8.75E-09	0.00E+00	0.00E+00	8.77E-08	0.00E+00	0.00E+00	3.00E-09	0.00E+00
barium	7440-39-3	No data	N	N	N	N	1	0.009	0.00E+00	3.97E-08	0.00E+00	0.00E+00	1.75E-09	0.00E+00	0.00E+00	1.75E-08	0.00E+00	0.00E+00	6.00E-10	0.00E+00
beryllium	7440-41-7	Yes	N	N	N	N	1	0.009	0.00E+00	1.87E-08	0.00E+00	0.00E+00	8.24E-10	0.00E+00	0.00E+00	8.26E-09	0.00E+00	0.00E+00	2.82E-10	0.00E+00
cadmium	7440-43-9	Yes	N	N	N	N	1	0.009	0.00E+00	2.01E-07	0.00E+00	0.00E+00	8.87E-09	0.00E+00	0.00E+00	8.89E-08	0.00E+00	0.00E+00	3.04E-09	0.00E+00
chlorine		No data	N	N	N	N	1	1	2.02E-05	0.00E+00	2.11E-06	1.31E-08	0.00E+00	0.00E+00	8.94E-06	0.00E+00	4.65E-07	2.61E-09	0.00E+00	0.00E+00
chromium (3+)	16065-83-1	No data	N	N	N	N	1	0.009	0.00E+00	3.10E-07	0.00E+00	0.00E+00	1.37E-08	0.00E+00	0.00E+00	1.37E-07	0.00E+00	0.00E+00	4.68E-09	0.00E+00
chromium (6+)	18540-29-9	Yes	N	N	N	N	1	0.009	0.00E+00	3.10E-07	0.00E+00	0.00E+00	1.37E-08	0.00E+00	0.00E+00	1.37E-07	0.00E+00	0.00E+00	4.68E-09	0.00E+00
cobalt	7440-48-4	No data	N	N	N	N	1	0.009	0.00E+00	7.00E-08	0.00E+00	0.00E+00	3.09E-09	0.00E+00	0.00E+00	3.10E-08	0.00E+00	0.00E+00	1.06E-09	0.00E+00
copper	744-50-8	No data	N	N	N	N	1	0.009	0.00E+00	3.44E-06	0.00E+00	0.00E+00	1.52E-07	0.00E+00	0.00E+00	1.52E-06	0.00E+00	0.00E+00	5.20E-08	0.00E+00
hydrogen chloride	7647-01-0	No data	N	N	N	N	1	1	6.73E-05	0.00E+00	7.02E-06	4.35E-08	0.00E+00	0.00E+00	2.98E-05	0.00E+00	1.55E-06	8.70E-09	0.00E+00	0.00E+00
iron	7439-89-6	No data	N	N	N	N	1	0.009	0.00E+00	3.04E-04	0.00E+00	0.00E+00	1.34E-05	0.00E+00	0.00E+00	1.34E-04	0.00E+00	0.00E+00	4.59E-06	0.00E+00
lead	7439-92-1	Yes	N	N	N	N	1	0.007	0.00E+00	2.08E-07	0.00E+00	0.00E+00	9.17E-09	0.00E+00	0.00E+00	9.20E-08	0.00E+00	0.00E+00	3.14E-09	0.00E+00
manganese	7439-96-5	No data	N	N	N	N	1	0.009	0.00E+00	1.54E-05	0.00E+00	0.00E+00	6.80E-07	0.00E+00	0.00E+00	6.82E-06	0.00E+00	0.00E+00	2.33E-07	0.00E+00
total mercury	NA		N	N	N	N	1	0.85	0.00E+00	7.58E-08	0.00E+00	0.00E+00	3.35E-09	0.00E+00	0.00E+00	3.35E-08	0.00E+00	0.00E+00	1.15E-09	0.00E+00
mercuric chloride	7487-94-7	No data	N	N	N	N	1	0.85	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methyl mercury	22967-92-6	No data	N	N	N	N	1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
elemental mercury	7439-97-6	No data	N	N	N	N	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	Yes	N	N	N	N	1	0.009	0.00E+00	1.39E-07	0.00E+00	0.00E+00	6.14E-09	0.00E+00	0.00E+00	6.16E-08	0.00E+00	0.00E+00	2.10E-09	0.00E+00
selenium	7782-49-2	No data	N	N	N	N	1	0	0.00E+00	5.48E-07	0.00E+00	0.00E+00	2.42E-08	0.00E+00	0.00E+00	2.43E-07	0.00E+00	0.00E+00	8.29E-09	0.00E+00
silver	7440-22-4	No data	N	N	N	N	1	0.009	0.00E+00	4.84E-08	0.00E+00	0.00E+00	2.14E-09	0.00E+00	0.00E+00	2.14E-08	0.00E+00	0.00E+00	7.32E-10	0.00E+00
vanadium	7440-62-2	No data	N	N	N	N	1	0.009	0.00E+00	5.38E-07	0.00E+00	0.00E+00	2.38E-08	0.00E+00	0.00E+00	2.38E-07	0.00E+00	0.00E+00	8.14E-09	0.00E+00
zinc	7440-66-6	No data	N	N	N	N	1	0.008	0.00E+00	8.77E-06	0.00E+00	0.00E+00	3.87E-07	0.00E+00	0.00E+00	3.88E-06	0.00E+00	0.00E+00	1.33E-07	0.00E+00

MODELED VALUES (TEQ BASIS):

					During Years of PCAPP Operation (0 to tD)											
					Air Modeling Results						Watershed Modeling					
			Stack emissions	Fraction of air conc. that is in the vapor phase	Adjusted Vapor Phase Air Concentration	Adjusted Particle Phase Air Concentration	Adjusted Dry Deposition from Vapor Phase	Adjusted Wet Deposition from Vapor Phase	Adjusted Dry Deposition from Particle Phase	Adjusted Wet Deposition from Particle Phase	Adjusted Vapor Phase Air Concentration	Adjusted Particle Phase Air Concentration	Adjusted Dry Deposition from Vapor Phase	Adjusted Wet Deposition from Vapor Phase	Adjusted Dry Deposition from Particle Phase	Adjusted Wet Deposition from Particle Phase
			(g/sec)	*(unitless)*	(µg TEQ/m^3)	(µg TEQ/m^3)	(g TEQ/m^2)	(g TEQ/m^2)	(g TEQ/m^2)	(g TEQ/m^2)	(µg TEQ/m^3)	(µg/m^3)	(g TEQ/m^2)	(g TEQ/m^2)	(g TEQ/m^2)	(g TEQ/m^2)
COPC	**CAS No.**	**Carcinogen?**	Q	F_v	Cyv	Cyp	Dydv	Dywv	Dydp	Dywp	Cywv	Cywp	Dydv	Dywwv	Dywdp	Dywwp
1,4-dioxane	123-91-1	Yes	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-butanone	78-93-3	Not a known carc.	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-ethyl 1,3-butadiene	3404-63-5	No toxicity data avail.	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
acetone	67-64-1	Not a known carc.	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzene	71-43-2	Yes	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bis(2-ethylhexyl)-phthalate	117-81-7	Yes	1	0.131	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloromethane	74-87-3	Not a known carc.	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dichlorodifluoromethane	75-71-8	No data	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
di-n-butyl phthalate	84-74-2	No data	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
di-n-octyl phthalate	117-84-0	No data	1	0.852	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ethane	74-84-0	No toxicity data avail.	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
HD	505-60-2	Yes	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methane	74-82-8	No toxicity data avail.	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
naphthalene	91-20-3	Yes	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
propene	115-07-1	Not a known carc.	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
toluene	108-88-3	Not a known carc.	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trichlorofluoromethane	75-69-4	No data	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
xylenes	1330-20-7	Not a known carc.	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2,3,4,6,7,8-HpCDD	35822-46-9	Yes	1	0.003	0.00E+00	8.58E-15	0.00E+00	0.00E+00	3.79E-16	0.00E+00	0.00E+00	3.80E-15	0.00E+00	0.00E+00	1.30E-16	0.00E+00
1,2,3,4,6,7,8,9-OCDD	3268-87-9	Yes	1	0.002	0.00E+00	1.57E-15	0.00E+00	0.00E+00	6.95E-17	0.00E+00	0.00E+00	6.96E-16	0.00E+00	0.00E+00	2.38E-17	0.00E+00
1,2,3,4,6,7,8-HpCDF	67562-39-4	Yes	1	0.01	0.00E+00	5.01E-15	0.00E+00	0.00E+00	2.21E-16	0.00E+00	0.00E+00	2.21E-15	0.00E+00	0.00E+00	7.57E-17	0.00E+00
1,2,3,4,6,7,8,9-OCDF	39001-02-0	Yes	1	0.002	0.00E+00	5.11E-16	0.00E+00	0.00E+00	2.25E-17	0.00E+00	0.00E+00	2.26E-16	0.00E+00	0.00E+00	7.72E-18	0.00E+00
Total PCDDs and PCDFs	NA	Yes	1		0.00E+00	1.57E-14	0.00E+00	0.00E+00	6.92E-16	0.00E+00	0.00E+00	6.93E-15	0.00E+00	0.00E+00	2.37E-16	0.00E+00
ammonia	7664-41-7	Not a known carc.	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
aluminum	91728-14-2	No data	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
antimony	7440-36-0	No data	1	0.009	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
barium	7440-39-3	No data	1	0.009	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
beryllium	7440-41-7	Yes	1	0.009	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cadmium	7440-43-9	Yes	1	0.009	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chlorine	0	No data	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (3+)	16065-83-1	No data	1	0.009	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (6+)	18540-29-9	Yes	1	0.009	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cobalt	7440-48-4	No data	1	0.009	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
copper	744-50-8	No data	1	0.009	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
hydrogen chloride	7647-01-0	No data	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
iron	7439-89-6	No data	1	0.009	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
lead	7439-92-1	Yes	1	0.007	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
manganese	7439-96-5	No data	1	0.009	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
total mercury	NA		1	0.85	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
mercuric chloride	7487-94-7	No data	1	0.85	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methyl mercury	22967-92-6	No data	1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
elemental mercury	7439-97-6	No data	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	Yes	1	0.009	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
selenium	7782-49-2	No data	1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
silver	7440-22-4	No data	1	0.009	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
vanadium	7440-62-2	No data	1	0.009	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
zinc	7440-66-6	No data	1	0.008	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

a. With the exception of stack emission rates, all units for individual PCDDs and PCDFs congeners and coplanar PCBs are presented in terms of toxic equivalent (TEQ). The units for total PCDDs and PCDFs as well as the units for total coplanar PCBs are also presented in terms of TEQ and are calculated as the sum of the values of all individual PCDD and PCDF congeners and the values of all coplanar PCBs for the parameter of interest, respectively.

DEFAULT AND SITE-SPECIFIC VALUES

Parameter	Variable	Value	Units	Type	References
Average annual precipitation	P	31.5	cm/yr	Site-specific	NOAA, 2004
Average annual irrigation	I	0	cm/yr	Site-specific	na
Average annual runoff	RO	1.27	cm/yr	Site-specific	Miller, 1963
Average annual evapo-transpiration	E_v	121.9	cm/yr	Site-specific	Miller, 1963
Soil volumetric water content	θ_{sw}	0.2	mℓ water/cm^3 soil	Default	USEPA, 2005
Soil mixing depth	Z_s	2	cm	Default	USEPA, 2005
Soil bulk density	BD	1.5	g soil/cm^3 soil	Default	USEPA, 2005
Loss constant due to erosion	kse	0	yr^{-1}	Default	USEPA, 2005
Universal gas constant	R	8.205E-05	atm m^3/mol K	Default	USEPA, 2005
Ambient air temperature	T_a	298	K	Default	USEPA, 2005
Solids particulate density	ρ_{soil}	2.7	g/cm^3	Default	USEPA, 2005
Time period over which deposition occurs	tD	5	yr	Site-specific	na
Density of air	ρ_a	0.0012	g/cm^3	Default	USEPA, 2005
Fraction of chemical wet deposition that adheres to plant surfaces	Fw	0.6	dimensionless	Default	USEPA, 2005
Interception fraction of the edible portion of plant	Rp	0.39	dimensionless	Default	USEPA, 2005
Plant surface loss coefficient	kp	18	yr^{-1}	Default	USEPA, 2005
Length of plant exposure to deposition per harvest of edible portion of plant	Tp	0.16	yr	Default	USEPA, 2005
Yield or standing crop biomass of edible portion of plant	Yp	2.24	kg dry weight/m^2	Default	USEPA, 2005
Interception fraction of the edible portion of plant for forage	Rp_{forage}	0.5	dimensionless	Default	USEPA, 2005
Interception fraction of the edible portio nof plant for silage	Rp_{silage}	0.46	dimensionless	Default	USEPA, 2005
Length of plant exposure to deposition per harvest of edible portion of plant for forage	Tp_{forage}	0.12	yr	Default	USEPA, 2005
Length of plant exposure to deposition per harvest of edible portion of plant for silage	Tp_{silage}	0.16	yr	Default	USEPA, 2005
Yield or standing crop biomass of edible portion of plant for forage	Yp_{forage}	0.24	kg dry weight/m^2	Default	USEPA, 2005
Yield or standing crop biomass of edible portion of plant for silage	Yp_{silage}	0.8	kg dry weight/m^2	Default	USEPA, 2005
Empirical correction factor for forage	VG_{forage}	1	dimensionless	Default	USEPA, 2005
Empirical correction factor for silage	VG_{silage}	0.5	dimensionless	Default	USEPA, 2005
Beef cattle consumption rate of forage	$Qp_{forage(beef)}$	8.8	kg/day	Default	USEPA, 2005
Beef cattle consumption rate of silage	$Qp_{silage(beef)}$	2.5	kg/day	Default	USEPA, 2005
Beef cattle consumption rate of grain	$Qp_{grain(beef)}$	0.47	kg/day	Default	USEPA, 2005
Beef cattle consumption rate of soil	Qs_{beef}	0.5	kg/day	Default	USEPA, 2005
Dairy cattle consumption rate of forage	$Qp_{forage(dairy)}$	13.2	kg/day	Default	USEPA, 2005
Dairy cattle consumption rate of silage	$Qp_{silage(dairy)}$	4.1	kg/day	Default	USEPA, 2005
Dairy cattle consumption rate of grain	$Qp_{grain(dairy)}$	3	kg/day	Default	USEPA, 2005
Dairy cattle consumption rate of soil	Qs_{dairy}	0.4	kg/day	Default	USEPA, 2005
Swine consumption rate of forage	$Qp_{forage(pork)}$	0	kg/day	Default	USEPA, 2005
Swine consumption rate of silage	$Qp_{silage(pork)}$	1.4	kg/day	Default	USEPA, 2005
Swine consumption rate of grain	$Qp_{grain(pork)}$	3.3	kg/day	Default	USEPA, 2005
Swine consumption rate of soil	Qs_{pork}	0.37	kg/day	Default	USEPA, 2005
Poultry consumption rate of forage	$Qp_{forage(poultry)}$	0	kg/day	Default	USEPA, 2005
Poultry consumption rate of silage	$Qp_{silage(poultry)}$	0	kg/day	Default	USEPA, 2005
Poultry consumption rate of grain	$Qp_{grain(poultry)}$	0.2	kg/day	Default	USEPA, 2005
Poultry consumption rate of soil	$Qs_{poultry}$	0.022	kg/day	Default	USEPA, 2005
Fraction of plant that is grown on contaminated soil	F	1	dimensionless	Default	USEPA, 2005
Soil bioavailability factor	Bs	1	dimensionless	Default	USEPA, 2005
Total waterbody depth	d_z	5.03	m	Site-specific	na
Depth of water column	d_{wc}	5	m	Site-specific	na
Depth of upper benthic layer	d_{bs}	0.03	m	Default	USEPA, 2005
Drag coefficient	C_d	0.0011	dimensionless	Default	USEPA, 2005
Wind speed	W	3.9	m/s	Default	USEPA, 2005
Density of water	ρ_w	1	g/cm^3	Default	USEPA, 2005
von Karman's constant	k	0.4	dimensionless	Default	USEPA, 2005
Dimensionless viscous sublayer thickness	λ_z	4	dimensionless	Default	USEPA, 2005
Viscosity of water corresponding to water temperature	μ_w	0.0169	g/cm-s	Default	USEPA, 2005
Viscosity of air corresponding to air temperature	μ_a	0.000181	g/cm-s	Default	USEPA, 2005
Water body temperature	T_{wk}	298	K	Default	USEPA, 2005
Temperature correction factor	θ	1.026	dimensionless	Default	USEPA, 2005
Water body surface area	A_w	10,000	m^2	Site-specific	USGS
Impervious watershed area receiving chemical deposition	A_i	12,320	m^2	Site-specific	USGS
Total watershed area receiving chemical deposition	A_L	616,000	m^2	Site-specific	USGS
USLE rainfall factor	RF	31	yr^{-1}	Site-specific	NRCS, 2006
USLE erodibility factor	K	0.37	ton/acre	Site-specific	NRCS, 2006
USLE length-slope factor	LS	1.5	dimensionless	Default	USEPA, 2005
USLE cover management factor	C	0.1	dimensionless	Default	USEPA, 2005
USLE supporting practice factor	PF	1	dimensionless	Default	USEPA, 2005
Empirical intercept coefficient	a	1.9	dimensionless	Default	USEPA, 2005
Empirical slope coefficient	b	0.125	dimensionless	Default	USEPA, 2005
Soil enrichment ratio	ER	3	dimensionless	Default	USEPA, 2005
Total suspended solids	TSS	10	mg/ℓ	Default	USEPA, 2005
Bed sediment porosity	θ_{bs}	0.6	ℓwater/ℓsediment	Default	USEPA, 2005
Bed sediment concentration	C_{BS}	1	g/cm^3	Default	USEPA, 2005
Average volumetric flow rate through water body	Vf_x	2,680,560	m^3/yr	Calculated	USEPA, 2005
Fish lipid content	f_{lipid}	0.07	dimensionless	Default	USEPA, 2005
Fraction of organic content in bottom sediment	OC_{sed}	0.04	dimensionless	Default	USEPA, 2005
Thickness of stratum corneum	l_{sc}	0.001	cm	Default	USEPA, 2004
Duration of swimming event	t_{event}	3	hr	Site-specific	na

na Not available. These site-specific values are further discussed in Section F.2 of Appendix F.

EXPOSURE SCENARIO-SPECIFIC VALUES

Parameter	Variable	Adult Exposure Scenarios				Child Exposure Scenarios			Infant Exposure Scenarios		
		Resident	Subsistence Fisher	Subsistence Farmer	Worker	Resident	Subsistence Fisher	Subsistence Farmer	Resident	Subsistence Fisher	Subsistence Farmer
Body weight (kg)	BW	70	70	70	70	15	15	15	10	10	10
Body surface area exposed during swimming (cm^2)	SA	18,000	18,000	18,000	18,000	6,600	6,600	6,600			
Body surface area exposed to soil (cm^2)	SA	5,700	5,700	5,700	3,300	2,800	2,800	2,800	2,625	2,625	2,625
Soil adherence factor (mg/cm^2-event)	AF	0.07	0.07	0.07	0.20	0.20	0.20	0.20	0.20	0.20	0.20
Exposure duration for indirect pathways (yr)	Ed_{ind} (T_2)	30	30	40	25	5	5	5	1	1	1
Exposure duration for direct pathways (yr)	ED_{dir}	5	5	5	5	5	5	5	1	1	1
Exposure frequency (day/yr)	EF	350	350	350	250	350	350	350	350	350	350
Exposure frequency - dermal (day/yr)	EF_{dermal}	12	12	12	0	12	12	12	0	0	0
Event Frequency - dermal (events/day)	EV_{dermal}	1	1	1	1	1	1	1	1	1	1
Duration of swimming event (hrs/day)	t_{event}	3	3	3	3	3	3	3	3	3	3
Exposure time (hr/day)	ET	24	24	24	8	24	24	24	24	24	24
Averaging time for carcinogenic effects (yr)	AT_{carc}	70	70	70	70	70	70	70	70	70	70
Averaging time for noncarcinogenic direct pathways (yr)	$AT_{non\ carc,\ direct}$	5	5	5	5	5	5	5	1	1	1
Averaging time for noncarcinogenic indirect pathways (yr)	$AT_{noncarc,\ indirect}$	30	30	40	25	5	5	5	1	1	1
Consumption rate:											
soil (kg/day)	CR_{soil}	0.0001	0.0001	0.0001	0.00005	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
exposed fruit (kg/day)	$CR_{exposed\ fruit}$	0.425	0.425	0.425	n/a	0.434	0.434	0.434	0.388	0.388	0.388
protected fruit (kg/day)	$CR_{protected\ fruit}$	0.47	0.47	0.47	n/a	0.299	0.299	0.299	0.083	0.083	0.083
exposed vegetables (kg/day)	$CR_{exposed\ veg}$	0.316	0.316	0.316	n/a	0.109	0.109	0.109	0.074	0.074	0.074
protected vegetables (kg/day)	$CR_{protect\ veg}$	0.115	0.115	0.115	n/a	0.091	0.091	0.091	0.078	0.078	0.078
below-ground vegetables (kg/day)	CR_{bg}	0.282	0.282	0.282	n/a	0.114	0.114	0.114	0.096	0.096	0.096
beef (kg/day)	CR_{beef}	0.163	0.163	0.163	n/a	0.054	0.054	0.054	0.032	0.032	0.032
milk (kg/day)	CR_{milk}	0.836	0.836	0.836	n/a	0.728	0.728	0.728	1.709	1.709	1.709
eggs (kg/day)	CR_{egg}	0.1	0.1	0.1	n/a	0.061	0.061	0.061	0.033	0.033	0.033
poultry (kg/day)	$Cr_{poultry}$	0.142	0.142	0.142	n/a	0.057	0.057	0.057	0.035	0.035	0.035
pork (kg/day)	CR_{pork}	0.08	0.08	0.08	n/a	0.037	0.037	0.037	0.017	0.017	0.017
fish (kg/day)	CR_{fish}	0.256	0.256	0.256	n/a	0.134	0.134	0.134	0.134	0.134	0.134
breast milk (kg/day)	IR_{milk}	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.98	0.98	0.98
incidental surface water (mℓ/hr)	CR_{sw}	50	50	50	n/a	50	50	50	n/a	n/a	n/a
Inhalation Rate (m3/hr)	IR	0.83	0.83	0.83	0.83	0.5	0.5	0.5	0.1875	0.1875	0.1875
Soil Fraction Contaminated	F_{soil}	1	1	1	1	1	1	1	1	1	1
Produce Fraction Contaminated	F_p	0.4	0.4	1	n/a	0.4	0.4	1	0.4	0.4	1
Beef Fraction Contaminated	F_{beef}	0.4	0.4	1	n/a	0.4	0.4	1	0.4	0.4	1
Poultry Fraction Contaminated	$F_{poultry}$	0.4	0.4	1	n/a	0.4	0.4	1	0.4	0.4	1
Egg Fraction Contaminated	F_{egg}	0.4	0.4	1	n/a	0.4	0.4	1	0.4	0.4	1
Milk Fraction Contaminated	F_{milk}	0.4	0.4	1	n/a	0.4	0.4	1	0.4	0.4	1
Pork Fraction Contaminated	F_{pork}	0.4	0.4	1	n/a	0.4	0.4	1	0.4	0.4	1
Fish Fraction Contaminated	F_{fish}	0.4	1	0.4	n/a	0.4	1	0.4	0.4	1	0.4

n/a not applicable. The value is not applicable to this exposure scenario.

CHEMICAL-SPECIFIC VALUES

COPC	CAS Number	Chemical/Physical Properties								
		Molecular Weight (g/mol) MW	Loss Constant Due To Degradation (yr^{-1}) ksg	Soil-Water Partition Coefficient (cm^3 water/g soil) Kd_s	Bed Sediment/ Sediment Pore Water Partition Coefficient (cm^3/g/kg) Kd_{bs}	Suspended Sediment/ Surface Water Partition Coefficient (ℓ/kg) Kd_{sw}	Log Octanol-Water Partition Coefficient (dimensionless) log K_{ow}	Henry's Law Constant (atm-m^3/mol) H	Diffusivity of Chemical in Air (cm^2/s) D_a	Diffusivity of Chemical in Water (cm^2/s) D_w
1,4-dioxane	123-91-1	88.106	1.41 [c]	0.01 [c]	0.02 [c]	0.04 [c]	-0.3 [c]	0.00000 [c]	0.229 [c]	0.0000102 [c]
2-butanone	78-93-3	72.1066	36.14 [c]	0.29 [c]	0.08 [c]	0.14 [c]	0.3 [c]	0.00006 [c]	0.0808 [c]	0.0000098 [c]
2-ethyl 1,3-butadiene	3404-63-5	82.14	0 [b]	3.23 [e]	12.93 [e]	24.24 [e]	3.1 [k]	0.24500 [k]	0.101 [e]	0.0000116 [e]
acetone	67-64-1	58.0798	36.14 [c]	0.087 [c]	0.02 [c]	0.04 [c]	-0.2 [c]	0.00004 [c]	0.124 [c]	0.0000114 [c]
benzene	71-43-2	78.1134	15.81 [c]	0.12 [c]	2.47 [c]	4.63 [c]	2.1 [c]	0.00560 [c]	0.088 [c]	0.0000102 [c]
bis(2-ethylhexyl)-phthalate	117-81-7	390.56	11.04 [c]	2300000 [c]	4440 [c]	8330.00 [c]	5.1 [c]	0.00000 [c]	0.0351 [c]	0.0000037 [c]
chloromethane	74-87-3	50.4877	9.03 [c]	0.06 [c]	0.25 [c]	0.47 [c]	0.9 [c]	0.00882 [c]	0.126 [c]	0.0000065 [c]
dichlorodifluoromethane	75-71-8	120.91	1.41 [c]	0.62 [c]	2.46 [c]	4.61 [c]	2.2 [c]	0.34300 [c]	0.001 [c]	0.0000100 [c]
di-n-butyl phthalate	84-74-2	278.35	11 [c]	5200 [c]	62.8 [c]	117.75 [c]	4.7 [c]	0.00000 [c]	0.0438 [c]	0.0000079 [c]
di-n-octyl phthalate	117-84-0	390.62	9.03 [c]	0.00000013 [c]	0.00000367 [c]	0.00 [c]	8.1 [c]	0.00007 [c]	0.001 [c]	0.0000100 [c]
ethane	74-84-0	30.0694	0 [b]	0.32 [e]	1.3 [e]	2.44 [e]	1.8 [f]	0.50000 [f]	0.196 [e]	0.0000228 [e]
HD	505-60-2	159.0732	23349 [a, e]	2.34 [e]	9.36 [e]	17.55 [e]	2.4 [f]	0.00003 [h]	0.065 [e]	0.0000075 [e]
methane	74-82-8	16.0426	0 [b]	0.087 [e]	0.35 [e]	0.66 [e]	1.1 [f]	0.65800 [f]	0.299 [e]	0.0000346 [e]
naphthalene	91-20-3	128.1732	5.27 [c]	300 [c]	47.6 [c]	89.25 [c]	3.3 [c]	0.00048 [c]	0.059 [c]	0.0000075 [c]
propene	115-07-1	42.1	9.03 [a, e]	0.3 [e]	1.21 [e]	2.27 [e]	1.8 [f]	0.19600 [f]	0.157 [e]	0.0000182 [e]
toluene	108-88-3	92.1402	11.5 [c]	0.36 [c]	5.6 [c]	10.50 [c]	2.7 [c]	0.00660 [c]	0.087 [c]	0.0000086 [c]
trichlorofluoromethane	75-69-4	137.36	0.7 [c]	0.24 [c]	4.57 [c]	8.57 [c]	2.5 [c]	0.09700 [c]	0.087 [c]	0.0000097 [c]
xylenes	1330-20-7	106.16	9.03 [a, e]	3.81 [e]	15.24 [e]	28.57 [e]	3.2 [f]	0.00663 [f]	0.085 [e]	0.0000098 [e]
1,2,3,4,6,7,8-HpCDD	35822-46-9	425.28	0.03 [c]	617000 [c]	6170000 [c]	4620000.00 [c]	8.0 [c]	0.00001 [c]	9.04888 [c]	0.0000080 [c]
1,2,3,4,6,7,8,9-OCDD	3268-87-9	459.72	0.03 [c]	977000 [c]	3910000 [c]	7330000.00 [c]	8.2 [c]	0.00001 [c]	8.6938 [c]	0.0000080 [c]
1,2,3,4,6,7,8-HpCDF	67562-39-4	409.3067	0.03 [c]	155000 [c]	620000 [c]	1160000.00 [c]	7.4 [c]	0.00001 [c]	2.0318 [c]	0.0000080 [c]
1,2,3,4,6,7,8,9-OCDF	39001-02-0	443.7494	0.03 [c]	617000 [c]	2470000 [c]	4620000.00 [c]	8.0 [c]	0.00000 [c]	1.9492 [c]	0.0000080 [c]
Total PCDDs and PCDFs	NA	321.96	0.03 [c]	38900 [c]	156000 [c]	292000.00 [c]	6.8 [c]	0.00003 [c]	0.104 [c]	0.0000056 [c]
ammonia	7664-41-7	17	0 [b]	0.017 [e]	0.07287809 [e]	0.13 [e]	0.2 [f]	0.00002 [f]	0.287041 [e]	0.0000333 [e]
aluminum	7429-90-5	27	0 [b]	9.9 [e]	9.9 [e]	9.9 [e]	0.3 [k]	0.02450 [k]	0.211111 [e]	0.0000244 [e]
antimony	7440-36-0	121.8	0 [c]	45 [c]	45 [c]	45.00 [c]	0.7 [c]	0.02500 [c]	0.0772 [c]	0.0000096 [c]
barium	7440-39-3	137.3	0 [c]	41 [c]	41 [c]	41.00 [c]	0.2 [c]	0.02450 [k]	0.00772 [c]	0.0000096 [c]
beryllium	7440-41-7	9.01	0 [c]	790 [c]	790 [c]	790.00 [c]	-0.6 [c]	0.01500 [c]	0.0772 [c]	0.0000096 [c]
cadmium	7440-43-9	112.4	0 [c]	75 [c]	75 [c]	75.00 [c]	-0.1 [c]	0.03100 [c]	0.0775 [c]	0.0000096 [c]
chlorine	7782-50-5	70.91	0 [c]	0.25 [e, p]	0.25 [e, p]	0.25 [e, p]	0.9 [c]	0.01170 [c]	0.001 [c]	0.0000100 [c]
chromium (3+)	7440-47-3	52	0 [c]	19 [c]	19 [c]	19.00 [c]	0.2 [c]	0.02450 [k]	0.1265 [c]	0.0000141 [c]
chromium (6+)	18540-29-9	52	0 [c]	19 [c]	19 [c]	19.00 [c]	0.2 [c]	0.02450 [k]	0.1265 [c]	0.0000141 [c]
cobalt	7440-48-4	58.93	0 [b]	45 [e]	45 [e]	45 [e]	0.2 [k]	0.02450 [k]	0.125467 [e]	0.0000145 [e]
copper	7440-50-8	63.5	0 [b]	430 [e]	430 [e]	430.00 [e]	-0.6 [k]	0.02450 [k]	0.119373 [e]	0.0000138 [e]
hydrogen chloride	7647-01-0	36.5	0 [c]	0.032064613 [e]	0.12825845 [e]	1.22 [e]	0.5 [k]	0.00773 [k]	0.001 [c]	0.0000100 [c]
iron	7439-89-6	55.8	0 [b]	25 [e]	25 [e]	25.00 [e]	-0.8 [k]	0.02450 [k]	0.130116 [e]	0.0000151 [e]
lead	7439-92-1	207.2	0 [c]	900 [c]	900 [c]	900.00 [c]	0.7 [c]	0.02500 [c]	0.0772 [c]	0.0000096 [c]
manganese	7439-96-5	54.94	0 [b]	65 [e]	65 [e]	65 [e]	0.2 [k]	0.02450 [k]	0.13147 [e]	0.0000152 [e]
total mercury	NA	200.59	0 [c]	58000 [c]	50000 [c]	100000.00 [c]	0.2 [c]	0.00000 [c]	4.53126 [c]	0.0000053 [c]
mercuric chloride	7487-94-7	271.5	0 [c]	58000 [c]	50000 [c]	100000.00 [c]	0.2 [c]	0.00000 [c]	4.53126 [c]	0.0000053 [c]
methyl mercury	22967-92-6	215.63	0 [c]	7000 [c]	3000 [c]	100000.00 [c]	0.1 [k]	0.00000 [c]	5.2778 [c]	0.0000061 [c]
elemental mercury	7439-97-6	200.59	0 [c]	1000 [c]	3000 [c]	1000.00 [c]	0.6 [c]	0.00710 [c]	0.0109 [c]	0.0000301 [c]
nickel	7440-02-0	58.7	0 [c]	65 [c]	65 [c]	65.00 [c]	-0.6 [c]	0.02500 [c]	0.0772 [c]	0.0000096 [c]
selenium	7782-49-2	79	0 [c]	5 [c]	5 [c]	5.00 [c]	0.2 [c]	0.00970 [c]	0.0772 [c]	0.0000096 [c]
silver	7440-22-4	107.9	0 [c]	8.3 [c]	8.3 [c]	8.30 [c]	0.2 [c]	0.02450 [k]	0.0772 [c]	0.0000096 [c]
vanadium	7440-62-2	50.94	0 [b]	1000 [e]	1000 [e]	1000.00 [e]	0.2 [k]	0.02450 [k]	0.138266 [e]	0.0000160 [e]
zinc	7440-66-6	65.4	0 [c]	62 [c]	62 [c]	62.00 [c]	-0.5 [c]	0.02500 [c]	0.0772 [c]	0.0000096 [c]

NA No data available

a. Howard, P.H. et al., 1991. *Handbook of Environmental Degradation Rates*. Lewis Publishers. Chelsea, Michigan.

b. No data available, ksg set to 0 as a conservative assumption.

c. Human Health Risk Assessment Protocol for Hazardous Waste Combustion Facilities, Companion Database. USEPA, 2005.

d. Human Health Risk Assessment Protocol for Hazardous Waste Combustion Facilities. USEPA, 2005.

e. Calculated using guidance from Human Health Risk Assessment Protocol for Hazardous Waste Combustion Facilities, Appendix A-2. USEPA, 2005.

f. PHYSPROP Database. Syracuse Research Corporation.

g. Air Emission Models for Waste and Wastewater. USEPA, 1994.

h. CHEMFATE Database. Syracuse Research Corporation.

i. http://www.inchem.org/documents/icsc/icsc/eics0163.htm

j. CRC Handbook of Chemistry and Physics

k. EPI Software Program. Syracuse Research Corporation.

l. Measured value from RAGS Part E. USEPA, 2004.

m. Estimated value from RAGS Part E. USEPA, 2004.

n. Calculated using guidance provided in RAGS Part E. USEPA, 2004.

o. http://www.atsdr.cdc.gov/toxprofiles/tp11-c4.pdf

p. Baes, C.F. et al. 1984. "Review and Analysis of Parameters and Assessing Transport of Environmentally Released Radionuclides through Agriculture." Oak Ridge National Laboratory. Oak Ridge, Tennessee

q. No data. Value set equal to zero

CHEMICAL-SPECIFIC VALUES

COPC	CAS Number	Biotransfer Factors				
		Air-to-Plant Biotransfer Factor	Plant-to-Soil Bioconcentration Factor for Aboveground Produce	Root Concentration Factor	Biotransfer Factor for Beef	Biotransfer Factor for Milk
		(mg/kg)/(µg/g)	(mg/kg)/(µg/g)	(dimensionless)	(day/kg)	(day/kg)
		Bv_{ag}	Br_{ag}	RCF	Ba_{beef}	Ba_{milk}
1,4-dioxane	123-91-1	0.00601 [c]	8.38 [c]	6.45 [c]	0.00003 [c]	0.00001 [c]
2-butanone	78-93-3	0.00203 [c]	8.38 [c]	6.7 [c]	0.00011 [c]	0.00002 [c]
2-ethyl 1,3-butadiene	3404-63-5	0.000425 [e]	0.65 [e]	53.7 [e]	0.01180 [e]	0.00248 [e]
acetone	67-64-1	0.000796 [c]	8.38 [c]	6.46 [c]	0.00003 [c]	0.00001 [c]
benzene	71-43-2	0.00172 [c]	2.37 [c]	9.62 [c]	0.00338 [c]	0.00071 [c]
bis(2-ethylhexyl)-phthalate	117-81-7	151000 [c]	0.0437 [c]	1960 [c]	3.98810 [c]	8.39600 [c]
chloromethane	74-87-3	0.000059 [c]	8.38 [c]	7.47 [c]	0.00041 [c]	0.00009 [c]
dichlorodifluoromethane	75-71-8	0.0000325 [c]	2.19 [c]	10.7 [c]	0.00370 [c]	0.00078 [c]
di-n-butyl phthalate	84-74-2	3150 [c]	0.074 [c]	966 [c]	3.63780 [c]	7.65860 [c]
di-n-octyl phthalate	117-84-0	353000 [c]	0.000806 [c]	401000 [c]	7.76900 [c]	1.63600 [c]
ethane	74-84-0	0.00000946 [e]	3.48 [e]	12.06 [e]	0.00214 [e]	0.00045 [e]
HD	505-60-2	0.624 [e]	1.57 [e]	16.66 [e]	0.00528 [e]	0.00111 [e]
methane	74-82-8	0.000 [e]	9.08 [e]	7.91 [e]	0.00059 [e]	0.00000 [e]
naphthalene	91-20-3	0.381 [c]	0.479 [c]	80.70 [c]	0.01480 [c]	0.00312 [c]
propene	115-07-1	0.0000219 [e]	3.67 [e]	11.67 [e]	0.00201 [e]	0.00042 [e]
toluene	108-88-3	0.00636 [c]	1.07 [c]	27.9 [c]	0.00769 [c]	0.00162 [c]
trichlorofluoromethane	75-69-4	0.000265 [c]	1.39 [c]	19.5 [c]	5.95670 [c]	1.25400 [c]
xylenes	1330-20-7	0.0195 [e]	0.578 [e]	62.99 [e]	0.01290 [e]	0.00272 [e]
1,2,3,4,6,7,8-HpCDD	35822-46-9	910000 [c]	0.00092 [c]	336000 [c]	8.76500 [c]	1.84530 [c]
1,2,3,4,6,7,8,9-OCDD	3268-87-9	2360000 [c]	0.000705 [c]	479000 [c]	6.85480 [c]	1.44310 [c]
1,2,3,4,6,7,8-HpCDF	67562-39-4	830000 [c]	0.00205 [c]	116000 [c]	0.01643 [c]	3.45800 [c]
1,2,3,4,6,7,8,9-OCDF	39001-02-0	2280000 [c]	0.00092 [c]	479000 [c]	8.76500 [c]	1.84530 [c]
Total PCDDs and PCDFs	NA					
ammonia	7664-41-7	0 [d, q]	28.51412177 [e]	6.66 [e]	0.00009 [e]	0.00002 [e]
aluminum	7429-90-5	0 [d, q]	1.08E-03 [e, p]	0.006435 [e, p]	0.00150 [e, p]	0.00020 [e, p]
antimony	7440-36-0	0 [d, q]	0.0319 [c]	1.35 [e, p]	0.00100 [c]	0.00010 [c]
barium	7440-39-3	0 [d, q]	0.0322 [c]	0.615 [e, p]	0.00015 [c]	0.00035 [c]
beryllium	7440-41-7	0 [d, q]	0.00258 [c]	1.185 [e, p]	0.00100 [c]	0.00000 [c]
cadmium	7440-43-9	0 [d, q]	0.125 [c]	11.25 [e, p]	0.00012 [c]	0.00001 [c]
chlorine	7782-50-5	0 [d, q]	8.38 [c]	7.36 [c]	0.00036 [c]	0.00008 [c]
chromium (3+)	7440-47-3	0 [d, q]	0.00488 [c]	0.0855 [e, p]	0.00550 [c]	0.00150 [c]
chromium (6+)	18540-29-9	0 [d, q]	0.00488 [c]	0.0855 [e, p]	0.00550 [c]	0.00150 [c]
cobalt	7440-48-4	0 [d, q]	8.65E-03 [e, p]	0.315 [e, p]	0.02000 [e, p]	0.00200 [e, p]
copper	7440-50-8	0 [d, q]	2.69E-01 [e, p]	107.5 [e, p]	0.01000 [e, p]	0.00150 [e, p]
hydrogen chloride	7647-01-0	0 [d, q]	18.8746975 [e]	6.912833404 [e]	0.00005 [c]	0.00001 [c]
iron	7439-89-6	0 [d, q]	1.38E-03 [e, p]	6.367006231 [e]	0.02000 [e, p]	0.0003 [e, p]
lead	7439-92-1	0 [d, q]	0.0136 [c]	8.1 [e, p]	0.00030 [c]	0.0003 [c]
manganese	7439-96-5	0 [d, q]	7.54E-02 [e, p]	3.25 [e, p]	0.00040 [e, p]	0.0004 [e, p]
total mercury	NA					
mercuric chloride	7487-94-7	1800 [c]	0.0145 [c]	2088 [c, e]	0.00522 [c]	0.0023 [c]
methyl mercury	22967-92-6	0 [c]	0.0294 [c]	693 [c, e]	0.00078 [c]	0.0003 [c]
elemental mercury	7439-97-6	0 [c]	0 [c, q]	0 [c, q]	0.00000 [c]	0.0000 [c]
nickel	7440-02-0	0 [d, q]	0.00931 [c]	3.9 [e, p]	0.00600 [c]	0.0010 [c]
selenium	7782-49-2	0 [d, q]	0.0195 [c]	0.125 [e, p]	0.00227 [c]	0.0059 [c]
silver	7440-22-4	0 [d, q]	0.138 [c]	0.83 [e, p]	0.00300 [c]	0.0200 [c]
vanadium	7440-62-2	0 [d, q]	3.32E-03 [e, p]	3 [e, p]	0.00250 [e, p]	0.0000 [e, p]
zinc	7440-66-6	0 [d, q]	0.097 [c]	55.8 [e, p]	0.00009 [c]	0.0000 [c]

NA No data available

a. Howard, P.H. et al., 1991. Handbook of Environmental Degradation Rates. Lewis Publishers. Chelsea, Michigan.

b. No data available, ksg set to 0 as a conservative assumption.

c. Human Health Risk Assessment Protocol for Hazardous Waste Combustion Facilities, Companion Database. USEPA, 2005.

d. Human Health Risk Assessment Protocol for Hazardous Waste Combustion Facilities. USEPA, 2005.

e. Calculated using guidance from Human Health Risk Assessment Protocol for Hazardous Waste Combustion Facilities, Appendix A-2. USEPA, 2005.

f. PHYSPROP Database. Syracuse Research Corporation.

g. Air Emission Models for Waste and Wastewater. USEPA, 1994.

h. CHEMFATE Database. Syracuse Research Corporation.

i. http://www.inchem.org/documents/icsc/icsc/eics0163.htm

j. CRC Handbook of Chemistry and Physics

k. EPI Software Program. Syracuse Research Corporation.

l. Measured value from RAGS Part E. USEPA, 2004.

m. Estimated value from RAGS Part E. USEPA, 2004.

n. Calculated using guidance provided in RAGS Part E. USEPA, 2004.

o. http://www.atsdr.cdc.gov/toxprofiles/tp11-c4.pdf

p. Baes, C.F. et al. 1984. "Review and Analysis of Parameters and Assessing Transport of Environmentally Released Radionuclides through Agriculture." Oak Ridge National Laboratory. Oak Ridge, Tennessee

q. No data. Value set equal to zero

CHEMICAL-SPECIFIC VALUES

COPC	CAS Number	Biotransfer Factors (continued)						
		Biotransfer Factor for Eggs (day/kg) Ba_{egg}	Biotransfer Factor for Pork (day/kg) Ba_{pork}	Biotransfer Factor for Chicken (day/kg) $Ba_{poultry}$	Metabolism Factor (dimensionless) MF	Bio-Concentration Factor (ℓ/kg) BCF_{fish}	Bio-Accumulation Factor (ℓ/kg) BAF_{fish}	Biota-to Sediment Accumulation Factor (ℓ/kg) $BSAF_{fish}$
1,4-dioxane	123-91-1	0.00001 [c]	0.0000 [c]	0.00002 [c]	1 [d]	3.16 [c]	NA	NA
2-butanone	78-93-3	0.00004 [c]	0.0001 [c]	0.00008 [c]	1 [d]	3.16 [c]	NA	NA
2-ethyl 1,3-butadiene	3404-63-5	0.00495 [e]	0.0142 [e]	0.00867 [e]	1 [d]	46.12 [e]	NA	NA
acetone	67-64-1	0.00001 [c]	0.0000 [c]	0.00002 [c]	1 [d]	3.16 [c]	NA	NA
benzene	71-43-2	0.00142 [c]	0.0041 [c]	0.00249 [c]	1 [d]	8.26 [c]	NA	NA
bis(2-ethylhexyl)-phthalate	117-81-7	1.67920 [c]	4.8277 [c]	2.93860 [c]	0.01 [d]	53.3 [c]	194.3	NA
chloromethane	74-87-3	0.00017 [c]	0.0005 [c]	0.00030 [c]	1 [d]	3.16 [c]	NA	NA
dichlorodifluoromethane	75-71-8	1.55740 [c]	4.4775 [c]	2.72540 [c]	1 [d]	9.19 [c]	NA	NA
di-n-butyl phthalate	84-74-2	1.53170 [c]	4.4037 [c]	0.02681 [c]	1 [d]	830 [c]	1800	NA
di-n-octyl phthalate	117-84-0	3.27110 [c]	9.4045 [c]	5.72450 [c]	1 [d]	63.5 [c]	462.4	NA
ethane	74-84-0	0.00090 [e]	0.0026 [e]	0.00158 [e]	1 [d]	4.94 [e]	NA	NA
HD	505-60-2	0.00222 [e]	0.0064 [e]	0.00389 [e]	1 [d]	14.31 [e]	NA	NA
methane	74-82-8	0.00001 [e]	0.0000 [e]	0.00002 [e]	1 [d]	1.38 [e]	NA	NA
naphthalene	91-20-3	0.00625 [c]	0.0180 [c]	0.01090 [c]	1 [d]	69.3 [c]	NA	NA
propene	115-07-1	0.00085 [e]	0.0024 [e]	0.00148 [e]	1 [d]	4.6 [e]	NA	NA
toluene	108-88-3	0.00324 [c]	0.0093 [c]	0.00567 [c]	1 [d]	23.9 [c]	NA	NA
trichlorofluoromethane	75-69-4	2.50810 [c]	0.0072 [c]	4.38910 [c]	1 [d]	16.8 [c]	NA	NA
xylenes	1330-20-7	0.00544 [e]	0.0156 [e]	0.00952 [e]	1 [d]	54.1 [e]	NA	NA
1,2,3,4,6,7,8-HpCDD	35822-46-9	3.69050 [c]	1.0610 [c]	6.45840 [c]	1 [d]	2750 [c]	NA	0.005
1,2,3,4,6,7,8,9-OCDD	3268-87-9	2.88620 [c]	8.2979 [c]	5.05090 [c]	1 [d]	1470 [c]	NA	0.0001
1,2,3,4,6,7,8-HpCDF	67562-39-4	6.51590 [c]	1.9883 [c]	0.01210 [c]	1 [d]	18300 [c]	NA	0.005
1,2,3,4,6,7,8,9-OCDF	39001-02-0	3.69050 [c]	1.0610 [c]	6.45840 [c]	1 [d]	2750 [c]	NA	0.0001
Total PCDDs and PCDFs	NA				1 [d]			
ammonia	7664-41-7	0.00004 [e]	0.0001 [e]	0.00007 [e]	1 [d]	3.16227766 [e]	NA	NA
aluminum	7429-90-5	0 [d, q]	0 [d, q]	0 [d, q]	1 [d]	3.16227766 [e]	NA	NA
antimony	7440-36-0	0 [d, q]	0 [d, q]	0 [d, q]	1 [d]	40 [c]	NA	NA
barium	7440-39-3	0 [d, q]	0 [d, q]	0 [d, q]	1 [d]	633 [c]	NA	NA
beryllium	7440-41-7	0 [d, q]	0 [d, q]	0 [d, q]	1 [d]	62 [c]	NA	NA
cadmium	7440-43-9	0.00250 [c]	0.0002 [c]	0.10625 [c]	1 [d]	907 [c]	NA	NA
chlorine	7782-50-5	0.00015 [c]	0.0004 [c]	0.00027 [c]	1 [d]	3.16 [c]	NA	NA
chromium (3+)	7440-47-3	0 [d, q]	0 [d, q]	0 [d, q]	1 [d]	3.16 [c]	NA	NA
chromium (6+)	18540-29-9	0 [d, q]	0 [d, q]	0 [d, q]	1 [d]	3.16 [c]	NA	NA
cobalt	7440-48-4	0 [d, q]	0 [d, q]	0 [d, q]	1 [d]	3.16 [e]	NA	NA
copper	7440-50-8	0 [d, q]	0 [d, q]	0 [d, q]	1 [d]	3.16 [e]	NA	NA
hydrogen chloride	7647-01-0	0.00002 [c]	0.0001 [c]	0.00004 [c]	1 [d]	3.16 [e]	NA	NA
iron	7439-89-6	0 [d, q]	0 [d, q]	0 [d, q]	1 [d]	3.16 [e]	NA	NA
lead	7439-92-1	0 [d, q]	0 [d, q]	0 [d, q]	1 [d]	0.09 [c]	NA	NA
manganese	7439-96-5	0 [d, q]	0 [d, q]	0 [d, q]	1 [d]	3.16 [e]	NA	NA
total mercury	NA				1 [d]			
mercuric chloride	7487-94-7	0.02393 [c]	0.0000 [c]	0.02393 [c]	1 [d]	3.16 [e]	0	NA
methyl mercury	22967-92-6	0.00358 [c]	0.0000 [c]	0.00358 [c]	1 [d]	3.16 [e]	6.80E+06	NA
elemental mercury	7439-97-6	0.00000 [c]	0.0000 [c]	0.00000 [c]	1 [d]	3.16 [e]	NA	NA
nickel	7440-02-0	0 [d, q]	0 [d, q]	0 [d, q]	1 [d]	78 [c]	NA	NA
selenium	7782-49-2	1.12625 [c]	0.1877 [c]	1.12625 [c]	1 [d]	129 [c]	NA	NA
silver	7440-22-4	0 [d, q]	0 [d, q]	0 [d, q]	1 [d]	87.7 [c]	NA	NA
vanadium	7440-62-2	0 [d, q]	0 [d, q]	0 [d, q]	1 [d]	3.16 [e]	NA	NA
zinc	7440-66-6	0.00875 [c]	0.0001 [c]	0.00875 [c]	1 [d]	2060 [c]	NA	NA

NA No data available

a. Howard, P.H. et al., 1991. Handbook of Environmental Degradation Rates. Lewis Publishers. Chelsea, Michigan.

b. No data available, ksg set to 0 as a conservative assumption.

c. Human Health Risk Assessment Protocol for Hazardous Waste Combustion Facilities, Companion Database. USEPA, 2005.

d. Human Health Risk Assessment Protocol for Hazardous Waste Combustion Facilities. USEPA, 2005.

e. Calculated using guidance from Human Health Risk Assessment Protocol for Hazardous Waste Combustion Facilities, Appendix A
2. USEPA, 2005.

f. PHYSPROP Database. Syracuse Research Corporation.

g. Air Emission Models for Waste and Wastewater. USEPA, 1994.

h. CHEMFATE Database. Syracuse Research Corporation.

i. http://www.inchem.org/documents/icsc/icsc/eics0163.htm

j. CRC Handbook of Chemistry and Physics

k. EPI Software Program. Syracuse Research Corporation.

l. Measured value from RAGS Part E. USEPA, 2004.

m. Estimated value from RAGS Part E. USEPA, 2004.

n. Calculated using guidance provided in RAGS Part E. USEPA, 2004.

o. http://www.atsdr.cdc.gov/toxprofiles/tp11-c4.pdf

p. Baes, C.F. et al. 1984. "Review and Analysis of Parameters and Assessing Transport of Environmentally Released Radionuclides through Agriculture." Oak Ridge National Laboratory. Oak Ridge, Tennessee

q. No data. Value set equal to zero

CHEMICAL-SPECIFIC VALUES

COPC	CAS Number	Dermal		Breast Milk Pathway Data			
		Dermal Permeability Coefficient from Water (cm/hr) K_p	Dermal Absorption Fraction (dimensionless) ABS_d	Fraction Stored in Maternal Fat (dimensionless) f_1	Biological Half-Life (days) h	Red Blood Cells-Blood Plasma Partition Coefficient (dimensionless) Pc_{RBC}	Blood Plasma-Breast Milk Partition Coefficient (dimensionless) Pc_{bm}
1,4-dioxane	123-91-1	0.00033 [m]	0.1	0.5 [0]	5 [0]	1 [0]	1 [0]
2-butanone	78-93-3	0.00096 [m]	0.1	0.5 [0]	5 [0]	1 [0]	1 [0]
2-ethyl 1,3-butadiene	3404-63-5	0.058373536 [n]	0.1	0.5 [0]	5 [0]	1 [0]	1 [0]
acetone	67-64-1	0.000520419 [n]	0.1	0.5 [0]	5 [0]	1 [0]	1 [0]
benzene	71-43-2	0.015 [m]	0.1	0.5 [0]	5 [0]	1 [0]	1 [0]
bis(2-ethylhexyl)-phthalate	117-81-7	0.023925664 [n]	0.2	0.5 [0]	5 [0]	1 [0]	1 [0]
chloromethane	74-87-3	0.0033 [m]	0.1	0.5 [0]	5 [0]	1 [0]	1 [0]
dichlorodifluoromethane	75-71-8	0.009 [m]	0.0	0.5 [0]	5 [0]	1 [0]	1 [0]
di-n-butyl phthalate	84-74-2	0.055365599 [n]	0.4	0.5 [0]	5 [0]	1 [0]	1 [0]
di-n-octyl phthalate	117-84-0	2.283116118 [n]	17.4	0.5 [0]	5 [0]	1 [0]	1 [0]
ethane	74-84-0	0.016834932 [n]	0.1	0.5 [0]	5 [0]	1 [0]	1 [0]
HD	505-60-2	0.0045 [m]	0.1	0.5 [0]	5 [0]	1 [0]	1 [0]
methane	74-82-8	0.00675 [0]	0.1	0.5 [0]	5 [0]	1 [0]	1 [0]
naphthalene	91-20-3	0.047 [m]	0.1	0.5 [0]	5 [0]	1 [0]	1 [0]
propene	115-07-1	0.013565631 [n]	0.1	0.5 [0]	5 [0]	1 [0]	1 [0]
toluene	108-88-3	0.031 [m]	0.1	0.5 [0]	5 [0]	1 [0]	1 [0]
trichlorofluoromethane	75-69-4	0.013 [m]	0.1	0.5 [0]	5 [0]	1 [0]	1 [0]
xylenes	1330-20-7	0.053 [m]	0.1	0.5 [0]	5 [0]	1 [0]	1 [0]
1,2,3,4,6,7,8-HpCDD	35822-46-9	1.254388316 [n]	0.0	0.9 [0]	3650 [0]	1 [0]	1 [0]
1,2,3,4,6,7,8,9-OCDD	3268-87-9	1.090355202 [n]	0.0	0.9 [0]	3650 [0]	1 [0]	1 [0]
1,2,3,4,6,7,8-HpCDF	67562-39-4	0.619273477 [n]	0.0	0.9 [0]	3650 [0]	1 [0]	1 [0]
1,2,3,4,6,7,8,9-OCDF	39001-02-0	0.988560743 [n]	0.0	0.9 [0]	3650 [0]	1 [0]	1 [0]
Total PCDDs and PCDFs	NA	0.767403896	0.0	0.9 [0]	3650 [0]	1 [0]	1 [0]
ammonia	7664-41-7	0.00180551 [n]	0.1	0.5 [0]	5 [0]	1 [0]	1 [0]
aluminum	7429-90-5	0.001847566 [n]	0.0037	0.5 [0]	5 [0]	1 [0]	1 [0]
antimony	7440-36-0	0.001 [m]	0.0042	0.5 [0]	5 [0]	1 [0]	1 [0]
barium	7440-39-3	0.001 [m]	0.0045	0.5 [0]	5 [0]	1 [0]	1 [0]
beryllium	7440-41-7	0.001 [m]	0.0012	0.5 [0]	5 [0]	1 [0]	1 [0]
cadmium	7440-43-9	0.001 [m]	0.0010	0.5 [0]	5 [0]	1 [0]	1 [0]
chlorine	7782-50-5	0.002311554 [n]	0.0075	0.5 [0]	5 [0]	1 [0]	1 [0]
chromium (3+)	7440-47-3	0.002 [m]	0.0055	0.5 [0]	5 [0]	1 [0]	1 [0]
chromium (6+)	18540-29-9	0.002 [m]	0.0055	0.5 [0]	5 [0]	1 [0]	1 [0]
cobalt	7440-48-4	0.001051458 [n]	0.0031	0.5 [0]	5 [0]	1 [0]	1 [0]
copper	7440-50-8	0.001 [m]	0.0031	0.5 [0]	5 [0]	1 [0]	1 [0]
hydrogen chloride	7647-01-0	0.002249055 [n]	0.0052	0.5 [0]	5 [0]	1 [0]	1 [0]
iron	7439-89-6	0.000239508 [n]	0.0007	0.5 [0]	5 [0]	1 [0]	1 [0]
lead	7439-92-1	0.000332261 [n]	0.0018	0.5 [0]	5 [0]	1 [0]	1 [0]
manganese	7439-96-5	0.001 [m]	0.0029	0.5 [0]	5 [0]	1 [0]	1 [0]
total mercury	NA			0.5 [0]	5 [0]	1 [0]	1 [0]
mercuric chloride	7487-94-7	0.001 [l]	0.0063	0.5 [0]	5 [0]	1 [0]	1 [0]
methyl mercury	22967-92-6	0.000110987 [n]	0.0006	0.5 [0]	5 [0]	1 [0]	1 [0]
elemental mercury	7439-97-6	0.001 [l]	0.0054	0.5 [0]	5 [0]	1 [0]	1 [0]
nickel	7440-02-0	0.002 [l]	0.0059	0.5 [0]	5 [0]	1 [0]	1 [0]
selenium	7782-49-2	0.001 [m]	0.0034	0.5 [0]	5 [0]	1 [0]	1 [0]
silver	7440-22-4	0.0006 [l]	0.0024	0.5 [0]	5 [0]	1 [0]	1 [0]
vanadium	7440-62-2	0.001 [m]	0.0027	0.5 [0]	5 [0]	1 [0]	1 [0]
zinc	7440-66-6	0.0006 [l]	0.0019	0.5 [0]	5 [0]	1 [0]	1 [0]

CHEMICAL-SPECIFIC VALUES

COPC	CAS Number	Toxicity Data								
		Early-Life Sensitivity	Cancer Slope Factor				Reference Dose			
			Inhalation		Oral		Inhalation		Oral	
			$(mg/kg/day)^{-1}$	Reference	$(mg/kg/day)^{-1}$	Reference	(mg/kg/day)	Reference	(mg/kg/day)	Reference
1,4-dioxane	123-91-1	n/a	2.70E-02	Cal/EPA	1.10E-02	IRIS	8.60E-01	Cal/EPA	1.00E-01	ATSDR MRL
2-butanone	78-93-3	n/a	not a known carc.		not a known carc.		1.4	IRIS	0.6	IRIS
2-ethyl 1,3-butadiene	3404-63-5	n/a	no toxicity data available							
acetone	67-64-1	n/a	not a known carc.		not a known carc.		9.00E-01	Reg. 9 PRG	9.00E-01	IRIS
benzene	71-43-2	n/a	2.70E-02	IRIS	5.50E-02	IRIS	8.60E-03	IRIS	4.00E-03	IRIS
bis(2-ethylhexyl)-phthalate	117-81-7	n/a	8.40E-03	RSL	1.40E-02	IRIS	No data	No data	2.00E-02	IRIS
chloromethane	74-87-3	n/a	not a known carc.		not a known carc.		2.60E-02	IRIS	2.60E-02	Reg. 9 PRG
dichlorodifluoromethane	75-71-8	n/a	No data	No data	No data	No data	0.028571429	RSL	0.2	IRIS
di-n-butyl phthalate	84-74-2	n/a	No data	No data	No data	No data	No data	No data	1.00E-01	IRIS
di-n-octyl phthalate	117-84-0	n/a	No data	No data	No data	No data	No data	No data	No data	No data
ethane	74-84-0	n/a	no toxicity data available							
HD	505-60-2	n/a	1.40E+01	CHPPM	7.70E+00	CHPPM	6.00E-06	CHPPM	7.00E-06	CHPPM
methane	74-82-8	n/a	no toxicity data available							
naphthalene	91-20-3	n/a	1.20E-01	Cal/EPA	no data	0	8.60E-04	IRIS	2.00E-02	IRIS
propene	115-07-1	n/a	not a known carc.		not a known carc.		8.60E-01	Cal/EPA	no data	0.00E+00
toluene	108-88-3	n/a	not a known carc.		not a known carc.		1.40E+00	IRIS	8.00E-02	IRIS
trichlorofluoromethane	75-69-4	n/a	No data	No data	No data	No data	2.00E-01	RSL	3.00E-01	IRIS
xylenes	1330-20-7	n/a	not a known carc.		not a known carc.		2.90E-02	IRIS	2.00E-01	IRIS
1,2,3,4,6,7,8-HpCDD	35822-46-9	n/a	TEQ Basis	TEQ Basis	TEQ Basis	TEQ Basis	No data	No data	No data	No data
1,2,3,4,6,7,8,9-OCDD	3268-87-9	n/a	TEQ Basis	TEQ Basis	TEQ Basis	TEQ Basis	No data	No data	No data	No data
1,2,3,4,6,7,8-HpCDF	67562-39-4	n/a	TEQ Basis	TEQ Basis	TEQ Basis	TEQ Basis	No data	No data	No data	No data
1,2,3,4,6,7,8,9-OCDF	39001-02-0	n/a	TEQ Basis	TEQ Basis	TEQ Basis	TEQ Basis	No data	No data	No data	No data
Total PCDDs and PCDFs	NA	n/a	1.33E+05	RSL	1.30E+05	RSL	1.14E-08	RSL	7.00E-10	IRIS
ammonia	7664-41-7	n/a	not a known carc.		not a known carc.		2.86E-02	IRIS	no data	0.00E+00
aluminum	7429-90-5	n/a	No data	No data	No data	No data	1.43E-03	RSL	1.00E+00	ASTDR
antimony	7440-36-0	n/a	No data	No data	No data	No data	No data	No data	4.00E-04	IRIS
barium	7440-39-3	n/a	No data	No data	No data	No data	1.43E-04	RSL	2.00E-01	IRIS
beryllium	7440-41-7	n/a	8.40E+00	IRIS	No data	No data	5.71E-06	IRIS	2.00E-03	IRIS
cadmium	7440-43-9	n/a	6.30E+00	IRIS	No data	No data	2.86E-06	ASTDR	5.00E-04	IRIS
chlorine	7782-50-5	n/a	No data	No data	No data	No data	4.13E-05	ASTDR	1.00E-01	IRIS
chromium (3+)	7440-47-3	n/a	No data	No data	No data	No data	No data	No data	1.50E+00	IRIS
chromium (6+)	18540-29-9	n/a	4.20E+01	IRIS	5.00E-01	RSL	2.86E-05	IRIS	3.00E-03	IRIS
cobalt	7440-48-4	n/a	No data	No data	No data	No data	6.87E-05	ASTDR	3.00E-04	RSL
copper	7440-50-8	n/a	No data	No data	No data	No data	No data	No data	4.00E-02	RSL
hydrogen chloride	7647-01-0	n/a	No data	No data	No data	No data	5.71E-03	IRIS	No data	No data
iron	7439-89-6	n/a	No data	No data	No data	No data	No data	No data	7.00E-01	RSL
lead	7439-92-1	n/a	4.20E-02	Cal EPA	8.50E-03	Cal EPA	No data	No data	No data	No data
manganese	7439-96-5	n/a	No data	No data	No data	No data	1.43E-05	IRIS	1.40E-01	IRIS
total mercury	NA	n/a								
mercuric chloride	7487-94-7	n/a	No data	No data	No data	No data	8.57E-06	RSL	3.00E-04	IRIS
methyl mercury	22967-92-6	n/a	No data	No data	No data	No data	No data	No data	1.00E-04	IRIS
elemental mercury	7439-97-6	n/a	No data	No data	No data	No data	8.57E-06	IRIS	No data	No data
nickel	7440-02-0	n/a	8.40E-01	IRIS	No data	No data	2.57E-05	ASTDR	2.00E-02	IRIS
selenium	7782-49-2	n/a	No data	No data	No data	No data	5.71E-03	RSL	5.00E-03	IRIS
silver	7440-22-4	n/a	No data	No data	No data	No data	No data	No data	5.00E-03	IRIS
vanadium	7440-62-2	n/a	No data	No data	No data	No data	2.97E-05	ASTDR	5.00E-03	RSL
zinc	7440-66-6	n/a	No data	No data	No data	No data	No data	No data	3.00E-01	IRIS

a. From the EPA Region 9 Preliminary Remediation Goals (PRG) table, http://www.epa.gov/region09/waste/sfund/prg/files/04prgtable.pdf.

b. From the on-line EPA Integrated Risk Information System (IRIS) Database, http://www.epa.gov/iris.

c. From the US EPA document entitled "Upper-Bound Quantitative Cancer Risk Estimate for Populations Adjacent to Sulfur Mustard Incineration Facilities", 1991.

CHEMICAL-SPECIFIC VALUES

COPC	CAS Number	Chemical Types and Breast Milk Pathway Identifiers							
		Inorganic Compound Identifier (Y/N)	PCDD and PCDF Group Identifier (Y/N)	PCDD and PCDF Compound Identifier (Y/N)	Coplanar PCB Group Identifier (Y/N)	Coplanar PCB Compound Identifier (Y/N)	Non-coplanar PCB Compound Identifier (Y/N)	Evaluate Compound in Breast Milk Pathway for Infant ?	
								Carcinogenic (Y/N)	Noncarcinogenic (Y/N)
1,4-dioxane	123-91-1	N	N	N	N	N	N	N	N
2-butanone	78-93-3	N	N	N	N	N	N	N	Y
2-ethyl 1,3-butadiene	3404-63-5	N	N	N	N	N	N	N	N
acetone	67-64-1	N	N	N	N	N	N	N	Y
benzene	71-43-2	N	N	N	N	N	N	Y	Y
bis(2-ethylhexyl)-phthalate	117-81-7	N	N	N	N	N	N	N	N
chloromethane	74-87-3	N	N	N	N	N	N	N	Y
dichlorodifluoromethane	75-71-8	N	N	N	N	N	N	N	Y
di-n-butyl phthalate	84-74-2	N	N	N	N	N	N	N	N
di-n-octyl phthalate	117-84-0	N	N	N	N	N	N	N	N
ethane	74-84-0	N	N	N	N	N	N	N	N
HD	505-60-2	N	N	N	N	N	N	N	N
methane	74-82-8	N	N	N	N	N	N	N	N
naphthalene	91-20-3	N	N	N	N	N	N	N	Y
propene	115-07-1	N	N	N	N	N	N	N	N
toluene	108-88-3	N	N	N	N	N	N	N	Y
trichlorofluoromethane	75-69-4	N	N	N	N	N	N	N	Y
xylenes	1330-20-7	N	N	N	N	N	N	N	Y
1,2,3,4,6,7,8-HpCDD	35822-46-9	N	N	Y	N	N	N	Y	Y
1,2,3,4,6,7,8,9-OCDD	3268-87-9	N	N	Y	N	N	N	Y	Y
1,2,3,4,6,7,8-HpCDF	67562-39-4	N	N	Y	N	N	N	Y	Y
1,2,3,4,6,7,8,9-OCDF	39001-02-0	N	N	Y	N	N	N	Y	Y
Total PCDDs and PCDFs	NA	N	Y	N	N	N	N	Y	Y
ammonia	7664-41-7	Y	N	N	N	N	N	N	N
aluminum	7429-90-5	Y	N	N	N	N	N	N	Y
antimony	7440-36-0	Y	N	N	N	N	N	N	Y
barium	7440-39-3	Y	N	N	N	N	N	N	Y
beryllium	7440-41-7	Y	N	N	N	N	N	N	Y
cadmium	7440-43-9	Y	N	N	N	N	N	N	Y
chlorine	7782-50-5	Y	N	N	N	N	N	N	Y
chromium (3+)	7440-47-3	Y	N	N	N	N	N	N	Y
chromium (6+)	18540-29-9	Y	N	N	N	N	N	Y	Y
cobalt	7440-48-4	Y	N	N	N	N	N	N	Y
copper	7440-50-8	Y	N	N	N	N	N	N	Y
hydrogen chloride	7647-01-0	Y	N	N	N	N	N	N	N
iron	7439-89-6	Y	N	N	N	N	N	N	Y
lead	7439-92-1	Y	N	N	N	N	N	Y	N
manganese	7439-96-5	Y	N	N	N	N	N	N	Y
total mercury	NA	Y	N	N	N	N	N	N	N
mercuric chloride	7487-94-7	Y	N	N	N	N	N	N	Y
methyl mercury	22967-92-6	Y	N	N	N	N	N	N	Y
elemental mercury	7439-97-6	Y	N	N	N	N	N	N	N
nickel	7440-02-0	Y	N	N	N	N	N	N	Y
selenium	7782-49-2	Y	N	N	N	N	N	N	Y
silver	7440-22-4	Y	N	N	N	N	N	N	Y
vanadium	7440-62-2	Y	N	N	N	N	N	N	Y
zinc	7440-66-6	Y	N	N	N	N	N	N	Y

TOXICITY EQUIVALENCY FACTORS

COPC				
Name	Alternative Name	CAS Number	Chemical Type	Toxicity Equivalency Factor (dimensionless)
3,3',4,4'-tetrachlorobiphenyl	3,3',4,4'-TCB (PCB 77)	32598-13-3	Coplanar PCB	0.0001 [a]
3,4,4',5-tetrachlorobiphenyl	3,4,4,5'-TCB (PCB 81)	70362-50-4	Coplanar PCB	0.0003 [a]
2,3,3',4,4'-pentachlorobiphenyl	2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	Coplanar PCB	0.00003 [a]
2,3,4,4',5-pentachlorobiphenyl	2,3,4,4',5-PeCB (PCB 114)	74472-37-0	Coplanar PCB	0.00003 [a]
2,3',4,4',5-pentachlorobiphenyl	2,3',4,4',5-PeCB (PCB 118)	31508-00-6	Coplanar PCB	0.00003 [a]
2',3,4,4',5-pentachlorobiphenyl	2',3,4,4',5-PeCB (PCB 123)	65510-44-3	Coplanar PCB	0.00003 [a]
3,3',4,4',5-pentachlorobiphenyl	3,3',4,4',5-PeCB (PCB 126)	57465-28-8	Coplanar PCB	0.1 [a]
2,3,3',4,4',5-hexachlorobiphenyl	2,3,3',4,4',5-HxCB (PCB 156)	38380-08-4	Coplanar PCB	0.00003 [a]
2,3,3',4,4',5'-hexachlorobiphenyl	2,3,3',4,4',5'-HxCB (PCB 157)	69782-90-7	Coplanar PCB	0.00003 [a]
2,3',4,4',5,5'-hexachlorobiphenyl	2,3',4,4',5,5'-HxCB (PCB 167)	52663-72-6	Coplanar PCB	0.00003 [a]
3,3',4,4',5,5'-hexachlorobiphenyl	3,3',4,4',5,5'-HxCB (PCB 169)	32774-16-6	Coplanar PCB	0.03 [a]
2,3,3',4,4',5,5'-heptachlorobiphenyl	2,3,3',4,4',5,5'-HpCB (PCB 189)	39635-31-9	Coplanar PCB	0.00003 [a]
2,3,7,8-tetrachlorodibenzo(p)dioxin	2,3,7,8-TCDD	1746-01-6	PCDD	1 [a]
1,2,3,7,8-pentachlorodibenzo(p)dioxin	1,2,3,7,8-PeCDD	40321-76-4	PCDD	1 [a]
1,2,3,4,7,8-hexachlorodibenzo(p)dioxin	1,2,3,4,7,8-HxCDD	39227-28-6	PCDD	0.1 [a]
1,2,3,6,7,8-hexachlorodibenzo(p)dioxin	1,2,3,6,7,8-HxCDD	57653-85-7	PCDD	0.1 [a]
1,2,3,7,8,9-hexachlorodibenzo(p)dioxin	1,2,3,7,8,9-HxCDD	19408-74-3	PCDD	0.1 [a]
1,2,3,4,6,7,8-heptachlorodibenzo(p)dioxin	1,2,3,4,6,7,8-HpCDD	35822-46-9	PCDD	0.01 [a]
1,2,3,4,6,7,8,9-octachlorodibenzo(p)dioxin	1,2,3,4,6,7,8,9-OCDD	3268-87-9	PCDD	0.0003 [a]
2,3,7,8-tetrachlorodibenzofuran	2,3,7,8-TCDF	51207-31-9	PCDF	0.1 [a]
1,2,3,7,8-pentachlorodibenzofuran	1,2,3,7,8-PeCDF	57117-31-4	PCDF	0.03 [a]
2,3,4,7,8-pentachlorodibenzofuran	2,3,4,7,8-PeCDF	57117-31-4	PCDF	0.3 [a]
1,2,3,4,7,8-hexachlorodibenzofuran	1,2,3,4,7,8-HxCDF	70648-26-9	PCDF	0.1 [a]
1,2,3,6,7,8-hexachlorodibenzofuran	1,2,3,6,7,8-HxCDF	57117-44-9	PCDF	0.1 [a]
1,2,3,7,8,9-hexachlorodibenzofuran	1,2,3,7,8,9-HxCDF	72918-21-9	PCDF	0.1 [a]
2,3,4,6,7,8-hexachlorodibenzofuran	2,3,4,6,7,8-HxCDF	60851-34-5	PCDF	0.1 [a]
1,2,3,4,6,7,8-heptachlorodibenzofuran	1,2,3,4,6,7,8-HpCDF	67562-39-4	PCDF	0.01 [a]
1,2,3,4,7,8,9-heptachlorodibenzofuran	1,2,3,4,7,8,9-HpCDF	55673-89-7	PCDF	0.01 [a]
1,2,3,4,6,7,8,9-octachlorodibenzofuran	1,2,3,4,6,7,8,9-OCDF	39001-02-0	PCDF	0.0003 [a]

a. Recommended Toxicity Equivalence Factors (TEFs) for Human Health Risk Assessments of 2,3,7,8-Tetrachlorodinezo-p-dioxin and Dioxin-Like Compounds. EPA/100/R 10/005. USEPA, 2010.

RISK AND HAZARD FROM DIRECT AND INDIRECT COPC EXPOSURE

OVERVIEW OF DIRECT AND INDIRECT CARCINOGENIC RISK AND NONCARCINOGENIC HEALTH HAZARD FOR RESIDENT EXPOSURE SCENARIOS

Resident Exposure Scenarios - Carcinogenic Effects							
		Adult		Child		Infant	
COPC	CAS Number	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)
1,4-dioxane	123-91-1	3.70E-12	3.63E-12	1.03E-11	6.96E-12	1.16E-12	1.73E-12
2-butanone	78-93-3						
2-ethyl 1,3-butadiene	3404-63-5						
acetone	67-64-1						
benzene	71-43-2	7.86E-11	6.04E-12	2.20E-10	4.67E-12	2.48E-11	1.52E-10
bis(2-ethylhexyl)-phthalate	117-81-7	4.92E-13	5.09E-10	1.38E-12	3.30E-10	1.55E-13	2.21E-10
chloromethane	74-87-3						
dichlorodifluoromethane	75-71-8						
di-n-butyl phthalate	84-74-2						
di-n-octyl phthalate	117-84-0						
ethane	74-84-0						
HD	505-60-2	1.26E-10	1.15E-11	3.51E-10	7.09E-12	3.95E-11	1.88E-12
methane	74-82-8						
naphthalene	91-20-3	6.02E-12		1.69E-11		1.90E-12	
propene	115-07-1						
toluene	108-88-3						
trichlorofluoromethane	75-69-4						
xylenes	1330-20-7						
1,2,3,4,6,7,8-HpCDD	35822-46-9						
1,2,3,4,6,7,8,9-OCDD	3268-87-9						
1,2,3,4,6,7,8-HpCDF	67562-39-4						
1,2,3,4,6,7,8,9-OCDF	39001-02-0						
Total PCDDs and PCDFs	NA	4.06E-14	8.25E-10	1.14E-13	4.70E-10	1.28E-14	2.08E-08
ammonia	7664-41-7						
aluminum	7429-90-5						
antimony	7440-36-0						
barium	7440-39-3						
beryllium	7440-41-7	3.04E-12		8.51E-12		9.57E-13	
cadmium	7440-43-9	2.46E-11		6.88E-11		7.74E-12	
chlorine	7782-50-5						
chromium (3+)	7440-47-3						
chromium (6+)	18540-29-9	2.52E-10	1.51E-10	7.06E-10	8.48E-11	7.94E-11	5.65E-11
cobalt	7440-48-4						
copper	7440-50-8						
hydrogen chloride	7647-01-0						
iron	7439-89-6						
lead	7439-92-1	1.70E-13	1.30E-12	4.75E-13	7.42E-13	5.34E-14	4.39E-13
manganese	7439-96-5						
total mercury	NA						
mercuric chloride	7487-94-7						
methyl mercury	22967-92-6						
elemental mercury	7439-97-6						
nickel	7440-02-0	2.27E-12		6.35E-12		7.14E-13	
selenium	7782-49-2						
silver	7440-22-4						
vanadium	7440-62-2						
zinc	7440-66-6						
Total Cancer Risk - Pathway (dimensionless)		4.97E-10	1.51E-09	1.39E-09	9.04E-10	1.56E-10	2.12E-08
Overall excess lifetime cancer risk via all routes of exposure (dimensionless)		**2.00E-09**		**2.29E-09**		**2.14E-08**	

OVERVIEW OF DIRECT AND INDIRECT CARCINOGENIC RISK AND NONCARCINOGENIC HEALTH HAZARD FOR RESIDENT EXPOSURE SCENARIOS

Resident Exposure Scenarios - Noncarcinogenic Effects							
		Adult		Child		Infant	
COPC	CAS Number	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)
1,4-dioxane	123-91-1	2.23E-09	4.50E-08	6.24E-09	8.86E-08	3.51E-09	1.10E-07
2-butanone	78-93-3	2.62E-09	8.83E-09	7.35E-09	2.44E-08	4.13E-09	9.55E-08
2-ethyl 1,3-butadiene	3404-63-5						
acetone	67-64-1	5.86E-08	4.46E-08	1.64E-07	1.06E-07	9.22E-08	5.99E-07
benzene	71-43-2	4.74E-06	1.35E-07	1.33E-05	2.97E-07	7.46E-06	4.83E-05
bis(2-ethylhexyl)-phthalate	117-81-7		4.25E-06		1.65E-05		5.52E-05
chloromethane	74-87-3	1.54E-08	8.30E-11	4.30E-08	1.92E-10	2.42E-08	7.19E-08
dichlorodifluoromethane	75-71-8	1.62E-08	7.86E-11	4.54E-08	1.84E-10	2.55E-08	1.13E-08
di-n-butyl phthalate	84-74-2		6.51E-06		2.55E-05		8.80E-05
di-n-octyl phthalate	117-84-0						
ethane	74-84-0						
HD	505-60-2	2.09E-05	6.83E-07	5.86E-05	1.84E-06	3.29E-05	2.44E-06
methane	74-82-8						
naphthalene	91-20-3	8.17E-07	1.84E-07	2.29E-06	5.74E-07	1.29E-06	1.67E-06
propene	115-07-1	4.56E-08		1.28E-07		7.18E-08	
toluene	108-88-3	1.10E-08	6.58E-09	3.08E-08	1.43E-08	1.73E-08	9.44E-07
trichlorofluoromethane	75-69-4	1.04E-09	8.72E-12	2.91E-09	2.19E-11	1.64E-09	3.29E-09
xylenes	1330-20-7	8.32E-09	9.78E-11	2.33E-08	2.18E-10	1.31E-08	6.34E-09
1,2,3,4,6,7,8-HpCDD	35822-46-9						
1,2,3,4,6,7,8,9-OCDD	3268-87-9						
1,2,3,4,6,7,8-HpCDF	67562-39-4						
1,2,3,4,6,7,8,9-OCDF	39001-02-0						
Total PCDDs and PCDFs	NA	3.74E-10	2.16E-05	1.05E-09	7.40E-05	5.89E-10	1.60E-02
ammonia	7664-41-7	1.61E-08		4.52E-08		2.54E-08	
aluminum	7429-90-5	8.02E-07	1.56E-12	2.25E-06	3.86E-12	1.26E-06	5.33E-09
antimony	7440-36-0		8.39E-07		2.84E-06		8.27E-06
barium	7440-39-3	7.54E-08	3.56E-10	2.11E-07	1.22E-09	1.19E-07	3.65E-09
beryllium	7440-41-7	8.87E-07	1.55E-08	2.48E-06	5.24E-08	1.40E-06	1.51E-07
cadmium	7440-43-9	1.91E-05	6.92E-07	5.34E-05	2.33E-06	3.01E-05	6.71E-06
chlorine	7782-50-5	1.34E-04	3.07E-08	3.75E-04	8.24E-08	2.11E-04	4.89E-07
chromium (3+)	7440-47-3		4.70E-10		1.58E-09		5.27E-09
chromium (6+)	18540-29-9	2.94E-06	2.35E-07	8.23E-06	7.92E-07	4.63E-06	2.64E-06
cobalt	7440-48-4	2.77E-07	6.94E-07	7.74E-07	2.13E-06	4.36E-07	7.38E-06
copper	7440-50-8		2.11E-07		6.85E-07		2.29E-06
hydrogen chloride	7647-01-0	3.23E-06		9.04E-06		5.08E-06	
iron	7439-89-6		1.07E-06		3.05E-06		9.48E-06
lead	7439-92-1						
manganese	7439-96-5	2.93E-04	1.92E-07	8.19E-04	6.59E-07	4.61E-04	1.97E-06
total mercury	NA						
mercuric chloride	7487-94-7	1.74E-07	5.84E-08	4.89E-07	1.88E-07	2.75E-07	6.16E-07
methyl mercury	22967-92-6		2.07E-05		5.05E-05		1.72E-04
elemental mercury	7439-97-6	0.00E+00		0.00E+00		0.00E+00	
nickel	7440-02-0	1.47E-06	1.50E-08	4.12E-06	4.95E-08	2.32E-06	1.59E-07
selenium	7782-49-2	2.63E-08	3.99E-07	7.36E-08	1.45E-06	4.14E-08	5.56E-06
silver	7440-22-4		7.41E-08		2.88E-07		1.25E-06
vanadium	7440-62-2	4.92E-06	1.86E-07	1.38E-05	6.16E-07	7.75E-06	1.78E-06
zinc	7440-66-6		5.40E-08		1.79E-07		5.21E-07
Total Hazard Quotient - Pathway (dimensionless)		4.87E-04	5.89E-05	1.36E-03	1.85E-04	7.67E-04	1.64E-02
Total Hazard Index (dimensionless)		**5.46E-04**		**1.55E-03**		**1.72E-02**	

OVERVIEW OF DIRECT AND INDIRECT CARCINOGENIC RISK AND NONCARCINOGENIC HEALTH HAZARD FOR SUBSISTENCE FISHER EXPOSURE SCENARIOS

Subsistence Fisher Exposure Scenarios - Carcinogenic Effects							
		Adult		Child		Infant	
COPC	CAS Number	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)
1,4-dioxane	123-91-1	3.70E-12	3.81E-12	1.03E-11	7.03E-12	1.16E-12	1.75E-12
2-butanone	78-93-3						
2-ethyl 1,3-butadiene	3404-63-5						
acetone	67-64-1						
benzene	71-43-2	7.86E-11	1.28E-11	2.20E-10	7.41E-12	2.48E-11	1.54E-10
bis(2-ethylhexyl)-phthalate	117-81-7	4.92E-13	5.09E-10	1.38E-12	3.31E-10	1.55E-13	2.21E-10
chloromethane	74-87-3						
dichlorodifluoromethane	75-71-8						
di-n-butyl phthalate	84-74-2						
di-n-octyl phthalate	117-84-0						
ethane	74-84-0						
HD	505-60-2	1.26E-10	2.24E-11	3.51E-10	1.15E-11	3.95E-11	3.21E-12
methane	74-82-8						
naphthalene	91-20-3	6.02E-12		1.69E-11		1.90E-12	
propene	115-07-1						
toluene	108-88-3						
trichlorofluoromethane	75-69-4						
xylenes	1330-20-7						
1,2,3,4,6,7,8-HpCDD	35822-46-9						
1,2,3,4,6,7,8,9-OCDD	3268-87-9						
1,2,3,4,6,7,8-HpCDF	67562-39-4						
1,2,3,4,6,7,8,9-OCDF	39001-02-0						
Total PCDDs and PCDFs	NA	4.06E-14	8.25E-10	1.14E-13	4.70E-10	1.28E-14	2.08E-08
ammonia	7664-41-7						
aluminum	7429-90-5						
antimony	7440-36-0						
barium	7440-39-3						
beryllium	7440-41-7	3.04E-12		8.51E-12		9.57E-13	
cadmium	7440-43-9	2.46E-11		6.88E-11		7.74E-12	
chlorine	7782-50-5						
chromium (3+)	7440-47-3						
chromium (6+)	18540-29-9	2.52E-10	1.51E-10	7.06E-10	8.48E-11	7.94E-11	5.65E-11
cobalt	7440-48-4						
copper	7440-50-8						
hydrogen chloride	7647-01-0						
iron	7439-89-6						
lead	7439-92-1	1.70E-13	1.30E-12	4.75E-13	7.42E-13	5.34E-14	4.39E-13
manganese	7439-96-5						
total mercury	NA						
mercuric chloride	7487-94-7						
methyl mercury	22967-92-6						
elemental mercury	7439-97-6						
nickel	7440-02-0	2.27E-12		6.35E-12		7.14E-13	
selenium	7782-49-2						
silver	7440-22-4						
vanadium	7440-62-2						
zinc	7440-66-6						
Total Cancer Risk - Pathway (dimensionless)		4.97E-10	1.53E-09	1.39E-09	9.12E-10	1.56E-10	2.13E-08
Overall excess lifetime cancer risk via all routes of exposure (dimensionless)		**2.02E-09**		**2.30E-09**		**2.14E-08**	

OVERVIEW OF DIRECT AND INDIRECT CARCINOGENIC RISK AND NONCARCINOGENIC HEALTH HAZARD FOR SUBSISTENCE FISHER EXPOSURE SCENARIOS

Subsistence Fisher Exposure Scenarios - Noncarcinogenic Effects							
		Adult		Child		Infant	
COPC	CAS Number	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)
1,4-dioxane	123-91-1	2.23E-09	4.54E-08	6.24E-09	8.95E-08	3.51E-09	1.11E-07
2-butanone	78-93-3	2.62E-09	8.86E-09	7.35E-09	2.45E-08	4.13E-09	9.58E-08
2-ethyl 1,3-butadiene	3404-63-5						
acetone	67-64-1	5.86E-08	4.49E-08	1.64E-07	1.07E-07	9.22E-08	6.02E-07
benzene	71-43-2	4.74E-06	2.07E-07	1.33E-05	4.71E-07	7.46E-06	4.89E-05
bis(2-ethylhexyl)-phthalate	117-81-7		4.26E-06		1.65E-05		5.53E-05
chloromethane	74-87-3	1.54E-08	1.29E-10	4.30E-08	3.05E-10	2.42E-08	7.23E-08
dichlorodifluoromethane	75-71-8	1.62E-08	9.66E-11	4.54E-08	2.28E-10	2.55E-08	1.15E-08
di-n-butyl phthalate	84-74-2		6.52E-06		2.55E-05		8.80E-05
di-n-octyl phthalate	117-84-0						
ethane	74-84-0						
HD	505-60-2	2.09E-05	1.15E-06	5.86E-05	2.99E-06	3.29E-05	4.17E-06
methane	74-82-8						
naphthalene	91-20-3	8.17E-07	1.87E-07	2.29E-06	5.81E-07	1.29E-06	1.69E-06
propene	115-07-1	4.56E-08		1.28E-07		7.18E-08	
toluene	108-88-3	1.10E-08	1.07E-08	3.08E-08	2.43E-08	1.73E-08	9.79E-07
trichlorofluoromethane	75-69-4	1.04E-09	1.86E-11	2.91E-09	4.62E-11	1.64E-09	3.37E-09
xylenes	1330-20-7	8.32E-09	1.54E-10	2.33E-08	3.55E-10	1.31E-08	6.81E-09
1,2,3,4,6,7,8-HpCDD	35822-46-9						
1,2,3,4,6,7,8,9-OCDD	3268-87-9						
1,2,3,4,6,7,8-HpCDF	67562-39-4						
1,2,3,4,6,7,8,9-OCDF	39001-02-0						
Total PCDDs and PCDFs	NA	3.74E-10	2.16E-05	1.05E-09	7.40E-05	5.89E-10	1.60E-02
ammonia	7664-41-7	1.61E-08		4.52E-08		2.54E-08	
aluminum	7429-90-5	8.02E-07	3.83E-12	2.25E-06	9.41E-12	1.26E-06	5.35E-09
antimony	7440-36-0		8.42E-07		2.85E-06		8.30E-06
barium	7440-39-3	7.54E-08	3.75E-10	2.11E-07	1.26E-09	1.19E-07	3.81E-09
beryllium	7440-41-7	8.87E-07	1.56E-08	2.48E-06	5.27E-08	1.40E-06	1.51E-07
cadmium	7440-43-9	1.91E-05	7.47E-07	5.34E-05	2.46E-06	3.01E-05	7.17E-06
chlorine	7782-50-5	1.34E-04	3.08E-08	3.75E-04	8.28E-08	2.11E-04	4.90E-07
chromium (3+)	7440-47-3		4.70E-10		1.58E-09		5.27E-09
chromium (6+)	18540-29-9	2.94E-06	2.35E-07	8.23E-06	7.92E-07	4.63E-06	2.64E-06
cobalt	7440-48-4	2.77E-07	6.94E-07	7.74E-07	2.13E-06	4.36E-07	7.39E-06
copper	7440-50-8		2.11E-07		6.86E-07		2.29E-06
hydrogen chloride	7647-01-0	3.23E-06		9.04E-06		5.08E-06	
iron	7439-89-6		1.07E-06		3.05E-06		9.48E-06
lead	7439-92-1						
manganese	7439-96-5	2.93E-04	1.92E-07	8.19E-04	6.59E-07	4.61E-04	1.97E-06
total mercury	NA						
mercuric chloride	7487-94-7	1.74E-07	5.84E-08	4.89E-07	1.88E-07	2.75E-07	6.16E-07
methyl mercury	22967-92-6		5.16E-05		1.26E-04		4.29E-04
elemental mercury	7439-97-6	0.00E+00		0.00E+00		0.00E+00	
nickel	7440-02-0	1.47E-06	1.51E-08	4.12E-06	4.97E-08	2.32E-06	1.60E-07
selenium	7782-49-2	2.63E-08	4.01E-07	7.36E-08	1.45E-06	4.14E-08	5.57E-06
silver	7440-22-4		7.42E-08		2.88E-07		1.25E-06
vanadium	7440-62-2	4.92E-06	1.86E-07	1.38E-05	6.16E-07	7.75E-06	1.78E-06
zinc	7440-66-6		6.31E-08		2.01E-07		5.97E-07
Total Hazard Quotient - Pathway (dimensionless)		4.87E-04	9.05E-05	1.36E-03	2.62E-04	7.67E-04	1.67E-02
Total Hazard Index (dimensionless)		**5.78E-04**		**1.63E-03**		**1.75E-02**	

OVERVIEW OF DIRECT AND INDIRECT CARCINOGENIC RISK AND NONCARCINOGENIC HEALTH HAZARD FOR SUBSISTENCE FARMER EXPOSURE SCENARIOS

Subsistence Farmer Exposure Scenarios - Carcinogenic Effects							
		Adult		Child		Infant	
COPC	CAS Number	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)
1,4-dioxane	123-91-1	3.70E-12	8.95E-12	1.03E-11	1.73E-11	1.16E-12	4.29E-12
2-butanone	78-93-3						
2-ethyl 1,3-butadiene	3404-63-5						
acetone	67-64-1						
benzene	71-43-2	7.86E-11	9.66E-12	2.20E-10	8.82E-12	2.48E-11	1.55E-10
bis(2-ethylhexyl)-phthalate	117-81-7	4.92E-13	1.69E-09	1.38E-12	8.26E-10	1.55E-13	5.52E-10
chloromethane	74-87-3						
dichlorodifluoromethane	75-71-8						
di-n-butyl phthalate	84-74-2						
di-n-octyl phthalate	117-84-0						
ethane	74-84-0						
HD	505-60-2	1.26E-10	2.29E-11	3.51E-10	1.32E-11	3.95E-11	3.37E-12
methane	74-82-8						
naphthalene	91-20-3	6.02E-12		1.69E-11		1.90E-12	
propene	115-07-1						
toluene	108-88-3						
trichlorofluoromethane	75-69-4						
xylenes	1330-20-7						
1,2,3,4,6,7,8-HpCDD	35822-46-9						
1,2,3,4,6,7,8,9-OCDD	3268-87-9						
1,2,3,4,6,7,8-HpCDF	67562-39-4						
1,2,3,4,6,7,8,9-OCDF	39001-02-0						
Total PCDDs and PCDFs	NA	4.06E-14	2.74E-09	1.14E-13	1.17E-09	1.28E-14	5.20E-08
ammonia	7664-41-7						
aluminum	7429-90-5						
antimony	7440-36-0						
barium	7440-39-3						
beryllium	7440-41-7	3.04E-12		8.51E-12		9.57E-13	
cadmium	7440-43-9	2.46E-11		6.88E-11		7.74E-12	
chlorine	7782-50-5						
chromium (3+)	7440-47-3						
chromium (6+)	18540-29-9	2.52E-10	5.03E-10	7.06E-10	2.12E-10	7.94E-11	1.37E-10
cobalt	7440-48-4						
copper	7440-50-8						
hydrogen chloride	7647-01-0						
iron	7439-89-6						
lead	7439-92-1	1.70E-13	4.32E-12	4.75E-13	1.85E-12	5.34E-14	1.05E-12
manganese	7439-96-5						
total mercury	NA						
mercuric chloride	7487-94-7						
methyl mercury	22967-92-6						
elemental mercury	7439-97-6						
nickel	7440-02-0	2.27E-12		6.35E-12		7.14E-13	
selenium	7782-49-2						
silver	7440-22-4						
vanadium	7440-62-2						
zinc	7440-66-6						
Total Cancer Risk - Pathway (dimensionless)		4.97E-10	4.98E-09	1.39E-09	2.25E-09	1.56E-10	5.29E-08
Overall excess lifetime cancer risk via all routes of exposure (dimensionless)		**5.48E-09**		**3.64E-09**		**5.30E-08**	

OVERVIEW OF DIRECT AND INDIRECT CARCINOGENIC RISK AND NONCARCINOGENIC HEALTH HAZARD FOR SUBSISTENCE FARMER EXPOSURE SCENARIOS

Subsistence Farmer Exposure Scenarios - Noncarcinogenic Effects							
		Adult		Child		Infant	
COPC	CAS Number	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)
1,4-dioxane	123-91-1	2.23E-09	1.12E-07	6.24E-09	2.21E-07	3.51E-09	2.73E-07
2-butanone	78-93-3	2.62E-09	2.20E-08	7.35E-09	6.10E-08	4.13E-09	1.96E-07
2-ethyl 1,3-butadiene	3404-63-5						
acetone	67-64-1	5.86E-08	1.11E-07	1.64E-07	2.63E-07	9.22E-08	1.09E-06
benzene	71-43-2	4.74E-06	2.63E-07	1.33E-05	5.61E-07	7.46E-06	4.92E-05
bis(2-ethylhexyl)-phthalate	117-81-7		1.06E-05		4.13E-05		1.38E-04
chloromethane	74-87-3	1.54E-08	1.60E-10	4.30E-08	3.62E-10	2.42E-08	7.25E-08
dichlorodifluoromethane	75-71-8	1.62E-08	1.78E-10	4.54E-08	4.15E-10	2.55E-08	1.20E-08
di-n-butyl phthalate	84-74-2		1.63E-05		6.36E-05		2.20E-04
di-n-octyl phthalate	117-84-0						
ethane	74-84-0						
HD	505-60-2	2.09E-05	1.23E-06	5.86E-05	3.44E-06	3.29E-05	4.38E-06
methane	74-82-8						
naphthalene	91-20-3	8.17E-07	4.56E-07	2.29E-06	1.43E-06	1.29E-06	3.90E-06
propene	115-07-1	4.56E-08		1.28E-07		7.18E-08	
toluene	108-88-3	1.10E-08	1.22E-08	3.08E-08	2.55E-08	1.73E-08	9.85E-07
trichlorofluoromethane	75-69-4	1.04E-09	1.16E-11	2.91E-09	3.00E-11	1.64E-09	3.33E-09
xylenes	1330-20-7	8.32E-09	1.87E-10	2.33E-08	4.06E-10	1.31E-08	6.99E-09
1,2,3,4,6,7,8-HpCDD	35822-46-9						
1,2,3,4,6,7,8,9-OCDD	3268-87-9						
1,2,3,4,6,7,8-HpCDF	67562-39-4						
1,2,3,4,6,7,8,9-OCDF	39001-02-0						
Total PCDDs and PCDFs	NA	3.74E-10	5.40E-05	1.05E-09	1.85E-04	5.89E-10	4.00E-02
ammonia	7664-41-7	1.61E-08		4.52E-08		2.54E-08	
aluminum	7429-90-5	8.02E-07	1.57E-12	2.25E-06	3.88E-12	1.26E-06	5.33E-09
antimony	7440-36-0		2.10E-06		7.10E-06		1.97E-05
barium	7440-39-3	7.54E-08	8.71E-10	2.11E-07	2.99E-09	1.19E-07	8.59E-09
beryllium	7440-41-7	8.87E-07	3.88E-08	2.48E-06	1.31E-07	1.40E-06	3.58E-07
cadmium	7440-43-9	1.91E-05	1.67E-06	5.34E-05	5.68E-06	3.01E-05	1.56E-05
chlorine	7782-50-5	1.34E-04	7.65E-08	3.75E-04	2.06E-07	2.11E-04	8.35E-07
chromium (3+)	7440-47-3		1.17E-09		3.96E-09		1.28E-08
chromium (6+)	18540-29-9	2.94E-06	5.87E-07	8.23E-06	1.98E-06	4.63E-06	6.39E-06
cobalt	7440-48-4	2.77E-07	1.74E-06	7.74E-07	5.32E-06	4.36E-07	1.80E-05
copper	7440-50-8		5.28E-07		1.71E-06		5.57E-06
hydrogen chloride	7647-01-0	3.23E-06		9.04E-06		5.08E-06	
iron	7439-89-6		2.67E-06		7.62E-06		2.29E-05
lead	7439-92-1						
manganese	7439-96-5	2.93E-04	4.79E-07	8.19E-04	1.65E-06	4.61E-04	4.72E-06
total mercury	NA						
mercuric chloride	7487-94-7	1.74E-07	1.46E-07	4.89E-07	4.68E-07	2.75E-07	1.50E-06
methyl mercury	22967-92-6		2.07E-05		5.06E-05		1.72E-04
elemental mercury	7439-97-6	0.00E+00		0.00E+00		0.00E+00	
nickel	7440-02-0	1.47E-06	3.74E-08	4.12E-06	1.24E-07	2.32E-06	3.85E-07
selenium	7782-49-2	2.63E-08	9.94E-07	7.36E-08	3.61E-06	4.14E-08	1.37E-05
silver	7440-22-4		1.85E-07		7.20E-07		3.09E-06
vanadium	7440-62-2	4.92E-06	4.64E-07	1.38E-05	1.54E-06	7.75E-06	4.25E-06
zinc	7440-66-6		1.26E-07		4.24E-07		1.17E-06
Total Hazard Quotient - Pathway (dimensionless)		4.87E-04	1.16E-04	1.36E-03	3.85E-04	7.67E-04	4.07E-02
Total Hazard Index (dimensionless)		**6.03E-04**		**1.75E-03**		**4.15E-02**	

OVERVIEW OF DIRECT AND INDIRECT CARCINOGENIC RISK AND NONCARCINOGENIC HEALTH HAZARD FOR THE ADULT WORKER EXPOSURE SCENARIO

Adult Worker Exposure Scenario					
		Carcinogenic Effects		Noncarcinogenic Effects	
COPC	CAS Number	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)
1,4-dioxane	123-91-1	8.80E-13	3.77E-18	5.31E-10	4.54E-14
2-butanone	78-93-3			6.25E-10	9.79E-14
2-ethyl 1,3-butadiene	3404-63-5				
acetone	67-64-1			1.39E-08	2.71E-13
benzene	71-43-2	1.87E-11	1.07E-17	1.13E-06	6.47E-13
bis(2-ethylhexyl)-phthalate	117-81-7	1.17E-13	6.64E-16		3.20E-11
chloromethane	74-87-3			3.66E-09	2.16E-16
dichlorodifluoromethane	75-71-8			3.86E-09	6.85E-16
di-n-butyl phthalate	84-74-2				3.71E-12
di-n-octyl phthalate	117-84-0				
ethane	74-84-0				
HD	505-60-2	2.99E-11	4.27E-17	4.98E-06	1.05E-11
methane	74-82-8				
naphthalene	91-20-3	1.43E-12		1.95E-07	4.71E-11
propene	115-07-1			1.08E-08	
toluene	108-88-3			2.62E-09	3.15E-14
trichlorofluoromethane	75-69-4			2.47E-10	3.85E-18
xylenes	1330-20-7			1.98E-09	2.12E-15
1,2,3,4,6,7,8-HpCDD	35822-46-9				
1,2,3,4,6,7,8,9-OCDD	3268-87-9				
1,2,3,4,6,7,8-HpCDF	67562-39-4				
1,2,3,4,6,7,8,9-OCDF	39001-02-0				
Total PCDDs and PCDFs	NA	9.66E-15	2.19E-15	8.90E-11	9.27E-11
ammonia	7664-41-7			3.84E-09	
aluminum	7429-90-5			1.91E-07	2.41E-16
antimony	7440-36-0				1.46E-13
barium	7440-39-3			1.79E-08	5.45E-16
beryllium	7440-41-7	7.24E-13		2.11E-07	7.69E-14
cadmium	7440-43-9	5.85E-12		4.54E-06	1.51E-13
chlorine	7782-50-5			3.19E-05	1.37E-13
chromium (3+)	7440-47-3				1.63E-17
chromium (6+)	18540-29-9	6.00E-11	9.88E-19	7.00E-07	8.14E-15
cobalt	7440-48-4			6.58E-08	4.25E-14
copper	7440-50-8				1.57E-13
hydrogen chloride	7647-01-0			7.69E-07	
iron	7439-89-6				4.08E-14
lead	7439-92-1	4.04E-14	8.20E-19		
manganese	7439-96-5			6.97E-05	2.75E-14
total mercury	NA				
mercuric chloride	7487-94-7			4.15E-08	6.15E-11
methyl mercury	22967-92-6				3.31E-12
elemental mercury	7439-97-6			0.00E+00	
nickel	7440-02-0	5.40E-13		3.50E-07	3.03E-15
selenium	7782-49-2			6.26E-09	9.23E-15
silver	7440-22-4				5.23E-16
vanadium	7440-62-2			1.17E-06	3.93E-13
zinc	7440-66-6				1.15E-14
Total Cancer Risk - Pathway (dimensionless)		1.18E-10	2.91E-15		
Overall excess lifetime cancer risk via all routes of exposure (dimensionless)		**1.18E-10**			
Total Hazard Quotient - Pathway (dimensionless)				1.16E-04	2.53E-10
Total Hazard Index (dimensionless)				**1.16E-04**	

RISK AND HAZARD BY PATHWAY FOR RESIDENT EXPOSURE SCENARIOS

CARCINOGENIC EFFECTS: Adult Resident Exposure Scenario											
COPC	CAS Number	Risk from Inhalation	Risk from Dermal Water Contact	Risk from Dermal Soil Contact	Risk from Incidental Soil Ingestion	Risk from Incidental Surface Water Ingestion	Risk from Ingestion of Produce	Risk from Ingestion of Terrestrial Animal Products	Risk from Ingestion of Fish	Risk from Ingestion of Breast Milk	Total Risk from Individual Chemical
1,4-dioxane	123-91-1	3.70E-12	2.65E-16	1.82E-18	4.55E-18	1.75E-15	3.52E-12	2.43E-17	1.15E-13	n/a	**7.33E-12**
2-butanone	78-93-3									n/a	**0.00E+00**
2-ethyl 1,3-butadiene	3404-63-5									n/a	**0.00E+00**
acetone	67-64-1									n/a	**0.00E+00**
benzene	71-43-2	7.86E-11	1.70E-13	5.17E-18	1.30E-17	2.62E-14	1.36E-12	2.93E-15	4.49E-12	n/a	**8.46E-11**
bis(2-ethylhexyl)-phthalate	117-81-7	4.92E-13	7.60E-15	3.97E-16	5.47E-16	1.43E-16	2.95E-11	4.78E-10	5.32E-13	n/a	**5.09E-10**
chloromethane	74-87-3									n/a	**0.00E+00**
dichlorodifluoromethane	75-71-8									n/a	**0.00E+00**
di-n-butyl phthalate	84-74-2									n/a	**0.00E+00**
di-n-octyl phthalate	117-84-0									n/a	**0.00E+00**
ethane	74-84-0									n/a	**0.00E+00**
HD	505-60-2	1.26E-10	6.34E-14	2.06E-17	5.16E-17	2.44E-14	4.04E-12	1.10E-13	7.26E-12	n/a	**1.37E-10**
methane	74-82-8									n/a	**0.00E+00**
naphthalene	91-20-3	6.02E-12								n/a	**6.02E-12**
propene	115-07-1									n/a	**0.00E+00**
toluene	108-88-3									n/a	**0.00E+00**
trichlorofluoromethane	75-69-4									n/a	**0.00E+00**
xylenes	1330-20-7									n/a	**0.00E+00**
1,2,3,4,6,7,8-HpCDD	35822-46-9									n/a	
1,2,3,4,6,7,8,9-OCDD	3268-87-9									n/a	
1,2,3,4,6,7,8-HpCDF	67562-39-4									n/a	
1,2,3,4,6,7,8,9-OCDF	39001-02-0									n/a	
Total PCDDs and PCDFs	NA	4.06E-14	5.67E-16	5.92E-16	4.95E-15	1.07E-17	1.49E-12	8.23E-10	1.42E-13	n/a	**8.25E-10**
ammonia	7664-41-7									n/a	**0.00E+00**
aluminum	7429-90-5									n/a	**0.00E+00**
antimony	7440-36-0									n/a	**0.00E+00**
barium	7440-39-3									n/a	**0.00E+00**
beryllium	7440-41-7	3.04E-12								n/a	**3.04E-12**
cadmium	7440-43-9	2.46E-11								n/a	**2.46E-11**
chlorine	7782-50-5									n/a	**0.00E+00**
chromium (3+)	7440-47-3									n/a	**0.00E+00**
chromium (6+)	18540-29-9	2.52E-10	2.16E-16	5.70E-20	2.58E-18	2.87E-16	1.08E-10	4.33E-11	1.88E-14	n/a	**4.03E-10**
cobalt	7440-48-4									n/a	**0.00E+00**
copper	7440-50-8									n/a	**0.00E+00**
hydrogen chloride	7647-01-0									n/a	**0.00E+00**
iron	7439-89-6									n/a	**0.00E+00**
lead	7439-92-1	1.70E-13	4.55E-19	1.65E-20	2.24E-18	3.68E-18	1.23E-12	6.48E-14	6.81E-18	n/a	**1.46E-12**
manganese	7439-96-5									n/a	**0.00E+00**
total mercury	NA									n/a	**0.00E+00**
mercuric chloride	7487-94-7									n/a	**0.00E+00**
methyl mercury	22967-92-6									n/a	**0.00E+00**
elemental mercury	7439-97-6									n/a	**0.00E+00**
nickel	7440-02-0	2.27E-12								n/a	**2.27E-12**
selenium	7782-49-2									n/a	**0.00E+00**
silver	7440-22-4									n/a	**0.00E+00**
vanadium	7440-62-2									n/a	**0.00E+00**
zinc	7440-66-6									n/a	**0.00E+00**
Total Pathway Risk	**All Chemicals**	**4.97E-10**	**2.42E-13**	**1.02E-15**	**5.57E-15**	**5.28E-14**	**1.49E-10**	**1.35E-09**	**1.26E-11**	**0.00E+00**	**2.00E-09**

RISK AND HAZARD BY PATHWAY FOR RESIDENT EXPOSURE SCENARIOS

NONCARCINOGENIC EFFECTS: Adult Resident Exposure Scenario											
COPC	CAS Number	Hazard from Inhalation	Hazard from Dermal Water Contact	Hazard from Dermal Soil Contact	Hazard from Incidental Soil Ingestion	Hazard from Incidental Surface Water Ingestion	Hazard from Ingestion of Produce	Hazard from Ingestion of Terrestrial Animal Products	Hazard from Ingestion of Fish	Hazard from Ingestion of Breast Milk	Total Hazard from Individual Chemical
1,4-dioxane	123-91-1	2.23E-09	5.67E-13	2.31E-14	5.80E-14	3.76E-12	4.47E-08	3.09E-13	2.47E-10	n/a	**4.72E-08**
2-butanone	78-93-3	2.62E-09	1.35E-13	4.98E-14	1.25E-13	3.19E-13	8.80E-09	2.64E-12	2.09E-11	n/a	**1.15E-08**
2-ethyl 1,3-butadiene	3404-63-5									n/a	**0.00E+00**
acetone	67-64-1	5.86E-08	7.71E-13	1.38E-13	3.46E-13	3.44E-12	4.44E-08	1.99E-12	2.26E-10	n/a	**1.03E-07**
benzene	71-43-2	4.74E-06	1.80E-09	3.29E-13	8.25E-13	2.78E-10	8.52E-08	1.65E-10	4.76E-08	n/a	**4.87E-06**
bis(2-ethylhexyl)-phthalate	117-81-7		6.85E-11	1.98E-11	2.73E-11	1.29E-12	2.51E-07	4.00E-06	4.79E-09	n/a	**4.25E-06**
chloromethane	74-87-3	1.54E-08	6.56E-13	1.10E-16	2.76E-16	4.70E-13	5.10E-11	2.26E-14	3.08E-11	n/a	**1.54E-08**
dichlorodifluoromethane	75-71-8	1.62E-08	2.79E-13	2.11E-16	1.39E-15	6.31E-14	4.33E-11	2.29E-11	1.20E-11	n/a	**1.63E-08**
di-n-butyl phthalate	84-74-2		1.31E-11	2.64E-12	1.87E-12	2.02E-13	1.19E-09	6.50E-06	7.54E-09	n/a	**6.51E-06**
di-n-octyl phthalate	117-84-0									n/a	**0.00E+00**
ethane	74-84-0									n/a	**0.00E+00**
HD	505-60-2	2.09E-05	2.75E-09	5.34E-12	1.34E-11	1.06E-09	3.57E-07	7.02E-09	3.14E-07	n/a	**2.16E-05**
methane	74-82-8									n/a	**0.00E+00**
naphthalene	91-20-3	8.17E-07	2.92E-11	2.39E-11	6.00E-11	1.30E-12	1.71E-07	1.09E-08	1.88E-09	n/a	**1.00E-06**
propene	115-07-1	4.56E-08								n/a	**4.56E-08**
toluene	108-88-3	1.10E-08	7.39E-11	1.60E-14	4.02E-14	5.50E-12	3.76E-09	8.83E-12	2.73E-09	n/a	**1.76E-08**
trichlorofluoromethane	75-69-4	1.04E-09	1.28E-13	1.53E-18	6.55E-18	1.90E-14	6.51E-13	1.30E-12	6.62E-12	n/a	**1.05E-09**
xylenes	1330-20-7	8.32E-09	7.66E-13	1.08E-15	2.71E-15	3.32E-14	5.91E-11	5.32E-13	3.73E-11	n/a	**8.41E-09**
1,2,3,4,6,7,8-HpCDD	35822-46-9									n/a	
1,2,3,4,6,7,8,9-OCDD	3268-87-9									n/a	
1,2,3,4,6,7,8-HpCDF	67562-39-4									n/a	
1,2,3,4,6,7,8,9-OCDF	39001-02-0									n/a	
Total PCDDs and PCDFs	NA	3.74E-10	2.13E-11	2.44E-11	2.04E-10	4.01E-13	3.92E-08	2.15E-05	5.34E-09	n/a	**2.16E-05**
ammonia	7664-41-7	1.61E-08								n/a	**1.61E-08**
aluminum	7429-90-5	8.02E-07	1.60E-14	1.07E-17	7.29E-16	2.31E-14	4.71E-15	5.72E-16	1.51E-12	n/a	**8.02E-07**
antimony	7440-36-0		9.07E-13	7.44E-15	4.39E-13	2.42E-12	8.04E-07	3.36E-08	2.01E-09	n/a	**8.39E-07**
barium	7440-39-3	7.54E-08	3.66E-16	2.94E-17	1.63E-15	9.74E-16	3.22E-10	2.16E-11	1.28E-11	n/a	**7.57E-08**
beryllium	7440-41-7	8.87E-07	1.71E-14	1.11E-15	2.42E-13	4.59E-14	1.51E-08	3.58E-10	5.86E-11	n/a	**9.02E-07**
cadmium	7440-43-9	1.91E-05	7.36E-13	1.90E-15	4.77E-13	1.96E-12	6.52E-07	2.68E-09	3.69E-08	n/a	**1.98E-05**
chlorine	7782-50-5	1.34E-04	1.39E-12	1.17E-14	3.93E-13	1.60E-12	3.05E-08	2.85E-11	1.05E-10	n/a	**1.34E-04**
chromium (3+)	7440-47-3		6.71E-16	1.06E-18	4.81E-17	8.94E-16	3.35E-10	1.35E-10	5.87E-14	n/a	**4.70E-10**
chromium (6+)	18540-29-9	2.94E-06	3.36E-13	5.32E-16	2.40E-14	4.47E-13	1.67E-07	6.74E-08	2.93E-11	n/a	**3.17E-06**
cobalt	7440-48-4	2.77E-07	3.95E-13	1.61E-15	1.30E-13	1.00E-12	3.78E-07	3.16E-07	6.57E-11	n/a	**9.71E-07**
copper	7440-50-8		1.40E-13	5.88E-15	4.81E-13	3.75E-13	1.40E-07	7.10E-08	2.45E-11	n/a	**2.11E-07**
hydrogen chloride	7647-01-0	3.23E-06								n/a	**3.23E-06**
iron	7439-89-6		1.65E-13	3.55E-16	1.29E-13	1.84E-12	7.03E-07	3.63E-07	1.21E-10	n/a	**1.07E-06**
lead	7439-92-1									n/a	**0.00E+00**
manganese	7439-96-5	2.93E-04	1.74E-13	9.60E-16	8.44E-14	4.65E-13	1.78E-07	1.31E-08	3.05E-11	n/a	**2.93E-04**
total mercury	NA									n/a	**0.00E+00**
mercuric chloride	7487-94-7	1.74E-07	1.04E-13	4.54E-12	1.80E-10	0.00E+00	4.43E-08	1.39E-08	0.00E+00	n/a	**2.33E-07**
methyl mercury	22967-92-6		6.09E-15	2.63E-14	1.05E-11	0.00E+00	2.25E-08	1.59E-09	2.06E-05	n/a	**2.07E-05**
elemental mercury	7439-97-6	0.00E+00								n/a	**0.00E+00**
nickel	7440-02-0	1.47E-06	2.55E-14	2.09E-16	8.91E-15	3.40E-14	1.13E-08	3.65E-09	5.50E-11	n/a	**1.49E-06**
selenium	7782-49-2	2.63E-08	2.03E-13	3.83E-16	2.81E-14	5.40E-13	1.79E-07	2.18E-07	1.45E-09	n/a	**4.25E-07**
silver	7440-22-4		1.06E-14	1.54E-17	1.61E-15	4.72E-14	1.57E-08	5.83E-08	8.60E-11	n/a	**7.41E-08**
vanadium	7440-62-2	4.92E-06	1.66E-13	1.32E-14	1.21E-12	4.47E-13	1.75E-07	1.09E-08	2.91E-11	n/a	**5.11E-06**
zinc	7440-66-6		3.21E-14	2.66E-16	3.57E-14	1.43E-13	4.75E-08	3.85E-10	6.10E-09	n/a	**5.40E-08**
Total Pathway Hazard	**All Chemicals**	**4.87E-04**	**4.76E-09**	**8.14E-11**	**5.02E-10**	**1.36E-09**	**4.57E-06**	**3.32E-05**	**2.11E-05**	**0.00E+00**	**5.46E-04**

RISK AND HAZARD BY PATHWAY FOR RESIDENT EXPOSURE SCENARIOS

CARCINOGENIC EFFECTS: Child Resident Exposure Scenario											
COPC	CAS Number	Risk from Inhalation	Risk from Dermal Water Contact	Risk from Dermal Soil Contact	Risk from Incidental Soil Ingestion	Risk from Incidental Surface Water Ingestion	Risk from Ingestion of Produce	Risk from Ingestion of Terrestrial Animal Products	Risk from Ingestion of Fish	Risk from Ingestion of Breast Milk	Total Risk from Individual Chemical
1,4-dioxane	123-91-1	1.03E-11	7.62E-17	1.19E-17	4.25E-17	1.38E-15	6.91E-12	7.51E-17	4.73E-14	n/a	**1.73E-11**
2-butanone	78-93-3									n/a	**0.00E+00**
2-ethyl 1,3-butadiene	3404-63-5									n/a	**0.00E+00**
acetone	67-64-1									n/a	**0.00E+00**
benzene	71-43-2	2.20E-10	4.85E-14	3.39E-17	1.21E-16	2.04E-14	2.76E-12	8.00E-15	1.83E-12	n/a	**2.25E-10**
bis(2-ethylhexyl)-phthalate	117-81-7	1.38E-12	2.34E-15	2.55E-15	5.01E-15	1.20E-16	1.72E-11	3.13E-10	2.34E-13	n/a	**3.32E-10**
chloromethane	74-87-3									n/a	**0.00E+00**
dichlorodifluoromethane	75-71-8									n/a	**0.00E+00**
di-n-butyl phthalate	84-74-2									n/a	**0.00E+00**
di-n-octyl phthalate	117-84-0									n/a	**0.00E+00**
ethane	74-84-0									n/a	**0.00E+00**
HD	505-60-2	3.51E-10	1.81E-14	1.35E-16	4.81E-16	1.90E-14	4.01E-12	8.36E-14	2.96E-12	n/a	**3.59E-10**
methane	74-82-8									n/a	**0.00E+00**
naphthalene	91-20-3	1.69E-11								n/a	**1.69E-11**
propene	115-07-1									n/a	**0.00E+00**
toluene	108-88-3									n/a	**0.00E+00**
trichlorofluoromethane	75-69-4									n/a	**0.00E+00**
xylenes	1330-20-7									n/a	**0.00E+00**
1,2,3,4,6,7,8-HpCDD	35822-46-9									n/a	
1,2,3,4,6,7,8,9-OCDD	3268-87-9									n/a	
1,2,3,4,6,7,8-HpCDF	67562-39-4									n/a	
1,2,3,4,6,7,8,9-OCDF	39001-02-0									n/a	
Total PCDDs and PCDFs	NA	1.14E-13	1.42E-16	5.37E-16	6.39E-15	7.26E-18	8.34E-13	4.69E-10	5.07E-14	n/a	**4.70E-10**
ammonia	7664-41-7									n/a	**0.00E+00**
aluminum	7429-90-5									n/a	**0.00E+00**
antimony	7440-36-0									n/a	**0.00E+00**
barium	7440-39-3									n/a	**0.00E+00**
beryllium	7440-41-7	8.51E-12								n/a	**8.51E-12**
cadmium	7440-43-9	6.88E-11								n/a	**6.88E-11**
chlorine	7782-50-5									n/a	**0.00E+00**
chromium (3+)	7440-47-3									n/a	**0.00E+00**
chromium (6+)	18540-29-9	7.06E-10	6.15E-17	3.74E-19	2.40E-17	2.24E-16	6.13E-11	2.35E-11	7.68E-15	n/a	**7.91E-10**
cobalt	7440-48-4									n/a	**0.00E+00**
copper	7440-50-8									n/a	**0.00E+00**
hydrogen chloride	7647-01-0									n/a	**0.00E+00**
iron	7439-89-6									n/a	**0.00E+00**
lead	7439-92-1	4.75E-13	1.31E-19	1.08E-19	2.09E-17	2.88E-18	7.02E-13	4.02E-14	2.80E-18	n/a	**1.22E-12**
manganese	7439-96-5									n/a	**0.00E+00**
total mercury	NA									n/a	**0.00E+00**
mercuric chloride	7487-94-7									n/a	**0.00E+00**
methyl mercury	22967-92-6									n/a	**0.00E+00**
elemental mercury	7439-97-6									n/a	**0.00E+00**
nickel	7440-02-0	6.35E-12								n/a	**6.35E-12**
selenium	7782-49-2									n/a	**0.00E+00**
silver	7440-22-4									n/a	**0.00E+00**
vanadium	7440-62-2									n/a	**0.00E+00**
zinc	7440-66-6									n/a	**0.00E+00**
Total Pathway Risk	**All Chemicals**	**1.39E-09**	**6.92E-14**	**3.27E-15**	**1.21E-14**	**4.11E-14**	**9.37E-11**	**8.06E-10**	**5.13E-12**	**0.00E+00**	**2.29E-09**

RISK AND HAZARD BY PATHWAY FOR RESIDENT EXPOSURE SCENARIOS

NONCARCINOGENIC EFFECTS: Child Resident Exposure Scenario											
COPC	CAS Number	Hazard from Inhalation	Hazard from Dermal Water Contact	Hazard from Dermal Soil Contact	Hazard from Incidental Soil Ingestion	Hazard from Incidental Surface Water Ingestion	Hazard from Ingestion of Produce	Hazard from Ingestion of Terrestrial Animal Products	Hazard from Ingestion of Fish	Hazard from Ingestion of Breast Milk	Total Hazard from Individual Chemical
1,4-dioxane	123-91-1	6.24E-09	9.70E-13	1.51E-13	5.41E-13	1.75E-11	8.80E-08	9.56E-13	6.02E-10	n/a	**9.49E-08**
2-butanone	78-93-3	7.35E-09	2.31E-13	3.26E-13	1.17E-12	1.49E-12	2.44E-08	8.17E-12	5.11E-11	n/a	**3.18E-08**
2-ethyl 1,3-butadiene	3404-63-5									n/a	**0.00E+00**
acetone	67-64-1	1.64E-07	1.32E-12	9.04E-13	3.23E-12	1.61E-11	1.05E-07	6.16E-12	5.51E-10	n/a	**2.70E-07**
benzene	71-43-2	1.33E-05	3.09E-09	2.16E-12	7.70E-12	1.30E-09	1.76E-07	5.09E-10	1.16E-07	n/a	**1.36E-05**
bis(2-ethylhexyl)-phthalate	117-81-7		1.17E-10	1.30E-10	2.55E-10	6.00E-12	8.59E-07	1.57E-05	1.17E-08	n/a	**1.65E-05**
chloromethane	74-87-3	4.30E-08	1.12E-12	7.21E-16	2.57E-15	2.19E-12	1.13E-10	7.01E-14	7.53E-11	n/a	**4.32E-08**
dichlorodifluoromethane	75-71-8	4.54E-08	4.78E-13	1.38E-15	1.30E-14	2.94E-13	1.04E-10	4.97E-11	2.94E-11	n/a	**4.56E-08**
di-n-butyl phthalate	84-74-2		2.23E-11	1.73E-11	1.74E-11	9.43E-13	3.97E-09	2.54E-05	1.84E-08	n/a	**2.55E-05**
di-n-octyl phthalate	117-84-0									n/a	**0.00E+00**
ethane	74-84-0									n/a	**0.00E+00**
HD	505-60-2	5.86E-05	4.70E-09	3.50E-11	1.25E-10	4.94E-09	1.04E-06	2.17E-08	7.68E-07	n/a	**6.04E-05**
methane	74-82-8									n/a	**0.00E+00**
naphthalene	91-20-3	2.29E-06	4.99E-11	1.57E-10	5.60E-10	6.09E-12	5.36E-07	3.34E-08	4.58E-09	n/a	**2.86E-06**
propene	115-07-1	1.28E-07								n/a	**1.28E-07**
toluene	108-88-3	3.08E-08	1.26E-10	1.05E-13	3.75E-13	2.57E-11	7.43E-09	2.73E-11	6.67E-09	n/a	**4.51E-08**
trichlorofluoromethane	75-69-4	2.91E-09	2.19E-13	1.00E-17	6.11E-17	8.86E-14	1.30E-12	4.12E-12	1.62E-11	n/a	**2.93E-09**
xylenes	1330-20-7	2.33E-08	1.31E-12	7.08E-15	2.53E-14	1.55E-13	1.24E-10	1.64E-12	9.12E-11	n/a	**2.35E-08**
1,2,3,4,6,7,8-HpCDD	35822-46-9									n/a	
1,2,3,4,6,7,8,9-OCDD	3268-87-9									n/a	
1,2,3,4,6,7,8-HpCDF	67562-39-4									n/a	
1,2,3,4,6,7,8,9-OCDF	39001-02-0									n/a	
Total PCDDs and PCDFs	NA	1.05E-09	3.65E-11	1.60E-10	1.91E-09	1.87E-12	1.32E-07	7.38E-05	1.31E-08	n/a	**7.40E-05**
ammonia	7664-41-7	4.52E-08								n/a	**4.52E-08**
aluminum	7429-90-5	2.25E-06	2.74E-14	7.04E-17	6.81E-15	1.08E-13	1.47E-14	1.40E-15	3.70E-12	n/a	**2.25E-06**
antimony	7440-36-0		1.55E-12	4.87E-14	4.10E-12	1.13E-11	2.75E-06	8.88E-08	4.90E-09	n/a	**2.84E-06**
barium	7440-39-3	2.11E-07	6.26E-16	1.92E-16	1.52E-14	4.55E-15	1.10E-09	8.51E-11	3.13E-11	n/a	**2.12E-07**
beryllium	7440-41-7	2.48E-06	2.92E-14	7.30E-15	2.26E-12	2.14E-13	5.17E-08	5.60E-10	1.43E-10	n/a	**2.53E-06**
cadmium	7440-43-9	5.34E-05	1.26E-12	1.25E-14	4.45E-12	9.15E-12	2.23E-06	6.12E-09	9.01E-08	n/a	**5.58E-05**
chlorine	7782-50-5	3.75E-04	2.38E-12	7.69E-14	3.67E-12	7.48E-12	8.20E-08	8.83E-11	2.57E-10	n/a	**3.75E-04**
chromium (3+)	7440-47-3		1.15E-15	6.97E-18	4.49E-16	4.17E-15	1.14E-09	4.39E-10	1.43E-13	n/a	**1.58E-09**
chromium (6+)	18540-29-9	8.23E-06	5.74E-13	3.49E-15	2.24E-13	2.09E-12	5.72E-07	2.19E-07	7.16E-11	n/a	**9.02E-06**
cobalt	7440-48-4	7.74E-07	6.75E-13	1.05E-14	1.21E-12	4.67E-12	1.29E-06	8.35E-07	1.60E-10	n/a	**2.90E-06**
copper	7440-50-8		2.40E-13	3.85E-14	4.49E-12	1.75E-12	4.80E-07	2.06E-07	5.99E-11	n/a	**6.85E-07**
hydrogen chloride	7647-01-0	9.04E-06								n/a	**9.04E-06**
iron	7439-89-6		2.83E-13	2.33E-15	1.21E-12	8.58E-12	2.41E-06	6.42E-07	2.95E-10	n/a	**3.05E-06**
lead	7439-92-1									n/a	**0.00E+00**
manganese	7439-96-5	8.19E-04	2.98E-13	6.29E-15	7.88E-13	2.17E-12	6.10E-07	4.89E-08	7.45E-11	n/a	**8.20E-04**
total mercury	NA									n/a	**0.00E+00**
mercuric chloride	7487-94-7	4.89E-07	1.77E-13	2.98E-11	1.68E-09	0.00E+00	1.39E-07	4.80E-08	0.00E+00	n/a	**6.77E-07**
methyl mercury	22967-92-6		1.04E-14	1.72E-13	9.80E-11	0.00E+00	7.48E-08	5.53E-09	5.04E-05	n/a	**5.05E-05**
elemental mercury	7439-97-6	0.00E+00								n/a	**0.00E+00**
nickel	7440-02-0	4.12E-06	4.36E-14	1.37E-15	8.31E-14	1.58E-13	3.86E-08	1.08E-08	1.34E-10	n/a	**4.17E-06**
selenium	7782-49-2	7.36E-08	3.47E-13	2.51E-15	2.62E-13	2.52E-12	6.13E-07	8.29E-07	3.53E-09	n/a	**1.52E-06**
silver	7440-22-4		1.82E-14	1.01E-16	1.51E-14	2.20E-13	5.37E-08	2.34E-07	2.10E-10	n/a	**2.88E-07**
vanadium	7440-62-2	1.38E-05	2.84E-13	8.67E-14	1.13E-11	2.09E-12	5.97E-07	1.85E-08	7.10E-11	n/a	**1.44E-05**
zinc	7440-66-6		5.50E-14	1.74E-15	3.33E-13	6.66E-13	1.62E-07	1.30E-09	1.49E-08	n/a	**1.79E-07**
Total Pathway Hazard	**All Chemicals**	**1.36E-03**	**8.15E-09**	**5.33E-10**	**4.69E-09**	**6.37E-09**	**1.51E-05**	**1.18E-04**	**5.15E-05**	**0.00E+00**	**1.55E-03**

RISK AND HAZARD BY PATHWAY FOR RESIDENT EXPOSURE SCENARIOS

CARCINOGENIC EFFECTS: Infant Resident Exposure Scenario											
COPC	CAS Number	Risk from Inhalation	Risk from Dermal Water Contact	Risk from Dermal Soil Contact	Risk from Incidental Soil Ingestion	Risk from Incidental Surface Water Ingestion	Risk from Ingestion of Produce	Risk from Ingestion of Terrestrial Animal Products	Risk from Ingestion of Fish	Risk from Ingestion of Breast Milk	Total Risk from Individual Chemical
1,4-dioxane	123-91-1	1.16E-12	n/a	3.35E-18	1.27E-17	n/a	1.71E-12	4.42E-17	1.42E-14		**2.89E-12**
2-butanone	78-93-3		n/a			n/a					**0.00E+00**
2-ethyl 1,3-butadiene	3404-63-5		n/a			n/a					**0.00E+00**
acetone	67-64-1		n/a			n/a					**0.00E+00**
benzene	71-43-2	2.48E-11	n/a	9.53E-18	3.63E-17	n/a	6.69E-13	4.70E-15	5.49E-13	1.51E-10	**1.77E-10**
bis(2-ethylhexyl)-phthalate	117-81-7	1.55E-13	n/a	7.17E-16	1.50E-15	n/a	4.36E-12	2.16E-10	7.01E-14		**2.21E-10**
chloromethane	74-87-3		n/a			n/a					**0.00E+00**
dichlorodifluoromethane	75-71-8		n/a			n/a					**0.00E+00**
di-n-butyl phthalate	84-74-2		n/a			n/a					**0.00E+00**
di-n-octyl phthalate	117-84-0		n/a			n/a					**0.00E+00**
ethane	74-84-0		n/a			n/a					**0.00E+00**
HD	505-60-2	3.95E-11	n/a	3.79E-17	1.44E-16	n/a	9.44E-13	4.97E-14	8.87E-13		**4.14E-11**
methane	74-82-8		n/a			n/a					**0.00E+00**
naphthalene	91-20-3	1.90E-12	n/a			n/a					**1.90E-12**
propene	115-07-1		n/a			n/a					**0.00E+00**
toluene	108-88-3		n/a			n/a					**0.00E+00**
trichlorofluoromethane	75-69-4		n/a			n/a					**0.00E+00**
xylenes	1330-20-7		n/a			n/a					**0.00E+00**
1,2,3,4,6,7,8-HpCDD	35822-46-9		n/a			n/a					**0.00E+00**
1,2,3,4,6,7,8,9-OCDD	3268-87-9		n/a			n/a					**0.00E+00**
1,2,3,4,6,7,8-HpCDF	67562-39-4		n/a			n/a					**0.00E+00**
1,2,3,4,6,7,8,9-OCDF	39001-02-0		n/a			n/a					**0.00E+00**
Total PCDDs and PCDFs	NA	1.28E-14	n/a	1.51E-16	1.92E-15	n/a	2.12E-13	3.02E-10	1.52E-14	2.05E-08	**2.08E-08**
ammonia	7664-41-7		n/a			n/a					**0.00E+00**
aluminum	7429-90-5		n/a			n/a					**0.00E+00**
antimony	7440-36-0		n/a			n/a					**0.00E+00**
barium	7440-39-3		n/a			n/a					**0.00E+00**
beryllium	7440-41-7	9.57E-13	n/a			n/a					**9.57E-13**
cadmium	7440-43-9	7.74E-12	n/a			n/a					**7.74E-12**
chlorine	7782-50-5		n/a			n/a					**0.00E+00**
chromium (3+)	7440-47-3		n/a			n/a					**0.00E+00**
chromium (6+)	18540-29-9	7.94E-11	n/a	1.05E-19	7.21E-18	n/a	1.56E-11	1.47E-11	2.30E-15	2.61E-11	**1.36E-10**
cobalt	7440-48-4		n/a			n/a					**0.00E+00**
copper	7440-50-8		n/a			n/a					**0.00E+00**
hydrogen chloride	7647-01-0		n/a			n/a					**0.00E+00**
iron	7439-89-6		n/a			n/a					**0.00E+00**
lead	7439-92-1	5.34E-14	n/a	3.03E-20	6.26E-18	n/a	1.79E-13	2.71E-14	8.39E-19	2.32E-13	**4.92E-13**
manganese	7439-96-5		n/a			n/a					**0.00E+00**
total mercury	NA		n/a			n/a					**0.00E+00**
mercuric chloride	7487-94-7		n/a			n/a					**0.00E+00**
methyl mercury	22967-92-6		n/a			n/a					**0.00E+00**
elemental mercury	7439-97-6		n/a			n/a					**0.00E+00**
nickel	7440-02-0	7.14E-13	n/a			n/a					**7.14E-13**
selenium	7782-49-2		n/a			n/a					**0.00E+00**
silver	7440-22-4		n/a			n/a					**0.00E+00**
vanadium	7440-62-2		n/a			n/a					**0.00E+00**
zinc	7440-66-6		n/a			n/a					**0.00E+00**
Total Pathway Risk	**All Chemicals**	**1.56E-10**	**0.00E+00**	**9.19E-16**	**3.63E-15**	**0.00E+00**	**2.37E-11**	**5.34E-10**	**1.54E-12**	**2.07E-08**	**2.14E-08**

RISK AND HAZARD BY PATHWAY FOR RESIDENT EXPOSURE SCENARIOS

NONCARCINOGENIC EFFECTS: Infant Resident Exposure Scenario											
COPC	CAS Number	Hazard from Inhalation	Hazard from Dermal Water Contact	Hazard from Dermal Soil Contact	Hazard from Incidental Soil Ingestion	Hazard from Incidental Surface Water Ingestion	Hazard from Ingestion of Produce	Hazard from Ingestion of Terrestrial Animal Products	Hazard from Ingestion of Fish	Hazard from Ingestion of Breast Milk	Total Hazard from Individual Chemical
1,4-dioxane	123-91-1	3.51E-09	n/a	2.13E-13	8.11E-13	n/a	1.09E-07	2.81E-12	9.03E-10		**1.13E-07**
2-butanone	78-93-3	4.13E-09	n/a	4.59E-13	1.75E-12	n/a	2.60E-08	2.40E-11	7.66E-11	6.94E-08	**9.97E-08**
2-ethyl 1,3-butadiene	3404-63-5		n/a			n/a					**0.00E+00**
acetone	67-64-1	9.22E-08	n/a	1.27E-12	4.84E-12	n/a	1.20E-07	1.81E-11	8.27E-10	4.79E-07	**6.92E-07**
benzene	71-43-2	7.46E-06	n/a	3.03E-12	1.16E-11	n/a	2.13E-07	1.50E-09	1.75E-07	4.79E-05	**5.58E-05**
bis(2-ethylhexyl)-phthalate	117-81-7		n/a	1.83E-10	3.83E-10	n/a	1.09E-06	5.41E-05	1.76E-08		**5.52E-05**
chloromethane	74-87-3	2.42E-08	n/a	1.01E-15	3.86E-15	n/a	1.33E-10	2.06E-13	1.13E-10	7.17E-08	**9.61E-08**
dichlorodifluoromethane	75-71-8	2.55E-08	n/a	1.95E-15	1.95E-14	n/a	1.18E-10	3.67E-11	4.41E-11	1.11E-08	**3.68E-08**
di-n-butyl phthalate	84-74-2		n/a	2.44E-11	2.61E-11	n/a	4.41E-09	8.80E-05	2.76E-08		**8.80E-05**
di-n-octyl phthalate	117-84-0		n/a			n/a					**0.00E+00**
ethane	74-84-0		n/a			n/a					**0.00E+00**
HD	505-60-2	3.29E-05	n/a	4.92E-11	1.88E-10	n/a	1.23E-06	6.46E-08	1.15E-06		**3.54E-05**
methane	74-82-8		n/a			n/a					**0.00E+00**
naphthalene	91-20-3	1.29E-06	n/a	2.21E-10	8.40E-10	n/a	5.46E-07	9.72E-08	6.87E-09	1.02E-06	**2.95E-06**
propene	115-07-1	7.18E-08	n/a			n/a					**7.18E-08**
toluene	108-88-3	1.73E-08	n/a	1.48E-13	5.63E-13	n/a	9.19E-09	8.00E-11	1.00E-08	9.25E-07	**9.62E-07**
trichlorofluoromethane	75-69-4	1.64E-09	n/a	1.41E-17	9.17E-17	n/a	1.60E-12	1.26E-11	2.43E-11	3.25E-09	**4.93E-09**
xylenes	1330-20-7	1.31E-08	n/a	9.95E-15	3.79E-14	n/a	1.49E-10	4.78E-12	1.37E-10	6.05E-09	**1.94E-08**
1,2,3,4,6,7,8-HpCDD	35822-46-9		n/a			n/a					
1,2,3,4,6,7,8,9-OCDD	3268-87-9		n/a			n/a					
1,2,3,4,6,7,8-HpCDF	67562-39-4		n/a			n/a					
1,2,3,4,6,7,8,9-OCDF	39001-02-0		n/a			n/a					
Total PCDDs and PCDFs	NA	5.89E-10	n/a	2.25E-10	2.86E-09	n/a	1.67E-07	2.38E-04	1.96E-08	1.58E-02	**1.60E-02**
ammonia	7664-41-7	2.54E-08	n/a			n/a					**2.54E-08**
aluminum	7429-90-5	1.26E-06	n/a	9.90E-17	1.02E-14	n/a	1.50E-14	3.45E-15	5.55E-12	5.33E-09	**1.27E-06**
antimony	7440-36-0		n/a	6.85E-14	6.15E-12	n/a	3.51E-06	2.36E-07	7.35E-09	4.52E-06	**8.27E-06**
barium	7440-39-3	1.19E-07	n/a	2.71E-16	2.29E-14	n/a	1.40E-09	2.95E-10	4.69E-11	1.90E-09	**1.22E-07**
beryllium	7440-41-7	1.40E-06	n/a	1.03E-14	3.39E-12	n/a	6.60E-08	5.25E-10	2.15E-10	8.39E-08	**1.55E-06**
cadmium	7440-43-9	3.01E-05	n/a	1.75E-14	6.68E-12	n/a	2.85E-06	1.37E-08	1.35E-07	3.72E-06	**3.68E-05**
chlorine	7782-50-5	2.11E-04	n/a	1.08E-13	5.50E-12	n/a	8.86E-08	2.60E-10	3.85E-10	3.99E-07	**2.12E-04**
chromium (3+)	7440-47-3		n/a	9.80E-18	6.73E-16	n/a	1.46E-09	1.37E-09	2.15E-13	2.44E-09	**5.27E-09**
chromium (6+)	18540-29-9	4.63E-06	n/a	4.90E-15	3.37E-13	n/a	7.30E-07	6.85E-07	1.07E-10	1.22E-06	**7.26E-06**
cobalt	7440-48-4	4.36E-07	n/a	1.48E-14	1.82E-12	n/a	1.65E-06	2.22E-06	2.41E-10	3.52E-06	**7.82E-06**
copper	7440-50-8		n/a	5.42E-14	6.73E-12	n/a	6.11E-07	5.91E-07	8.99E-11	1.09E-06	**2.29E-06**
hydrogen chloride	7647-01-0	5.08E-06	n/a			n/a					**5.08E-06**
iron	7439-89-6		n/a	3.27E-15	1.81E-12	n/a	3.07E-06	9.13E-07	4.42E-10	5.50E-06	**9.48E-06**
lead	7439-92-1		n/a			n/a					**0.00E+00**
manganese	7439-96-5	4.61E-04	n/a	8.84E-15	1.18E-12	n/a	7.79E-07	1.65E-07	1.12E-10	1.03E-06	**4.63E-04**
total mercury	NA		n/a			n/a					**0.00E+00**
mercuric chloride	7487-94-7	2.75E-07	n/a	4.18E-11	2.52E-09	n/a	1.64E-07	1.55E-07	0.00E+00	2.94E-07	**8.91E-07**
methyl mercury	22967-92-6		n/a	2.42E-13	1.47E-10	n/a	9.39E-08	1.80E-08	7.56E-05	9.59E-05	**1.72E-04**
elemental mercury	7439-97-6	0.00E+00	n/a			n/a					**0.00E+00**
nickel	7440-02-0	2.32E-06	n/a	1.93E-15	1.25E-13	n/a	4.92E-08	3.16E-08	2.01E-10	7.84E-08	**2.48E-06**
selenium	7782-49-2	4.14E-08	n/a	3.53E-15	3.93E-13	n/a	7.83E-07	2.78E-06	5.30E-09	1.99E-06	**5.60E-06**
silver	7440-22-4		n/a	1.42E-16	2.26E-14	n/a	6.85E-08	8.20E-07	3.15E-10	3.56E-07	**1.25E-06**
vanadium	7440-62-2	7.75E-06	n/a	1.22E-13	1.69E-11	n/a	7.62E-07	2.32E-08	1.07E-10	9.97E-07	**9.53E-06**
zinc	7440-66-6		n/a	2.45E-15	5.00E-13	n/a	2.07E-07	4.16E-09	2.24E-08	2.87E-07	**5.21E-07**
Total Pathway Hazard	**All Chemicals**	**7.67E-04**	**0.00E+00**	**7.50E-10**	**7.03E-09**	**0.00E+00**	**1.90E-05**	**3.88E-04**	**7.72E-05**	**1.59E-02**	**1.72E-02**

RISK AND HAZARD BY PATHWAY FOR RESIDENT EXPOSURE SCENARIOS

CARCINOGENIC EFFECTS: Early Life Exposure - Infant											
COPC	CAS Number	Risk from Inhalation	Risk from Dermal Water Contact	Risk from Dermal Soil Contact	Risk from Incidental Soil Ingestion	Risk from Incidental Surface Water Ingestion	Risk from Ingestion of Produce	Risk from Ingestion of Terrestrial Animal Products	Risk from Ingestion of Fish	Risk from Ingestion of Breast Milk	Total Risk from Individual Chemical
vinyl chloride	75-01-4	0.00E+00	n/a	0.00E+00	0.00E+00	n/a	0.00E+00	0.00E+00	0.00E+00	n/a	**0.00E+00**

CARCINOGENIC EFFECTS: Early Life Exposure - Child											
COPC	CAS Number	Risk from Inhalation	Risk from Dermal Water Contact	Risk from Dermal Soil Contact	Risk from Incidental Soil Ingestion	Risk from Incidental Surface Water Ingestion	Risk from Ingestion of Produce	Risk from Ingestion of Terrestrial Animal Products	Risk from Ingestion of Fish	Risk from Ingestion of Breast Milk	Total Risk from Individual Chemical
vinyl chloride	75-01-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	n/a	**0.00E+00**

RISK AND HAZARD BY PATHWAY FOR SUBSISTENCE FISHER EXPOSURE SCENARIOS

CARCINOGENIC EFFECTS: Adult Subsistence Fisher Exposure Scenario											
COPC	CAS Number	Risk from Inhalation	Risk from Dermal Water Contact	Risk from Dermal Soil Contact	Risk from Incidental Soil Ingestion	Risk from Incidental Surface Water Ingestion	Risk from Ingestion of Produce	Risk from Ingestion of Terrestrial Animal Products	Risk from Ingestion of Fish	Risk from Ingestion of Breast Milk	Total Risk from Individual Chemical
1,4-dioxane	123-91-1	3.70E-12	2.65E-16	1.82E-18	4.55E-18	1.75E-15	3.52E-12	2.43E-17	2.88E-13	n/a	**7.50E-12**
2-butanone	78-93-3									n/a	**0.00E+00**
2-ethyl 1,3-butadiene	3404-63-5									n/a	**0.00E+00**
acetone	67-64-1									n/a	**0.00E+00**
benzene	71-43-2	7.86E-11	1.70E-13	5.17E-18	1.30E-17	2.62E-14	1.36E-12	2.93E-15	1.12E-11	n/a	**9.14E-11**
bis(2-ethylhexyl)-phthalate	117-81-7	4.92E-13	7.60E-15	3.97E-16	5.47E-16	1.43E-16	2.95E-11	4.78E-10	1.33E-12	n/a	**5.10E-10**
chloromethane	74-87-3									n/a	**0.00E+00**
dichlorodifluoromethane	75-71-8									n/a	**0.00E+00**
di-n-butyl phthalate	84-74-2									n/a	**0.00E+00**
di-n-octyl phthalate	117-84-0									n/a	**0.00E+00**
ethane	74-84-0									n/a	**0.00E+00**
HD	505-60-2	1.26E-10	6.34E-14	2.06E-17	5.16E-17	2.44E-14	4.04E-12	1.10E-13	1.82E-11	n/a	**1.48E-10**
methane	74-82-8									n/a	**0.00E+00**
naphthalene	91-20-3	6.02E-12								n/a	**6.02E-12**
propene	115-07-1									n/a	**0.00E+00**
toluene	108-88-3									n/a	**0.00E+00**
trichlorofluoromethane	75-69-4									n/a	**0.00E+00**
xylenes	1330-20-7									n/a	**0.00E+00**
1,2,3,4,6,7,8-HpCDD	35822-46-9									n/a	
1,2,3,4,6,7,8,9-OCDD	3268-87-9									n/a	
1,2,3,4,6,7,8-HpCDF	67562-39-4									n/a	
1,2,3,4,6,7,8,9-OCDF	39001-02-0									n/a	
Total PCDDs and PCDFs	NA	4.06E-14	5.67E-16	5.92E-16	4.95E-15	1.07E-17	1.49E-12	8.23E-10	3.55E-13	n/a	**8.25E-10**
ammonia	7664-41-7									n/a	**0.00E+00**
aluminum	7429-90-5									n/a	**0.00E+00**
antimony	7440-36-0									n/a	**0.00E+00**
barium	7440-39-3									n/a	**0.00E+00**
beryllium	7440-41-7	3.04E-12								n/a	**3.04E-12**
cadmium	7440-43-9	2.46E-11								n/a	**2.46E-11**
chlorine	7782-50-5									n/a	**0.00E+00**
chromium (3+)	7440-47-3									n/a	**0.00E+00**
chromium (6+)	18540-29-9	2.52E-10	2.16E-16	5.70E-20	2.58E-18	2.87E-16	1.08E-10	4.33E-11	4.71E-14	n/a	**4.03E-10**
cobalt	7440-48-4									n/a	**0.00E+00**
copper	7440-50-8									n/a	**0.00E+00**
hydrogen chloride	7647-01-0									n/a	**0.00E+00**
iron	7439-89-6									n/a	**0.00E+00**
lead	7439-92-1	1.70E-13	4.55E-19	1.65E-20	2.24E-18	3.68E-18	1.23E-12	6.48E-14	1.70E-17	n/a	**1.46E-12**
manganese	7439-96-5									n/a	**0.00E+00**
total mercury	NA									n/a	**0.00E+00**
mercuric chloride	7487-94-7									n/a	**0.00E+00**
methyl mercury	22967-92-6									n/a	**0.00E+00**
elemental mercury	7439-97-6									n/a	**0.00E+00**
nickel	7440-02-0	2.27E-12								n/a	**2.27E-12**
selenium	7782-49-2									n/a	**0.00E+00**
silver	7440-22-4									n/a	**0.00E+00**
vanadium	7440-62-2									n/a	**0.00E+00**
zinc	7440-66-6									n/a	**0.00E+00**
Total Pathway Risk	**All Chemicals**	**4.97E-10**	**2.42E-13**	**1.02E-15**	**5.57E-15**	**5.28E-14**	**1.49E-10**	**1.35E-09**	**3.14E-11**	**0.00E+00**	**2.02E-09**

RISK AND HAZARD BY PATHWAY FOR SUBSISTENCE FISHER EXPOSURE SCENARIOS

NONCARCINOGENIC EFFECTS: Adult Subsistence Fisher Exposure Scenario											
COPC	CAS Number	Hazard from Inhalation	Hazard from Dermal Water Contact	Hazard from Dermal Soil Contact	Hazard from Incidental Soil Ingestion	Hazard from Incidental Surface Water Ingestion	Hazard from Ingestion of Produce	Hazard from Ingestion of Terrestrial Animal Products	Hazard from Ingestion of Fish	Hazard from Ingestion of Breast Milk	Total Hazard from Individual Chemical
1,4-dioxane	123-91-1	2.23E-09	5.67E-13	2.31E-14	5.80E-14	3.76E-12	4.47E-08	3.09E-13	6.16E-10	n/a	**4.76E-08**
2-butanone	78-93-3	2.62E-09	1.35E-13	4.98E-14	1.25E-13	3.19E-13	8.80E-09	2.64E-12	5.23E-11	n/a	**1.15E-08**
2-ethyl 1,3-butadiene	3404-63-5									n/a	**0.00E+00**
acetone	67-64-1	5.86E-08	7.71E-13	1.38E-13	3.46E-13	3.44E-12	4.44E-08	1.99E-12	5.64E-10	n/a	**1.03E-07**
benzene	71-43-2	4.74E-06	1.80E-09	3.29E-13	8.25E-13	2.78E-10	8.52E-08	1.65E-10	1.19E-07	n/a	**4.95E-06**
bis(2-ethylhexyl)-phthalate	117-81-7		6.85E-11	1.98E-11	2.73E-11	1.29E-12	2.51E-07	4.00E-06	1.20E-08	n/a	**4.26E-06**
chloromethane	74-87-3	1.54E-08	6.56E-13	1.10E-16	2.76E-16	4.70E-13	5.10E-11	2.26E-14	7.71E-11	n/a	**1.55E-08**
dichlorodifluoromethane	75-71-8	1.62E-08	2.79E-13	2.11E-16	1.39E-15	6.31E-14	4.33E-11	2.29E-11	3.01E-11	n/a	**1.63E-08**
di-n-butyl phthalate	84-74-2		1.31E-11	2.64E-12	1.87E-12	2.02E-13	1.19E-09	6.50E-06	1.89E-08	n/a	**6.52E-06**
di-n-octyl phthalate	117-84-0									n/a	**0.00E+00**
ethane	74-84-0									n/a	**0.00E+00**
HD	505-60-2	2.09E-05	2.75E-09	5.34E-12	1.34E-11	1.06E-09	3.57E-07	7.02E-09	7.86E-07	n/a	**2.21E-05**
methane	74-82-8									n/a	**0.00E+00**
naphthalene	91-20-3	8.17E-07	2.92E-11	2.39E-11	6.00E-11	1.30E-12	1.71E-07	1.09E-08	4.69E-09	n/a	**1.00E-06**
propene	115-07-1	4.56E-08								n/a	**4.56E-08**
toluene	108-88-3	1.10E-08	7.39E-11	1.60E-14	4.02E-14	5.50E-12	3.76E-09	8.83E-12	6.83E-09	n/a	**2.17E-08**
trichlorofluoromethane	75-69-4	1.04E-09	1.28E-13	1.53E-18	6.55E-18	1.90E-14	6.51E-13	1.30E-12	1.66E-11	n/a	**1.06E-09**
xylenes	1330-20-7	8.32E-09	7.66E-13	1.08E-15	2.71E-15	3.32E-14	5.91E-11	5.32E-13	9.33E-11	n/a	**8.47E-09**
1,2,3,4,6,7,8-HpCDD	35822-46-9									n/a	
1,2,3,4,6,7,8,9-OCDD	3268-87-9									n/a	
1,2,3,4,6,7,8-HpCDF	67562-39-4									n/a	
1,2,3,4,6,7,8,9-OCDF	39001-02-0									n/a	
Total PCDDs and PCDFs	NA	3.74E-10	2.13E-11	2.44E-11	2.04E-10	4.01E-13	3.92E-08	2.15E-05	1.34E-08	n/a	**2.16E-05**
ammonia	7664-41-7	1.61E-08								n/a	**1.61E-08**
aluminum	7429-90-5	8.02E-07	1.60E-14	1.07E-17	7.29E-16	2.31E-14	4.71E-15	5.72E-16	3.79E-12	n/a	**8.02E-07**
antimony	7440-36-0		9.07E-13	7.44E-15	4.39E-13	2.42E-12	8.04E-07	3.36E-08	5.02E-09	n/a	**8.42E-07**
barium	7440-39-3	7.54E-08	3.66E-16	2.94E-17	1.63E-15	9.74E-16	3.22E-10	2.16E-11	3.20E-11	n/a	**7.57E-08**
beryllium	7440-41-7	8.87E-07	1.71E-14	1.11E-15	2.42E-13	4.59E-14	1.51E-08	3.58E-10	1.46E-10	n/a	**9.02E-07**
cadmium	7440-43-9	1.91E-05	7.36E-13	1.90E-15	4.77E-13	1.96E-12	6.52E-07	2.68E-09	9.23E-08	n/a	**1.98E-05**
chlorine	7782-50-5	1.34E-04	1.39E-12	1.17E-14	3.93E-13	1.60E-12	3.05E-08	2.85E-11	2.63E-10	n/a	**1.34E-04**
chromium (3+)	7440-47-3		6.71E-16	1.06E-18	4.81E-17	8.94E-16	3.35E-10	1.35E-10	1.47E-13	n/a	**4.70E-10**
chromium (6+)	18540-29-9	2.94E-06	3.36E-13	5.32E-16	2.40E-14	4.47E-13	1.67E-07	6.74E-08	7.33E-11	n/a	**3.17E-06**
cobalt	7440-48-4	2.77E-07	3.95E-13	1.61E-15	1.30E-13	1.00E-12	3.78E-07	3.16E-07	1.64E-10	n/a	**9.71E-07**
copper	7440-50-8		1.40E-13	5.88E-15	4.81E-13	3.75E-13	1.40E-07	7.10E-08	6.13E-11	n/a	**2.11E-07**
hydrogen chloride	7647-01-0	3.23E-06								n/a	**3.23E-06**
iron	7439-89-6		1.65E-13	3.55E-16	1.29E-13	1.84E-12	7.03E-07	3.63E-07	3.02E-10	n/a	**1.07E-06**
lead	7439-92-1									n/a	**0.00E+00**
manganese	7439-96-5	2.93E-04	1.74E-13	9.60E-16	8.44E-14	4.65E-13	1.78E-07	1.31E-08	7.62E-11	n/a	**2.93E-04**
total mercury	NA									n/a	**0.00E+00**
mercuric chloride	7487-94-7	1.74E-07	1.04E-13	4.54E-12	1.80E-10	0.00E+00	4.43E-08	1.39E-08	0.00E+00	n/a	**2.33E-07**
methyl mercury	22967-92-6		6.09E-15	2.63E-14	1.05E-11	0.00E+00	2.25E-08	1.59E-09	5.16E-05	n/a	**5.16E-05**
elemental mercury	7439-97-6	0.00E+00								n/a	**0.00E+00**
nickel	7440-02-0	1.47E-06	2.55E-14	2.09E-16	8.91E-15	3.40E-14	1.13E-08	3.65E-09	1.37E-10	n/a	**1.49E-06**
selenium	7782-49-2	2.63E-08	2.03E-13	3.83E-16	2.81E-14	5.40E-13	1.79E-07	2.18E-07	3.62E-09	n/a	**4.27E-07**
silver	7440-22-4		1.06E-14	1.54E-17	1.61E-15	4.72E-14	1.57E-08	5.83E-08	2.15E-10	n/a	**7.42E-08**
vanadium	7440-62-2	4.92E-06	1.66E-13	1.32E-14	1.21E-12	4.47E-13	1.75E-07	1.09E-08	7.27E-11	n/a	**5.11E-06**
zinc	7440-66-6		3.21E-14	2.66E-16	3.57E-14	1.43E-13	4.75E-08	3.85E-10	1.53E-08	n/a	**6.31E-08**
Total Pathway Hazard	**All Chemicals**	**4.87E-04**	**4.76E-09**	**8.14E-11**	**5.02E-10**	**1.36E-09**	**4.57E-06**	**3.32E-05**	**5.27E-05**	**0.00E+00**	**5.78E-04**

RISK AND HAZARD BY PATHWAY FOR SUBSISTENCE FISHER EXPOSURE SCENARIOS

CARCINOGENIC EFFECTS: Child Subsistence Fisher Exposure Scenario											
COPC	CAS Number	Risk from Inhalation	Risk from Dermal Water Contact	Risk from Dermal Soil Contact	Risk from Incidental Soil Ingestion	Risk from Incidental Surface Water Ingestion	Risk from Ingestion of Produce	Risk from Ingestion of Terrestrial Animal Products	Risk from Ingestion of Fish	Risk from Ingestion of Breast Milk	Total Risk from Individual Chemical
1,4-dioxane	123-91-1	1.03E-11	7.62E-17	1.19E-17	4.25E-17	1.38E-15	6.91E-12	7.51E-17	1.18E-13	n/a	**1.74E-11**
2-butanone	78-93-3									n/a	**0.00E+00**
2-ethyl 1,3-butadiene	3404-63-5									n/a	**0.00E+00**
acetone	67-64-1									n/a	**0.00E+00**
benzene	71-43-2	2.20E-10	4.85E-14	3.39E-17	1.21E-16	2.04E-14	2.76E-12	8.00E-15	4.57E-12	n/a	**2.27E-10**
bis(2-ethylhexyl)-phthalate	117-81-7	1.38E-12	2.34E-15	2.55E-15	5.01E-15	1.20E-16	1.72E-11	3.13E-10	5.84E-13	n/a	**3.32E-10**
chloromethane	74-87-3									n/a	**0.00E+00**
dichlorodifluoromethane	75-71-8									n/a	**0.00E+00**
di-n-butyl phthalate	84-74-2									n/a	**0.00E+00**
di-n-octyl phthalate	117-84-0									n/a	**0.00E+00**
ethane	74-84-0									n/a	**0.00E+00**
HD	505-60-2	3.51E-10	1.81E-14	1.35E-16	4.81E-16	1.90E-14	4.01E-12	8.36E-14	7.39E-12	n/a	**3.63E-10**
methane	74-82-8									n/a	**0.00E+00**
naphthalene	91-20-3	1.69E-11								n/a	**1.69E-11**
propene	115-07-1									n/a	**0.00E+00**
toluene	108-88-3									n/a	**0.00E+00**
trichlorofluoromethane	75-69-4									n/a	**0.00E+00**
xylenes	1330-20-7									n/a	**0.00E+00**
1,2,3,4,6,7,8-HpCDD	35822-46-9									n/a	
1,2,3,4,6,7,8,9-OCDD	3268-87-9									n/a	
1,2,3,4,6,7,8-HpCDF	67562-39-4									n/a	
1,2,3,4,6,7,8,9-OCDF	39001-02-0									n/a	
Total PCDDs and PCDFs	NA	1.14E-13	1.42E-16	5.37E-16	6.39E-15	7.26E-18	8.34E-13	4.69E-10	1.27E-13	n/a	**4.70E-10**
ammonia	7664-41-7									n/a	**0.00E+00**
aluminum	7429-90-5									n/a	**0.00E+00**
antimony	7440-36-0									n/a	**0.00E+00**
barium	7440-39-3									n/a	**0.00E+00**
beryllium	7440-41-7	8.51E-12								n/a	**8.51E-12**
cadmium	7440-43-9	6.88E-11								n/a	**6.88E-11**
chlorine	7782-50-5									n/a	**0.00E+00**
chromium (3+)	7440-47-3									n/a	**0.00E+00**
chromium (6+)	18540-29-9	7.06E-10	6.15E-17	3.74E-19	2.40E-17	2.24E-16	6.13E-11	2.35E-11	1.92E-14	n/a	**7.91E-10**
cobalt	7440-48-4									n/a	**0.00E+00**
copper	7440-50-8									n/a	**0.00E+00**
hydrogen chloride	7647-01-0									n/a	**0.00E+00**
iron	7439-89-6									n/a	**0.00E+00**
lead	7439-92-1	4.75E-13	1.31E-19	1.08E-19	2.09E-17	2.88E-18	7.02E-13	4.02E-14	6.99E-18	n/a	**1.22E-12**
manganese	7439-96-5									n/a	**0.00E+00**
total mercury	NA									n/a	**0.00E+00**
mercuric chloride	7487-94-7									n/a	**0.00E+00**
methyl mercury	22967-92-6									n/a	**0.00E+00**
elemental mercury	7439-97-6									n/a	**0.00E+00**
nickel	7440-02-0	6.35E-12								n/a	**6.35E-12**
selenium	7782-49-2									n/a	**0.00E+00**
silver	7440-22-4									n/a	**0.00E+00**
vanadium	7440-62-2									n/a	**0.00E+00**
zinc	7440-66-6									n/a	**0.00E+00**
Total Pathway Risk	**All Chemicals**	**1.39E-09**	**6.92E-14**	**3.27E-15**	**1.21E-14**	**4.11E-14**	**9.37E-11**	**8.06E-10**	**1.28E-11**	**0.00E+00**	**2.30E-09**

RISK AND HAZARD BY PATHWAY FOR SUBSISTENCE FISHER EXPOSURE SCENARIOS

NONCARCINOGENIC EFFECTS: Child Subsistence Fisher Exposure Scenario											
COPC	CAS Number	Hazard from Inhalation	Hazard from Dermal Water Contact	Hazard from Dermal Soil Contact	Hazard from Incidental Soil Ingestion	Hazard from Incidental Surface Water Ingestion	Hazard from Ingestion of Produce	Hazard from Ingestion of Terrestrial Animal Products	Hazard from Ingestion of Fish	Hazard from Ingestion of Breast Milk	Total Hazard from Individual Chemical
1,4-dioxane	123-91-1	6.24E-09	9.70E-13	1.51E-13	5.41E-13	1.75E-11	8.80E-08	9.56E-13	1.51E-09	n/a	**9.58E-08**
2-butanone	78-93-3	7.35E-09	2.31E-13	3.26E-13	1.17E-12	1.49E-12	2.44E-08	8.17E-12	1.28E-10	n/a	**3.18E-08**
2-ethyl 1,3-butadiene	3404-63-5									n/a	**0.00E+00**
acetone	67-64-1	1.64E-07	1.32E-12	9.04E-13	3.23E-12	1.61E-11	1.05E-07	6.16E-12	1.38E-09	n/a	**2.71E-07**
benzene	71-43-2	1.33E-05	3.09E-09	2.16E-12	7.70E-12	1.30E-09	1.76E-07	5.09E-10	2.91E-07	n/a	**1.37E-05**
bis(2-ethylhexyl)-phthalate	117-81-7		1.17E-10	1.30E-10	2.55E-10	6.00E-12	8.59E-07	1.57E-05	2.93E-08	n/a	**1.65E-05**
chloromethane	74-87-3	4.30E-08	1.12E-12	7.21E-16	2.57E-15	2.19E-12	1.13E-10	7.01E-14	1.88E-10	n/a	**4.33E-08**
dichlorodifluoromethane	75-71-8	4.54E-08	4.78E-13	1.38E-15	1.30E-14	2.94E-13	1.04E-10	4.97E-11	7.35E-11	n/a	**4.56E-08**
di-n-butyl phthalate	84-74-2		2.23E-11	1.73E-11	1.74E-11	9.43E-13	3.97E-09	2.54E-05	4.61E-08	n/a	**2.55E-05**
di-n-octyl phthalate	117-84-0									n/a	**0.00E+00**
ethane	74-84-0									n/a	**0.00E+00**
HD	505-60-2	5.86E-05	4.70E-09	3.50E-11	1.25E-10	4.94E-09	1.04E-06	2.17E-08	1.92E-06	n/a	**6.16E-05**
methane	74-82-8									n/a	**0.00E+00**
naphthalene	91-20-3	2.29E-06	4.99E-11	1.57E-10	5.60E-10	6.09E-12	5.36E-07	3.34E-08	1.15E-08	n/a	**2.87E-06**
propene	115-07-1	1.28E-07								n/a	**1.28E-07**
toluene	108-88-3	3.08E-08	1.26E-10	1.05E-13	3.75E-13	2.57E-11	7.43E-09	2.73E-11	1.67E-08	n/a	**5.51E-08**
trichlorofluoromethane	75-69-4	2.91E-09	2.19E-13	1.00E-17	6.11E-17	8.86E-14	1.30E-12	4.12E-12	4.04E-11	n/a	**2.95E-09**
xylenes	1330-20-7	2.33E-08	1.31E-12	7.08E-15	2.53E-14	1.55E-13	1.24E-10	1.64E-12	2.28E-10	n/a	**2.36E-08**
1,2,3,4,6,7,8-HpCDD	35822-46-9									n/a	
1,2,3,4,6,7,8,9-OCDD	3268-87-9									n/a	
1,2,3,4,6,7,8-HpCDF	67562-39-4									n/a	
1,2,3,4,6,7,8,9-OCDF	39001-02-0									n/a	
Total PCDDs and PCDFs	NA	1.05E-09	3.65E-11	1.60E-10	1.91E-09	1.87E-12	1.32E-07	7.38E-05	3.26E-08	n/a	**7.40E-05**
ammonia	7664-41-7	4.52E-08								n/a	**4.52E-08**
aluminum	7429-90-5	2.25E-06	2.74E-14	7.04E-17	6.81E-15	1.08E-13	1.47E-14	1.40E-15	9.25E-12	n/a	**2.25E-06**
antimony	7440-36-0		1.55E-12	4.87E-14	4.10E-12	1.13E-11	2.75E-06	8.88E-08	1.23E-08	n/a	**2.85E-06**
barium	7440-39-3	2.11E-07	6.26E-16	1.92E-16	1.52E-14	4.55E-15	1.10E-09	8.51E-11	7.82E-11	n/a	**2.12E-07**
beryllium	7440-41-7	2.48E-06	2.92E-14	7.30E-15	2.26E-12	2.14E-13	5.17E-08	5.60E-10	3.58E-10	n/a	**2.54E-06**
cadmium	7440-43-9	5.34E-05	1.26E-12	1.25E-14	4.45E-12	9.15E-12	2.23E-06	6.12E-09	2.25E-07	n/a	**5.59E-05**
chlorine	7782-50-5	3.75E-04	2.38E-12	7.69E-14	3.67E-12	7.48E-12	8.20E-08	8.83E-11	6.42E-10	n/a	**3.75E-04**
chromium (3+)	7440-47-3		1.15E-15	6.97E-18	4.49E-16	4.17E-15	1.14E-09	4.39E-10	3.58E-13	n/a	**1.58E-09**
chromium (6+)	18540-29-9	8.23E-06	5.74E-13	3.49E-15	2.24E-13	2.09E-12	5.72E-07	2.19E-07	1.79E-10	n/a	**9.02E-06**
cobalt	7440-48-4	7.74E-07	6.75E-13	1.05E-14	1.21E-12	4.67E-12	1.29E-06	8.35E-07	4.01E-10	n/a	**2.90E-06**
copper	7440-50-8		2.40E-13	3.85E-14	4.49E-12	1.75E-12	4.80E-07	2.06E-07	1.50E-10	n/a	**6.86E-07**
hydrogen chloride	7647-01-0	9.04E-06								n/a	**9.04E-06**
iron	7439-89-6		2.83E-13	2.33E-15	1.21E-12	8.58E-12	2.41E-06	6.42E-07	7.37E-10	n/a	**3.05E-06**
lead	7439-92-1									n/a	**0.00E+00**
manganese	7439-96-5	8.19E-04	2.98E-13	6.29E-15	7.88E-13	2.17E-12	6.10E-07	4.89E-08	1.86E-10	n/a	**8.20E-04**
total mercury	NA									n/a	**0.00E+00**
mercuric chloride	7487-94-7	4.89E-07	1.77E-13	2.98E-11	1.68E-09	0.00E+00	1.39E-07	4.80E-08	0.00E+00	n/a	**6.77E-07**
methyl mercury	22967-92-6		1.04E-14	1.72E-13	9.80E-11	0.00E+00	7.48E-08	5.53E-09	1.26E-04	n/a	**1.26E-04**
elemental mercury	7439-97-6	0.00E+00								n/a	**0.00E+00**
nickel	7440-02-0	4.12E-06	4.36E-14	1.37E-15	8.31E-14	1.58E-13	3.86E-08	1.08E-08	3.36E-10	n/a	**4.17E-06**
selenium	7782-49-2	7.36E-08	3.47E-13	2.51E-15	2.62E-13	2.52E-12	6.13E-07	8.29E-07	8.83E-09	n/a	**1.52E-06**
silver	7440-22-4		1.82E-14	1.01E-16	1.51E-14	2.20E-13	5.37E-08	2.34E-07	5.25E-10	n/a	**2.88E-07**
vanadium	7440-62-2	1.38E-05	2.84E-13	8.67E-14	1.13E-11	2.09E-12	5.97E-07	1.85E-08	1.78E-10	n/a	**1.44E-05**
zinc	7440-66-6		5.50E-14	1.74E-15	3.33E-13	6.66E-13	1.62E-07	1.30E-09	3.73E-08	n/a	**2.01E-07**
Total Pathway Hazard	**All Chemicals**	**1.36E-03**	**8.15E-09**	**5.33E-10**	**4.69E-09**	**6.37E-09**	**1.51E-05**	**1.18E-04**	**1.29E-04**	**0.00E+00**	**1.63E-03**

RISK AND HAZARD BY PATHWAY FOR SUBSISTENCE FISHER EXPOSURE SCENARIOS

CARCINOGENIC EFFECTS: Infant Subsistence Fisher Exposure Scenario											
COPC	CAS Number	Risk from Inhalation	Risk from Dermal Water Contact	Risk from Dermal Soil Contact	Risk from Incidental Soil Ingestion	Risk from Incidental Surface Water Ingestion	Risk from Ingestion of Produce	Risk from Ingestion of Terrestrial Animal Products	Risk from Ingestion of Fish	Risk from Ingestion of Breast Milk	Total Risk from Individual Chemical
1,4-dioxane	123-91-1	1.16E-12	n/a	3.35E-18	1.27E-17	n/a	1.71E-12	4.42E-17	3.55E-14		**2.91E-12**
2-butanone	78-93-3		n/a			n/a					**0.00E+00**
2-ethyl 1,3-butadiene	3404-63-5		n/a			n/a					**0.00E+00**
acetone	67-64-1		n/a			n/a					**0.00E+00**
benzene	71-43-2	2.48E-11	n/a	9.53E-18	3.63E-17	n/a	6.69E-13	4.70E-15	1.37E-12	1.52E-10	**1.78E-10**
bis(2-ethylhexyl)-phthalate	117-81-7	1.55E-13	n/a	7.17E-16	1.50E-15	n/a	4.36E-12	2.16E-10	1.75E-13		**2.21E-10**
chloromethane	74-87-3		n/a			n/a					**0.00E+00**
dichlorodifluoromethane	75-71-8		n/a			n/a					**0.00E+00**
di-n-butyl phthalate	84-74-2		n/a			n/a					**0.00E+00**
di-n-octyl phthalate	117-84-0		n/a			n/a					**0.00E+00**
ethane	74-84-0		n/a			n/a					**0.00E+00**
HD	505-60-2	3.95E-11	n/a	3.79E-17	1.44E-16	n/a	9.44E-13	4.97E-14	2.22E-12		**4.27E-11**
methane	74-82-8		n/a			n/a					**0.00E+00**
naphthalene	91-20-3	1.90E-12	n/a			n/a					**1.90E-12**
propene	115-07-1		n/a			n/a					**0.00E+00**
toluene	108-88-3		n/a			n/a					**0.00E+00**
trichlorofluoromethane	75-69-4		n/a			n/a					**0.00E+00**
xylenes	1330-20-7		n/a			n/a					**0.00E+00**
1,2,3,4,6,7,8-HpCDD	35822-46-9		n/a			n/a					
1,2,3,4,6,7,8,9-OCDD	3268-87-9		n/a			n/a					
1,2,3,4,6,7,8-HpCDF	67562-39-4		n/a			n/a					
1,2,3,4,6,7,8,9-OCDF	39001-02-0		n/a			n/a					
Total PCDDs and PCDFs	NA	1.28E-14	n/a	1.51E-16	1.92E-15	n/a	2.12E-13	3.02E-10	3.80E-14	2.05E-08	**2.08E-08**
ammonia	7664-41-7		n/a			n/a					**0.00E+00**
aluminum	7429-90-5		n/a			n/a					**0.00E+00**
antimony	7440-36-0		n/a			n/a					**0.00E+00**
barium	7440-39-3		n/a			n/a					**0.00E+00**
beryllium	7440-41-7	9.57E-13	n/a			n/a					**9.57E-13**
cadmium	7440-43-9	7.74E-12	n/a			n/a					**7.74E-12**
chlorine	7782-50-5		n/a			n/a					**0.00E+00**
chromium (3+)	7440-47-3		n/a			n/a					**0.00E+00**
chromium (6+)	18540-29-9	7.94E-11	n/a	1.05E-19	7.21E-18	n/a	1.56E-11	1.47E-11	5.76E-15	2.62E-11	**1.36E-10**
cobalt	7440-48-4		n/a			n/a					**0.00E+00**
copper	7440-50-8		n/a			n/a					**0.00E+00**
hydrogen chloride	7647-01-0		n/a			n/a					**0.00E+00**
iron	7439-89-6		n/a			n/a					**0.00E+00**
lead	7439-92-1	5.34E-14	n/a	3.03E-20	6.26E-18	n/a	1.79E-13	2.71E-14	2.10E-18	2.32E-13	**4.92E-13**
manganese	7439-96-5		n/a			n/a					**0.00E+00**
total mercury	NA		n/a			n/a					**0.00E+00**
mercuric chloride	7487-94-7		n/a			n/a					**0.00E+00**
methyl mercury	22967-92-6		n/a			n/a					**0.00E+00**
elemental mercury	7439-97-6		n/a			n/a					**0.00E+00**
nickel	7440-02-0	7.14E-13	n/a			n/a					**7.14E-13**
selenium	7782-49-2		n/a			n/a					**0.00E+00**
silver	7440-22-4		n/a			n/a					**0.00E+00**
vanadium	7440-62-2		n/a			n/a					**0.00E+00**
zinc	7440-66-6		n/a			n/a					**0.00E+00**
Total Pathway Risk	**All Chemicals**	**1.56E-10**	**0.00E+00**	**9.19E-16**	**3.63E-15**	**0.00E+00**	**2.37E-11**	**5.34E-10**	**3.84E-12**	**2.07E-08**	**2.14E-08**

RISK AND HAZARD BY PATHWAY FOR SUBSISTENCE FISHER EXPOSURE SCENARIOS

NONCARCINOGENIC EFFECTS: Infant Subsistence Fisher Exposure Scenario											
COPC	CAS Number	Hazard from Inhalation	Hazard from Dermal Water Contact	Hazard from Dermal Soil Contact	Hazard from Incidental Soil Ingestion	Hazard from Incidental Surface Water Ingestion	Hazard from Ingestion of Produce	Hazard from Ingestion of Terrestrial Animal Products	Hazard from Ingestion of Fish	Hazard from Ingestion of Breast Milk	Total Hazard from Individual Chemical
1,4-dioxane	123-91-1	3.51E-09	n/a	2.13E-13	8.11E-13	n/a	1.09E-07	2.81E-12	2.26E-09		**1.15E-07**
2-butanone	78-93-3	4.13E-09	n/a	4.59E-13	1.75E-12	n/a	2.60E-08	2.40E-11	1.92E-10	6.96E-08	**9.99E-08**
2-ethyl 1,3-butadiene	3404-63-5		n/a			n/a					**0.00E+00**
acetone	67-64-1	9.22E-08	n/a	1.27E-12	4.84E-12	n/a	1.20E-07	1.81E-11	2.07E-09	4.80E-07	**6.94E-07**
benzene	71-43-2	7.46E-06	n/a	3.03E-12	1.16E-11	n/a	2.13E-07	1.50E-09	4.36E-07	4.83E-05	**5.64E-05**
bis(2-ethylhexyl)-phthalate	117-81-7		n/a	1.83E-10	3.83E-10	n/a	1.09E-06	5.41E-05	4.39E-08		**5.53E-05**
chloromethane	74-87-3	2.42E-08	n/a	1.01E-15	3.86E-15	n/a	1.33E-10	2.06E-13	2.82E-10	7.19E-08	**9.65E-08**
dichlorodifluoromethane	75-71-8	2.55E-08	n/a	1.95E-15	1.95E-14	n/a	1.18E-10	3.67E-11	1.10E-10	1.12E-08	**3.70E-08**
di-n-butyl phthalate	84-74-2		n/a	2.44E-11	2.61E-11	n/a	4.41E-09	8.80E-05	6.91E-08		**8.80E-05**
di-n-octyl phthalate	117-84-0		n/a			n/a					**0.00E+00**
ethane	74-84-0		n/a			n/a					**0.00E+00**
HD	505-60-2	3.29E-05	n/a	4.92E-11	1.88E-10	n/a	1.23E-06	6.46E-08	2.88E-06		**3.71E-05**
methane	74-82-8		n/a			n/a					**0.00E+00**
naphthalene	91-20-3	1.29E-06	n/a	2.21E-10	8.40E-10	n/a	5.46E-07	9.72E-08	1.72E-08	1.03E-06	**2.98E-06**
propene	115-07-1	7.18E-08	n/a			n/a					**7.18E-08**
toluene	108-88-3	1.73E-08	n/a	1.48E-13	5.63E-13	n/a	9.19E-09	8.00E-11	2.50E-08	9.44E-07	**9.96E-07**
trichlorofluoromethane	75-69-4	1.64E-09	n/a	1.41E-17	9.17E-17	n/a	1.60E-12	1.26E-11	6.06E-11	3.30E-09	**5.01E-09**
xylenes	1330-20-7	1.31E-08	n/a	9.95E-15	3.79E-14	n/a	1.49E-10	4.78E-12	3.42E-10	6.31E-09	**1.99E-08**
1,2,3,4,6,7,8-HpCDD	35822-46-9		n/a			n/a					
1,2,3,4,6,7,8,9-OCDD	3268-87-9		n/a			n/a					
1,2,3,4,6,7,8-HpCDF	67562-39-4		n/a			n/a					
1,2,3,4,6,7,8,9-OCDF	39001-02-0		n/a			n/a					
Total PCDDs and PCDFs	NA	5.89E-10	n/a	2.25E-10	2.86E-09	n/a	1.67E-07	2.38E-04	4.89E-08	1.58E-02	**1.60E-02**
ammonia	7664-41-7	2.54E-08	n/a			n/a					**2.54E-08**
aluminum	7429-90-5	1.26E-06	n/a	9.90E-17	1.02E-14	n/a	1.50E-14	3.45E-15	1.39E-11	5.34E-09	**1.27E-06**
antimony	7440-36-0		n/a	6.85E-14	6.15E-12	n/a	3.51E-06	2.36E-07	1.84E-08	4.54E-06	**8.30E-06**
barium	7440-39-3	1.19E-07	n/a	2.71E-16	2.29E-14	n/a	1.40E-09	2.95E-10	1.17E-10	1.99E-09	**1.22E-07**
beryllium	7440-41-7	1.40E-06	n/a	1.03E-14	3.39E-12	n/a	6.60E-08	5.25E-10	5.37E-10	8.44E-08	**1.55E-06**
cadmium	7440-43-9	3.01E-05	n/a	1.75E-14	6.68E-12	n/a	2.85E-06	1.37E-08	3.38E-07	3.98E-06	**3.72E-05**
chlorine	7782-50-5	2.11E-04	n/a	1.08E-13	5.50E-12	n/a	8.86E-08	2.60E-10	9.63E-10	4.00E-07	**2.12E-04**
chromium (3+)	7440-47-3		n/a	9.80E-18	6.73E-16	n/a	1.46E-09	1.37E-09	5.37E-13	2.44E-09	**5.27E-09**
chromium (6+)	18540-29-9	4.63E-06	n/a	4.90E-15	3.37E-13	n/a	7.30E-07	6.85E-07	2.69E-10	1.22E-06	**7.26E-06**
cobalt	7440-48-4	4.36E-07	n/a	1.48E-14	1.82E-12	n/a	1.65E-06	2.22E-06	6.01E-10	3.52E-06	**7.82E-06**
copper	7440-50-8		n/a	5.42E-14	6.73E-12	n/a	6.11E-07	5.91E-07	2.25E-10	1.09E-06	**2.29E-06**
hydrogen chloride	7647-01-0	5.08E-06	n/a			n/a					**5.08E-06**
iron	7439-89-6		n/a	3.27E-15	1.81E-12	n/a	3.07E-06	9.13E-07	1.11E-09	5.50E-06	**9.48E-06**
lead	7439-92-1		n/a			n/a					**0.00E+00**
manganese	7439-96-5	4.61E-04	n/a	8.84E-15	1.18E-12	n/a	7.79E-07	1.65E-07	2.79E-10	1.03E-06	**4.63E-04**
total mercury	NA		n/a			n/a					**0.00E+00**
mercuric chloride	7487-94-7	2.75E-07	n/a	4.18E-11	2.52E-09	n/a	1.64E-07	1.55E-07	0.00E+00	2.94E-07	**8.91E-07**
methyl mercury	22967-92-6		n/a	2.42E-13	1.47E-10	n/a	9.39E-08	1.80E-08	1.89E-04	2.40E-04	**4.29E-04**
elemental mercury	7439-97-6	0.00E+00	n/a			n/a					**0.00E+00**
nickel	7440-02-0	2.32E-06	n/a	1.93E-15	1.25E-13	n/a	4.92E-08	3.16E-08	5.03E-10	7.88E-08	**2.48E-06**
selenium	7782-49-2	4.14E-08	n/a	3.53E-15	3.93E-13	n/a	7.83E-07	2.78E-06	1.32E-08	2.00E-06	**5.62E-06**
silver	7440-22-4		n/a	1.42E-16	2.26E-14	n/a	6.85E-08	8.20E-07	7.88E-10	3.57E-07	**1.25E-06**
vanadium	7440-62-2	7.75E-06	n/a	1.22E-13	1.69E-11	n/a	7.62E-07	2.32E-08	2.66E-10	9.97E-07	**9.53E-06**
zinc	7440-66-6		n/a	2.45E-15	5.00E-13	n/a	2.07E-07	4.16E-09	5.59E-08	3.30E-07	**5.97E-07**
Total Pathway Hazard	**All Chemicals**	**7.67E-04**	**0.00E+00**	**7.50E-10**	**7.03E-09**	**0.00E+00**	**1.90E-05**	**3.88E-04**	**1.93E-04**	**1.61E-02**	**1.75E-02**

RISK AND HAZARD BY PATHWAY FOR SUBSISTENCE FISHER EXPOSURE SCENARIOS

CARCINOGENIC EFFECTS: Early Life Exposure - Infant											
COPC	CAS Number	Risk from Inhalation	Risk from Dermal Water Contact	Risk from Dermal Soil Contact	Risk from Incidental Soil Ingestion	Risk from Incidental Surface Water Ingestion	Risk from Ingestion of Produce	Risk from Ingestion of Terrestrial Animal Products	Risk from Ingestion of Fish	Risk from Ingestion of Breast Milk	Total Risk from Individual Chemical
vinyl chloride	75-01-4	0.00E+00	n/a	0.00E+00	0.00E+00	n/a	0.00E+00	0.00E+00	0.00E+00	n/a	**0.00E+00**

CARCINOGENIC EFFECTS: Early Life Exposure - Child											
COPC	CAS Number	Risk from Inhalation	Risk from Dermal Water Contact	Risk from Dermal Soil Contact	Risk from Incidental Soil Ingestion	Risk from Incidental Surface Water Ingestion	Risk from Ingestion of Produce	Risk from Ingestion of Terrestrial Animal Products	Risk from Ingestion of Fish	Risk from Ingestion of Breast Milk	Total Risk from Individual Chemical
vinyl chloride	75-01-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	n/a	**0.00E+00**

RISK AND HAZARD BY PATHWAY FOR SUBSISTENCE FARMER EXPOSURE SCENARIOS

CARCINOGENIC EFFECTS: Adult Subsistence Farmer Exposure Scenario											
COPC	CAS Number	Risk from Inhalation	Risk from Dermal Water Contact	Risk from Dermal Soil Contact	Risk from Incidental Soil Ingestion	Risk from Incidental Surface Water Ingestion	Risk from Ingestion of Produce	Risk from Ingestion of Terrestrial Animal Products	Risk from Ingestion of Fish	Risk from Ingestion of Breast Milk	Total Risk from Individual Chemical
1,4-dioxane	123-91-1	3.70E-12	3.53E-16	1.82E-18	4.55E-18	2.34E-15	8.79E-12	6.09E-17	1.53E-13	n/a	**1.26E-11**
2-butanone	78-93-3									n/a	**0.00E+00**
2-ethyl 1,3-butadiene	3404-63-5									n/a	**0.00E+00**
acetone	67-64-1									n/a	**0.00E+00**
benzene	71-43-2	7.86E-11	2.27E-13	5.17E-18	1.30E-17	3.49E-14	3.41E-12	7.66E-15	5.99E-12	n/a	**8.83E-11**
bis(2-ethylhexyl)-phthalate	117-81-7	4.92E-13	1.01E-14	3.97E-16	5.47E-16	1.90E-16	9.83E-11	1.59E-09	7.06E-13	n/a	**1.69E-09**
chloromethane	74-87-3									n/a	**0.00E+00**
dichlorodifluoromethane	75-71-8									n/a	**0.00E+00**
di-n-butyl phthalate	84-74-2									n/a	**0.00E+00**
di-n-octyl phthalate	117-84-0									n/a	**0.00E+00**
ethane	74-84-0									n/a	**0.00E+00**
HD	505-60-2	1.26E-10	8.45E-14	2.06E-17	5.16E-17	3.26E-14	1.27E-11	3.59E-13	9.68E-12	n/a	**1.48E-10**
methane	74-82-8									n/a	**0.00E+00**
naphthalene	91-20-3	6.02E-12								n/a	**6.02E-12**
propene	115-07-1									n/a	**0.00E+00**
toluene	108-88-3									n/a	**0.00E+00**
trichlorofluoromethane	75-69-4									n/a	**0.00E+00**
xylenes	1330-20-7									n/a	**0.00E+00**
1,2,3,4,6,7,8-HpCDD	35822-46-9									n/a	
1,2,3,4,6,7,8,9-OCDD	3268-87-9									n/a	
1,2,3,4,6,7,8-HpCDF	67562-39-4									n/a	
1,2,3,4,6,7,8,9-OCDF	39001-02-0									n/a	
Total PCDDs and PCDFs	NA	4.06E-14	6.85E-16	6.93E-16	5.79E-15	1.30E-17	4.93E-12	2.73E-09	1.71E-13	n/a	**2.74E-09**
ammonia	7664-41-7									n/a	**0.00E+00**
aluminum	7429-90-5									n/a	**0.00E+00**
antimony	7440-36-0									n/a	**0.00E+00**
barium	7440-39-3									n/a	**0.00E+00**
beryllium	7440-41-7	3.04E-12								n/a	**3.04E-12**
cadmium	7440-43-9	2.46E-11								n/a	**2.46E-11**
chlorine	7782-50-5									n/a	**0.00E+00**
chromium (3+)	7440-47-3									n/a	**0.00E+00**
chromium (6+)	18540-29-9	2.52E-10	2.88E-16	5.70E-20	2.58E-18	3.83E-16	3.59E-10	1.44E-10	2.51E-14	n/a	**7.55E-10**
cobalt	7440-48-4									n/a	**0.00E+00**
copper	7440-50-8									n/a	**0.00E+00**
hydrogen chloride	7647-01-0									n/a	**0.00E+00**
iron	7439-89-6									n/a	**0.00E+00**
lead	7439-92-1	1.70E-13	6.06E-19	1.65E-20	2.24E-18	4.90E-18	4.10E-12	2.16E-13	9.08E-18	n/a	**4.49E-12**
manganese	7439-96-5									n/a	**0.00E+00**
total mercury	NA									n/a	**0.00E+00**
mercuric chloride	7487-94-7									n/a	**0.00E+00**
methyl mercury	22967-92-6									n/a	**0.00E+00**
elemental mercury	7439-97-6									n/a	**0.00E+00**
nickel	7440-02-0	2.27E-12								n/a	**2.27E-12**
selenium	7782-49-2									n/a	**0.00E+00**
silver	7440-22-4									n/a	**0.00E+00**
vanadium	7440-62-2									n/a	**0.00E+00**
zinc	7440-66-6									n/a	**0.00E+00**
Total Pathway Risk	**All Chemicals**	**4.97E-10**	**3.23E-13**	**1.12E-15**	**6.41E-15**	**7.04E-14**	**4.91E-10**	**4.47E-09**	**1.67E-11**	**0.00E+00**	**5.48E-09**

RISK AND HAZARD BY PATHWAY FOR SUBSISTENCE FARMER EXPOSURE SCENARIOS

NONCARCINOGENIC EFFECTS: Adult Subsistence Farmer Exposure Scenario											
COPC	CAS Number	Hazard from Inhalation	Hazard from Dermal Water Contact	Hazard from Dermal Soil Contact	Hazard from Incidental Soil Ingestion	Hazard from Incidental Surface Water Ingestion	Hazard from Ingestion of Produce	Hazard from Ingestion of Terrestrial Animal Products	Hazard from Ingestion of Fish	Hazard from Ingestion of Breast Milk	Total Hazard from Individual Chemical
1,4-dioxane	123-91-1	2.23E-09	5.67E-13	2.31E-14	5.80E-14	3.76E-12	1.12E-07	7.72E-13	2.47E-10	n/a	**1.14E-07**
2-butanone	78-93-3	2.62E-09	1.35E-13	4.98E-14	1.25E-13	3.19E-13	2.20E-08	6.59E-12	2.09E-11	n/a	**2.47E-08**
2-ethyl 1,3-butadiene	3404-63-5									n/a	**0.00E+00**
acetone	67-64-1	5.86E-08	7.71E-13	1.38E-13	3.46E-13	3.44E-12	1.11E-07	4.97E-12	2.26E-10	n/a	**1.70E-07**
benzene	71-43-2	4.74E-06	1.80E-09	3.29E-13	8.25E-13	2.78E-10	2.13E-07	4.11E-10	4.76E-08	n/a	**5.00E-06**
bis(2-ethylhexyl)-phthalate	117-81-7		6.85E-11	1.98E-11	2.73E-11	1.29E-12	6.28E-07	1.00E-05	4.79E-09	n/a	**1.06E-05**
chloromethane	74-87-3	1.54E-08	6.56E-13	1.10E-16	2.76E-16	4.70E-13	1.28E-10	5.66E-14	3.08E-11	n/a	**1.55E-08**
dichlorodifluoromethane	75-71-8	1.62E-08	2.79E-13	2.11E-16	1.39E-15	6.31E-14	1.08E-10	5.73E-11	1.20E-11	n/a	**1.64E-08**
di-n-butyl phthalate	84-74-2		1.31E-11	2.64E-12	1.87E-12	2.02E-13	2.98E-09	1.63E-05	7.54E-09	n/a	**1.63E-05**
di-n-octyl phthalate	117-84-0									n/a	**0.00E+00**
ethane	74-84-0									n/a	**0.00E+00**
HD	505-60-2	2.09E-05	2.75E-09	5.34E-12	1.34E-11	1.06E-09	8.93E-07	1.76E-08	3.14E-07	n/a	**2.21E-05**
methane	74-82-8									n/a	**0.00E+00**
naphthalene	91-20-3	8.17E-07	2.92E-11	2.39E-11	6.00E-11	1.30E-12	4.27E-07	2.72E-08	1.88E-09	n/a	**1.27E-06**
propene	115-07-1	4.56E-08								n/a	**4.56E-08**
toluene	108-88-3	1.10E-08	7.39E-11	1.60E-14	4.02E-14	5.50E-12	9.39E-09	2.21E-11	2.73E-09	n/a	**2.32E-08**
trichlorofluoromethane	75-69-4	1.04E-09	1.28E-13	1.53E-18	6.55E-18	1.90E-14	1.63E-12	3.25E-12	6.62E-12	n/a	**1.05E-09**
xylenes	1330-20-7	8.32E-09	7.66E-13	1.08E-15	2.71E-15	3.32E-14	1.48E-10	1.33E-12	3.73E-11	n/a	**8.50E-09**
1,2,3,4,6,7,8-HpCDD	35822-46-9									n/a	
1,2,3,4,6,7,8,9-OCDD	3268-87-9									n/a	
1,2,3,4,6,7,8-HpCDF	67562-39-4									n/a	
1,2,3,4,6,7,8,9-OCDF	39001-02-0									n/a	
Total PCDDs and PCDFs	NA	3.74E-10	2.13E-11	2.44E-11	2.04E-10	4.01E-13	9.80E-08	5.38E-05	5.34E-09	n/a	**5.40E-05**
ammonia	7664-41-7	1.61E-08								n/a	**1.61E-08**
aluminum	7429-90-5	8.02E-07	1.60E-14	1.07E-17	7.29E-16	2.31E-14	1.18E-14	1.43E-15	1.51E-12	n/a	**8.02E-07**
antimony	7440-36-0		9.07E-13	7.44E-15	4.39E-13	2.42E-12	2.01E-06	8.39E-08	2.01E-09	n/a	**2.10E-06**
barium	7440-39-3	7.54E-08	3.66E-16	2.94E-17	1.63E-15	9.74E-16	8.04E-10	5.41E-11	1.28E-11	n/a	**7.62E-08**
beryllium	7440-41-7	8.87E-07	1.71E-14	1.11E-15	2.42E-13	4.59E-14	3.78E-08	8.96E-10	5.86E-11	n/a	**9.25E-07**
cadmium	7440-43-9	1.91E-05	7.36E-13	1.90E-15	4.77E-13	1.96E-12	1.63E-06	6.69E-09	3.69E-08	n/a	**2.08E-05**
chlorine	7782-50-5	1.34E-04	1.39E-12	1.17E-14	3.93E-13	1.60E-12	7.63E-08	7.12E-11	1.05E-10	n/a	**1.34E-04**
chromium (3+)	7440-47-3		6.71E-16	1.06E-18	4.81E-17	8.94E-16	8.37E-10	3.37E-10	5.87E-14	n/a	**1.17E-09**
chromium (6+)	18540-29-9	2.94E-06	3.36E-13	5.32E-16	2.40E-14	4.47E-13	4.18E-07	1.69E-07	2.93E-11	n/a	**3.53E-06**
cobalt	7440-48-4	2.77E-07	3.95E-13	1.61E-15	1.30E-13	1.00E-12	9.45E-07	7.90E-07	6.57E-11	n/a	**2.01E-06**
copper	7440-50-8		1.40E-13	5.88E-15	4.81E-13	3.75E-13	3.51E-07	1.77E-07	2.45E-11	n/a	**5.28E-07**
hydrogen chloride	7647-01-0	3.23E-06								n/a	**3.23E-06**
iron	7439-89-6		1.65E-13	3.55E-16	1.29E-13	1.84E-12	1.76E-06	9.07E-07	1.21E-10	n/a	**2.67E-06**
lead	7439-92-1									n/a	**0.00E+00**
manganese	7439-96-5	2.93E-04	1.74E-13	9.60E-16	8.44E-14	4.65E-13	4.46E-07	3.27E-08	3.05E-11	n/a	**2.93E-04**
total mercury	NA									n/a	**0.00E+00**
mercuric chloride	7487-94-7	1.74E-07	1.04E-13	4.54E-12	1.80E-10	0.00E+00	1.11E-07	3.47E-08	0.00E+00	n/a	**3.20E-07**
methyl mercury	22967-92-6		6.09E-15	2.63E-14	1.05E-11	0.00E+00	5.61E-08	3.97E-09	2.06E-05	n/a	**2.07E-05**
elemental mercury	7439-97-6	0.00E+00								n/a	**0.00E+00**
nickel	7440-02-0	1.47E-06	2.55E-14	2.09E-16	8.91E-15	3.40E-14	2.82E-08	9.12E-09	5.50E-11	n/a	**1.51E-06**
selenium	7782-49-2	2.63E-08	2.03E-13	3.83E-16	2.81E-14	5.40E-13	4.48E-07	5.45E-07	1.45E-09	n/a	**1.02E-06**
silver	7440-22-4		1.06E-14	1.54E-17	1.61E-15	4.72E-14	3.92E-08	1.46E-07	8.60E-11	n/a	**1.85E-07**
vanadium	7440-62-2	4.92E-06	1.66E-13	1.32E-14	1.21E-12	4.47E-13	4.36E-07	2.73E-08	2.91E-11	n/a	**5.38E-06**
zinc	7440-66-6		3.21E-14	2.66E-16	3.57E-14	1.43E-13	1.19E-07	9.61E-10	6.10E-09	n/a	**1.26E-07**
Total Pathway Hazard	**All Chemicals**	**4.87E-04**	**4.76E-09**	**8.14E-11**	**5.02E-10**	**1.36E-09**	**1.14E-05**	**8.31E-05**	**2.11E-05**	**0.00E+00**	**6.03E-04**

RISK AND HAZARD BY PATHWAY FOR SUBSISTENCE FARMER EXPOSURE SCENARIOS

CARCINOGENIC EFFECTS: Child Subsistence Farmer Exposure Scenario											
COPC	CAS Number	Risk from Inhalation	Risk from Dermal Water Contact	Risk from Dermal Soil Contact	Risk from Incidental Soil Ingestion	Risk from Incidental Surface Water Ingestion	Risk from Ingestion of Produce	Risk from Ingestion of Terrestrial Animal Products	Risk from Ingestion of Fish	Risk from Ingestion of Breast Milk	Total Risk from Individual Chemical
1,4-dioxane	123-91-1	1.03E-11	7.62E-17	1.19E-17	4.25E-17	1.38E-15	1.73E-11	1.88E-16	4.73E-14	n/a	**2.77E-11**
2-butanone	78-93-3									n/a	**0.00E+00**
2-ethyl 1,3-butadiene	3404-63-5									n/a	**0.00E+00**
acetone	67-64-1									n/a	**0.00E+00**
benzene	71-43-2	2.20E-10	4.85E-14	3.39E-17	1.21E-16	2.04E-14	6.90E-12	2.00E-14	1.83E-12	n/a	**2.29E-10**
bis(2-ethylhexyl)-phthalate	117-81-7	1.38E-12	2.34E-15	2.55E-15	5.01E-15	1.20E-16	4.29E-11	7.83E-10	2.34E-13	n/a	**8.27E-10**
chloromethane	74-87-3									n/a	**0.00E+00**
dichlorodifluoromethane	75-71-8									n/a	**0.00E+00**
di-n-butyl phthalate	84-74-2									n/a	**0.00E+00**
di-n-octyl phthalate	117-84-0									n/a	**0.00E+00**
ethane	74-84-0									n/a	**0.00E+00**
HD	505-60-2	3.51E-10	1.81E-14	1.35E-16	4.81E-16	1.90E-14	1.00E-11	2.09E-13	2.96E-12	n/a	**3.65E-10**
methane	74-82-8									n/a	**0.00E+00**
naphthalene	91-20-3	1.69E-11								n/a	**1.69E-11**
propene	115-07-1									n/a	**0.00E+00**
toluene	108-88-3									n/a	**0.00E+00**
trichlorofluoromethane	75-69-4									n/a	**0.00E+00**
xylenes	1330-20-7									n/a	**0.00E+00**
1,2,3,4,6,7,8-HpCDD	35822-46-9									n/a	
1,2,3,4,6,7,8,9-OCDD	3268-87-9									n/a	
1,2,3,4,6,7,8-HpCDF	67562-39-4									n/a	
1,2,3,4,6,7,8,9-OCDF	39001-02-0									n/a	
Total PCDDs and PCDFs	NA	1.14E-13	1.42E-16	5.37E-16	6.39E-15	7.26E-18	2.08E-12	1.17E-09	5.07E-14	n/a	**1.17E-09**
ammonia	7664-41-7									n/a	**0.00E+00**
aluminum	7429-90-5									n/a	**0.00E+00**
antimony	7440-36-0									n/a	**0.00E+00**
barium	7440-39-3									n/a	**0.00E+00**
beryllium	7440-41-7	8.51E-12								n/a	**8.51E-12**
cadmium	7440-43-9	6.88E-11								n/a	**6.88E-11**
chlorine	7782-50-5									n/a	**0.00E+00**
chromium (3+)	7440-47-3									n/a	**0.00E+00**
chromium (6+)	18540-29-9	7.06E-10	6.15E-17	3.74E-19	2.40E-17	2.24E-16	1.53E-10	5.88E-11	7.68E-15	n/a	**9.18E-10**
cobalt	7440-48-4									n/a	**0.00E+00**
copper	7440-50-8									n/a	**0.00E+00**
hydrogen chloride	7647-01-0									n/a	**0.00E+00**
iron	7439-89-6									n/a	**0.00E+00**
lead	7439-92-1	4.75E-13	1.31E-19	1.08E-19	2.09E-17	2.88E-18	1.75E-12	1.01E-13	2.80E-18	n/a	**2.33E-12**
manganese	7439-96-5									n/a	**0.00E+00**
total mercury	NA									n/a	**0.00E+00**
mercuric chloride	7487-94-7									n/a	**0.00E+00**
methyl mercury	22967-92-6									n/a	**0.00E+00**
elemental mercury	7439-97-6									n/a	**0.00E+00**
nickel	7440-02-0	6.35E-12								n/a	**6.35E-12**
selenium	7782-49-2									n/a	**0.00E+00**
silver	7440-22-4									n/a	**0.00E+00**
vanadium	7440-62-2									n/a	**0.00E+00**
zinc	7440-66-6									n/a	**0.00E+00**
Total Pathway Risk	**All Chemicals**	**1.39E-09**	**6.92E-14**	**3.27E-15**	**1.21E-14**	**4.11E-14**	**2.34E-10**	**2.01E-09**	**5.13E-12**	**0.00E+00**	**3.64E-09**

RISK AND HAZARD BY PATHWAY FOR SUBSISTENCE FARMER EXPOSURE SCENARIOS

NONCARCINOGENIC EFFECTS: Child Subsistence Farmer Exposure Scenario											
COPC	CAS Number	Hazard from Inhalation	Hazard from Dermal Water Contact	Hazard from Dermal Soil Contact	Hazard from Incidental Soil Ingestion	Hazard from Incidental Surface Water Ingestion	Hazard from Ingestion of Produce	Hazard from Ingestion of Terrestrial Animal Products	Hazard from Ingestion of Fish	Hazard from Ingestion of Breast Milk	Total Hazard from Individual Chemical
1,4-dioxane	123-91-1	6.24E-09	9.70E-13	1.51E-13	5.41E-13	1.75E-11	2.20E-07	2.39E-12	6.02E-10	n/a	**2.27E-07**
2-butanone	78-93-3	7.35E-09	2.31E-13	3.26E-13	1.17E-12	1.49E-12	6.09E-08	2.04E-11	5.11E-11	n/a	**6.83E-08**
2-ethyl 1,3-butadiene	3404-63-5									n/a	**0.00E+00**
acetone	67-64-1	1.64E-07	1.32E-12	9.04E-13	3.23E-12	1.61E-11	2.63E-07	1.54E-11	5.51E-10	n/a	**4.27E-07**
benzene	71-43-2	1.33E-05	3.09E-09	2.16E-12	7.70E-12	1.30E-09	4.39E-07	1.27E-09	1.16E-07	n/a	**1.38E-05**
bis(2-ethylhexyl)-phthalate	117-81-7		1.17E-10	1.30E-10	2.55E-10	6.00E-12	2.15E-06	3.91E-05	1.17E-08	n/a	**4.13E-05**
chloromethane	74-87-3	4.30E-08	1.12E-12	7.21E-16	2.57E-15	2.19E-12	2.83E-10	1.75E-13	7.53E-11	n/a	**4.34E-08**
dichlorodifluoromethane	75-71-8	4.54E-08	4.78E-13	1.38E-15	1.30E-14	2.94E-13	2.61E-10	1.24E-10	2.94E-11	n/a	**4.58E-08**
di-n-butyl phthalate	84-74-2		2.23E-11	1.73E-11	1.74E-11	9.43E-13	9.94E-09	6.36E-05	1.84E-08	n/a	**6.36E-05**
di-n-octyl phthalate	117-84-0									n/a	**0.00E+00**
ethane	74-84-0									n/a	**0.00E+00**
HD	505-60-2	5.86E-05	4.70E-09	3.50E-11	1.25E-10	4.94E-09	2.60E-06	5.43E-08	7.68E-07	n/a	**6.20E-05**
methane	74-82-8									n/a	**0.00E+00**
naphthalene	91-20-3	2.29E-06	4.99E-11	1.57E-10	5.60E-10	6.09E-12	1.34E-06	8.35E-08	4.58E-09	n/a	**3.72E-06**
propene	115-07-1	1.28E-07								n/a	**1.28E-07**
toluene	108-88-3	3.08E-08	1.26E-10	1.05E-13	3.75E-13	2.57E-11	1.86E-08	6.82E-11	6.67E-09	n/a	**5.63E-08**
trichlorofluoromethane	75-69-4	2.91E-09	2.19E-13	1.00E-17	6.11E-17	8.86E-14	3.25E-12	1.03E-11	1.62E-11	n/a	**2.94E-09**
xylenes	1330-20-7	2.33E-08	1.31E-12	7.08E-15	2.53E-14	1.55E-13	3.09E-10	4.09E-12	9.12E-11	n/a	**2.37E-08**
1,2,3,4,6,7,8-HpCDD	35822-46-9									n/a	
1,2,3,4,6,7,8,9-OCDD	3268-87-9									n/a	
1,2,3,4,6,7,8-HpCDF	67562-39-4									n/a	
1,2,3,4,6,7,8,9-OCDF	39001-02-0									n/a	
Total PCDDs and PCDFs	NA	1.05E-09	3.65E-11	1.60E-10	1.91E-09	1.87E-12	3.29E-07	1.85E-04	1.31E-08	n/a	**1.85E-04**
ammonia	7664-41-7	4.52E-08								n/a	**4.52E-08**
aluminum	7429-90-5	2.25E-06	2.74E-14	7.04E-17	6.81E-15	1.08E-13	3.68E-14	3.50E-15	3.70E-12	n/a	**2.25E-06**
antimony	7440-36-0		1.55E-12	4.87E-14	4.10E-12	1.13E-11	6.87E-06	2.22E-07	4.90E-09	n/a	**7.10E-06**
barium	7440-39-3	2.11E-07	6.26E-16	1.92E-16	1.52E-14	4.55E-15	2.75E-09	2.13E-10	3.13E-11	n/a	**2.14E-07**
beryllium	7440-41-7	2.48E-06	2.92E-14	7.30E-15	2.26E-12	2.14E-13	1.29E-07	1.40E-09	1.43E-10	n/a	**2.61E-06**
cadmium	7440-43-9	5.34E-05	1.26E-12	1.25E-14	4.45E-12	9.15E-12	5.58E-06	1.53E-08	9.01E-08	n/a	**5.91E-05**
chlorine	7782-50-5	3.75E-04	2.38E-12	7.69E-14	3.67E-12	7.48E-12	2.05E-07	2.21E-10	2.57E-10	n/a	**3.75E-04**
chromium (3+)	7440-47-3		1.15E-15	6.97E-18	4.49E-16	4.17E-15	2.86E-09	1.10E-09	1.43E-13	n/a	**3.96E-09**
chromium (6+)	18540-29-9	8.23E-06	5.74E-13	3.49E-15	2.24E-13	2.09E-12	1.43E-06	5.49E-07	7.16E-11	n/a	**1.02E-05**
cobalt	7440-48-4	7.74E-07	6.75E-13	1.05E-14	1.21E-12	4.67E-12	3.23E-06	2.09E-06	1.60E-10	n/a	**6.10E-06**
copper	7440-50-8		2.40E-13	3.85E-14	4.49E-12	1.75E-12	1.20E-06	5.15E-07	5.99E-11	n/a	**1.71E-06**
hydrogen chloride	7647-01-0	9.04E-06								n/a	**9.04E-06**
iron	7439-89-6		2.83E-13	2.33E-15	1.21E-12	8.58E-12	6.01E-06	1.60E-06	2.95E-10	n/a	**7.62E-06**
lead	7439-92-1									n/a	**0.00E+00**
manganese	7439-96-5	8.19E-04	2.98E-13	6.29E-15	7.88E-13	2.17E-12	1.53E-06	1.22E-07	7.45E-11	n/a	**8.21E-04**
total mercury	NA									n/a	**0.00E+00**
mercuric chloride	7487-94-7	4.89E-07	1.77E-13	2.98E-11	1.68E-09	0.00E+00	3.46E-07	1.20E-07	0.00E+00	n/a	**9.57E-07**
methyl mercury	22967-92-6		1.04E-14	1.72E-13	9.80E-11	0.00E+00	1.87E-07	1.38E-08	5.04E-05	n/a	**5.06E-05**
elemental mercury	7439-97-6	0.00E+00								n/a	**0.00E+00**
nickel	7440-02-0	4.12E-06	4.36E-14	1.37E-15	8.31E-14	1.58E-13	9.65E-08	2.71E-08	1.34E-10	n/a	**4.24E-06**
selenium	7782-49-2	7.36E-08	3.47E-13	2.51E-15	2.62E-13	2.52E-12	1.53E-06	2.07E-06	3.53E-09	n/a	**3.68E-06**
silver	7440-22-4		1.82E-14	1.01E-16	1.51E-14	2.20E-13	1.34E-07	5.86E-07	2.10E-10	n/a	**7.20E-07**
vanadium	7440-62-2	1.38E-05	2.84E-13	8.67E-14	1.13E-11	2.09E-12	1.49E-06	4.61E-08	7.10E-11	n/a	**1.53E-05**
zinc	7440-66-6		5.50E-14	1.74E-15	3.33E-13	6.66E-13	4.06E-07	3.26E-09	1.49E-08	n/a	**4.24E-07**
Total Pathway Hazard	**All Chemicals**	**1.36E-03**	**8.15E-09**	**5.33E-10**	**4.69E-09**	**6.37E-09**	**3.78E-05**	**2.95E-04**	**5.15E-05**	**0.00E+00**	**1.75E-03**

RISK AND HAZARD BY PATHWAY FOR SUBSISTENCE FARMER EXPOSURE SCENARIOS

CARCINOGENIC EFFECTS: Infant Subsistence Farmer Exposure Scenario											
COPC	CAS Number	Risk from Inhalation	Risk from Dermal Water Contact	Risk from Dermal Soil Contact	Risk from Incidental Soil Ingestion	Risk from Incidental Surface Water Ingestion	Risk from Ingestion of Produce	Risk from Ingestion of Terrestrial Animal Products	Risk from Ingestion of Fish	Risk from Ingestion of Breast Milk	Total Risk from Individual Chemical
1,4-dioxane	123-91-1	1.16E-12	n/a	3.35E-18	1.27E-17	n/a	4.28E-12	1.10E-16	1.42E-14		**5.46E-12**
2-butanone	78-93-3		n/a			n/a					**0.00E+00**
2-ethyl 1,3-butadiene	3404-63-5		n/a			n/a					**0.00E+00**
acetone	67-64-1		n/a			n/a					**0.00E+00**
benzene	71-43-2	2.48E-11	n/a	9.53E-18	3.63E-17	n/a	1.67E-12	1.17E-14	5.49E-13	1.53E-10	**1.80E-10**
bis(2-ethylhexyl)-phthalate	117-81-7	1.55E-13	n/a	7.17E-16	1.50E-15	n/a	1.09E-11	5.41E-10	7.01E-14		**5.52E-10**
chloromethane	74-87-3		n/a			n/a					**0.00E+00**
dichlorodifluoromethane	75-71-8		n/a			n/a					**0.00E+00**
di-n-butyl phthalate	84-74-2		n/a			n/a					**0.00E+00**
di-n-octyl phthalate	117-84-0		n/a			n/a					**0.00E+00**
ethane	74-84-0		n/a			n/a					**0.00E+00**
HD	505-60-2	3.95E-11	n/a	3.79E-17	1.44E-16	n/a	2.36E-12	1.24E-13	8.87E-13		**4.29E-11**
methane	74-82-8		n/a			n/a					**0.00E+00**
naphthalene	91-20-3	1.90E-12	n/a			n/a					**1.90E-12**
propene	115-07-1		n/a			n/a					**0.00E+00**
toluene	108-88-3		n/a			n/a					**0.00E+00**
trichlorofluoromethane	75-69-4		n/a			n/a					**0.00E+00**
xylenes	1330-20-7		n/a			n/a					**0.00E+00**
1,2,3,4,6,7,8-HpCDD	35822-46-9		n/a			n/a					
1,2,3,4,6,7,8,9-OCDD	3268-87-9		n/a			n/a					
1,2,3,4,6,7,8-HpCDF	67562-39-4		n/a			n/a					
1,2,3,4,6,7,8,9-OCDF	39001-02-0		n/a			n/a					
Total PCDDs and PCDFs	NA	1.28E-14	n/a	1.51E-16	1.92E-15	n/a	5.30E-13	7.56E-10	1.52E-14	5.13E-08	**5.20E-08**
ammonia	7664-41-7		n/a			n/a					**0.00E+00**
aluminum	7429-90-5		n/a			n/a					**0.00E+00**
antimony	7440-36-0		n/a			n/a					**0.00E+00**
barium	7440-39-3		n/a			n/a					**0.00E+00**
beryllium	7440-41-7	9.57E-13	n/a			n/a					**9.57E-13**
cadmium	7440-43-9	7.74E-12	n/a			n/a					**7.74E-12**
chlorine	7782-50-5		n/a			n/a					**0.00E+00**
chromium (3+)	7440-47-3		n/a			n/a					**0.00E+00**
chromium (6+)	18540-29-9	7.94E-11	n/a	1.05E-19	7.21E-18	n/a	3.91E-11	3.67E-11	2.30E-15	6.12E-11	**2.16E-10**
cobalt	7440-48-4		n/a			n/a					**0.00E+00**
copper	7440-50-8		n/a			n/a					**0.00E+00**
hydrogen chloride	7647-01-0		n/a			n/a					**0.00E+00**
iron	7439-89-6		n/a			n/a					**0.00E+00**
lead	7439-92-1	5.34E-14	n/a	3.03E-20	6.26E-18	n/a	4.48E-13	6.79E-14	8.39E-19	5.33E-13	**1.10E-12**
manganese	7439-96-5		n/a			n/a					**0.00E+00**
total mercury	NA		n/a			n/a					**0.00E+00**
mercuric chloride	7487-94-7		n/a			n/a					**0.00E+00**
methyl mercury	22967-92-6		n/a			n/a					**0.00E+00**
elemental mercury	7439-97-6		n/a			n/a					**0.00E+00**
nickel	7440-02-0	7.14E-13	n/a			n/a					**7.14E-13**
selenium	7782-49-2		n/a			n/a					**0.00E+00**
silver	7440-22-4		n/a			n/a					**0.00E+00**
vanadium	7440-62-2		n/a			n/a					**0.00E+00**
zinc	7440-66-6		n/a			n/a					**0.00E+00**
Total Pathway Risk	**All Chemicals**	**1.56E-10**	**0.00E+00**	**9.19E-16**	**3.63E-15**	**0.00E+00**	**5.93E-11**	**1.33E-09**	**1.54E-12**	**5.15E-08**	**5.30E-08**

RISK AND HAZARD BY PATHWAY FOR SUBSISTENCE FARMER EXPOSURE SCENARIOS

NONCARCINOGENIC EFFECTS: Infant Subsistence Farmer Exposure Scenario											
COPC	CAS Number	Hazard from Inhalation	Hazard from Dermal Water Contact	Hazard from Dermal Soil Contact	Hazard from Incidental Soil Ingestion	Hazard from Incidental Surface Water Ingestion	Hazard from Ingestion of Produce	Hazard from Ingestion of Terrestrial Animal Products	Hazard from Ingestion of Fish	Hazard from Ingestion of Breast Milk	Total Hazard from Individual Chemical
1,4-dioxane	123-91-1	3.51E-09	n/a	2.13E-13	8.11E-13	n/a	2.72E-07	7.03E-12	9.03E-10		**2.77E-07**
2-butanone	78-93-3	4.13E-09	n/a	4.59E-13	1.75E-12	n/a	6.50E-08	6.00E-11	7.66E-11	1.31E-07	**2.00E-07**
2-ethyl 1,3-butadiene	3404-63-5		n/a			n/a					**0.00E+00**
acetone	67-64-1	9.22E-08	n/a	1.27E-12	4.84E-12	n/a	2.99E-07	4.53E-11	8.27E-10	7.88E-07	**1.18E-06**
benzene	71-43-2	7.46E-06	n/a	3.03E-12	1.16E-11	n/a	5.32E-07	3.74E-09	1.75E-07	4.85E-05	**5.67E-05**
bis(2-ethylhexyl)-phthalate	117-81-7		n/a	1.83E-10	3.83E-10	n/a	2.72E-06	1.35E-04	1.76E-08		**1.38E-04**
chloromethane	74-87-3	2.42E-08	n/a	1.01E-15	3.86E-15	n/a	3.32E-10	5.15E-13	1.13E-10	7.20E-08	**9.67E-08**
dichlorodifluoromethane	75-71-8	2.55E-08	n/a	1.95E-15	1.95E-14	n/a	2.94E-10	9.18E-11	4.41E-11	1.16E-08	**3.75E-08**
di-n-butyl phthalate	84-74-2		n/a	2.44E-11	2.61E-11	n/a	1.10E-08	2.20E-04	2.76E-08		**2.20E-04**
di-n-octyl phthalate	117-84-0		n/a			n/a					**0.00E+00**
ethane	74-84-0		n/a			n/a					**0.00E+00**
HD	505-60-2	3.29E-05	n/a	4.92E-11	1.88E-10	n/a	3.07E-06	1.61E-07	1.15E-06		**3.73E-05**
methane	74-82-8		n/a			n/a					**0.00E+00**
naphthalene	91-20-3	1.29E-06	n/a	2.21E-10	8.40E-10	n/a	1.36E-06	2.43E-07	6.87E-09	2.28E-06	**5.18E-06**
propene	115-07-1	7.18E-08	n/a			n/a					**7.18E-08**
toluene	108-88-3	1.73E-08	n/a	1.48E-13	5.63E-13	n/a	2.30E-08	2.00E-10	1.00E-08	9.51E-07	**1.00E-06**
trichlorofluoromethane	75-69-4	1.64E-09	n/a	1.41E-17	9.17E-17	n/a	4.00E-12	3.15E-11	2.43E-11	3.27E-09	**4.96E-09**
xylenes	1330-20-7	1.31E-08	n/a	9.95E-15	3.79E-14	n/a	3.72E-10	1.19E-11	1.37E-10	6.47E-09	**2.01E-08**
1,2,3,4,6,7,8-HpCDD	35822-46-9		n/a			n/a					
1,2,3,4,6,7,8,9-OCDD	3268-87-9		n/a			n/a					
1,2,3,4,6,7,8-HpCDF	67562-39-4		n/a			n/a					
1,2,3,4,6,7,8,9-OCDF	39001-02-0		n/a			n/a					
Total PCDDs and PCDFs	NA	5.89E-10	n/a	2.25E-10	2.86E-09	n/a	4.17E-07	5.94E-04	1.96E-08	3.94E-02	**4.00E-02**
ammonia	7664-41-7	2.54E-08	n/a			n/a					**2.54E-08**
aluminum	7429-90-5	1.26E-06	n/a	9.90E-17	1.02E-14	n/a	3.75E-14	8.62E-15	5.55E-12	5.33E-09	**1.27E-06**
antimony	7440-36-0		n/a	6.85E-14	6.15E-12	n/a	8.77E-06	5.89E-07	7.35E-09	1.04E-05	**1.97E-05**
barium	7440-39-3	1.19E-07	n/a	2.71E-16	2.29E-14	n/a	3.51E-09	7.38E-10	4.69E-11	4.30E-09	**1.27E-07**
beryllium	7440-41-7	1.40E-06	n/a	1.03E-14	3.39E-12	n/a	1.65E-07	1.31E-09	2.15E-10	1.92E-07	**1.75E-06**
cadmium	7440-43-9	3.01E-05	n/a	1.75E-14	6.68E-12	n/a	7.12E-06	3.42E-08	1.35E-07	8.28E-06	**4.56E-05**
chlorine	7782-50-5	2.11E-04	n/a	1.08E-13	5.50E-12	n/a	2.21E-07	6.49E-10	3.85E-10	6.12E-07	**2.12E-04**
chromium (3+)	7440-47-3		n/a	9.80E-18	6.73E-16	n/a	3.65E-09	3.42E-09	2.15E-13	5.71E-09	**1.28E-08**
chromium (6+)	18540-29-9	4.63E-06	n/a	4.90E-15	3.37E-13	n/a	1.83E-06	1.71E-06	1.07E-10	2.85E-06	**1.10E-05**
cobalt	7440-48-4	4.36E-07	n/a	1.48E-14	1.82E-12	n/a	4.13E-06	5.54E-06	2.41E-10	8.35E-06	**1.85E-05**
copper	7440-50-8		n/a	5.42E-14	6.73E-12	n/a	1.53E-06	1.48E-06	8.99E-11	2.56E-06	**5.57E-06**
hydrogen chloride	7647-01-0	5.08E-06	n/a			n/a					**5.08E-06**
iron	7439-89-6		n/a	3.27E-15	1.81E-12	n/a	7.67E-06	2.28E-06	4.42E-10	1.29E-05	**2.29E-05**
lead	7439-92-1		n/a			n/a					**0.00E+00**
manganese	7439-96-5	4.61E-04	n/a	8.84E-15	1.18E-12	n/a	1.95E-06	4.13E-07	1.12E-10	2.36E-06	**4.65E-04**
total mercury	NA		n/a			n/a					**0.00E+00**
mercuric chloride	7487-94-7	2.75E-07	n/a	4.18E-11	2.52E-09	n/a	4.10E-07	3.88E-07	0.00E+00	7.00E-07	**1.78E-06**
methyl mercury	22967-92-6		n/a	2.42E-13	1.47E-10	n/a	2.35E-07	4.50E-08	7.56E-05	9.61E-05	**1.72E-04**
elemental mercury	7439-97-6	0.00E+00	n/a			n/a					**0.00E+00**
nickel	7440-02-0	2.32E-06	n/a	1.93E-15	1.25E-13	n/a	1.23E-07	7.91E-08	2.01E-10	1.82E-07	**2.70E-06**
selenium	7782-49-2	4.14E-08	n/a	3.53E-15	3.93E-13	n/a	1.96E-06	6.95E-06	5.30E-09	4.76E-06	**1.37E-05**
silver	7440-22-4		n/a	1.42E-16	2.26E-14	n/a	1.71E-07	2.05E-06	3.15E-10	8.72E-07	**3.09E-06**
vanadium	7440-62-2	7.75E-06	n/a	1.22E-13	1.69E-11	n/a	1.90E-06	5.80E-08	1.07E-10	2.29E-06	**1.20E-05**
zinc	7440-66-6		n/a	2.45E-15	5.00E-13	n/a	5.18E-07	1.04E-08	2.24E-08	6.21E-07	**1.17E-06**
Total Pathway Hazard	**All Chemicals**	**7.67E-04**	**0.00E+00**	**7.50E-10**	**7.03E-09**	**0.00E+00**	**4.75E-05**	**9.71E-04**	**7.72E-05**	**3.96E-02**	**4.15E-02**

RISK AND HAZARD BY PATHWAY FOR SUBSISTENCE FARMER EXPOSURE SCENARIOS

CARCINOGENIC EFFECTS: Early Life Exposure - Infant											
COPC	CAS Number	Risk from Inhalation	Risk from Dermal Water Contact	Risk from Dermal Soil Contact	Risk from Incidental Soil Ingestion	Risk from Incidental Surface Water Ingestion	Risk from Ingestion of Produce	Risk from Ingestion of Terrestrial Animal Products	Risk from Ingestion of Fish	Risk from Ingestion of Breast Milk	Total Risk from Individual Chemical
vinyl chloride	75-01-4	0.00E+00	n/a	0.00E+00	0.00E+00	n/a	0.00E+00	0.00E+00	0.00E+00	n/a	**0.00E+00**

CARCINOGENIC EFFECTS: Early Life Exposure - Child											
COPC	CAS Number	Risk from Inhalation	Risk from Dermal Water Contact	Risk from Dermal Soil Contact	Risk from Incidental Soil Ingestion	Risk from Incidental Surface Water Ingestion	Risk from Ingestion of Produce	Risk from Ingestion of Terrestrial Animal Products	Risk from Ingestion of Fish	Risk from Ingestion of Breast Milk	Total Risk from Individual Chemical
vinyl chloride	75-01-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	n/a	**0.00E+00**

RISK AND HAZARD BY PATHWAY FOR THE ADULT WORKER EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Adult Worker Exposure Scenario											
COPC	CAS Number	Risk from Inhalation	Risk from Dermal Water Contact	Risk from Dermal Soil Contact	Risk from Incidental Soil Ingestion	Risk from Incidental Surface Water Ingestion	Risk from Ingestion of Produce	Risk from Ingestion of Terrestrial Animal Products	Risk from Ingestion of Fish	Risk from Ingestion of Breast Milk	Total Risk from Individual Chemical
1,4-dioxane	123-91-1	8.80E-13	n/a	2.15E-18	1.63E-18	n/a	n/a	n/a	n/a	n/a	**8.80E-13**
2-butanone	78-93-3		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
2-ethyl 1,3-butadiene	3404-63-5		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
acetone	67-64-1		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
benzene	71-43-2	1.87E-11	n/a	6.11E-18	4.63E-18	n/a	n/a	n/a	n/a	n/a	**1.87E-11**
bis(2-ethylhexyl)-phthalate	117-81-7	1.17E-13	n/a	4.69E-16	1.95E-16	n/a	n/a	n/a	n/a	n/a	**1.18E-13**
chloromethane	74-87-3		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
dichlorodifluoromethane	75-71-8		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
di-n-butyl phthalate	84-74-2		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
di-n-octyl phthalate	117-84-0		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
ethane	74-84-0		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
HD	505-60-2	2.99E-11	n/a	2.43E-17	1.84E-17	n/a	n/a	n/a	n/a	n/a	**2.99E-11**
methane	74-82-8		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
naphthalene	91-20-3	1.43E-12	n/a			n/a	n/a	n/a	n/a	n/a	**1.43E-12**
propene	115-07-1		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
toluene	108-88-3		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
trichlorofluoromethane	75-69-4		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
xylenes	1330-20-7		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
1,2,3,4,6,7,8-HpCDD	35822-46-9		n/a			n/a	n/a	n/a	n/a	n/a	
1,2,3,4,6,7,8,9-OCDD	3268-87-9		n/a			n/a	n/a	n/a	n/a	n/a	
1,2,3,4,6,7,8-HpCDF	67562-39-4		n/a			n/a	n/a	n/a	n/a	n/a	
1,2,3,4,6,7,8,9-OCDF	39001-02-0		n/a			n/a	n/a	n/a	n/a	n/a	
Total PCDDs and PCDFs	NA	9.66E-15	n/a	6.21E-16	1.57E-15	n/a	n/a	n/a	n/a	n/a	**1.18E-14**
ammonia	7664-41-7		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
aluminum	7429-90-5		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
antimony	7440-36-0		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
barium	7440-39-3		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
beryllium	7440-41-7	7.24E-13	n/a			n/a	n/a	n/a	n/a	n/a	**7.24E-13**
cadmium	7440-43-9	5.85E-12	n/a			n/a	n/a	n/a	n/a	n/a	**5.85E-12**
chlorine	7782-50-5		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
chromium (3+)	7440-47-3		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
chromium (6+)	18540-29-9	6.00E-11	n/a	6.74E-20	9.20E-19	n/a	n/a	n/a	n/a	n/a	**6.00E-11**
cobalt	7440-48-4		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
copper	7440-50-8		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
hydrogen chloride	7647-01-0		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
iron	7439-89-6		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
lead	7439-92-1	4.04E-14	n/a	1.94E-20	8.01E-19	n/a	n/a	n/a	n/a	n/a	**4.04E-14**
manganese	7439-96-5		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
total mercury	NA		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
mercuric chloride	7487-94-7		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
methyl mercury	22967-92-6		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
elemental mercury	7439-97-6		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
nickel	7440-02-0	5.40E-13	n/a			n/a	n/a	n/a	n/a	n/a	**5.40E-13**
selenium	7782-49-2		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
silver	7440-22-4		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
vanadium	7440-62-2		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
zinc	7440-66-6		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
Total Pathway Risk	**All Chemicals**	**1.18E-10**	**0.00E+00**	**1.12E-15**	**1.79E-15**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**1.18E-10**

RISK AND HAZARD BY PATHWAY FOR THE ADULT WORKER EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS: Adult Worker Exposure Scenario											
COPC	CAS Number	Hazard from Inhalation	Hazard from Dermal Water Contact	Hazard from Dermal Soil Contact	Hazard from Incidental Soil Ingestion	Hazard from Incidental Surface Water Ingestion	Hazard from Ingestion of Produce	Hazard from Ingestion of Terrestrial Animal Products	Hazard from Ingestion of Fish	Hazard from Ingestion of Breast Milk	Total Hazard from Individual Chemical
1,4-dioxane	123-91-1	5.31E-10	n/a	3.28E-14	2.48E-14	n/a	n/a	n/a	n/a	n/a	**5.31E-10**
2-butanone	78-93-3	6.25E-10	n/a	7.06E-14	5.35E-14	n/a	n/a	n/a	n/a	n/a	**6.25E-10**
2-ethyl 1,3-butadiene	3404-63-5		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
acetone	67-64-1	1.39E-08	n/a	1.96E-13	1.48E-13	n/a	n/a	n/a	n/a	n/a	**1.39E-08**
benzene	71-43-2	1.13E-06	n/a	4.67E-13	3.54E-13	n/a	n/a	n/a	n/a	n/a	**1.13E-06**
bis(2-ethylhexyl)-phthalate	117-81-7		n/a	2.81E-11	1.17E-11	n/a	n/a	n/a	n/a	n/a	**3.98E-11**
chloromethane	74-87-3	3.66E-09	n/a	1.56E-16	1.18E-16	n/a	n/a	n/a	n/a	n/a	**3.66E-09**
dichlorodifluoromethane	75-71-8	3.86E-09	n/a	3.00E-16	5.97E-16	n/a	n/a	n/a	n/a	n/a	**3.86E-09**
di-n-butyl phthalate	84-74-2		n/a	3.75E-12	8.00E-13	n/a	n/a	n/a	n/a	n/a	**4.55E-12**
di-n-octyl phthalate	117-84-0		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
ethane	74-84-0		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
HD	505-60-2	4.98E-06	n/a	7.58E-12	5.74E-12	n/a	n/a	n/a	n/a	n/a	**4.98E-06**
methane	74-82-8		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
naphthalene	91-20-3	1.95E-07	n/a	3.40E-11	2.57E-11	n/a	n/a	n/a	n/a	n/a	**1.95E-07**
propene	115-07-1	1.08E-08	n/a			n/a	n/a	n/a	n/a	n/a	**1.08E-08**
toluene	108-88-3	2.62E-09	n/a	2.27E-14	1.72E-14	n/a	n/a	n/a	n/a	n/a	**2.62E-09**
trichlorofluoromethane	75-69-4	2.47E-10	n/a	2.17E-18	2.81E-18	n/a	n/a	n/a	n/a	n/a	**2.47E-10**
xylenes	1330-20-7	1.98E-09	n/a	1.53E-15	1.16E-15	n/a	n/a	n/a	n/a	n/a	**1.98E-09**
1,2,3,4,6,7,8-HpCDD	35822-46-9		n/a			n/a	n/a	n/a	n/a	n/a	
1,2,3,4,6,7,8,9-OCDD	3268-87-9		n/a			n/a	n/a	n/a	n/a	n/a	
1,2,3,4,6,7,8-HpCDF	67562-39-4		n/a			n/a	n/a	n/a	n/a	n/a	
1,2,3,4,6,7,8,9-OCDF	39001-02-0		n/a			n/a	n/a	n/a	n/a	n/a	
Total PCDDs and PCDFs	NA	8.90E-11	n/a	3.46E-11	8.75E-11	n/a	n/a	n/a	n/a	n/a	**2.11E-10**
ammonia	7664-41-7	3.84E-09	n/a			n/a	n/a	n/a	n/a	n/a	**3.84E-09**
aluminum	7429-90-5	1.91E-07	n/a	1.52E-17	3.13E-16	n/a	n/a	n/a	n/a	n/a	**1.91E-07**
antimony	7440-36-0		n/a	1.05E-14	1.88E-13	n/a	n/a	n/a	n/a	n/a	**1.99E-13**
barium	7440-39-3	1.79E-08	n/a	4.16E-17	7.00E-16	n/a	n/a	n/a	n/a	n/a	**1.79E-08**
beryllium	7440-41-7	2.11E-07	n/a	1.58E-15	1.04E-13	n/a	n/a	n/a	n/a	n/a	**2.11E-07**
cadmium	7440-43-9	4.54E-06	n/a	2.70E-15	2.04E-13	n/a	n/a	n/a	n/a	n/a	**4.54E-06**
chlorine	7782-50-5	3.19E-05	n/a	1.67E-14	1.68E-13	n/a	n/a	n/a	n/a	n/a	**3.19E-05**
chromium (3+)	7440-47-3		n/a	1.51E-18	2.06E-17	n/a	n/a	n/a	n/a	n/a	**2.21E-17**
chromium (6+)	18540-29-9	7.00E-07	n/a	7.55E-16	1.03E-14	n/a	n/a	n/a	n/a	n/a	**7.00E-07**
cobalt	7440-48-4	6.58E-08	n/a	2.28E-15	5.56E-14	n/a	n/a	n/a	n/a	n/a	**6.58E-08**
copper	7440-50-8		n/a	8.34E-15	2.06E-13	n/a	n/a	n/a	n/a	n/a	**2.14E-13**
hydrogen chloride	7647-01-0	7.69E-07	n/a			n/a	n/a	n/a	n/a	n/a	**7.69E-07**
iron	7439-89-6		n/a	5.03E-16	5.54E-14	n/a	n/a	n/a	n/a	n/a	**5.59E-14**
lead	7439-92-1		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
manganese	7439-96-5	6.97E-05	n/a	1.36E-15	3.62E-14	n/a	n/a	n/a	n/a	n/a	**6.97E-05**
total mercury	NA		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
mercuric chloride	7487-94-7	4.15E-08	n/a	6.44E-12	7.70E-11	n/a	n/a	n/a	n/a	n/a	**4.16E-08**
methyl mercury	22967-92-6		n/a	3.72E-14	4.50E-12	n/a	n/a	n/a	n/a	n/a	**4.54E-12**
elemental mercury	7439-97-6	0.00E+00	n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
nickel	7440-02-0	3.50E-07	n/a	2.97E-16	3.82E-15	n/a	n/a	n/a	n/a	n/a	**3.50E-07**
selenium	7782-49-2	6.26E-09	n/a	5.43E-16	1.20E-14	n/a	n/a	n/a	n/a	n/a	**6.26E-09**
silver	7440-22-4		n/a	2.19E-17	6.92E-16	n/a	n/a	n/a	n/a	n/a	**7.14E-16**
vanadium	7440-62-2	1.17E-06	n/a	1.88E-14	5.18E-13	n/a	n/a	n/a	n/a	n/a	**1.17E-06**
zinc	7440-66-6		n/a	3.77E-16	1.53E-14	n/a	n/a	n/a	n/a	n/a	**1.57E-14**
Total Pathway Hazard	**All Chemicals**	**1.16E-04**	**0.00E+00**	**1.15E-10**	**2.15E-10**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**1.16E-04**

COPC UPTAKE

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Adult Resident Exposure Scenario														
COPC	CAS Number	Incidental Ingestion of Soil (mg/day)[a]	Ingestion of Exposed Produce (mg/day)[a]	Ingestion of Protected Produce (mg/day)[a]	Ingestion of Belowground Produce (mg/day)[a]	Ingestion of Beef (mg/day)[a]	Ingestion of Pork (mg/day)[a]	Ingestion of Poultry (mg/day)[a]	Ingestion of Eggs (mg/day)[a]	Ingestion of Milk (mg/day)[a]	Ingestion of Fish (mg/day)[a]	Incidental Ingestion of Surface Water (mg/day)[a]	Ingestion of Breast Milk (mg/day)[a]	Total Daily COPC Ingestion (mg/day)[a]
1,4-dioxane	123-91-1	7.05E-14	1.76E-09	1.38E-09	5.13E-08	1.21E-13	2.87E-14	1.33E-15	5.32E-16	2.25E-13	1.78E-09	2.72E-11	n/a	**5.63E-08**
2-butanone	78-93-3	9.12E-13	2.26E-08	1.79E-08	2.38E-08	6.19E-12	1.47E-12	6.80E-14	2.74E-14	1.15E-11	8.55E-10	1.30E-11	n/a	**6.52E-08**
2-ethyl 1,3-butadiene	3404-63-5	1.91E-16	5.07E-13	2.91E-13	3.58E-12	1.56E-14	3.12E-15	1.43E-16	5.75E-17	2.75E-14	6.57E-10	6.87E-13	n/a	**6.63E-10**
acetone	67-64-1	3.79E-12	9.41E-08	7.43E-08	3.17E-07	7.00E-12	1.67E-12	7.71E-14	3.09E-14	1.30E-11	1.44E-08	2.19E-10	n/a	**5.00E-07**
benzene	71-43-2	4.02E-14	3.45E-10	2.23E-10	3.63E-09	2.99E-12	6.24E-13	2.82E-14	1.13E-14	5.41E-12	1.39E-08	8.11E-11	n/a	**1.82E-08**
bis(2-ethylhexyl)-phthalate	117-81-7	6.65E-12	3.59E-07	6.80E-10	6.39E-14	3.36E-07	8.68E-09	3.41E-10	1.37E-10	5.48E-06	6.47E-09	1.74E-12	n/a	**6.19E-06**
chloromethane	74-87-3	8.72E-17	2.19E-12	1.71E-12	1.23E-11	2.32E-15	5.49E-16	2.52E-17	1.02E-17	4.30E-15	5.85E-11	8.92E-13	n/a	**7.56E-11**
dichlorodifluoromethane	75-71-8	3.39E-15	2.20E-11	1.74E-11	6.60E-11	2.15E-13	5.18E-11	2.41E-12	9.71E-13	3.96E-13	1.75E-10	9.19E-13	n/a	**3.37E-10**
di-n-butyl phthalate	84-74-2	2.27E-12	3.83E-09	3.93E-10	4.76E-12	2.69E-06	1.13E-07	1.27E-12	5.12E-11	4.41E-05	5.32E-08	1.43E-12	n/a	**4.69E-05**
di-n-octyl phthalate	117-84-0	3.44E-19	4.53E-08	6.48E-19	1.20E-05	8.29E-06	2.13E-07	2.48E-17	9.97E-18	1.35E-05	1.87E-09	1.95E-13	n/a	**3.40E-05**
ethane	74-84-0	1.01E-14	1.11E-10	8.25E-11	4.31E-10	6.17E-13	1.42E-13	6.53E-15	2.63E-15	1.14E-12	1.18E-07	1.15E-09	n/a	**1.20E-07**
HD	505-60-2	1.14E-15	7.59E-11	4.19E-12	9.16E-12	8.99E-13	5.22E-14	8.47E-16	3.40E-16	1.49E-12	1.61E-10	5.41E-13	n/a	**2.53E-10**
methane	74-82-8	6.93E-15	1.91E-10	1.47E-10	7.11E-10	2.89E-13	2.45E-15	1.13E-16	4.54E-17	1.94E-14	1.41E-07	4.92E-09	n/a	**1.47E-07**
naphthalene	91-20-3	1.46E-11	2.10E-08	1.64E-08	4.43E-09	8.73E-10	2.21E-10	1.07E-11	4.30E-12	1.56E-09	2.41E-09	1.67E-12	n/a	**4.69E-08**
propene	115-07-1	1.55E-15	1.76E-11	1.33E-11	6.78E-11	9.20E-14	2.13E-14	9.83E-16	3.95E-16	1.69E-13	6.12E-09	6.41E-11	n/a	**6.28E-09**
toluene	108-88-3	3.91E-14	2.12E-10	9.79E-11	3.42E-09	4.07E-12	6.91E-13	2.97E-14	1.20E-14	7.15E-12	1.59E-08	3.21E-11	n/a	**1.97E-08**
trichlorofluoromethane	75-69-4	2.39E-17	1.48E-13	7.77E-14	2.19E-12	2.22E-12	4.08E-16	1.79E-14	7.19E-15	3.94E-12	1.45E-10	4.16E-13	n/a	**1.54E-10**
xylenes	1330-20-7	6.59E-15	1.55E-11	8.91E-12	1.23E-10	5.26E-13	1.07E-13	4.90E-15	1.97E-15	9.26E-13	5.44E-10	4.84E-13	n/a	**6.93E-10**
1,2,3,4,6,7,8-HpCDD	35822-46-9												n/a	
1,2,3,4,6,7,8,9-OCDD	3268-87-9												n/a	
1,2,3,4,6,7,8-HpCDF	67562-39-4												n/a	
1,2,3,4,6,7,8,9-OCDF	39001-02-0												n/a	
Total PCDDs and PCDFs	NA	6.48E-18	1.89E-15	1.90E-17	4.47E-17	2.66E-13	3.59E-15	3.50E-16	2.59E-16	8.08E-13	1.86E-16	1.41E-20	n/a	**1.08E-12**
ammonia	7664-41-7	6.86E-15	5.80E-10	4.58E-10	3.03E-09	1.37E-13	3.25E-14	1.50E-15	6.04E-16	2.55E-13	2.45E-10	3.72E-12	n/a	**4.32E-09**
aluminum	7429-90-5	8.87E-15	2.84E-14	2.24E-14	6.51E-15	4.45E-15	0.00E+00	0.00E+00	0.00E+00	2.50E-15	1.11E-10	1.68E-12	n/a	**1.12E-10**
antimony	7440-36-0	2.14E-15	2.35E-08	1.60E-13	7.23E-14	5.52E-10	0.00E+00	0.00E+00	0.00E+00	4.28E-10	5.86E-11	7.06E-14	n/a	**2.45E-08**
barium	7440-39-3	3.97E-15	4.69E-09	2.99E-13	6.72E-14	1.66E-11	0.00E+00	0.00E+00	0.00E+00	2.99E-10	1.86E-10	1.41E-14	n/a	**5.20E-09**
beryllium	7440-41-7	5.89E-15	2.21E-09	3.55E-14	9.96E-15	5.20E-11	0.00E+00	0.00E+00	0.00E+00	3.62E-13	8.45E-12	6.62E-15	n/a	**2.27E-09**
cadmium	7440-43-9	2.90E-15	2.38E-08	8.49E-13	4.91E-13	6.72E-11	2.27E-12	8.23E-15	1.36E-16	2.82E-11	1.35E-09	7.15E-14	n/a	**2.52E-08**
chlorine	7782-50-5	4.78E-13	1.19E-08	9.38E-09	1.59E-08	1.11E-11	2.65E-12	1.23E-13	4.94E-14	2.07E-11	7.34E-10	1.12E-11	n/a	**3.79E-08**
chromium (3+)	7440-47-3	8.78E-16	3.66E-08	1.00E-14	4.46E-15	4.74E-09	0.00E+00	0.00E+00	0.00E+00	1.00E-08	6.42E-12	9.79E-14	n/a	**5.14E-08**
chromium (6+)	18540-29-9	8.78E-16	3.66E-08	1.00E-14	4.46E-15	4.74E-09	0.00E+00	0.00E+00	0.00E+00	1.00E-08	6.42E-12	9.79E-14	n/a	**5.14E-08**
cobalt	7440-48-4	4.74E-16	8.28E-09	9.59E-15	3.74E-15	3.90E-09	0.00E+00	0.00E+00	0.00E+00	3.02E-09	1.44E-12	2.19E-14	n/a	**1.52E-08**
copper	7440-50-8	2.34E-13	4.08E-07	1.47E-10	6.60E-11	9.58E-08	0.00E+00	0.00E+00	0.00E+00	1.11E-07	7.14E-11	1.09E-12	n/a	**6.15E-07**
hydrogen chloride	7647-01-0	3.10E-13	1.73E-08	1.37E-08	7.53E-08	2.35E-12	5.59E-13	2.58E-14	1.03E-14	4.37E-12	2.45E-09	3.73E-11	n/a	**1.09E-07**
iron	7439-89-6	1.10E-12	3.59E-05	3.56E-12	3.16E-10	1.69E-05	0.00E+00	0.00E+00	0.00E+00	1.64E-06	6.16E-09	9.39E-11	n/a	**5.45E-05**
lead	7439-92-1	4.49E-14	2.47E-08	1.43E-12	4.56E-13	1.74E-10	0.00E+00	0.00E+00	0.00E+00	1.12E-09	1.37E-13	7.37E-14	n/a	**2.60E-08**
manganese	7439-96-5	1.44E-13	1.82E-06	2.54E-11	8.11E-12	1.72E-08	0.00E+00	0.00E+00	0.00E+00	1.16E-07	3.12E-10	4.75E-12	n/a	**1.96E-06**
total mercury	NA												n/a	
mercuric chloride	7487-94-7	3.61E-12	6.63E-10	1.22E-10	1.46E-10	7.07E-11	2.57E-14	1.22E-12	8.59E-13	2.29E-10	0.00E+00	0.00E+00	n/a	**1.24E-09**
methyl mercury	22967-92-6	5.75E-14	1.48E-10	3.96E-12	6.42E-12	2.66E-12	4.10E-16	3.26E-15	2.29E-15	8.90E-12	1.40E-07	0.00E+00	n/a	**1.40E-07**
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	n/a	**0.00E+00**
nickel	7440-02-0	2.17E-15	1.65E-08	4.72E-14	1.47E-13	2.33E-09	0.00E+00	0.00E+00	0.00E+00	3.00E-09	8.02E-11	4.95E-14	n/a	**2.19E-08**
selenium	7782-49-2	1.71E-15	6.55E-08	7.79E-14	4.82E-14	3.49E-09	6.13E-09	2.83E-14	1.99E-14	6.99E-08	5.28E-10	1.97E-13	n/a	**1.46E-07**
silver	7440-22-4	9.82E-17	5.73E-09	3.17E-14	1.11E-14	4.04E-10	0.00E+00	0.00E+00	0.00E+00	2.09E-08	3.14E-11	1.72E-14	n/a	**2.70E-08**
vanadium	7440-62-2	7.35E-14	6.37E-08	5.71E-13	2.49E-13	3.75E-09	0.00E+00	0.00E+00	0.00E+00	2.32E-10	1.06E-11	1.62E-13	n/a	**6.77E-08**
zinc	7440-66-6	1.30E-13	1.04E-06	2.96E-11	1.32E-10	2.20E-09	6.64E-11	2.68E-14	1.89E-14	6.15E-09	1.34E-07	3.12E-12	n/a	**1.18E-06**

a. Ingestion rates of total PCDDs/PCDFs and coplanar PCBs are presented in units of mg TEQ/day

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS: Adult Resident Exposure Scenario														
COPC	CAS Number	Incidental Ingestion of Soil (mg/day)[a]	Ingestion of Exposed Produce (mg/day)[a]	Ingestion of Protected Produce (mg/day)[a]	Ingestion of Belowground Produce (mg/day)[a]	Ingestion of Beef (mg/day)[a]	Ingestion of Pork (mg/day)[a]	Ingestion of Poultry (mg/day)[a]	Ingestion of Eggs (mg/day)[a]	Ingestion of Milk (mg/day)[a]	Ingestion of Fish (mg/day)[a]	Incidental Ingestion of Surface Water (mg/day)[a]	Ingestion of Breast Milk (mg/day)[a]	Total Daily COPC Ingestion (mg/day)[a]
1,4-dioxane	123-91-1	4.23E-13	1.05E-08	8.30E-09	3.08E-07	7.25E-13	1.72E-13	7.96E-15	3.19E-15	1.34E-12	1.80E-09	2.74E-11	n/a	**3.28E-07**
2-butanone	78-93-3	5.47E-12	1.36E-07	1.07E-07	1.43E-07	3.71E-11	8.84E-12	4.08E-13	1.64E-13	6.89E-11	9.16E-10	1.40E-11	n/a	**3.87E-07**
2-ethyl 1,3-butadiene	3404-63-5	1.15E-15	2.35E-12	1.74E-12	2.15E-11	7.55E-14	1.80E-14	8.58E-16	3.45E-16	1.35E-13	6.57E-10	6.87E-13	n/a	**6.84E-10**
acetone	67-64-1	2.27E-11	5.65E-07	4.46E-07	1.90E-06	4.20E-11	1.00E-11	4.63E-13	1.85E-13	7.80E-11	1.48E-08	2.26E-10	n/a	**2.93E-06**
benzene	71-43-2	2.41E-13	1.76E-09	1.34E-09	2.18E-08	1.56E-11	3.65E-12	1.69E-13	6.79E-14	2.86E-11	1.39E-08	8.11E-11	n/a	**3.89E-08**
bis(2-ethylhexyl)-phthalate	117-81-7	3.99E-11	3.63E-07	4.08E-09	3.84E-13	3.37E-07	8.97E-09	2.05E-09	8.24E-10	5.49E-06	7.00E-09	1.88E-12	n/a	**6.21E-06**
chloromethane	74-87-3	5.23E-16	1.30E-11	1.03E-11	7.35E-11	1.38E-14	3.29E-15	1.51E-16	6.12E-17	2.56E-14	5.85E-11	8.92E-13	n/a	**1.56E-10**
dichlorodifluoromethane	75-71-8	2.03E-14	1.32E-10	1.04E-10	3.96E-10	1.29E-12	3.11E-10	1.45E-11	5.83E-12	2.38E-12	1.76E-10	9.21E-13	n/a	**1.14E-09**
di-n-butyl phthalate	84-74-2	1.36E-11	6.32E-09	2.36E-09	2.85E-11	2.73E-06	1.25E-07	7.63E-12	3.07E-10	4.46E-05	5.51E-08	1.47E-12	n/a	**4.75E-05**
di-n-octyl phthalate	117-84-0	2.06E-18	4.53E-08	3.89E-18	7.18E-05	8.29E-06	2.13E-07	1.49E-16	5.98E-17	1.35E-05	1.87E-09	1.95E-13	n/a	**9.38E-05**
ethane	74-84-0	6.08E-14	6.34E-10	4.95E-10	2.58E-09	3.55E-12	8.44E-13	3.92E-14	1.58E-14	6.56E-12	1.18E-07	1.15E-09	n/a	**1.23E-07**
HD	505-60-2	6.84E-15	1.02E-10	2.51E-11	5.50E-11	1.27E-12	1.43E-13	5.08E-15	2.04E-15	2.17E-12	1.61E-10	5.41E-13	n/a	**3.47E-10**
methane	74-82-8	4.16E-14	1.12E-09	8.84E-10	4.27E-09	1.71E-12	1.47E-14	6.77E-16	2.72E-16	1.15E-13	1.41E-07	4.92E-09	n/a	**1.52E-07**
naphthalene	91-20-3	8.76E-11	1.25E-07	9.82E-08	2.66E-08	5.20E-09	1.32E-09	6.39E-11	2.58E-11	9.27E-09	2.74E-09	1.90E-12	n/a	**2.68E-07**
propene	115-07-1	9.28E-15	1.02E-10	7.97E-11	4.07E-10	5.35E-13	1.27E-13	5.90E-15	2.37E-15	9.86E-13	6.12E-09	6.41E-11	n/a	**6.78E-09**
toluene	108-88-3	2.35E-13	8.33E-10	5.88E-10	2.05E-08	1.69E-11	3.84E-12	1.78E-13	7.18E-14	3.06E-11	1.60E-08	3.21E-11	n/a	**3.80E-08**
trichlorofluoromethane	75-69-4	1.43E-16	6.40E-13	4.66E-13	1.31E-11	1.00E-11	2.31E-15	1.07E-13	4.32E-14	1.83E-11	1.45E-10	4.16E-13	n/a	**1.88E-10**
xylenes	1330-20-7	3.95E-14	7.20E-11	5.35E-11	7.37E-10	2.55E-12	6.14E-13	2.94E-14	1.18E-14	4.56E-12	5.45E-10	4.85E-13	n/a	**1.42E-09**
1,2,3,4,6,7,8-HpCDD	35822-46-9												n/a	
1,2,3,4,6,7,8,9-OCDD	3268-87-9												n/a	
1,2,3,4,6,7,8-HpCDF	67562-39-4												n/a	
1,2,3,4,6,7,8,9-OCDF	39001-02-0												n/a	
Total PCDDs and PCDFs	NA	1.04E-17	1.90E-15	3.07E-17	7.19E-17	2.74E-13	4.56E-15	5.61E-16	4.19E-16	8.21E-13	2.73E-16	2.05E-20	n/a	**1.10E-12**
ammonia	7664-41-7	4.12E-14	3.48E-09	2.75E-09	1.82E-08	8.22E-13	1.95E-13	8.99E-15	3.62E-15	1.53E-12	2.46E-10	3.74E-12	n/a	**2.47E-08**
aluminum	7429-90-5	5.32E-14	1.70E-13	1.35E-13	3.90E-14	2.67E-14	0.00E+00	0.00E+00	0.00E+00	1.50E-14	1.11E-10	1.68E-12	n/a	**1.13E-10**
antimony	7440-36-0	1.28E-14	2.35E-08	9.57E-13	4.34E-13	5.52E-10	0.00E+00	0.00E+00	0.00E+00	4.28E-10	5.86E-11	7.06E-14	n/a	**2.45E-08**
barium	7440-39-3	2.38E-14	4.70E-09	1.80E-12	4.03E-13	1.66E-11	0.00E+00	0.00E+00	0.00E+00	2.99E-10	1.87E-10	1.42E-14	n/a	**5.20E-09**
beryllium	7440-41-7	3.53E-14	2.21E-09	2.13E-13	5.98E-14	5.20E-11	0.00E+00	0.00E+00	0.00E+00	3.62E-13	8.55E-12	6.70E-15	n/a	**2.27E-09**
cadmium	7440-43-9	1.74E-14	2.38E-08	5.09E-12	2.95E-12	6.72E-11	2.27E-12	4.94E-14	8.18E-16	2.82E-11	1.35E-09	7.16E-14	n/a	**2.53E-08**
chlorine	7782-50-5	2.87E-12	7.13E-08	5.63E-08	9.53E-08	6.68E-11	1.59E-11	7.36E-13	2.96E-13	1.24E-10	7.67E-10	1.17E-11	n/a	**2.24E-07**
chromium (3+)	7440-47-3	5.27E-15	3.66E-08	6.01E-14	2.67E-14	4.74E-09	0.00E+00	0.00E+00	0.00E+00	1.00E-08	6.42E-12	9.79E-14	n/a	**5.14E-08**
chromium (6+)	18540-29-9	5.27E-15	3.66E-08	6.01E-14	2.67E-14	4.74E-09	0.00E+00	0.00E+00	0.00E+00	1.00E-08	6.42E-12	9.79E-14	n/a	**5.14E-08**
cobalt	7440-48-4	2.84E-15	8.28E-09	5.75E-14	2.24E-14	3.90E-09	0.00E+00	0.00E+00	0.00E+00	3.02E-09	1.44E-12	2.19E-14	n/a	**1.52E-08**
copper	7440-50-8	1.40E-12	4.08E-07	8.84E-10	3.96E-10	9.59E-08	0.00E+00	0.00E+00	0.00E+00	1.11E-07	7.16E-11	1.10E-12	n/a	**6.17E-07**
hydrogen chloride	7647-01-0	1.86E-12	1.04E-07	8.20E-08	4.52E-07	1.41E-11	3.35E-12	1.55E-13	6.21E-14	2.62E-11	2.50E-09	3.80E-11	n/a	**6.40E-07**
iron	7439-89-6	6.61E-12	3.59E-05	2.13E-11	1.90E-09	1.69E-05	0.00E+00	0.00E+00	0.00E+00	1.64E-06	6.17E-09	9.39E-11	n/a	**5.45E-05**
lead	7439-92-1	2.69E-13	2.47E-08	8.58E-12	2.74E-12	1.74E-10	0.00E+00	0.00E+00	0.00E+00	1.12E-09	1.38E-13	7.43E-14	n/a	**2.60E-08**
manganese	7439-96-5	8.63E-13	1.82E-06	1.52E-10	4.87E-11	1.72E-08	0.00E+00	0.00E+00	0.00E+00	1.16E-07	3.12E-10	4.75E-12	n/a	**1.96E-06**
total mercury	NA												n/a	
mercuric chloride	7487-94-7	3.93E-12	6.78E-10	1.33E-10	1.60E-10	7.14E-11	2.73E-14	1.33E-12	9.38E-13	2.30E-10	0.00E+00	0.00E+00	n/a	**1.28E-09**
methyl mercury	22967-92-6	7.67E-14	1.50E-10	5.27E-12	8.56E-12	2.66E-12	4.26E-16	4.34E-15	3.06E-15	8.92E-12	1.51E-07	0.00E+00	n/a	**1.51E-07**
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	n/a	**0.00E+00**
nickel	7440-02-0	1.30E-14	1.65E-08	2.83E-13	8.80E-13	2.33E-09	0.00E+00	0.00E+00	0.00E+00	3.00E-09	8.02E-11	4.96E-14	n/a	**2.19E-08**
selenium	7782-49-2	1.02E-14	6.55E-08	4.68E-13	2.89E-13	3.49E-09	6.13E-09	1.70E-13	1.20E-13	6.99E-08	5.28E-10	1.97E-13	n/a	**1.46E-07**
silver	7440-22-4	5.89E-16	5.73E-09	1.90E-13	6.65E-14	4.04E-10	0.00E+00	0.00E+00	0.00E+00	2.09E-08	3.14E-11	1.72E-14	n/a	**2.70E-08**
vanadium	7440-62-2	4.41E-13	6.37E-08	3.43E-12	1.49E-12	3.75E-09	0.00E+00	0.00E+00	0.00E+00	2.32E-10	1.06E-11	1.63E-13	n/a	**6.77E-08**
zinc	7440-66-6	7.82E-13	1.04E-06	1.78E-10	7.94E-10	2.20E-09	6.64E-11	1.61E-13	1.13E-13	6.16E-09	1.34E-07	3.13E-12	n/a	**1.18E-06**

a. Ingestion rates of total PCDDs/PCDFs are presented in units of mg TEQ/day

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS:
Adult Subsistence Fisher Exposure Scenario

COPC	CAS Number	Incidental Ingestion of Soil (mg/day)[a]	Ingestion of Exposed Produce (mg/day)[a]	Ingestion of Protected Produce (mg/day)[a]	Ingestion of Belowground Produce (mg/day)[a]	Ingestion of Beef (mg/day)[a]	Ingestion of Pork (mg/day)[a]	Ingestion of Poultry (mg/day)[a]	Ingestion of Eggs (mg/day)[a]	Ingestion of Milk (mg/day)[a]	Ingestion of Fish (mg/day)[a]	Incidental Ingestion of Surface Water (mg/day)[a]	Ingestion of Breast Milk (mg/day)[a]	Total Daily COPC Ingestion (mg/day)[a]
1,4-dioxane	123-91-1	7.05E-14	1.76E-09	1.38E-09	5.13E-08	1.21E-13	2.87E-14	1.33E-15	5.32E-16	2.25E-13	4.46E-09	2.72E-11	n/a	**5.89E-08**
2-butanone	78-93-3	9.12E-13	2.26E-08	1.79E-08	2.38E-08	6.19E-12	1.47E-12	6.80E-14	2.74E-14	1.15E-11	2.14E-09	1.30E-11	n/a	**6.64E-08**
2-ethyl 1,3-butadiene	3404-63-5	1.91E-16	5.07E-13	2.91E-13	3.58E-12	1.56E-14	3.12E-15	1.43E-16	5.75E-17	2.75E-14	1.64E-09	6.87E-13	n/a	**1.65E-09**
acetone	67-64-1	3.79E-12	9.41E-08	7.43E-08	3.17E-07	7.00E-12	1.67E-12	7.71E-14	3.09E-14	1.30E-11	3.59E-08	2.19E-10	n/a	**5.22E-07**
benzene	71-43-2	4.02E-14	3.45E-10	2.23E-10	3.63E-09	2.99E-12	6.24E-13	2.82E-14	1.13E-14	5.41E-12	3.48E-08	8.11E-11	n/a	**3.90E-08**
bis(2-ethylhexyl)-phthalate	117-81-7	6.65E-12	3.59E-07	6.80E-10	6.39E-14	3.36E-07	8.68E-09	3.41E-10	1.37E-10	5.48E-06	1.62E-08	1.74E-12	n/a	**6.20E-06**
chloromethane	74-87-3	8.72E-17	2.19E-12	1.71E-12	1.23E-11	2.32E-15	5.49E-16	2.52E-17	1.02E-17	4.30E-15	1.46E-10	8.92E-13	n/a	**1.63E-10**
dichlorodifluoromethane	75-71-8	3.39E-15	2.20E-11	1.74E-11	6.60E-11	2.15E-13	5.18E-11	2.41E-12	9.71E-13	3.96E-13	4.39E-10	9.19E-13	n/a	**6.01E-10**
di-n-butyl phthalate	84-74-2	2.27E-12	3.83E-09	3.93E-10	4.76E-12	2.69E-06	1.13E-07	1.27E-12	5.12E-11	4.41E-05	1.33E-07	1.43E-12	n/a	**4.70E-05**
di-n-octyl phthalate	117-84-0	3.44E-19	4.53E-08	6.48E-19	1.20E-05	8.29E-06	2.13E-07	2.48E-17	9.97E-18	1.35E-05	4.68E-09	1.95E-13	n/a	**3.40E-05**
ethane	74-84-0	1.01E-14	1.11E-10	8.25E-11	4.31E-10	6.17E-13	1.42E-13	6.53E-15	2.63E-15	1.14E-12	2.96E-07	1.15E-09	n/a	**2.98E-07**
HD	505-60-2	1.14E-15	7.59E-11	4.19E-12	9.16E-12	8.99E-13	5.22E-14	8.47E-16	3.40E-16	1.49E-12	4.02E-10	5.41E-13	n/a	**4.94E-10**
methane	74-82-8	6.93E-15	1.91E-10	1.47E-10	7.11E-10	2.89E-13	2.45E-15	1.13E-16	4.54E-17	1.94E-14	3.53E-07	4.92E-09	n/a	**3.59E-07**
naphthalene	91-20-3	1.46E-11	2.10E-08	1.64E-08	4.43E-09	8.73E-10	2.21E-10	1.07E-11	4.30E-12	1.56E-09	6.02E-09	1.67E-12	n/a	**5.05E-08**
propene	115-07-1	1.55E-15	1.76E-11	1.33E-11	6.78E-11	9.20E-14	2.13E-14	9.83E-16	3.95E-16	1.69E-13	1.53E-08	6.41E-11	n/a	**1.55E-08**
toluene	108-88-3	3.91E-14	2.12E-10	9.79E-11	3.42E-09	4.07E-12	6.91E-13	2.97E-14	1.20E-14	7.15E-12	3.98E-08	3.21E-11	n/a	**4.36E-08**
trichlorofluoromethane	75-69-4	2.39E-17	1.48E-13	7.77E-14	2.19E-12	2.22E-12	4.08E-16	1.79E-14	7.19E-15	3.94E-12	3.62E-10	4.16E-13	n/a	**3.71E-10**
xylenes	1330-20-7	6.59E-15	1.55E-11	8.91E-12	1.23E-10	5.26E-13	1.07E-13	4.90E-15	1.97E-15	9.26E-13	1.36E-09	4.84E-13	n/a	**1.51E-09**
1,2,3,4,6,7,8-HpCDD	35822-46-9												n/a	
1,2,3,4,6,7,8,9-OCDD	3268-87-9												n/a	
1,2,3,4,6,7,8-HpCDF	67562-39-4												n/a	
1,2,3,4,6,7,8,9-OCDF	39001-02-0												n/a	
Total PCDDs and PCDFs	NA	6.48E-18	1.89E-15	1.90E-17	4.47E-17	2.66E-13	3.59E-15	3.50E-16	2.59E-16	8.08E-13	4.65E-16	1.41E-20	n/a	**1.08E-12**
ammonia	7664-41-7	6.86E-15	5.80E-10	4.58E-10	3.03E-09	1.37E-13	3.25E-14	1.50E-15	6.04E-16	2.55E-13	6.11E-10	3.72E-12	n/a	**4.69E-09**
aluminum	7429-90-5	8.87E-15	2.84E-14	2.24E-14	6.51E-15	4.45E-15	0.00E+00	0.00E+00	0.00E+00	2.50E-15	2.76E-10	1.68E-12	n/a	**2.78E-10**
antimony	7440-36-0	2.14E-15	2.35E-08	1.60E-13	7.23E-14	5.52E-10	0.00E+00	0.00E+00	0.00E+00	4.28E-10	1.46E-10	7.06E-14	n/a	**2.46E-08**
barium	7440-39-3	3.97E-15	4.69E-09	2.99E-13	6.72E-14	1.66E-11	0.00E+00	0.00E+00	0.00E+00	2.99E-10	4.64E-10	1.41E-14	n/a	**5.47E-09**
beryllium	7440-41-7	5.89E-15	2.21E-09	3.55E-14	9.96E-15	5.20E-11	0.00E+00	0.00E+00	0.00E+00	3.62E-13	2.11E-11	6.62E-15	n/a	**2.28E-09**
cadmium	7440-43-9	2.90E-15	2.38E-08	8.49E-13	4.91E-13	6.72E-11	2.27E-12	8.23E-15	1.36E-16	2.82E-11	3.36E-09	7.15E-14	n/a	**2.73E-08**
chlorine	7782-50-5	4.78E-13	1.19E-08	9.38E-09	1.59E-08	1.11E-11	2.65E-12	1.23E-13	4.94E-14	2.07E-11	1.83E-09	1.12E-11	n/a	**3.90E-08**
chromium (3+)	7440-47-3	8.78E-16	3.66E-08	1.00E-14	4.46E-15	4.74E-09	0.00E+00	0.00E+00	0.00E+00	1.00E-08	1.61E-11	9.79E-14	n/a	**5.14E-08**
chromium (6+)	18540-29-9	8.78E-16	3.66E-08	1.00E-14	4.46E-15	4.74E-09	0.00E+00	0.00E+00	0.00E+00	1.00E-08	1.61E-11	9.79E-14	n/a	**5.14E-08**
cobalt	7440-48-4	4.74E-16	8.28E-09	9.59E-15	3.74E-15	3.90E-09	0.00E+00	0.00E+00	0.00E+00	3.02E-09	3.59E-12	2.19E-14	n/a	**1.52E-08**
copper	7440-50-8	2.34E-13	4.08E-07	1.47E-10	6.60E-11	9.58E-08	0.00E+00	0.00E+00	0.00E+00	1.11E-07	1.79E-10	1.09E-12	n/a	**6.15E-07**
hydrogen chloride	7647-01-0	3.10E-13	1.73E-08	1.37E-08	7.53E-08	2.35E-12	5.59E-13	2.58E-14	1.03E-14	4.37E-12	6.12E-09	3.73E-11	n/a	**1.12E-07**
iron	7439-89-6	1.10E-12	3.59E-05	3.56E-12	3.16E-10	1.69E-05	0.00E+00	0.00E+00	0.00E+00	1.64E-06	1.54E-08	9.39E-11	n/a	**5.45E-05**
lead	7439-92-1	4.49E-14	2.47E-08	1.43E-12	4.56E-13	1.74E-10	0.00E+00	0.00E+00	0.00E+00	1.12E-09	3.41E-13	7.37E-14	n/a	**2.60E-08**
manganese	7439-96-5	1.44E-13	1.82E-06	2.54E-11	8.11E-12	1.72E-08	0.00E+00	0.00E+00	0.00E+00	1.16E-07	7.79E-10	4.75E-12	n/a	**1.96E-06**
total mercury	NA												n/a	
mercuric chloride	7487-94-7	3.61E-12	6.63E-10	1.22E-10	1.46E-10	7.07E-11	2.57E-14	1.22E-12	8.59E-13	2.29E-10	0.00E+00	0.00E+00	n/a	**1.24E-09**
methyl mercury	22967-92-6	5.75E-14	1.48E-10	3.96E-12	6.42E-12	2.66E-12	4.10E-16	3.26E-15	2.29E-15	8.90E-12	3.49E-07	0.00E+00	n/a	**3.49E-07**
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	n/a	**0.00E+00**
nickel	7440-02-0	2.17E-15	1.65E-08	4.72E-14	1.47E-13	2.33E-09	0.00E+00	0.00E+00	0.00E+00	3.00E-09	2.00E-10	4.95E-14	n/a	**2.20E-08**
selenium	7782-49-2	1.71E-15	6.55E-08	7.79E-14	4.82E-14	3.49E-09	6.13E-09	2.83E-14	1.99E-14	6.99E-08	1.32E-09	1.97E-13	n/a	**1.46E-07**
silver	7440-22-4	9.82E-17	5.73E-09	3.17E-14	1.11E-14	4.04E-10	0.00E+00	0.00E+00	0.00E+00	2.09E-08	7.84E-11	1.72E-14	n/a	**2.71E-08**
vanadium	7440-62-2	7.35E-14	6.37E-08	5.71E-13	2.49E-13	3.75E-09	0.00E+00	0.00E+00	0.00E+00	2.32E-10	2.64E-11	1.62E-13	n/a	**6.77E-08**
zinc	7440-66-6	1.30E-13	1.04E-06	2.96E-11	1.32E-10	2.20E-09	6.64E-11	2.68E-14	1.89E-14	6.15E-09	3.34E-07	3.12E-12	n/a	**1.38E-06**

a. Ingestion rates of total PCDDs/PCDFs and coplanar PCBs are presented in units of mg TEQ/day

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS:
Adult Subsistence Fisher Exposure Scenario

COPC	CAS Number	Incidental Ingestion of Soil (mg/day)[a]	Ingestion of Exposed Produce (mg/day)[a]	Ingestion of Protected Produce (mg/day)[a]	Ingestion of Belowground Produce (mg/day)[a]	Ingestion of Beef (mg/day)[a]	Ingestion of Pork (mg/day)[a]	Ingestion of Poultry (mg/day)[a]	Ingestion of Eggs (mg/day)[a]	Ingestion of Milk (mg/day)[a]	Ingestion of Fish (mg/day)[a]	Incidental Ingestion of Surface Water (mg/day)[a]	Ingestion of Breast Milk (mg/day)[a]	Total Daily COPC Ingestion (mg/day)[a]
1,4-dioxane	123-91-1	4.23E-13	1.05E-08	8.30E-09	3.08E-07	7.25E-13	1.72E-13	7.96E-15	3.19E-15	1.34E-12	4.50E-09	2.74E-11	n/a	**3.31E-07**
2-butanone	78-93-3	5.47E-12	1.36E-07	1.07E-07	1.43E-07	3.71E-11	8.84E-12	4.08E-13	1.64E-13	6.89E-11	2.29E-09	1.40E-11	n/a	**3.88E-07**
2-ethyl 1,3-butadiene	3404-63-5	1.15E-15	2.35E-12	1.74E-12	2.15E-11	7.55E-14	1.80E-14	8.58E-16	3.45E-16	1.35E-13	1.64E-09	6.87E-13	n/a	**1.67E-09**
acetone	67-64-1	2.27E-11	5.65E-07	4.46E-07	1.90E-06	4.20E-11	1.00E-11	4.63E-13	1.85E-13	7.80E-11	3.71E-08	2.26E-10	n/a	**2.95E-06**
benzene	71-43-2	2.41E-13	1.76E-09	1.34E-09	2.18E-08	1.56E-11	3.65E-12	1.69E-13	6.79E-14	2.86E-11	3.48E-08	8.11E-11	n/a	**5.98E-08**
bis(2-ethylhexyl)-phthalate	117-81-7	3.99E-11	3.63E-07	4.08E-09	3.84E-13	3.37E-07	8.97E-09	2.05E-09	8.24E-10	5.49E-06	1.75E-08	1.88E-12	n/a	**6.22E-06**
chloromethane	74-87-3	5.23E-16	1.30E-11	1.03E-11	7.35E-11	1.38E-14	3.29E-15	1.51E-16	6.12E-17	2.56E-14	1.46E-10	8.92E-13	n/a	**2.44E-10**
dichlorodifluoromethane	75-71-8	2.03E-14	1.32E-10	1.04E-10	3.96E-10	1.29E-12	3.11E-10	1.45E-11	5.83E-12	2.38E-12	4.39E-10	9.21E-13	n/a	**1.41E-09**
di-n-butyl phthalate	84-74-2	1.36E-11	6.32E-09	2.36E-09	2.85E-11	2.73E-06	1.25E-07	7.63E-12	3.07E-10	4.46E-05	1.38E-07	1.47E-12	n/a	**4.76E-05**
di-n-octyl phthalate	117-84-0	2.06E-18	4.53E-08	3.89E-18	7.18E-05	8.29E-06	2.13E-07	1.49E-16	5.98E-17	1.35E-05	4.68E-09	1.95E-13	n/a	**9.38E-05**
ethane	74-84-0	6.08E-14	6.34E-10	4.95E-10	2.58E-09	3.55E-12	8.44E-13	3.92E-14	1.58E-14	6.56E-12	2.96E-07	1.15E-09	n/a	**3.01E-07**
HD	505-60-2	6.84E-15	1.02E-10	2.51E-11	5.50E-11	1.27E-12	1.43E-13	5.08E-15	2.04E-15	2.17E-12	4.02E-10	5.41E-13	n/a	**5.88E-10**
methane	74-82-8	4.16E-14	1.12E-09	8.84E-10	4.27E-09	1.71E-12	1.47E-14	6.77E-16	2.72E-16	1.15E-13	3.53E-07	4.92E-09	n/a	**3.64E-07**
naphthalene	91-20-3	8.76E-11	1.25E-07	9.82E-08	2.66E-08	5.20E-09	1.32E-09	6.39E-11	2.58E-11	9.27E-09	6.85E-09	1.90E-12	n/a	**2.72E-07**
propene	115-07-1	9.28E-15	1.02E-10	7.97E-11	4.07E-10	5.35E-13	1.27E-13	5.90E-15	2.37E-15	9.86E-13	1.53E-08	6.41E-11	n/a	**1.60E-08**
toluene	108-88-3	2.35E-13	8.33E-10	5.88E-10	2.05E-08	1.69E-11	3.84E-12	1.78E-13	7.18E-14	3.06E-11	3.99E-08	3.21E-11	n/a	**6.19E-08**
trichlorofluoromethane	75-69-4	1.43E-16	6.40E-13	4.66E-13	1.31E-11	1.00E-11	2.31E-15	1.07E-13	4.32E-14	1.83E-11	3.62E-10	4.16E-13	n/a	**4.06E-10**
xylenes	1330-20-7	3.95E-14	7.20E-11	5.35E-11	7.37E-10	2.55E-12	6.14E-13	2.94E-14	1.18E-14	4.56E-12	1.36E-09	4.85E-13	n/a	**2.23E-09**
1,2,3,4,6,7,8-HpCDD	35822-46-9												n/a	
1,2,3,4,6,7,8,9-OCDD	3268-87-9												n/a	
1,2,3,4,6,7,8-HpCDF	67562-39-4												n/a	
1,2,3,4,6,7,8,9-OCDF	39001-02-0												n/a	
Total PCDDs and PCDFs	NA	1.04E-17	1.90E-15	3.07E-17	7.19E-17	2.74E-13	4.56E-15	5.61E-16	4.19E-16	8.21E-13	6.83E-16	2.05E-20	n/a	**1.10E-12**
ammonia	7664-41-7	4.12E-14	3.48E-09	2.75E-09	1.82E-08	8.22E-13	1.95E-13	8.99E-15	3.62E-15	1.53E-12	6.14E-10	3.74E-12	n/a	**2.50E-08**
aluminum	7429-90-5	5.32E-14	1.70E-13	1.35E-13	3.90E-14	2.67E-14	0.00E+00	0.00E+00	0.00E+00	1.50E-14	2.76E-10	1.68E-12	n/a	**2.78E-10**
antimony	7440-36-0	1.28E-14	2.35E-08	9.57E-13	4.34E-13	5.52E-10	0.00E+00	0.00E+00	0.00E+00	4.28E-10	1.47E-10	7.06E-14	n/a	**2.46E-08**
barium	7440-39-3	2.38E-14	4.70E-09	1.80E-12	4.03E-13	1.66E-11	0.00E+00	0.00E+00	0.00E+00	2.99E-10	4.67E-10	1.42E-14	n/a	**5.48E-09**
beryllium	7440-41-7	3.53E-14	2.21E-09	2.13E-13	5.98E-14	5.20E-11	0.00E+00	0.00E+00	0.00E+00	3.62E-13	2.14E-11	6.70E-15	n/a	**2.28E-09**
cadmium	7440-43-9	1.74E-14	2.38E-08	5.09E-12	2.95E-12	6.72E-11	2.27E-12	4.94E-14	8.18E-16	2.82E-11	3.37E-09	7.16E-14	n/a	**2.73E-08**
chlorine	7782-50-5	2.87E-12	7.13E-08	5.63E-08	9.53E-08	6.68E-11	1.59E-11	7.36E-13	2.96E-13	1.24E-10	1.92E-09	1.17E-11	n/a	**2.25E-07**
chromium (3+)	7440-47-3	5.27E-15	3.66E-08	6.01E-14	2.67E-14	4.74E-09	0.00E+00	0.00E+00	0.00E+00	1.00E-08	1.61E-11	9.79E-14	n/a	**5.14E-08**
chromium (6+)	18540-29-9	5.27E-15	3.66E-08	6.01E-14	2.67E-14	4.74E-09	0.00E+00	0.00E+00	0.00E+00	1.00E-08	1.61E-11	9.79E-14	n/a	**5.14E-08**
cobalt	7440-48-4	2.84E-15	8.28E-09	5.75E-14	2.24E-14	3.90E-09	0.00E+00	0.00E+00	0.00E+00	3.02E-09	3.59E-12	2.19E-14	n/a	**1.52E-08**
copper	7440-50-8	1.40E-12	4.08E-07	8.84E-10	3.96E-10	9.59E-08	0.00E+00	0.00E+00	0.00E+00	1.11E-07	1.79E-10	1.10E-12	n/a	**6.17E-07**
hydrogen chloride	7647-01-0	1.86E-12	1.04E-07	8.20E-08	4.52E-07	1.41E-11	3.35E-12	1.55E-13	6.21E-14	2.62E-11	6.25E-09	3.80E-11	n/a	**6.44E-07**
iron	7439-89-6	6.61E-12	3.59E-05	2.13E-11	1.90E-09	1.69E-05	0.00E+00	0.00E+00	0.00E+00	1.64E-06	1.54E-08	9.39E-11	n/a	**5.45E-05**
lead	7439-92-1	2.69E-13	2.47E-08	8.58E-12	2.74E-12	1.74E-10	0.00E+00	0.00E+00	0.00E+00	1.12E-09	3.44E-13	7.43E-14	n/a	**2.60E-08**
manganese	7439-96-5	8.63E-13	1.82E-06	1.52E-10	4.87E-11	1.72E-08	0.00E+00	0.00E+00	0.00E+00	1.16E-07	7.79E-10	4.75E-12	n/a	**1.96E-06**
total mercury	NA												n/a	
mercuric chloride	7487-94-7	3.93E-12	6.78E-10	1.33E-10	1.60E-10	7.14E-11	2.73E-14	1.33E-12	9.38E-13	2.30E-10	0.00E+00	0.00E+00	n/a	**1.28E-09**
methyl mercury	22967-92-6	7.67E-14	1.50E-10	5.27E-12	8.56E-12	2.66E-12	4.26E-16	4.34E-15	3.06E-15	8.92E-12	3.77E-07	0.00E+00	n/a	**3.77E-07**
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	n/a	**0.00E+00**
nickel	7440-02-0	1.30E-14	1.65E-08	2.83E-13	8.80E-13	2.33E-09	0.00E+00	0.00E+00	0.00E+00	3.00E-09	2.01E-10	4.96E-14	n/a	**2.20E-08**
selenium	7782-49-2	1.02E-14	6.55E-08	4.68E-13	2.89E-13	3.49E-09	6.13E-09	1.70E-13	1.20E-13	6.99E-08	1.32E-09	1.97E-13	n/a	**1.46E-07**
silver	7440-22-4	5.89E-16	5.73E-09	1.90E-13	6.65E-14	4.04E-10	0.00E+00	0.00E+00	0.00E+00	2.09E-08	7.84E-11	1.72E-14	n/a	**2.71E-08**
vanadium	7440-62-2	4.41E-13	6.37E-08	3.43E-12	1.49E-12	3.75E-09	0.00E+00	0.00E+00	0.00E+00	2.32E-10	2.65E-11	1.63E-13	n/a	**6.77E-08**
zinc	7440-66-6	7.82E-13	1.04E-06	1.78E-10	7.94E-10	2.20E-09	6.64E-11	1.61E-13	1.13E-13	6.16E-09	3.34E-07	3.13E-12	n/a	**1.38E-06**

a. Ingestion rates of total PCDDs/PCDFs are presented in units of mg TEQ/day

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Adult Subsistence Farmer Exposure Scenario														
COPC	CAS Number	Incidental Ingestion of Soil (mg/day)[a]	Ingestion of Exposed Produce (mg/day)[a]	Ingestion of Protected Produce (mg/day)[a]	Ingestion of Belowground Produce (mg/day)[a]	Ingestion of Beef (mg/day)[a]	Ingestion of Pork (mg/day)[a]	Ingestion of Poultry (mg/day)[a]	Ingestion of Eggs (mg/day)[a]	Ingestion of Milk (mg/day)[a]	Ingestion of Fish (mg/day)[a]	Incidental Ingestion of Surface Water (mg/day)[a]	Ingestion of Breast Milk (mg/day)[a]	Total Daily COPC Ingestion (mg/day)[a]
1,4-dioxane	123-91-1	5.29E-14	3.31E-09	2.59E-09	9.62E-08	2.28E-13	5.39E-14	2.49E-15	9.97E-16	4.22E-13	1.78E-09	2.72E-11	n/a	**1.04E-07**
2-butanone	78-93-3	6.84E-13	4.25E-08	3.35E-08	4.45E-08	1.16E-11	2.76E-12	1.27E-13	5.13E-14	2.15E-11	8.52E-10	1.30E-11	n/a	**1.21E-07**
2-ethyl 1,3-butadiene	3404-63-5	1.43E-16	1.04E-12	5.45E-13	6.72E-12	3.15E-14	5.95E-15	2.68E-16	1.08E-16	5.52E-14	6.57E-10	6.87E-13	n/a	**6.66E-10**
acetone	67-64-1	2.84E-12	1.77E-07	1.39E-07	5.95E-07	1.31E-11	3.13E-12	1.45E-13	5.79E-14	2.44E-11	1.43E-08	2.18E-10	n/a	**9.25E-07**
benzene	71-43-2	3.01E-14	6.87E-10	4.18E-10	6.81E-09	5.89E-12	1.18E-12	5.28E-14	2.12E-14	1.06E-11	1.39E-08	8.11E-11	n/a	**2.19E-08**
bis(2-ethylhexyl)-phthalate	117-81-7	4.99E-12	8.96E-07	1.28E-09	1.20E-13	8.39E-07	2.17E-08	6.40E-10	2.57E-10	1.37E-05	6.44E-09	1.73E-12	n/a	**1.55E-05**
chloromethane	74-87-3	6.54E-17	4.12E-12	3.21E-12	2.30E-11	4.36E-15	1.03E-15	4.73E-17	1.91E-17	8.08E-15	5.85E-11	8.92E-13	n/a	**8.97E-11**
dichlorodifluoromethane	75-71-8	2.54E-15	4.13E-11	3.26E-11	1.24E-10	4.03E-13	9.71E-11	4.52E-12	1.82E-12	7.43E-13	1.75E-10	9.19E-13	n/a	**4.78E-10**
di-n-butyl phthalate	84-74-2	1.70E-12	9.27E-09	7.37E-10	8.92E-12	6.72E-06	2.82E-07	2.39E-12	9.60E-11	1.10E-04	5.31E-08	1.42E-12	n/a	**1.17E-04**
di-n-octyl phthalate	117-84-0	2.58E-19	1.13E-07	1.22E-18	2.24E-05	2.07E-05	5.32E-07	4.64E-17	1.87E-17	3.38E-05	1.87E-09	1.95E-13	n/a	**7.76E-05**
ethane	74-84-0	7.60E-15	2.12E-10	1.55E-10	8.08E-10	1.18E-12	2.67E-13	1.22E-14	4.93E-15	2.16E-12	1.18E-07	1.15E-09	n/a	**1.21E-07**
HD	505-60-2	8.56E-16	1.86E-10	7.86E-12	1.72E-11	2.20E-12	1.19E-13	1.59E-15	6.38E-16	3.63E-12	1.61E-10	5.41E-13	n/a	**3.79E-10**
methane	74-82-8	5.20E-15	3.61E-10	2.76E-10	1.33E-09	5.46E-13	4.60E-15	2.12E-16	8.50E-17	3.65E-14	1.41E-07	4.92E-09	n/a	**1.48E-07**
naphthalene	91-20-3	1.10E-11	3.95E-08	3.07E-08	8.31E-09	1.64E-09	4.14E-10	2.00E-11	8.07E-12	2.92E-09	2.39E-09	1.66E-12	n/a	**8.59E-08**
propene	115-07-1	1.16E-15	3.35E-11	2.49E-11	1.27E-10	1.75E-13	4.01E-14	1.84E-15	7.41E-16	3.20E-13	6.12E-09	6.41E-11	n/a	**6.37E-09**
toluene	108-88-3	2.93E-14	4.54E-10	1.84E-10	6.41E-09	8.57E-12	1.34E-12	5.57E-14	2.24E-14	1.49E-11	1.59E-08	3.21E-11	n/a	**2.30E-08**
trichlorofluoromethane	75-69-4	1.79E-17	3.09E-13	1.46E-13	4.11E-12	4.57E-12	7.81E-16	3.35E-14	1.35E-14	8.05E-12	1.45E-10	4.16E-13	n/a	**1.63E-10**
xylenes	1330-20-7	4.94E-15	3.18E-11	1.67E-11	2.30E-10	1.06E-12	2.03E-13	9.19E-15	3.70E-15	1.86E-12	5.44E-10	4.84E-13	n/a	**8.27E-10**
1,2,3,4,6,7,8-HpCDD	35822-46-9												n/a	
1,2,3,4,6,7,8,9-OCDD	3268-87-9												n/a	
1,2,3,4,6,7,8-HpCDF	67562-39-4												n/a	
1,2,3,4,6,7,8,9-OCDF	39001-02-0												n/a	
Total PCDDs and PCDFs	NA	5.69E-18	4.71E-15	4.16E-17	9.81E-17	6.62E-13	8.50E-15	7.70E-16	5.69E-16	2.01E-12	1.68E-16	1.28E-20	n/a	**2.69E-12**
ammonia	7664-41-7	5.15E-15	1.09E-09	8.59E-10	5.69E-09	2.57E-13	6.09E-14	2.81E-15	1.13E-15	4.79E-13	2.45E-10	3.72E-12	n/a	**7.88E-09**
aluminum	7429-90-5	6.66E-15	5.33E-14	4.20E-14	1.22E-14	8.34E-15	0.00E+00	0.00E+00	0.00E+00	4.69E-15	1.11E-10	1.68E-12	n/a	**1.12E-10**
antimony	7440-36-0	1.60E-15	5.87E-08	2.99E-13	1.36E-13	1.38E-09	0.00E+00	0.00E+00	0.00E+00	1.07E-09	5.86E-11	7.05E-14	n/a	**6.12E-08**
barium	7440-39-3	2.98E-15	1.17E-08	5.62E-13	1.26E-13	4.14E-11	0.00E+00	0.00E+00	0.00E+00	7.49E-10	1.86E-10	1.41E-14	n/a	**1.27E-08**
beryllium	7440-41-7	4.41E-15	5.52E-09	6.66E-14	1.87E-14	1.30E-10	0.00E+00	0.00E+00	0.00E+00	9.06E-13	8.44E-12	6.61E-15	n/a	**5.66E-09**
cadmium	7440-43-9	2.18E-15	5.95E-08	1.59E-12	9.21E-13	1.68E-10	5.67E-12	1.54E-14	2.56E-16	7.05E-11	1.35E-09	7.15E-14	n/a	**6.11E-08**
chlorine	7782-50-5	3.59E-13	2.23E-08	1.76E-08	2.98E-08	2.09E-11	4.97E-12	2.30E-13	9.26E-14	3.88E-11	7.32E-10	1.12E-11	n/a	**7.05E-08**
chromium (3+)	7440-47-3	6.58E-16	9.16E-08	1.88E-14	8.35E-15	1.19E-08	0.00E+00	0.00E+00	0.00E+00	2.51E-08	6.42E-12	9.79E-14	n/a	**1.29E-07**
chromium (6+)	18540-29-9	6.58E-16	9.16E-08	1.88E-14	8.35E-15	1.19E-08	0.00E+00	0.00E+00	0.00E+00	2.51E-08	6.42E-12	9.79E-14	n/a	**1.29E-07**
cobalt	7440-48-4	3.55E-16	2.07E-08	1.80E-14	7.01E-15	9.74E-09	0.00E+00	0.00E+00	0.00E+00	7.55E-09	1.44E-12	2.19E-14	n/a	**3.80E-08**
copper	7440-50-8	1.76E-13	1.02E-06	2.76E-10	1.24E-10	2.40E-07	0.00E+00	0.00E+00	0.00E+00	2.78E-07	7.14E-11	1.09E-12	n/a	**1.54E-06**
hydrogen chloride	7647-01-0	2.32E-13	3.25E-08	2.56E-08	1.41E-07	4.41E-12	1.05E-12	4.83E-14	1.94E-14	8.19E-12	2.45E-09	3.72E-11	n/a	**2.02E-07**
iron	7439-89-6	8.26E-13	8.98E-05	6.67E-12	5.93E-10	4.23E-05	0.00E+00	0.00E+00	0.00E+00	4.09E-06	6.16E-09	9.39E-11	n/a	**1.36E-04**
lead	7439-92-1	3.37E-14	6.16E-08	2.68E-12	8.55E-13	4.35E-10	0.00E+00	0.00E+00	0.00E+00	2.81E-09	1.36E-13	7.37E-14	n/a	**6.49E-08**
manganese	7439-96-5	1.08E-13	4.56E-06	4.76E-11	1.52E-11	4.29E-08	0.00E+00	0.00E+00	0.00E+00	2.91E-07	3.12E-10	4.75E-12	n/a	**4.89E-06**
total mercury	NA												n/a	
mercuric chloride	7487-94-7	3.69E-12	1.67E-09	3.13E-10	3.74E-10	1.77E-10	6.53E-14	3.12E-12	2.20E-12	5.73E-10	0.00E+00	0.00E+00	n/a	**3.11E-09**
methyl mercury	22967-92-6	5.41E-14	3.70E-10	9.31E-12	1.51E-11	6.64E-12	1.02E-15	7.66E-15	5.39E-15	2.22E-11	1.42E-07	0.00E+00	n/a	**1.42E-07**
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	n/a	**0.00E+00**
nickel	7440-02-0	1.63E-15	4.12E-08	8.85E-14	2.75E-13	5.81E-09	0.00E+00	0.00E+00	0.00E+00	7.51E-09	8.02E-11	4.95E-14	n/a	**5.46E-08**
selenium	7782-49-2	1.28E-15	1.64E-07	1.46E-13	9.03E-14	8.72E-09	1.53E-08	5.31E-14	3.74E-14	1.75E-07	5.27E-10	1.97E-13	n/a	**3.63E-07**
silver	7440-22-4	7.37E-17	1.43E-08	5.95E-14	2.08E-14	1.01E-09	0.00E+00	0.00E+00	0.00E+00	5.22E-08	3.14E-11	1.72E-14	n/a	**6.76E-08**
vanadium	7440-62-2	5.51E-14	1.59E-07	1.07E-12	4.66E-13	9.37E-09	0.00E+00	0.00E+00	0.00E+00	5.81E-10	1.06E-11	1.62E-13	n/a	**1.69E-07**
zinc	7440-66-6	9.78E-14	2.60E-06	5.55E-11	2.48E-10	5.50E-09	1.66E-10	5.03E-14	3.54E-14	1.54E-08	1.34E-07	3.12E-12	n/a	**2.75E-06**

a. Ingestion rates of total PCDDs/PCDFs and coplanar PCBs are presented in units of mg TEQ/day

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS: Adult Subsistence Farmer Exposure Scenario														
COPC	CAS Number	Incidental Ingestion of Soil (mg/day)[a]	Ingestion of Exposed Produce (mg/day)[a]	Ingestion of Protected Produce (mg/day)[a]	Ingestion of Belowground Produce (mg/day)[a]	Ingestion of Beef (mg/day)[a]	Ingestion of Pork (mg/day)[a]	Ingestion of Poultry (mg/day)[a]	Ingestion of Eggs (mg/day)[a]	Ingestion of Milk (mg/day)[a]	Ingestion of Fish (mg/day)[a]	Incidental Ingestion of Surface Water (mg/day)[a]	Ingestion of Breast Milk (mg/day)[a]	Total Daily COPC Ingestion (mg/day)[a]
1,4-dioxane	123-91-1	4.23E-13	2.63E-08	2.07E-08	7.70E-07	1.81E-12	4.31E-13	1.99E-14	7.97E-15	3.36E-12	1.80E-09	2.74E-11	n/a	**8.18E-07**
2-butanone	78-93-3	5.47E-12	3.40E-07	2.68E-07	3.56E-07	9.28E-11	2.21E-11	1.02E-12	4.10E-13	1.72E-10	9.16E-10	1.40E-11	n/a	**9.65E-07**
2-ethyl 1,3-butadiene	3404-63-5	1.15E-15	5.87E-12	4.36E-12	5.38E-11	1.89E-13	4.50E-14	2.15E-15	8.63E-16	3.38E-13	6.57E-10	6.87E-13	n/a	**7.23E-10**
acetone	67-64-1	2.27E-11	1.41E-06	1.11E-06	4.76E-06	1.05E-10	2.50E-11	1.16E-12	4.63E-13	1.95E-10	1.48E-08	2.26E-10	n/a	**7.30E-06**
benzene	71-43-2	2.41E-13	4.39E-09	3.34E-09	5.45E-08	3.89E-11	9.12E-12	4.23E-13	1.70E-13	7.15E-11	1.39E-08	8.11E-11	n/a	**7.63E-08**
bis(2-ethylhexyl)-phthalate	117-81-7	3.99E-11	9.07E-07	1.02E-08	9.59E-13	8.42E-07	2.24E-08	5.12E-09	2.06E-09	1.37E-05	7.00E-09	1.88E-12	n/a	**1.55E-05**
chloromethane	74-87-3	5.23E-16	3.26E-11	2.57E-11	1.84E-10	3.46E-14	8.23E-15	3.79E-16	1.53E-16	6.41E-14	5.85E-11	8.92E-13	n/a	**3.02E-10**
dichlorodifluoromethane	75-71-8	2.03E-14	3.30E-10	2.60E-10	9.89E-10	3.22E-12	7.76E-10	3.62E-11	1.46E-11	5.94E-12	1.76E-10	9.21E-13	n/a	**2.59E-09**
di-n-butyl phthalate	84-74-2	1.36E-11	1.58E-08	5.90E-09	7.14E-11	6.82E-06	3.12E-07	1.91E-11	7.68E-10	1.12E-04	5.51E-08	1.47E-12	n/a	**1.19E-04**
di-n-octyl phthalate	117-84-0	2.06E-18	1.13E-07	9.73E-18	1.79E-04	2.07E-05	5.32E-07	3.72E-16	1.50E-16	3.38E-05	1.87E-09	1.95E-13	n/a	**2.35E-04**
ethane	74-84-0	6.08E-14	1.58E-09	1.24E-09	6.46E-09	8.87E-12	2.11E-12	9.79E-14	3.94E-14	1.64E-11	1.18E-07	1.15E-09	n/a	**1.29E-07**
HD	505-60-2	6.84E-15	2.56E-10	6.29E-11	1.37E-10	3.18E-12	3.56E-13	1.27E-14	5.11E-15	5.42E-12	1.61E-10	5.41E-13	n/a	**6.27E-10**
methane	74-82-8	4.16E-14	2.81E-09	2.21E-09	1.07E-08	4.27E-12	3.67E-14	1.69E-15	6.80E-16	2.87E-13	1.41E-07	4.92E-09	n/a	**1.62E-07**
naphthalene	91-20-3	8.76E-11	3.12E-07	2.46E-07	6.65E-08	1.30E-08	3.31E-09	1.60E-10	6.45E-11	2.32E-08	2.74E-09	1.90E-12	n/a	**6.66E-07**
propene	115-07-1	9.28E-15	2.54E-10	1.99E-10	1.02E-09	1.34E-12	3.18E-13	1.47E-14	5.93E-15	2.47E-12	6.12E-09	6.41E-11	n/a	**7.66E-09**
toluene	108-88-3	2.35E-13	2.08E-09	1.47E-09	5.13E-08	4.23E-11	9.59E-12	4.46E-13	1.79E-13	7.65E-11	1.60E-08	3.21E-11	n/a	**7.09E-08**
trichlorofluoromethane	75-69-4	1.43E-16	1.60E-12	1.17E-12	3.29E-11	2.51E-11	5.78E-15	2.68E-13	1.08E-13	4.57E-11	1.45E-10	4.16E-13	n/a	**2.52E-10**
xylenes	1330-20-7	3.95E-14	1.80E-10	1.34E-10	1.84E-09	6.37E-12	1.54E-12	7.36E-14	2.96E-14	1.14E-11	5.45E-10	4.85E-13	n/a	**2.72E-09**
1,2,3,4,6,7,8-HpCDD	35822-46-9												n/a	
1,2,3,4,6,7,8,9-OCDD	3268-87-9												n/a	
1,2,3,4,6,7,8-HpCDF	67562-39-4												n/a	
1,2,3,4,6,7,8,9-OCDF	39001-02-0												n/a	
Total PCDDs and PCDFs	NA	1.04E-17	4.75E-15	7.67E-17	1.80E-16	6.85E-13	1.14E-14	1.40E-15	1.05E-15	2.05E-12	2.73E-16	2.05E-20	n/a	**2.76E-12**
ammonia	7664-41-7	4.12E-14	8.70E-09	6.87E-09	4.55E-08	2.06E-12	4.87E-13	2.25E-14	9.05E-15	3.83E-12	2.46E-10	3.74E-12	n/a	**6.13E-08**
aluminum	7429-90-5	5.32E-14	4.26E-13	3.36E-13	9.76E-14	6.67E-14	0.00E+00	0.00E+00	0.00E+00	3.76E-14	1.11E-10	1.68E-12	n/a	**1.13E-10**
antimony	7440-36-0	1.28E-14	5.87E-08	2.39E-12	1.09E-12	1.38E-09	0.00E+00	0.00E+00	0.00E+00	1.07E-09	5.86E-11	7.06E-14	n/a	**6.12E-08**
barium	7440-39-3	2.38E-14	1.17E-08	4.49E-12	1.01E-12	4.14E-11	0.00E+00	0.00E+00	0.00E+00	7.49E-10	1.87E-10	1.42E-14	n/a	**1.27E-08**
beryllium	7440-41-7	3.53E-14	5.52E-09	5.33E-13	1.49E-13	1.30E-10	0.00E+00	0.00E+00	0.00E+00	9.06E-13	8.55E-12	6.70E-15	n/a	**5.66E-09**
cadmium	7440-43-9	1.74E-14	5.95E-08	1.27E-11	7.36E-12	1.68E-10	5.67E-12	1.23E-13	2.05E-15	7.05E-11	1.35E-09	7.16E-14	n/a	**6.11E-08**
chlorine	7782-50-5	2.87E-12	1.78E-07	1.41E-07	2.38E-07	1.67E-10	3.98E-11	1.84E-12	7.41E-13	3.11E-10	7.67E-10	1.17E-11	n/a	**5.58E-07**
chromium (3+)	7440-47-3	5.27E-15	9.16E-08	1.50E-13	6.68E-14	1.19E-08	0.00E+00	0.00E+00	0.00E+00	2.51E-08	6.42E-12	9.79E-14	n/a	**1.29E-07**
chromium (6+)	18540-29-9	5.27E-15	9.16E-08	1.50E-13	6.68E-14	1.19E-08	0.00E+00	0.00E+00	0.00E+00	2.51E-08	6.42E-12	9.79E-14	n/a	**1.29E-07**
cobalt	7440-48-4	2.84E-15	2.07E-08	1.44E-13	5.61E-14	9.74E-09	0.00E+00	0.00E+00	0.00E+00	7.55E-09	1.44E-12	2.19E-14	n/a	**3.80E-08**
copper	7440-50-8	1.40E-12	1.02E-06	2.21E-09	9.90E-10	2.40E-07	0.00E+00	0.00E+00	0.00E+00	2.79E-07	7.16E-11	1.10E-12	n/a	**1.54E-06**
hydrogen chloride	7647-01-0	1.86E-12	2.60E-07	2.05E-07	1.13E-06	3.53E-11	8.38E-12	3.87E-13	1.55E-13	6.55E-11	2.50E-09	3.80E-11	n/a	**1.60E-06**
iron	7439-89-6	6.61E-12	8.98E-05	5.33E-11	4.75E-09	4.23E-05	0.00E+00	0.00E+00	0.00E+00	4.09E-06	6.17E-09	9.39E-11	n/a	**1.36E-04**
lead	7439-92-1	2.69E-13	6.17E-08	2.14E-11	6.84E-12	4.35E-10	0.00E+00	0.00E+00	0.00E+00	2.81E-09	1.38E-13	7.43E-14	n/a	**6.49E-08**
manganese	7439-96-5	8.63E-13	4.56E-06	3.81E-10	1.22E-10	4.29E-08	0.00E+00	0.00E+00	0.00E+00	2.91E-07	3.12E-10	4.75E-12	n/a	**4.89E-06**
total mercury	NA												n/a	
mercuric chloride	7487-94-7	3.93E-12	1.69E-09	3.34E-10	3.99E-10	1.79E-10	6.83E-14	3.33E-12	2.34E-12	5.76E-10	0.00E+00	0.00E+00	n/a	**3.19E-09**
methyl mercury	22967-92-6	7.67E-14	3.75E-10	1.32E-11	2.14E-11	6.66E-12	1.07E-15	1.08E-14	7.64E-15	2.23E-11	1.51E-07	0.00E+00	n/a	**1.51E-07**
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	n/a	**0.00E+00**
nickel	7440-02-0	1.30E-14	4.12E-08	7.08E-13	2.20E-12	5.81E-09	0.00E+00	0.00E+00	0.00E+00	7.51E-09	8.02E-11	4.96E-14	n/a	**5.46E-08**
selenium	7782-49-2	1.02E-14	1.64E-07	1.17E-12	7.22E-13	8.72E-09	1.53E-08	4.24E-13	2.99E-13	1.75E-07	5.28E-10	1.97E-13	n/a	**3.63E-07**
silver	7440-22-4	5.89E-16	1.43E-08	4.76E-13	1.66E-13	1.01E-09	0.00E+00	0.00E+00	0.00E+00	5.22E-08	3.14E-11	1.72E-14	n/a	**6.76E-08**
vanadium	7440-62-2	4.41E-13	1.59E-07	8.56E-12	3.73E-12	9.37E-09	0.00E+00	0.00E+00	0.00E+00	5.81E-10	1.06E-11	1.63E-13	n/a	**1.69E-07**
zinc	7440-66-6	7.82E-13	2.60E-06	4.44E-10	1.99E-09	5.50E-09	1.66E-10	4.02E-13	2.83E-13	1.54E-08	1.34E-07	3.13E-12	n/a	**2.75E-06**

a. Ingestion rates of total PCDDs/PCDFs are presented in units of mg TEQ/day

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Adult Worker Exposure Scenario														
COPC	CAS Number	Incidental Ingestion of Soil (mg/day)[a]	Ingestion of Exposed Produce (mg/day)[a]	Ingestion of Protected Produce (mg/day)[a]	Ingestion of Belowground Produce (mg/day)[a]	Ingestion of Beef (mg/day)[a]	Ingestion of Pork (mg/day)[a]	Ingestion of Poultry (mg/day)[a]	Ingestion of Eggs (mg/day)[a]	Ingestion of Milk (mg/day)[a]	Ingestion of Fish (mg/day)[a]	Incidental Ingestion of Surface Water (mg/day)[a]	Ingestion of Breast Milk (mg/day)[a]	Total Daily COPC Ingestion (mg/day)[a]
1,4-dioxane	123-91-1	4.23E-14	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**4.23E-14**
2-butanone	78-93-3	5.47E-13	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**5.47E-13**
2-ethyl 1,3-butadiene	3404-63-5	1.15E-16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.15E-16**
acetone	67-64-1	2.27E-12	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**2.27E-12**
benzene	71-43-2	2.41E-14	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**2.41E-14**
bis(2-ethylhexyl)-phthalate	117-81-7	3.99E-12	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**3.99E-12**
chloromethane	74-87-3	5.23E-17	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**5.23E-17**
dichlorodifluoromethane	75-71-8	2.03E-15	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**2.03E-15**
di-n-butyl phthalate	84-74-2	1.36E-12	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.36E-12**
di-n-octyl phthalate	117-84-0	2.06E-19	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**2.06E-19**
ethane	74-84-0	6.08E-15	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**6.08E-15**
HD	505-60-2	6.84E-16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**6.84E-16**
methane	74-82-8	4.16E-15	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**4.16E-15**
naphthalene	91-20-3	8.76E-12	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**8.76E-12**
propene	115-07-1	9.28E-16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**9.28E-16**
toluene	108-88-3	2.35E-14	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**2.35E-14**
trichlorofluoromethane	75-69-4	1.43E-17	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.43E-17**
xylenes	1330-20-7	3.95E-15	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**3.95E-15**
1,2,3,4,6,7,8-HpCDD	35822-46-9		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
1,2,3,4,6,7,8,9-OCDD	3268-87-9		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
1,2,3,4,6,7,8-HpCDF	67562-39-4		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
1,2,3,4,6,7,8,9-OCDF	39001-02-0		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
Total PCDDs and PCDFs	NA	3.45E-18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**3.45E-18**
ammonia	7664-41-7	4.12E-15	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**4.12E-15**
aluminum	7429-90-5	5.32E-15	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**5.32E-15**
antimony	7440-36-0	1.28E-15	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.28E-15**
barium	7440-39-3	2.38E-15	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**2.38E-15**
beryllium	7440-41-7	3.53E-15	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**3.53E-15**
cadmium	7440-43-9	1.74E-15	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.74E-15**
chlorine	7782-50-5	2.87E-13	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**2.87E-13**
chromium (3+)	7440-47-3	5.27E-16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**5.27E-16**
chromium (6+)	18540-29-9	5.27E-16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**5.27E-16**
cobalt	7440-48-4	2.84E-16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**2.84E-16**
copper	7440-50-8	1.40E-13	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.40E-13**
hydrogen chloride	7647-01-0	1.86E-13	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.86E-13**
iron	7439-89-6	6.61E-13	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**6.61E-13**
lead	7439-92-1	2.69E-14	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**2.69E-14**
manganese	7439-96-5	8.63E-14	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**8.63E-14**
total mercury	NA		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
mercuric chloride	7487-94-7	1.77E-12	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.77E-12**
methyl mercury	22967-92-6	2.95E-14	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**2.95E-14**
elemental mercury	7439-97-6	0.00E+00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**0.00E+00**
nickel	7440-02-0	1.30E-15	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.30E-15**
selenium	7782-49-2	1.02E-15	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.02E-15**
silver	7440-22-4	5.89E-17	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**5.89E-17**
vanadium	7440-62-2	4.41E-14	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**4.41E-14**
zinc	7440-66-6	7.82E-14	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**7.82E-14**

a. Ingestion rates of total PCDDs/PCDFs and coplanar PCBs are presented in units of mg TEQ/day

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS: Adult Worker Exposure Scenario														
COPC	CAS Number	Incidental Ingestion of Soil (mg/day)[a]	Ingestion of Exposed Produce (mg/day)[a]	Ingestion of Protected Produce (mg/day)[a]	Ingestion of Belowground Produce (mg/day)[a]	Ingestion of Beef (mg/day)[a]	Ingestion of Pork (mg/day)[a]	Ingestion of Poultry (mg/day)[a]	Ingestion of Eggs (mg/day)[a]	Ingestion of Milk (mg/day)[a]	Ingestion of Fish (mg/day)[a]	Incidental Ingestion of Surface Water (mg/day)[a]	Ingestion of Breast Milk (mg/day)[a]	Total Daily COPC Ingestion (mg/day)[a]
1,4-dioxane	123-91-1	2.12E-13	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**2.12E-13**
2-butanone	78-93-3	2.73E-12	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**2.73E-12**
2-ethyl 1,3-butadiene	3404-63-5	5.73E-16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**5.73E-16**
acetone	67-64-1	1.14E-11	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.14E-11**
benzene	71-43-2	1.20E-13	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.20E-13**
bis(2-ethylhexyl)-phthalate	117-81-7	2.00E-11	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**2.00E-11**
chloromethane	74-87-3	2.62E-16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**2.62E-16**
dichlorodifluoromethane	75-71-8	1.02E-14	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.02E-14**
di-n-butyl phthalate	84-74-2	6.81E-12	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**6.81E-12**
di-n-octyl phthalate	117-84-0	1.03E-18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.03E-18**
ethane	74-84-0	3.04E-14	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**3.04E-14**
HD	505-60-2	3.42E-15	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**3.42E-15**
methane	74-82-8	2.08E-14	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**2.08E-14**
naphthalene	91-20-3	4.38E-11	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**4.38E-11**
propene	115-07-1	4.64E-15	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**4.64E-15**
toluene	108-88-3	1.17E-13	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.17E-13**
trichlorofluoromethane	75-69-4	7.17E-17	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**7.17E-17**
xylenes	1330-20-7	1.98E-14	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.98E-14**
1,2,3,4,6,7,8-HpCDD	35822-46-9		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
1,2,3,4,6,7,8,9-OCDD	3268-87-9		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
1,2,3,4,6,7,8-HpCDF	67562-39-4		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
1,2,3,4,6,7,8,9-OCDF	39001-02-0		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
Total PCDDs and PCDFs	NA	5.22E-18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**5.22E-18**
ammonia	7664-41-7	2.06E-14	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**2.06E-14**
aluminum	7429-90-5	2.66E-14	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**2.66E-14**
antimony	7440-36-0	6.41E-15	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**6.41E-15**
barium	7440-39-3	1.19E-14	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.19E-14**
beryllium	7440-41-7	1.77E-14	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.77E-14**
cadmium	7440-43-9	8.71E-15	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**8.71E-15**
chlorine	7782-50-5	1.44E-12	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.44E-12**
chromium (3+)	7440-47-3	2.63E-15	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**2.63E-15**
chromium (6+)	18540-29-9	2.63E-15	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**2.63E-15**
cobalt	7440-48-4	1.42E-15	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.42E-15**
copper	7440-50-8	7.02E-13	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**7.02E-13**
hydrogen chloride	7647-01-0	9.29E-13	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**9.29E-13**
iron	7439-89-6	3.30E-12	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**3.30E-12**
lead	7439-92-1	1.35E-13	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.35E-13**
manganese	7439-96-5	4.31E-13	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**4.31E-13**
total mercury	NA		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
mercuric chloride	7487-94-7	1.97E-12	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.97E-12**
methyl mercury	22967-92-6	3.83E-14	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**3.83E-14**
elemental mercury	7439-97-6	0.00E+00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**0.00E+00**
nickel	7440-02-0	6.50E-15	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**6.50E-15**
selenium	7782-49-2	5.12E-15	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**5.12E-15**
silver	7440-22-4	2.95E-16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**2.95E-16**
vanadium	7440-62-2	2.20E-13	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**2.20E-13**
zinc	7440-66-6	3.91E-13	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**3.91E-13**

a. Ingestion rates of total PCDDs/PCDFs are presented in units of mg TEQ/day

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Child Resident Exposure Scenario														
COPC	CAS Number	Incidental Ingestion of Soil (mg/day)[a]	Ingestion of Exposed Produce (mg/day)[a]	Ingestion of Protected Produce (mg/day)[a]	Ingestion of Belowground Produce (mg/day)[a]	Ingestion of Beef (mg/day)[a]	Ingestion of Pork (mg/day)[a]	Ingestion of Poultry (mg/day)[a]	Ingestion of Eggs (mg/day)[a]	Ingestion of Milk (mg/day)[a]	Ingestion of Fish (mg/day)[a]	Incidental Ingestion of Surface Water (mg/day)[a]	Ingestion of Breast Milk (mg/day)[a]	Total Daily COPC Ingestion (mg/day)[a]
1,4-dioxane	123-91-1	8.46E-13	7.71E-09	5.53E-09	1.24E-07	2.40E-13	7.97E-14	3.19E-15	1.95E-15	1.17E-12	9.42E-10	2.74E-11	n/a	**1.39E-07**
2-butanone	78-93-3	1.09E-11	9.95E-08	7.15E-08	5.76E-08	1.23E-11	4.09E-12	1.64E-13	1.00E-13	6.00E-11	4.80E-10	1.40E-11	n/a	**2.29E-07**
2-ethyl 1,3-butadiene	3404-63-5	2.29E-15	1.72E-12	1.16E-12	8.69E-12	2.50E-14	8.32E-15	3.45E-16	2.10E-16	1.18E-13	3.44E-10	6.87E-13	n/a	**3.57E-10**
acetone	67-64-1	4.55E-11	4.14E-07	2.97E-07	7.69E-07	1.39E-11	4.63E-12	1.86E-13	1.13E-13	6.79E-11	7.76E-09	2.26E-10	n/a	**1.49E-06**
benzene	71-43-2	4.82E-13	1.29E-09	8.91E-10	8.81E-09	5.15E-12	1.69E-12	6.79E-14	4.14E-14	2.49E-11	7.28E-09	8.11E-11	n/a	**1.84E-08**
bis(2-ethylhexyl)-phthalate	117-81-7	7.84E-11	2.66E-07	2.67E-09	1.52E-13	1.12E-07	4.15E-09	8.07E-10	4.94E-10	4.78E-06	3.66E-09	1.88E-12	n/a	**5.17E-06**
chloromethane	74-87-3	1.05E-15	9.54E-12	6.84E-12	2.97E-11	4.58E-15	1.52E-15	6.08E-17	3.73E-17	2.23E-14	3.06E-11	8.92E-13	n/a	**7.77E-11**
dichlorodifluoromethane	75-71-8	4.07E-14	9.67E-11	6.94E-11	1.60E-10	4.27E-13	1.44E-10	5.81E-12	3.55E-12	2.07E-12	9.20E-11	9.21E-13	n/a	**5.75E-10**
di-n-butyl phthalate	84-74-2	2.67E-11	4.59E-09	1.54E-09	1.13E-11	9.03E-07	5.76E-08	3.01E-12	1.84E-10	3.88E-05	2.88E-08	1.47E-12	n/a	**3.98E-05**
di-n-octyl phthalate	117-84-0	4.13E-18	3.32E-08	2.59E-18	2.90E-05	2.75E-06	9.85E-08	5.97E-17	3.65E-17	1.18E-05	9.79E-10	1.95E-13	n/a	**4.37E-05**
ethane	74-84-0	1.22E-13	4.64E-10	3.30E-10	1.04E-09	1.18E-12	3.90E-13	1.57E-14	9.62E-15	5.72E-12	6.19E-08	1.15E-09	n/a	**6.49E-08**
HD	505-60-2	1.37E-14	7.51E-11	1.68E-11	2.22E-11	4.21E-13	6.59E-14	2.04E-15	1.25E-15	1.89E-12	8.41E-11	5.41E-13	n/a	**2.01E-10**
methane	74-82-8	8.32E-14	8.23E-10	5.89E-10	1.72E-09	5.66E-13	6.79E-15	2.72E-16	1.66E-16	9.98E-14	7.38E-08	4.92E-09	n/a	**8.19E-08**
naphthalene	91-20-3	1.72E-10	8.96E-08	6.42E-08	1.05E-08	1.69E-09	6.00E-10	2.52E-11	1.54E-11	7.91E-09	1.43E-09	1.90E-12	n/a	**1.76E-07**
propene	115-07-1	1.86E-14	7.45E-11	5.31E-11	1.65E-10	1.77E-13	5.89E-14	2.37E-15	1.45E-15	8.59E-13	3.20E-09	6.41E-11	n/a	**3.56E-09**
toluene	108-88-3	4.69E-13	6.10E-10	3.92E-10	8.29E-09	5.60E-12	1.77E-12	7.16E-14	4.38E-14	2.66E-11	8.35E-09	3.21E-11	n/a	**1.77E-08**
trichlorofluoromethane	75-69-4	2.87E-16	4.69E-13	3.11E-13	5.31E-12	3.33E-12	1.07E-15	4.30E-14	2.63E-14	1.59E-11	7.59E-11	4.16E-13	n/a	**1.02E-10**
xylenes	1330-20-7	7.91E-14	5.28E-11	3.57E-11	2.98E-10	8.45E-13	2.84E-13	1.18E-14	7.22E-15	3.97E-12	2.85E-10	4.85E-13	n/a	**6.77E-10**
1,2,3,4,6,7,8-HpCDD	35822-46-9												n/a	
1,2,3,4,6,7,8,9-OCDD	3268-87-9												n/a	
1,2,3,4,6,7,8-HpCDF	67562-39-4												n/a	
1,2,3,4,6,7,8,9-OCDF	39001-02-0												n/a	
Total PCDDs and PCDFs	NA	1.08E-17	1.38E-15	1.06E-17	1.50E-17	8.75E-14	1.52E-15	1.16E-16	1.32E-16	7.01E-13	8.54E-17	1.22E-20	n/a	**7.91E-13**
ammonia	7664-41-7	8.24E-14	2.55E-09	1.83E-09	7.36E-09	2.72E-13	9.01E-14	3.61E-15	2.21E-15	1.33E-12	1.29E-10	3.74E-12	n/a	**1.19E-08**
aluminum	7429-90-5	1.06E-13	1.25E-13	8.97E-14	1.58E-14	8.84E-15	0.00E+00	0.00E+00	0.00E+00	1.31E-14	5.79E-11	1.68E-12	n/a	**5.99E-11**
antimony	7440-36-0	2.56E-14	1.72E-08	6.38E-13	1.75E-13	1.83E-10	0.00E+00	0.00E+00	0.00E+00	3.73E-10	3.07E-11	7.06E-14	n/a	**1.78E-08**
barium	7440-39-3	4.77E-14	3.44E-09	1.20E-12	1.63E-13	5.49E-12	0.00E+00	0.00E+00	0.00E+00	2.61E-10	9.78E-11	1.42E-14	n/a	**3.81E-09**
beryllium	7440-41-7	7.05E-14	1.62E-09	1.42E-13	2.41E-14	1.72E-11	0.00E+00	0.00E+00	0.00E+00	3.16E-13	4.48E-12	6.70E-15	n/a	**1.64E-09**
cadmium	7440-43-9	3.48E-14	1.74E-08	3.39E-12	1.19E-12	2.23E-11	1.05E-12	1.98E-14	4.99E-16	2.46E-11	7.05E-10	7.16E-14	n/a	**1.82E-08**
chlorine	7782-50-5	5.74E-12	5.22E-08	3.75E-08	3.85E-08	2.21E-11	7.36E-12	2.96E-13	1.81E-13	1.08E-10	4.02E-10	1.17E-11	n/a	**1.29E-07**
chromium (3+)	7440-47-3	1.05E-14	2.69E-08	4.01E-14	1.08E-14	1.57E-09	0.00E+00	0.00E+00	0.00E+00	8.73E-09	3.36E-12	9.79E-14	n/a	**3.72E-08**
chromium (6+)	18540-29-9	1.05E-14	2.69E-08	4.01E-14	1.08E-14	1.57E-09	0.00E+00	0.00E+00	0.00E+00	8.73E-09	3.36E-12	9.79E-14	n/a	**3.72E-08**
cobalt	7440-48-4	5.68E-15	6.07E-09	3.83E-14	9.07E-15	1.29E-09	0.00E+00	0.00E+00	0.00E+00	2.63E-09	7.53E-13	2.19E-14	n/a	**9.99E-09**
copper	7440-50-8	2.81E-12	2.99E-07	5.89E-10	1.60E-10	3.18E-08	0.00E+00	0.00E+00	0.00E+00	9.70E-08	3.75E-11	1.10E-12	n/a	**4.29E-07**
hydrogen chloride	7647-01-0	3.72E-12	7.62E-08	5.47E-08	1.83E-07	4.67E-12	1.55E-12	6.21E-14	3.79E-14	2.28E-11	1.31E-09	3.80E-11	n/a	**3.15E-07**
iron	7439-89-6	1.32E-11	2.63E-05	1.42E-11	7.67E-10	5.60E-06	0.00E+00	0.00E+00	0.00E+00	1.43E-06	3.23E-09	9.39E-11	n/a	**3.34E-05**
lead	7439-92-1	5.38E-13	1.81E-08	5.71E-12	1.10E-12	5.77E-11	0.00E+00	0.00E+00	0.00E+00	9.79E-10	7.21E-14	7.43E-14	n/a	**1.91E-08**
manganese	7439-96-5	1.73E-12	1.34E-06	1.01E-10	1.97E-11	5.69E-09	0.00E+00	0.00E+00	0.00E+00	1.01E-07	1.63E-10	4.75E-12	n/a	**1.44E-06**
total mercury	NA												n/a	
mercuric chloride	7487-94-7	3.93E-12	4.35E-10	4.45E-11	3.23E-11	2.22E-11	8.30E-15	2.67E-13	2.86E-13	1.92E-10	0.00E+00	0.00E+00	n/a	**7.30E-10**
methyl mercury	22967-92-6	7.79E-14	1.08E-10	1.79E-12	1.76E-12	8.77E-13	1.83E-16	8.85E-16	9.47E-16	7.73E-12	4.55E-08	0.00E+00	n/a	**4.56E-08**
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	n/a	**0.00E+00**
nickel	7440-02-0	2.60E-14	1.21E-08	1.89E-13	3.56E-13	7.70E-10	0.00E+00	0.00E+00	0.00E+00	2.62E-09	4.20E-11	4.96E-14	n/a	**1.55E-08**
selenium	7782-49-2	2.05E-14	4.80E-08	3.12E-13	1.17E-13	1.16E-09	2.84E-09	6.81E-14	7.29E-14	6.09E-08	2.76E-10	1.97E-13	n/a	**1.13E-07**
silver	7440-22-4	1.18E-15	4.20E-09	1.27E-13	2.69E-14	1.34E-10	0.00E+00	0.00E+00	0.00E+00	1.82E-08	1.64E-11	1.72E-14	n/a	**2.25E-08**
vanadium	7440-62-2	8.81E-13	4.67E-08	2.28E-12	6.02E-13	1.24E-09	0.00E+00	0.00E+00	0.00E+00	2.02E-10	5.55E-12	1.63E-13	n/a	**4.81E-08**
zinc	7440-66-6	1.56E-12	7.61E-07	1.18E-10	3.21E-10	7.29E-10	3.07E-11	6.46E-14	6.91E-14	5.36E-09	6.99E-08	3.13E-12	n/a	**8.38E-07**

a. Ingestion rates of total PCDDs/PCDFs and coplanar PCBs are presented in units of mg TEQ/day

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS: Child Resident Exposure Scenario														
COPC	CAS Number	Incidental Ingestion of Soil (mg/day)[a]	Ingestion of Exposed Produce (mg/day)[a]	Ingestion of Protected Produce (mg/day)[a]	Ingestion of Belowground Produce (mg/day)[a]	Ingestion of Beef (mg/day)[a]	Ingestion of Pork (mg/day)[a]	Ingestion of Poultry (mg/day)[a]	Ingestion of Eggs (mg/day)[a]	Ingestion of Milk (mg/day)[a]	Ingestion of Fish (mg/day)[a]	Incidental Ingestion of Surface Water (mg/day)[a]	Ingestion of Breast Milk (mg/day)[a]	Total Daily COPC Ingestion (mg/day)[a]
1,4-dioxane	123-91-1	8.46E-13	7.71E-09	5.53E-09	1.24E-07	2.40E-13	7.97E-14	3.19E-15	1.95E-15	1.17E-12	9.42E-10	2.74E-11	n/a	**1.39E-07**
2-butanone	78-93-3	1.09E-11	9.96E-08	7.15E-08	5.76E-08	1.23E-11	4.09E-12	1.64E-13	1.00E-13	6.00E-11	4.80E-10	1.40E-11	n/a	**2.29E-07**
2-ethyl 1,3-butadiene	3404-63-5	2.29E-15	1.72E-12	1.16E-12	8.69E-12	2.50E-14	8.32E-15	3.45E-16	2.10E-16	1.18E-13	3.44E-10	6.87E-13	n/a	**3.57E-10**
acetone	67-64-1	4.55E-11	4.14E-07	2.97E-07	7.70E-07	1.39E-11	4.63E-12	1.86E-13	1.13E-13	6.79E-11	7.76E-09	2.26E-10	n/a	**1.49E-06**
benzene	71-43-2	4.82E-13	1.29E-09	8.91E-10	8.81E-09	5.15E-12	1.69E-12	6.79E-14	4.14E-14	2.49E-11	7.28E-09	8.11E-11	n/a	**1.84E-08**
bis(2-ethylhexyl)-phthalate	117-81-7	7.98E-11	2.66E-07	2.72E-09	1.55E-13	1.12E-07	4.15E-09	8.22E-10	5.03E-10	4.78E-06	3.66E-09	1.88E-12	n/a	**5.17E-06**
chloromethane	74-87-3	1.05E-15	9.54E-12	6.84E-12	2.97E-11	4.58E-15	1.52E-15	6.08E-17	3.73E-17	2.23E-14	3.06E-11	8.92E-13	n/a	**7.77E-11**
dichlorodifluoromethane	75-71-8	4.07E-14	9.67E-11	6.94E-11	1.60E-10	4.27E-13	1.44E-10	5.81E-12	3.55E-12	2.07E-12	9.20E-11	9.21E-13	n/a	**5.75E-10**
di-n-butyl phthalate	84-74-2	2.72E-11	4.63E-09	1.57E-09	1.15E-11	9.03E-07	5.77E-08	3.06E-12	1.87E-10	3.88E-05	2.88E-08	1.47E-12	n/a	**3.98E-05**
di-n-octyl phthalate	117-84-0	4.13E-18	3.32E-08	2.59E-18	2.90E-05	2.75E-06	9.85E-08	5.97E-17	3.65E-17	1.18E-05	9.79E-10	1.95E-13	n/a	**4.37E-05**
ethane	74-84-0	1.22E-13	4.64E-10	3.30E-10	1.04E-09	1.18E-12	3.90E-13	1.57E-14	9.62E-15	5.72E-12	6.19E-08	1.15E-09	n/a	**6.49E-08**
HD	505-60-2	1.37E-14	7.51E-11	1.68E-11	2.22E-11	4.21E-13	6.59E-14	2.04E-15	1.25E-15	1.89E-12	8.41E-11	5.41E-13	n/a	**2.01E-10**
methane	74-82-8	8.32E-14	8.23E-10	5.89E-10	1.72E-09	5.66E-13	6.79E-15	2.72E-16	1.66E-16	9.98E-14	7.38E-08	4.92E-09	n/a	**8.19E-08**
naphthalene	91-20-3	1.75E-10	9.14E-08	6.55E-08	1.07E-08	1.72E-09	6.12E-10	2.57E-11	1.57E-11	8.07E-09	1.43E-09	1.90E-12	n/a	**1.80E-07**
propene	115-07-1	1.86E-14	7.45E-11	5.31E-11	1.65E-10	1.77E-13	5.89E-14	2.37E-15	1.45E-15	8.59E-13	3.20E-09	6.41E-11	n/a	**3.56E-09**
toluene	108-88-3	4.69E-13	6.10E-10	3.92E-10	8.29E-09	5.60E-12	1.77E-12	7.16E-14	4.38E-14	2.66E-11	8.35E-09	3.21E-11	n/a	**1.77E-08**
trichlorofluoromethane	75-69-4	2.87E-16	4.69E-13	3.11E-13	5.31E-12	3.33E-12	1.07E-15	4.30E-14	2.63E-14	1.59E-11	7.59E-11	4.16E-13	n/a	**1.02E-10**
xylenes	1330-20-7	7.91E-14	5.28E-11	3.57E-11	2.98E-10	8.45E-13	2.84E-13	1.18E-14	7.22E-15	3.97E-12	2.85E-10	4.85E-13	n/a	**6.77E-10**
1,2,3,4,6,7,8-HpCDD	35822-46-9												n/a	
1,2,3,4,6,7,8,9-OCDD	3268-87-9												n/a	
1,2,3,4,6,7,8-HpCDF	67562-39-4												n/a	
1,2,3,4,6,7,8,9-OCDF	39001-02-0												n/a	
Total PCDDs and PCDFs	NA	2.09E-17	1.39E-15	2.04E-17	2.91E-17	9.07E-14	2.11E-15	2.25E-16	2.55E-16	7.15E-13	1.43E-16	2.05E-20	n/a	**8.10E-13**
ammonia	7664-41-7	8.24E-14	2.55E-09	1.83E-09	7.36E-09	2.72E-13	9.01E-14	3.61E-15	2.21E-15	1.33E-12	1.29E-10	3.74E-12	n/a	**1.19E-08**
aluminum	7429-90-5	1.06E-13	1.25E-13	8.97E-14	1.58E-14	8.84E-15	0.00E+00	0.00E+00	0.00E+00	1.31E-14	5.79E-11	1.68E-12	n/a	**5.99E-11**
antimony	7440-36-0	2.57E-14	1.72E-08	6.38E-13	1.75E-13	1.83E-10	0.00E+00	0.00E+00	0.00E+00	3.73E-10	3.07E-11	7.06E-14	n/a	**1.78E-08**
barium	7440-39-3	4.77E-14	3.44E-09	1.20E-12	1.63E-13	5.49E-12	0.00E+00	0.00E+00	0.00E+00	2.61E-10	9.78E-11	1.42E-14	n/a	**3.81E-09**
beryllium	7440-41-7	7.06E-14	1.62E-09	1.42E-13	2.42E-14	1.72E-11	0.00E+00	0.00E+00	0.00E+00	3.16E-13	4.48E-12	6.70E-15	n/a	**1.64E-09**
cadmium	7440-43-9	3.48E-14	1.74E-08	3.40E-12	1.19E-12	2.23E-11	1.05E-12	1.98E-14	4.99E-16	2.46E-11	7.05E-10	7.16E-14	n/a	**1.82E-08**
chlorine	7782-50-5	5.74E-12	5.22E-08	3.75E-08	3.85E-08	2.21E-11	7.36E-12	2.96E-13	1.81E-13	1.08E-10	4.02E-10	1.17E-11	n/a	**1.29E-07**
chromium (3+)	7440-47-3	1.05E-14	2.69E-08	4.01E-14	1.08E-14	1.57E-09	0.00E+00	0.00E+00	0.00E+00	8.73E-09	3.36E-12	9.79E-14	n/a	**3.72E-08**
chromium (6+)	18540-29-9	1.05E-14	2.69E-08	4.01E-14	1.08E-14	1.57E-09	0.00E+00	0.00E+00	0.00E+00	8.73E-09	3.36E-12	9.79E-14	n/a	**3.72E-08**
cobalt	7440-48-4	5.68E-15	6.07E-09	3.84E-14	9.07E-15	1.29E-09	0.00E+00	0.00E+00	0.00E+00	2.63E-09	7.53E-13	2.19E-14	n/a	**9.99E-09**
copper	7440-50-8	2.81E-12	2.99E-07	5.89E-10	1.60E-10	3.18E-08	0.00E+00	0.00E+00	0.00E+00	9.70E-08	3.75E-11	1.10E-12	n/a	**4.29E-07**
hydrogen chloride	7647-01-0	3.72E-12	7.62E-08	5.47E-08	1.83E-07	4.67E-12	1.55E-12	6.21E-14	3.79E-14	2.28E-11	1.31E-09	3.80E-11	n/a	**3.15E-07**
iron	7439-89-6	1.32E-11	2.63E-05	1.42E-11	7.67E-10	5.60E-06	0.00E+00	0.00E+00	0.00E+00	1.43E-06	3.23E-09	9.39E-11	n/a	**3.34E-05**
lead	7439-92-1	5.39E-13	1.81E-08	5.72E-12	1.11E-12	5.77E-11	0.00E+00	0.00E+00	0.00E+00	9.79E-10	7.21E-14	7.43E-14	n/a	**1.91E-08**
manganese	7439-96-5	1.73E-12	1.34E-06	1.01E-10	1.97E-11	5.69E-09	0.00E+00	0.00E+00	0.00E+00	1.01E-07	1.63E-10	4.75E-12	n/a	**1.44E-06**
total mercury	NA												n/a	
mercuric chloride	7487-94-7	7.87E-12	4.96E-10	8.90E-11	6.46E-11	2.37E-11	1.26E-14	5.34E-13	5.72E-13	2.01E-10	0.00E+00	0.00E+00	n/a	**8.83E-10**
methyl mercury	22967-92-6	1.53E-13	1.10E-10	3.52E-12	3.46E-12	8.83E-13	1.97E-16	1.74E-15	1.86E-15	7.77E-12	7.88E-08	0.00E+00	n/a	**7.90E-08**
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	n/a	**0.00E+00**
nickel	7440-02-0	2.60E-14	1.21E-08	1.89E-13	3.56E-13	7.70E-10	0.00E+00	0.00E+00	0.00E+00	2.62E-09	4.20E-11	4.96E-14	n/a	**1.55E-08**
selenium	7782-49-2	2.05E-14	4.80E-08	3.12E-13	1.17E-13	1.16E-09	2.84E-09	6.81E-14	7.29E-14	6.09E-08	2.76E-10	1.97E-13	n/a	**1.13E-07**
silver	7440-22-4	1.18E-15	4.20E-09	1.27E-13	2.69E-14	1.34E-10	0.00E+00	0.00E+00	0.00E+00	1.82E-08	1.64E-11	1.72E-14	n/a	**2.25E-08**
vanadium	7440-62-2	8.82E-13	4.67E-08	2.28E-12	6.03E-13	1.24E-09	0.00E+00	0.00E+00	0.00E+00	2.02E-10	5.55E-12	1.63E-13	n/a	**4.81E-08**
zinc	7440-66-6	1.56E-12	7.61E-07	1.18E-10	3.21E-10	7.29E-10	3.07E-11	6.46E-14	6.91E-14	5.36E-09	6.99E-08	3.13E-12	n/a	**8.38E-07**

a. Ingestion rates of total PCDDs/PCDFs are presented in units of mg TEQ/day

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS:
Child Subsistence Fisher Exposure Scenario

COPC	CAS Number	Incidental Ingestion of Soil (mg/day)[a]	Ingestion of Exposed Produce (mg/day)[a]	Ingestion of Protected Produce (mg/day)[a]	Ingestion of Belowground Produce (mg/day)[a]	Ingestion of Beef (mg/day)[a]	Ingestion of Pork (mg/day)[a]	Ingestion of Poultry (mg/day)[a]	Ingestion of Eggs (mg/day)[a]	Ingestion of Milk (mg/day)[a]	Ingestion of Fish (mg/day)[a]	Incidental Ingestion of Surface Water (mg/day)[a]	Ingestion of Breast Milk (mg/day)[a]	Total Daily COPC Ingestion (mg/day)[a]
1,4-dioxane	123-91-1	8.46E-13	7.71E-09	5.53E-09	1.24E-07	2.40E-13	7.97E-14	3.19E-15	1.95E-15	1.17E-12	2.35E-09	2.74E-11	n/a	**1.40E-07**
2-butanone	78-93-3	1.09E-11	9.95E-08	7.15E-08	5.76E-08	1.23E-11	4.09E-12	1.64E-13	1.00E-13	6.00E-11	1.20E-09	1.40E-11	n/a	**2.30E-07**
2-ethyl 1,3-butadiene	3404-63-5	2.29E-15	1.72E-12	1.16E-12	8.69E-12	2.50E-14	8.32E-15	3.45E-16	2.10E-16	1.18E-13	8.60E-10	6.87E-13	n/a	**8.73E-10**
acetone	67-64-1	4.55E-11	4.14E-07	2.97E-07	7.69E-07	1.39E-11	4.63E-12	1.86E-13	1.13E-13	6.79E-11	1.94E-08	2.26E-10	n/a	**1.50E-06**
benzene	71-43-2	4.82E-13	1.29E-09	8.91E-10	8.81E-09	5.15E-12	1.69E-12	6.79E-14	4.14E-14	2.49E-11	1.82E-08	8.11E-11	n/a	**2.93E-08**
bis(2-ethylhexyl)-phthalate	117-81-7	7.84E-11	2.66E-07	2.67E-09	1.52E-13	1.12E-07	4.15E-09	8.07E-10	4.94E-10	4.78E-06	9.14E-09	1.88E-12	n/a	**5.17E-06**
chloromethane	74-87-3	1.05E-15	9.54E-12	6.84E-12	2.97E-11	4.58E-15	1.52E-15	6.08E-17	3.73E-17	2.23E-14	7.66E-11	8.92E-13	n/a	**1.24E-10**
dichlorodifluoromethane	75-71-8	4.07E-14	9.67E-11	6.94E-11	1.60E-10	4.27E-13	1.44E-10	5.81E-12	3.55E-12	2.07E-12	2.30E-10	9.21E-13	n/a	**7.13E-10**
di-n-butyl phthalate	84-74-2	2.67E-11	4.59E-09	1.54E-09	1.13E-11	9.03E-07	5.76E-08	3.01E-12	1.84E-10	3.88E-05	7.20E-08	1.47E-12	n/a	**3.99E-05**
di-n-octyl phthalate	117-84-0	4.13E-18	3.32E-08	2.59E-18	2.90E-05	2.75E-06	9.85E-08	5.97E-17	3.65E-17	1.18E-05	2.45E-09	1.95E-13	n/a	**4.37E-05**
ethane	74-84-0	1.22E-13	4.64E-10	3.30E-10	1.04E-09	1.18E-12	3.90E-13	1.57E-14	9.62E-15	5.72E-12	1.55E-07	1.15E-09	n/a	**1.58E-07**
HD	505-60-2	1.37E-14	7.51E-11	1.68E-11	2.22E-11	4.21E-13	6.59E-14	2.04E-15	1.25E-15	1.89E-12	2.10E-10	5.41E-13	n/a	**3.27E-10**
methane	74-82-8	8.32E-14	8.23E-10	5.89E-10	1.72E-09	5.66E-13	6.79E-15	2.72E-16	1.66E-16	9.98E-14	1.85E-07	4.92E-09	n/a	**1.93E-07**
naphthalene	91-20-3	1.72E-10	8.96E-08	6.42E-08	1.05E-08	1.69E-09	6.00E-10	2.52E-11	1.54E-11	7.91E-09	3.57E-09	1.90E-12	n/a	**1.78E-07**
propene	115-07-1	1.86E-14	7.45E-11	5.31E-11	1.65E-10	1.77E-13	5.89E-14	2.37E-15	1.45E-15	8.59E-13	8.01E-09	6.41E-11	n/a	**8.37E-09**
toluene	108-88-3	4.69E-13	6.10E-10	3.92E-10	8.29E-09	5.60E-12	1.77E-12	7.16E-14	4.38E-14	2.66E-11	2.09E-08	3.21E-11	n/a	**3.02E-08**
trichlorofluoromethane	75-69-4	2.87E-16	4.69E-13	3.11E-13	5.31E-12	3.33E-12	1.07E-15	4.30E-14	2.63E-14	1.59E-11	1.90E-10	4.16E-13	n/a	**2.16E-10**
xylenes	1330-20-7	7.91E-14	5.28E-11	3.57E-11	2.98E-10	8.45E-13	2.84E-13	1.18E-14	7.22E-15	3.97E-12	7.13E-10	4.85E-13	n/a	**1.11E-09**
1,2,3,4,6,7,8-HpCDD	35822-46-9												n/a	
1,2,3,4,6,7,8,9-OCDD	3268-87-9												n/a	
1,2,3,4,6,7,8-HpCDF	67562-39-4												n/a	
1,2,3,4,6,7,8,9-OCDF	39001-02-0												n/a	
Total PCDDs and PCDFs	NA	1.08E-17	1.38E-15	1.06E-17	1.50E-17	8.75E-14	1.52E-15	1.16E-16	1.32E-16	7.01E-13	2.13E-16	1.22E-20	n/a	**7.91E-13**
ammonia	7664-41-7	8.24E-14	2.55E-09	1.83E-09	7.36E-09	2.72E-13	9.01E-14	3.61E-15	2.21E-15	1.33E-12	3.21E-10	3.74E-12	n/a	**1.21E-08**
aluminum	7429-90-5	1.06E-13	1.25E-13	8.97E-14	1.58E-14	8.84E-15	0.00E+00	0.00E+00	0.00E+00	1.31E-14	1.45E-10	1.68E-12	n/a	**1.47E-10**
antimony	7440-36-0	2.56E-14	1.72E-08	6.38E-13	1.75E-13	1.83E-10	0.00E+00	0.00E+00	0.00E+00	3.73E-10	7.67E-11	7.06E-14	n/a	**1.78E-08**
barium	7440-39-3	4.77E-14	3.44E-09	1.20E-12	1.63E-13	5.49E-12	0.00E+00	0.00E+00	0.00E+00	2.61E-10	2.45E-10	1.42E-14	n/a	**3.95E-09**
beryllium	7440-41-7	7.05E-14	1.62E-09	1.42E-13	2.41E-14	1.72E-11	0.00E+00	0.00E+00	0.00E+00	3.16E-13	1.12E-11	6.70E-15	n/a	**1.65E-09**
cadmium	7440-43-9	3.48E-14	1.74E-08	3.39E-12	1.19E-12	2.23E-11	1.05E-12	1.98E-14	4.99E-16	2.46E-11	1.76E-09	7.16E-14	n/a	**1.93E-08**
chlorine	7782-50-5	5.74E-12	5.22E-08	3.75E-08	3.85E-08	2.21E-11	7.36E-12	2.96E-13	1.81E-13	1.08E-10	1.00E-09	1.17E-11	n/a	**1.29E-07**
chromium (3+)	7440-47-3	1.05E-14	2.69E-08	4.01E-14	1.08E-14	1.57E-09	0.00E+00	0.00E+00	0.00E+00	8.73E-09	8.40E-12	9.79E-14	n/a	**3.72E-08**
chromium (6+)	18540-29-9	1.05E-14	2.69E-08	4.01E-14	1.08E-14	1.57E-09	0.00E+00	0.00E+00	0.00E+00	8.73E-09	8.40E-12	9.79E-14	n/a	**3.72E-08**
cobalt	7440-48-4	5.68E-15	6.07E-09	3.83E-14	9.07E-15	1.29E-09	0.00E+00	0.00E+00	0.00E+00	2.63E-09	1.88E-12	2.19E-14	n/a	**9.99E-09**
copper	7440-50-8	2.81E-12	2.99E-07	5.89E-10	1.60E-10	3.18E-08	0.00E+00	0.00E+00	0.00E+00	9.70E-08	9.37E-11	1.10E-12	n/a	**4.29E-07**
hydrogen chloride	7647-01-0	3.72E-12	7.62E-08	5.47E-08	1.83E-07	4.67E-12	1.55E-12	6.21E-14	3.79E-14	2.28E-11	3.27E-09	3.80E-11	n/a	**3.17E-07**
iron	7439-89-6	1.32E-11	2.63E-05	1.42E-11	7.67E-10	5.60E-06	0.00E+00	0.00E+00	0.00E+00	1.43E-06	8.07E-09	9.39E-11	n/a	**3.34E-05**
lead	7439-92-1	5.38E-13	1.81E-08	5.71E-12	1.10E-12	5.77E-11	0.00E+00	0.00E+00	0.00E+00	9.79E-10	1.80E-13	7.43E-14	n/a	**1.91E-08**
manganese	7439-96-5	1.73E-12	1.34E-06	1.01E-10	1.97E-11	5.69E-09	0.00E+00	0.00E+00	0.00E+00	1.01E-07	4.08E-10	4.75E-12	n/a	**1.44E-06**
total mercury	NA												n/a	
mercuric chloride	7487-94-7	3.93E-12	4.35E-10	4.45E-11	3.23E-11	2.22E-11	8.30E-15	2.67E-13	2.86E-13	1.92E-10	0.00E+00	0.00E+00	n/a	**7.30E-10**
methyl mercury	22967-92-6	7.79E-14	1.08E-10	1.79E-12	1.76E-12	8.77E-13	1.83E-16	8.85E-16	9.47E-16	7.73E-12	1.14E-07	0.00E+00	n/a	**1.14E-07**
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	n/a	**0.00E+00**
nickel	7440-02-0	2.60E-14	1.21E-08	1.89E-13	3.56E-13	7.70E-10	0.00E+00	0.00E+00	0.00E+00	2.62E-09	1.05E-10	4.96E-14	n/a	**1.56E-08**
selenium	7782-49-2	2.05E-14	4.80E-08	3.12E-13	1.17E-13	1.16E-09	2.84E-09	6.81E-14	7.29E-14	6.09E-08	6.91E-10	1.97E-13	n/a	**1.14E-07**
silver	7440-22-4	1.18E-15	4.20E-09	1.27E-13	2.69E-14	1.34E-10	0.00E+00	0.00E+00	0.00E+00	1.82E-08	4.11E-11	1.72E-14	n/a	**2.26E-08**
vanadium	7440-62-2	8.81E-13	4.67E-08	2.28E-12	6.02E-13	1.24E-09	0.00E+00	0.00E+00	0.00E+00	2.02E-10	1.39E-11	1.63E-13	n/a	**4.81E-08**
zinc	7440-66-6	1.56E-12	7.61E-07	1.18E-10	3.21E-10	7.29E-10	3.07E-11	6.46E-14	6.91E-14	5.36E-09	1.75E-07	3.13E-12	n/a	**9.43E-07**

a. Ingestion rates of total PCDDs/PCDFs and coplanar PCBs are presented in units of mg TEQ/day

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS: Child Subsistence Fisher Exposure Scenario														
COPC	CAS Number	Incidental Ingestion of Soil (mg/day)[a]	Ingestion of Exposed Produce (mg/day)[a]	Ingestion of Protected Produce (mg/day)[a]	Ingestion of Belowground Produce (mg/day)[a]	Ingestion of Beef (mg/day)[a]	Ingestion of Pork (mg/day)[a]	Ingestion of Poultry (mg/day)[a]	Ingestion of Eggs (mg/day)[a]	Ingestion of Milk (mg/day)[a]	Ingestion of Fish (mg/day)[a]	Incidental Ingestion of Surface Water (mg/day)[a]	Ingestion of Breast Milk (mg/day)[a]	Total Daily COPC Ingestion (mg/day)[a]
1,4-dioxane	123-91-1	8.46E-13	7.71E-09	5.53E-09	1.24E-07	2.40E-13	7.97E-14	3.19E-15	1.95E-15	1.17E-12	2.35E-09	2.74E-11	n/a	**1.40E-07**
2-butanone	78-93-3	1.09E-11	9.96E-08	7.15E-08	5.76E-08	1.23E-11	4.09E-12	1.64E-13	1.00E-13	6.00E-11	1.20E-09	1.40E-11	n/a	**2.30E-07**
2-ethyl 1,3-butadiene	3404-63-5	2.29E-15	1.72E-12	1.16E-12	8.69E-12	2.50E-14	8.32E-15	3.45E-16	2.10E-16	1.18E-13	8.60E-10	6.87E-13	n/a	**8.73E-10**
acetone	67-64-1	4.55E-11	4.14E-07	2.97E-07	7.70E-07	1.39E-11	4.63E-12	1.86E-13	1.13E-13	6.79E-11	1.94E-08	2.26E-10	n/a	**1.50E-06**
benzene	71-43-2	4.82E-13	1.29E-09	8.91E-10	8.81E-09	5.15E-12	1.69E-12	6.79E-14	4.14E-14	2.49E-11	1.82E-08	8.11E-11	n/a	**2.93E-08**
bis(2-ethylhexyl)-phthalate	117-81-7	7.98E-11	2.66E-07	2.72E-09	1.55E-13	1.12E-07	4.15E-09	8.22E-10	5.03E-10	4.78E-06	9.15E-09	1.88E-12	n/a	**5.17E-06**
chloromethane	74-87-3	1.05E-15	9.54E-12	6.84E-12	2.97E-11	4.58E-15	1.52E-15	6.08E-17	3.73E-17	2.23E-14	7.66E-11	8.92E-13	n/a	**1.24E-10**
dichlorodifluoromethane	75-71-8	4.07E-14	9.67E-11	6.94E-11	1.60E-10	4.27E-13	1.44E-10	5.81E-12	3.55E-12	2.07E-12	2.30E-10	9.21E-13	n/a	**7.13E-10**
di-n-butyl phthalate	84-74-2	2.72E-11	4.63E-09	1.57E-09	1.15E-11	9.03E-07	5.77E-08	3.06E-12	1.87E-10	3.88E-05	7.20E-08	1.47E-12	n/a	**3.99E-05**
di-n-octyl phthalate	117-84-0	4.13E-18	3.32E-08	2.59E-18	2.90E-05	2.75E-06	9.85E-08	5.97E-17	3.65E-17	1.18E-05	2.45E-09	1.95E-13	n/a	**4.37E-05**
ethane	74-84-0	1.22E-13	4.64E-10	3.30E-10	1.04E-09	1.18E-12	3.90E-13	1.57E-14	9.62E-15	5.72E-12	1.55E-07	1.15E-09	n/a	**1.58E-07**
HD	505-60-2	1.37E-14	7.51E-11	1.68E-11	2.22E-11	4.21E-13	6.59E-14	2.04E-15	1.25E-15	1.89E-12	2.10E-10	5.41E-13	n/a	**3.27E-10**
methane	74-82-8	8.32E-14	8.23E-10	5.89E-10	1.72E-09	5.66E-13	6.79E-15	2.72E-16	1.66E-16	9.98E-14	1.85E-07	4.92E-09	n/a	**1.93E-07**
naphthalene	91-20-3	1.75E-10	9.14E-08	6.55E-08	1.07E-08	1.72E-09	6.12E-10	2.57E-11	1.57E-11	8.07E-09	3.58E-09	1.90E-12	n/a	**1.82E-07**
propene	115-07-1	1.86E-14	7.45E-11	5.31E-11	1.65E-10	1.77E-13	5.89E-14	2.37E-15	1.45E-15	8.59E-13	8.01E-09	6.41E-11	n/a	**8.37E-09**
toluene	108-88-3	4.69E-13	6.10E-10	3.92E-10	8.29E-09	5.60E-12	1.77E-12	7.16E-14	4.38E-14	2.66E-11	2.09E-08	3.21E-11	n/a	**3.02E-08**
trichlorofluoromethane	75-69-4	2.87E-16	4.69E-13	3.11E-13	5.31E-12	3.33E-12	1.07E-15	4.30E-14	2.63E-14	1.59E-11	1.90E-10	4.16E-13	n/a	**2.16E-10**
xylenes	1330-20-7	7.91E-14	5.28E-11	3.57E-11	2.98E-10	8.45E-13	2.84E-13	1.18E-14	7.22E-15	3.97E-12	7.13E-10	4.85E-13	n/a	**1.11E-09**
1,2,3,4,6,7,8-HpCDD	35822-46-9												n/a	
1,2,3,4,6,7,8,9-OCDD	3268-87-9												n/a	
1,2,3,4,6,7,8-HpCDF	67562-39-4												n/a	
1,2,3,4,6,7,8,9-OCDF	39001-02-0												n/a	
Total PCDDs and PCDFs	NA	2.09E-17	1.39E-15	2.04E-17	2.91E-17	9.07E-14	2.11E-15	2.25E-16	2.55E-16	7.15E-13	3.57E-16	2.05E-20	n/a	**8.10E-13**
ammonia	7664-41-7	8.24E-14	2.55E-09	1.83E-09	7.36E-09	2.72E-13	9.01E-14	3.61E-15	2.21E-15	1.33E-12	3.21E-10	3.74E-12	n/a	**1.21E-08**
aluminum	7429-90-5	1.06E-13	1.25E-13	8.97E-14	1.58E-14	8.84E-15	0.00E+00	0.00E+00	0.00E+00	1.31E-14	1.45E-10	1.68E-12	n/a	**1.47E-10**
antimony	7440-36-0	2.57E-14	1.72E-08	6.38E-13	1.75E-13	1.83E-10	0.00E+00	0.00E+00	0.00E+00	3.73E-10	7.67E-11	7.06E-14	n/a	**1.78E-08**
barium	7440-39-3	4.77E-14	3.44E-09	1.20E-12	1.63E-13	5.49E-12	0.00E+00	0.00E+00	0.00E+00	2.61E-10	2.45E-10	1.42E-14	n/a	**3.95E-09**
beryllium	7440-41-7	7.06E-14	1.62E-09	1.42E-13	2.42E-14	1.72E-11	0.00E+00	0.00E+00	0.00E+00	3.16E-13	1.12E-11	6.70E-15	n/a	**1.65E-09**
cadmium	7440-43-9	3.48E-14	1.74E-08	3.40E-12	1.19E-12	2.23E-11	1.05E-12	1.98E-14	4.99E-16	2.46E-11	1.76E-09	7.16E-14	n/a	**1.93E-08**
chlorine	7782-50-5	5.74E-12	5.22E-08	3.75E-08	3.85E-08	2.21E-11	7.36E-12	2.96E-13	1.81E-13	1.08E-10	1.00E-09	1.17E-11	n/a	**1.29E-07**
chromium (3+)	7440-47-3	1.05E-14	2.69E-08	4.01E-14	1.08E-14	1.57E-09	0.00E+00	0.00E+00	0.00E+00	8.73E-09	8.40E-12	9.79E-14	n/a	**3.72E-08**
chromium (6+)	18540-29-9	1.05E-14	2.69E-08	4.01E-14	1.08E-14	1.57E-09	0.00E+00	0.00E+00	0.00E+00	8.73E-09	8.40E-12	9.79E-14	n/a	**3.72E-08**
cobalt	7440-48-4	5.68E-15	6.07E-09	3.84E-14	9.07E-15	1.29E-09	0.00E+00	0.00E+00	0.00E+00	2.63E-09	1.88E-12	2.19E-14	n/a	**9.99E-09**
copper	7440-50-8	2.81E-12	2.99E-07	5.89E-10	1.60E-10	3.18E-08	0.00E+00	0.00E+00	0.00E+00	9.70E-08	9.37E-11	1.10E-12	n/a	**4.29E-07**
hydrogen chloride	7647-01-0	3.72E-12	7.62E-08	5.47E-08	1.83E-07	4.67E-12	1.55E-12	6.21E-14	3.79E-14	2.28E-11	3.27E-09	3.80E-11	n/a	**3.17E-07**
iron	7439-89-6	1.32E-11	2.63E-05	1.42E-11	7.67E-10	5.60E-06	0.00E+00	0.00E+00	0.00E+00	1.43E-06	8.07E-09	9.39E-11	n/a	**3.34E-05**
lead	7439-92-1	5.39E-13	1.81E-08	5.72E-12	1.11E-12	5.77E-11	0.00E+00	0.00E+00	0.00E+00	9.79E-10	1.80E-13	7.43E-14	n/a	**1.91E-08**
manganese	7439-96-5	1.73E-12	1.34E-06	1.01E-10	1.97E-11	5.69E-09	0.00E+00	0.00E+00	0.00E+00	1.01E-07	4.08E-10	4.75E-12	n/a	**1.44E-06**
total mercury	NA												n/a	
mercuric chloride	7487-94-7	7.87E-12	4.96E-10	8.90E-11	6.46E-11	2.37E-11	1.26E-14	5.34E-13	5.72E-13	2.01E-10	0.00E+00	0.00E+00	n/a	**8.83E-10**
methyl mercury	22967-92-6	1.53E-13	1.10E-10	3.52E-12	3.46E-12	8.83E-13	1.97E-16	1.74E-15	1.86E-15	7.77E-12	1.97E-07	0.00E+00	n/a	**1.97E-07**
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	n/a	**0.00E+00**
nickel	7440-02-0	2.60E-14	1.21E-08	1.89E-13	3.56E-13	7.70E-10	0.00E+00	0.00E+00	0.00E+00	2.62E-09	1.05E-10	4.96E-14	n/a	**1.56E-08**
selenium	7782-49-2	2.05E-14	4.80E-08	3.12E-13	1.17E-13	1.16E-09	2.84E-09	6.81E-14	7.29E-14	6.09E-08	6.91E-10	1.97E-13	n/a	**1.14E-07**
silver	7440-22-4	1.18E-15	4.20E-09	1.27E-13	2.69E-14	1.34E-10	0.00E+00	0.00E+00	0.00E+00	1.82E-08	4.11E-11	1.72E-14	n/a	**2.26E-08**
vanadium	7440-62-2	8.82E-13	4.67E-08	2.28E-12	6.03E-13	1.24E-09	0.00E+00	0.00E+00	0.00E+00	2.02E-10	1.39E-11	1.63E-13	n/a	**4.81E-08**
zinc	7440-66-6	1.56E-12	7.61E-07	1.18E-10	3.21E-10	7.29E-10	3.07E-11	6.46E-14	6.91E-14	5.36E-09	1.75E-07	3.13E-12	n/a	**9.43E-07**

a. Ingestion rates of total PCDDs/PCDFs are presented in units of mg TEQ/day

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS:
Child Subsistence Farmer Exposure Scenario

COPC	CAS Number	Incidental Ingestion of Soil (mg/day)[a]	Ingestion of Exposed Produce (mg/day)[a]	Ingestion of Protected Produce (mg/day)[a]	Ingestion of Belowground Produce (mg/day)[a]	Ingestion of Beef (mg/day)[a]	Ingestion of Pork (mg/day)[a]	Ingestion of Poultry (mg/day)[a]	Ingestion of Eggs (mg/day)[a]	Ingestion of Milk (mg/day)[a]	Ingestion of Fish (mg/day)[a]	Incidental Ingestion of Surface Water (mg/day)[a]	Ingestion of Breast Milk (mg/day)[a]	Total Daily COPC Ingestion (mg/day)[a]
1,4-dioxane	123-91-1	8.46E-13	1.93E-08	1.38E-08	3.11E-07	6.01E-13	1.99E-13	7.98E-15	4.86E-15	2.93E-12	9.42E-10	2.74E-11	n/a	**3.45E-07**
2-butanone	78-93-3	1.09E-11	2.49E-07	1.79E-07	1.44E-07	3.07E-11	1.02E-11	4.09E-13	2.50E-13	1.50E-10	4.80E-10	1.40E-11	n/a	**5.72E-07**
2-ethyl 1,3-butadiene	3404-63-5	2.29E-15	4.30E-12	2.91E-12	2.17E-11	6.25E-14	2.08E-14	8.61E-16	5.26E-16	2.94E-13	3.44E-10	6.87E-13	n/a	**3.74E-10**
acetone	67-64-1	4.55E-11	1.03E-06	7.43E-07	1.92E-06	3.48E-11	1.16E-11	4.64E-13	2.82E-13	1.70E-10	7.76E-09	2.26E-10	n/a	**3.71E-06**
benzene	71-43-2	4.82E-13	3.22E-09	2.23E-09	2.20E-08	1.29E-11	4.22E-12	1.70E-13	1.04E-13	6.23E-11	7.28E-09	8.11E-11	n/a	**3.49E-08**
bis(2-ethylhexyl)-phthalate	117-81-7	7.84E-11	6.65E-07	6.68E-09	3.81E-13	2.79E-07	1.04E-08	2.02E-09	1.23E-09	1.19E-05	3.66E-09	1.88E-12	n/a	**1.29E-05**
chloromethane	74-87-3	1.05E-15	2.39E-11	1.71E-11	7.43E-11	1.14E-14	3.80E-15	1.52E-16	9.33E-17	5.58E-14	3.06E-11	8.92E-13	n/a	**1.47E-10**
dichlorodifluoromethane	75-71-8	4.07E-14	2.42E-10	1.74E-10	4.00E-10	1.07E-12	3.59E-10	1.45E-11	8.88E-12	5.17E-12	9.20E-11	9.21E-13	n/a	**1.30E-09**
di-n-butyl phthalate	84-74-2	2.67E-11	1.15E-08	3.86E-09	2.83E-11	2.26E-06	1.44E-07	7.52E-12	4.60E-10	9.71E-05	2.88E-08	1.47E-12	n/a	**9.95E-05**
di-n-octyl phthalate	117-84-0	4.13E-18	8.31E-08	6.48E-18	7.25E-05	6.87E-06	2.46E-07	1.49E-16	9.12E-17	2.94E-05	9.79E-10	1.95E-13	n/a	**1.09E-04**
ethane	74-84-0	1.22E-13	1.16E-09	8.25E-10	2.61E-09	2.94E-12	9.76E-13	3.93E-14	2.40E-14	1.43E-11	6.19E-08	1.15E-09	n/a	**6.77E-08**
HD	505-60-2	1.37E-14	1.88E-10	4.19E-11	5.56E-11	1.05E-12	1.65E-13	5.10E-15	3.11E-15	4.72E-12	8.41E-11	5.41E-13	n/a	**3.76E-10**
methane	74-82-8	8.32E-14	2.06E-09	1.47E-09	4.31E-09	1.42E-12	1.70E-14	6.80E-16	4.15E-16	2.50E-13	7.38E-08	4.92E-09	n/a	**8.66E-08**
naphthalene	91-20-3	1.72E-10	2.24E-07	1.61E-07	2.63E-08	4.22E-09	1.50E-09	6.29E-11	3.86E-11	1.98E-08	1.43E-09	1.90E-12	n/a	**4.38E-07**
propene	115-07-1	1.86E-14	1.86E-10	1.33E-10	4.11E-10	4.43E-13	1.47E-13	5.92E-15	3.62E-15	2.15E-12	3.20E-09	6.41E-11	n/a	**4.00E-09**
toluene	108-88-3	4.69E-13	1.53E-09	9.79E-10	2.07E-08	1.40E-11	4.44E-12	1.79E-13	1.09E-13	6.66E-11	8.35E-09	3.21E-11	n/a	**3.17E-08**
trichlorofluoromethane	75-69-4	2.87E-16	1.17E-12	7.77E-13	1.33E-11	8.32E-12	2.67E-15	1.08E-13	6.58E-14	3.98E-11	7.59E-11	4.16E-13	n/a	**1.40E-10**
xylenes	1330-20-7	7.91E-14	1.32E-10	8.91E-11	7.45E-10	2.11E-12	7.10E-13	2.95E-14	1.81E-14	9.93E-12	2.85E-10	4.85E-13	n/a	**1.26E-09**
1,2,3,4,6,7,8-HpCDD	35822-46-9												n/a	
1,2,3,4,6,7,8,9-OCDD	3268-87-9												n/a	
1,2,3,4,6,7,8-HpCDF	67562-39-4												n/a	
1,2,3,4,6,7,8,9-OCDF	39001-02-0												n/a	
Total PCDDs and PCDFs	NA	1.08E-17	3.45E-15	2.64E-17	3.75E-17	2.19E-13	3.80E-15	2.91E-16	3.30E-16	1.75E-12	8.54E-17	1.22E-20	n/a	**1.98E-12**
ammonia	7664-41-7	8.24E-14	6.38E-09	4.58E-09	1.84E-08	6.81E-13	2.25E-13	9.02E-15	5.52E-15	3.33E-12	1.29E-10	3.74E-12	n/a	**2.95E-08**
aluminum	7429-90-5	1.06E-13	3.12E-13	2.24E-13	3.95E-14	2.21E-14	0.00E+00	0.00E+00	0.00E+00	3.27E-14	5.79E-11	1.68E-12	n/a	**6.03E-11**
antimony	7440-36-0	2.56E-14	4.30E-08	1.60E-12	4.39E-13	4.57E-10	0.00E+00	0.00E+00	0.00E+00	9.31E-10	3.07E-11	7.06E-14	n/a	**4.44E-08**
barium	7440-39-3	4.77E-14	8.60E-09	2.99E-12	4.07E-13	1.37E-11	0.00E+00	0.00E+00	0.00E+00	6.52E-10	9.78E-11	1.42E-14	n/a	**9.37E-09**
beryllium	7440-41-7	7.05E-14	4.05E-09	3.54E-13	6.02E-14	4.30E-11	0.00E+00	0.00E+00	0.00E+00	7.89E-13	4.48E-12	6.70E-15	n/a	**4.10E-09**
cadmium	7440-43-9	3.48E-14	4.36E-08	8.49E-12	2.98E-12	5.56E-11	2.62E-12	4.96E-14	1.25E-15	6.14E-11	7.05E-10	7.16E-14	n/a	**4.44E-08**
chlorine	7782-50-5	5.74E-12	1.31E-07	9.38E-08	9.63E-08	5.53E-11	1.84E-11	7.39E-13	4.52E-13	2.70E-10	4.02E-10	1.17E-11	n/a	**3.21E-07**
chromium (3+)	7440-47-3	1.05E-14	6.71E-08	1.00E-13	2.70E-14	3.93E-09	0.00E+00	0.00E+00	0.00E+00	2.18E-08	3.36E-12	9.79E-14	n/a	**9.29E-08**
chromium (6+)	18540-29-9	1.05E-14	6.71E-08	1.00E-13	2.70E-14	3.93E-09	0.00E+00	0.00E+00	0.00E+00	2.18E-08	3.36E-12	9.79E-14	n/a	**9.29E-08**
cobalt	7440-48-4	5.68E-15	1.52E-08	9.59E-14	2.27E-14	3.23E-09	0.00E+00	0.00E+00	0.00E+00	6.57E-09	7.53E-13	2.19E-14	n/a	**2.50E-08**
copper	7440-50-8	2.81E-12	7.48E-07	1.47E-09	4.00E-10	7.94E-08	0.00E+00	0.00E+00	0.00E+00	2.43E-07	3.75E-11	1.10E-12	n/a	**1.07E-06**
hydrogen chloride	7647-01-0	3.72E-12	1.90E-07	1.37E-07	4.57E-07	1.17E-11	3.88E-12	1.55E-13	9.47E-14	5.71E-11	1.31E-09	3.80E-11	n/a	**7.85E-07**
iron	7439-89-6	1.32E-11	6.58E-05	3.56E-11	1.92E-09	1.40E-05	0.00E+00	0.00E+00	0.00E+00	3.57E-06	3.23E-09	9.39E-11	n/a	**8.34E-05**
lead	7439-92-1	5.38E-13	4.52E-08	1.43E-11	2.76E-12	1.44E-10	0.00E+00	0.00E+00	0.00E+00	2.45E-09	7.21E-14	7.43E-14	n/a	**4.78E-08**
manganese	7439-96-5	1.73E-12	3.34E-06	2.54E-10	4.92E-11	1.42E-08	0.00E+00	0.00E+00	0.00E+00	2.53E-07	1.63E-10	4.75E-12	n/a	**3.61E-06**
total mercury	NA												n/a	
mercuric chloride	7487-94-7	3.93E-12	1.09E-09	1.11E-10	8.07E-11	5.54E-11	2.08E-14	6.68E-13	7.15E-13	4.79E-10	0.00E+00	0.00E+00	n/a	**1.82E-09**
methyl mercury	22967-92-6	7.79E-14	2.69E-10	4.46E-12	4.39E-12	2.19E-12	4.57E-16	2.21E-15	2.37E-15	1.93E-11	4.55E-08	0.00E+00	n/a	**4.58E-08**
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	n/a	**0.00E+00**
nickel	7440-02-0	2.60E-14	3.02E-08	4.72E-13	8.90E-13	1.93E-09	0.00E+00	0.00E+00	0.00E+00	6.54E-09	4.20E-11	4.96E-14	n/a	**3.87E-08**
selenium	7782-49-2	2.05E-14	1.20E-07	7.79E-13	2.92E-13	2.89E-09	7.09E-09	1.70E-13	1.82E-13	1.52E-07	2.76E-10	1.97E-13	n/a	**2.82E-07**
silver	7440-22-4	1.18E-15	1.05E-08	3.17E-13	6.72E-14	3.35E-10	0.00E+00	0.00E+00	0.00E+00	4.55E-08	1.64E-11	1.72E-14	n/a	**5.63E-08**
vanadium	7440-62-2	8.81E-13	1.17E-07	5.70E-12	1.51E-12	3.10E-09	0.00E+00	0.00E+00	0.00E+00	5.06E-10	5.55E-12	1.63E-13	n/a	**1.20E-07**
zinc	7440-66-6	1.56E-12	1.90E-06	2.96E-10	8.03E-10	1.82E-09	7.68E-11	1.62E-13	1.73E-13	1.34E-08	6.99E-08	3.13E-12	n/a	**1.99E-06**

a. Ingestion rates of total PCDDs/PCDFs and coplanar PCBs are presented in units of mg TEQ/day

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS: Child Subsistence Farmer Exposure Scenario														
COPC	CAS Number	Incidental Ingestion of Soil (mg/day)[a]	Ingestion of Exposed Produce (mg/day)[a]	Ingestion of Protected Produce (mg/day)[a]	Ingestion of Belowground Produce (mg/day)[a]	Ingestion of Beef (mg/day)[a]	Ingestion of Pork (mg/day)[a]	Ingestion of Poultry (mg/day)[a]	Ingestion of Eggs (mg/day)[a]	Ingestion of Milk (mg/day)[a]	Ingestion of Fish (mg/day)[a]	Incidental Ingestion of Surface Water (mg/day)[a]	Ingestion of Breast Milk (mg/day)[a]	Total Daily COPC Ingestion (mg/day)[a]
1,4-dioxane	123-91-1	8.46E-13	1.93E-08	1.38E-08	3.11E-07	6.01E-13	1.99E-13	7.98E-15	4.86E-15	2.93E-12	9.42E-10	2.74E-11	n/a	**3.45E-07**
2-butanone	78-93-3	1.09E-11	2.49E-07	1.79E-07	1.44E-07	3.07E-11	1.02E-11	4.09E-13	2.50E-13	1.50E-10	4.80E-10	1.40E-11	n/a	**5.72E-07**
2-ethyl 1,3-butadiene	3404-63-5	2.29E-15	4.30E-12	2.91E-12	2.17E-11	6.25E-14	2.08E-14	8.61E-16	5.26E-16	2.94E-13	3.44E-10	6.87E-13	n/a	**3.74E-10**
acetone	67-64-1	4.55E-11	1.03E-06	7.43E-07	1.92E-06	3.48E-11	1.16E-11	4.64E-13	2.82E-13	1.70E-10	7.76E-09	2.26E-10	n/a	**3.71E-06**
benzene	71-43-2	4.82E-13	3.22E-09	2.23E-09	2.20E-08	1.29E-11	4.22E-12	1.70E-13	1.04E-13	6.23E-11	7.28E-09	8.11E-11	n/a	**3.49E-08**
bis(2-ethylhexyl)-phthalate	117-81-7	7.98E-11	6.65E-07	6.80E-09	3.88E-13	2.79E-07	1.04E-08	2.05E-09	1.26E-09	1.19E-05	3.66E-09	1.88E-12	n/a	**1.29E-05**
chloromethane	74-87-3	1.05E-15	2.39E-11	1.71E-11	7.43E-11	1.14E-14	3.80E-15	1.52E-16	9.33E-17	5.58E-14	3.06E-11	8.92E-13	n/a	**1.47E-10**
dichlorodifluoromethane	75-71-8	4.07E-14	2.42E-10	1.74E-10	4.00E-10	1.07E-12	3.59E-10	1.45E-11	8.88E-12	5.17E-12	9.20E-11	9.21E-13	n/a	**1.30E-09**
di-n-butyl phthalate	84-74-2	2.72E-11	1.16E-08	3.93E-09	2.88E-11	2.26E-06	1.44E-07	7.66E-12	4.68E-10	9.71E-05	2.88E-08	1.47E-12	n/a	**9.96E-05**
di-n-octyl phthalate	117-84-0	4.13E-18	8.31E-08	6.48E-18	7.25E-05	6.87E-06	2.46E-07	1.49E-16	9.12E-17	2.94E-05	9.79E-10	1.95E-13	n/a	**1.09E-04**
ethane	74-84-0	1.22E-13	1.16E-09	8.25E-10	2.61E-09	2.94E-12	9.76E-13	3.93E-14	2.40E-14	1.43E-11	6.19E-08	1.15E-09	n/a	**6.77E-08**
HD	505-60-2	1.37E-14	1.88E-10	4.19E-11	5.56E-11	1.05E-12	1.65E-13	5.10E-15	3.11E-15	4.72E-12	8.41E-11	5.41E-13	n/a	**3.76E-10**
methane	74-82-8	8.32E-14	2.06E-09	1.47E-09	4.31E-09	1.42E-12	1.70E-14	6.80E-16	4.15E-16	2.50E-13	7.38E-08	4.92E-09	n/a	**8.66E-08**
naphthalene	91-20-3	1.75E-10	2.28E-07	1.64E-07	2.69E-08	4.31E-09	1.53E-09	6.41E-11	3.94E-11	2.02E-08	1.43E-09	1.90E-12	n/a	**4.47E-07**
propene	115-07-1	1.86E-14	1.86E-10	1.33E-10	4.11E-10	4.43E-13	1.47E-13	5.92E-15	3.62E-15	2.15E-12	3.20E-09	6.41E-11	n/a	**4.00E-09**
toluene	108-88-3	4.69E-13	1.53E-09	9.79E-10	2.07E-08	1.40E-11	4.44E-12	1.79E-13	1.09E-13	6.66E-11	8.35E-09	3.21E-11	n/a	**3.17E-08**
trichlorofluoromethane	75-69-4	2.87E-16	1.17E-12	7.77E-13	1.33E-11	8.32E-12	2.67E-15	1.08E-13	6.58E-14	3.98E-11	7.59E-11	4.16E-13	n/a	**1.40E-10**
xylenes	1330-20-7	7.91E-14	1.32E-10	8.91E-11	7.45E-10	2.11E-12	7.10E-13	2.95E-14	1.81E-14	9.93E-12	2.85E-10	4.85E-13	n/a	**1.26E-09**
1,2,3,4,6,7,8-HpCDD	35822-46-9												n/a	
1,2,3,4,6,7,8,9-OCDD	3268-87-9												n/a	
1,2,3,4,6,7,8-HpCDF	67562-39-4												n/a	
1,2,3,4,6,7,8,9-OCDF	39001-02-0												n/a	
Total PCDDs and PCDFs	NA	2.09E-17	3.48E-15	5.11E-17	7.27E-17	2.27E-13	5.27E-15	5.63E-16	6.39E-16	1.79E-12	1.43E-16	2.05E-20	n/a	**2.03E-12**
ammonia	7664-41-7	8.24E-14	6.38E-09	4.58E-09	1.84E-08	6.81E-13	2.25E-13	9.02E-15	5.52E-15	3.33E-12	1.29E-10	3.74E-12	n/a	**2.95E-08**
aluminum	7429-90-5	1.06E-13	3.12E-13	2.24E-13	3.95E-14	2.21E-14	0.00E+00	0.00E+00	0.00E+00	3.27E-14	5.79E-11	1.68E-12	n/a	**6.03E-11**
antimony	7440-36-0	2.57E-14	4.30E-08	1.60E-12	4.39E-13	4.57E-10	0.00E+00	0.00E+00	0.00E+00	9.31E-10	3.07E-11	7.06E-14	n/a	**4.44E-08**
barium	7440-39-3	4.77E-14	8.60E-09	2.99E-12	4.08E-13	1.37E-11	0.00E+00	0.00E+00	0.00E+00	6.52E-10	9.78E-11	1.42E-14	n/a	**9.37E-09**
beryllium	7440-41-7	7.06E-14	4.05E-09	3.55E-13	6.04E-14	4.30E-11	0.00E+00	0.00E+00	0.00E+00	7.89E-13	4.48E-12	6.70E-15	n/a	**4.10E-09**
cadmium	7440-43-9	3.48E-14	4.36E-08	8.49E-12	2.98E-12	5.56E-11	2.62E-12	4.96E-14	1.25E-15	6.14E-11	7.05E-10	7.16E-14	n/a	**4.44E-08**
chlorine	7782-50-5	5.74E-12	1.31E-07	9.38E-08	9.63E-08	5.53E-11	1.84E-11	7.39E-13	4.52E-13	2.70E-10	4.02E-10	1.17E-11	n/a	**3.21E-07**
chromium (3+)	7440-47-3	1.05E-14	6.71E-08	1.00E-13	2.70E-14	3.93E-09	0.00E+00	0.00E+00	0.00E+00	2.18E-08	3.36E-12	9.79E-14	n/a	**9.29E-08**
chromium (6+)	18540-29-9	1.05E-14	6.71E-08	1.00E-13	2.70E-14	3.93E-09	0.00E+00	0.00E+00	0.00E+00	2.18E-08	3.36E-12	9.79E-14	n/a	**9.29E-08**
cobalt	7440-48-4	5.68E-15	1.52E-08	9.59E-14	2.27E-14	3.23E-09	0.00E+00	0.00E+00	0.00E+00	6.57E-09	7.53E-13	2.19E-14	n/a	**2.50E-08**
copper	7440-50-8	2.81E-12	7.48E-07	1.47E-09	4.00E-10	7.94E-08	0.00E+00	0.00E+00	0.00E+00	2.43E-07	3.75E-11	1.10E-12	n/a	**1.07E-06**
hydrogen chloride	7647-01-0	3.72E-12	1.90E-07	1.37E-07	4.57E-07	1.17E-11	3.88E-12	1.55E-13	9.47E-14	5.71E-11	1.31E-09	3.80E-11	n/a	**7.85E-07**
iron	7439-89-6	1.32E-11	6.58E-05	3.56E-11	1.92E-09	1.40E-05	0.00E+00	0.00E+00	0.00E+00	3.57E-06	3.23E-09	9.39E-11	n/a	**8.34E-05**
lead	7439-92-1	5.39E-13	4.52E-08	1.43E-11	2.77E-12	1.44E-10	0.00E+00	0.00E+00	0.00E+00	2.45E-09	7.21E-14	7.43E-14	n/a	**4.78E-08**
manganese	7439-96-5	1.73E-12	3.34E-06	2.54E-10	4.92E-11	1.42E-08	0.00E+00	0.00E+00	0.00E+00	2.53E-07	1.63E-10	4.75E-12	n/a	**3.61E-06**
total mercury	NA												n/a	
mercuric chloride	7487-94-7	7.87E-12	1.24E-09	2.22E-10	1.61E-10	5.92E-11	3.16E-14	1.34E-12	1.43E-12	5.01E-10	0.00E+00	0.00E+00	n/a	**2.20E-09**
methyl mercury	22967-92-6	1.53E-13	2.75E-10	8.79E-12	8.65E-12	2.21E-12	4.93E-16	4.36E-15	4.66E-15	1.94E-11	7.88E-08	0.00E+00	n/a	**7.92E-08**
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	n/a	**0.00E+00**
nickel	7440-02-0	2.60E-14	3.02E-08	4.72E-13	8.90E-13	1.93E-09	0.00E+00	0.00E+00	0.00E+00	6.54E-09	4.20E-11	4.96E-14	n/a	**3.87E-08**
selenium	7782-49-2	2.05E-14	1.20E-07	7.79E-13	2.92E-13	2.89E-09	7.09E-09	1.70E-13	1.82E-13	1.52E-07	2.76E-10	1.97E-13	n/a	**2.82E-07**
silver	7440-22-4	1.18E-15	1.05E-08	3.17E-13	6.72E-14	3.35E-10	0.00E+00	0.00E+00	0.00E+00	4.55E-08	1.64E-11	1.72E-14	n/a	**5.63E-08**
vanadium	7440-62-2	8.82E-13	1.17E-07	5.71E-12	1.51E-12	3.10E-09	0.00E+00	0.00E+00	0.00E+00	5.06E-10	5.55E-12	1.63E-13	n/a	**1.20E-07**
zinc	7440-66-6	1.56E-12	1.90E-06	2.96E-10	8.03E-10	1.82E-09	7.68E-11	1.62E-13	1.73E-13	1.34E-08	6.99E-08	3.13E-12	n/a	**1.99E-06**

a. Ingestion rates of total PCDDs/PCDFs are presented in units of mg TEQ/day

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Infant Resident Exposure Scenario														
COPC	CAS Number	Incidental Ingestion of Soil (mg/day)[a]	Ingestion of Exposed Produce (mg/day)[a]	Ingestion of Protected Produce (mg/day)[a]	Ingestion of Belowground Produce (mg/day)[a]	Ingestion of Beef (mg/day)[a]	Ingestion of Pork (mg/day)[a]	Ingestion of Poultry (mg/day)[a]	Ingestion of Eggs (mg/day)[a]	Ingestion of Milk (mg/day)[a]	Ingestion of Fish (mg/day)[a]	Incidental Ingestion of Surface Water (mg/day)[a]	Ingestion of Breast Milk (mg/day)[a]	Total Daily COPC Ingestion (mg/day)[a]
1,4-dioxane	123-91-1	8.46E-13	6.56E-09	2.28E-09	1.05E-07	1.42E-13	3.66E-14	1.96E-15	1.05E-15	2.75E-12	9.42E-10	n/a		**1.15E-07**
2-butanone	78-93-3	1.09E-11	8.47E-08	2.95E-08	4.85E-08	7.29E-12	1.88E-12	1.00E-13	5.42E-14	1.41E-10	4.80E-10	n/a		**1.63E-07**
2-ethyl 1,3-butadiene	3404-63-5	2.29E-15	1.46E-12	4.80E-13	7.32E-12	1.48E-14	3.82E-15	2.12E-16	1.14E-16	2.76E-13	3.44E-10	n/a		**3.54E-10**
acetone	67-64-1	4.55E-11	3.52E-07	1.23E-07	6.48E-07	8.25E-12	2.13E-12	1.14E-13	6.11E-14	1.59E-10	7.76E-09	n/a		**1.13E-06**
benzene	71-43-2	4.82E-13	1.09E-09	3.68E-10	7.42E-09	3.05E-12	7.75E-13	4.17E-14	2.24E-14	5.85E-11	7.28E-09	n/a	2.00E-06	**2.02E-06**
bis(2-ethylhexyl)-phthalate	117-81-7	7.84E-11	2.26E-07	1.10E-09	1.28E-13	6.61E-08	1.91E-09	4.96E-10	2.67E-10	1.12E-05	3.66E-09	n/a		**1.15E-05**
chloromethane	74-87-3	1.05E-15	8.12E-12	2.82E-12	2.50E-11	2.71E-15	6.99E-16	3.73E-17	2.02E-17	5.24E-14	3.06E-11	n/a		**6.67E-11**
dichlorodifluoromethane	75-71-8	4.07E-14	8.23E-11	2.87E-11	1.35E-10	2.53E-13	6.60E-11	3.57E-12	1.92E-12	4.86E-12	9.20E-11	n/a		**4.14E-10**
di-n-butyl phthalate	84-74-2	2.67E-11	3.91E-09	6.37E-10	9.54E-12	5.35E-07	2.65E-08	1.85E-12	9.95E-11	9.12E-05	2.88E-08	n/a		**9.18E-05**
di-n-octyl phthalate	117-84-0	4.13E-18	2.83E-08	1.07E-18	2.44E-05	1.63E-06	4.52E-08	3.66E-17	1.97E-17	2.76E-05	9.79E-10	n/a		**5.38E-05**
ethane	74-84-0	1.22E-13	3.95E-10	1.36E-10	8.80E-10	6.96E-13	1.79E-13	9.65E-15	5.20E-15	1.34E-11	6.19E-08	n/a		**6.34E-08**
HD	505-60-2	1.37E-14	6.39E-11	6.92E-12	1.87E-11	2.50E-13	3.03E-14	1.25E-15	6.74E-16	4.43E-12	8.41E-11	n/a		**1.78E-10**
methane	74-82-8	8.32E-14	7.01E-10	2.43E-10	1.45E-09	3.35E-13	3.12E-15	1.67E-16	8.98E-17	2.34E-13	7.38E-08	n/a		**7.62E-08**
naphthalene	91-20-3	1.72E-10	7.62E-08	2.65E-08	8.88E-09	1.00E-09	2.76E-10	1.54E-11	8.35E-12	1.86E-08	1.43E-09	n/a		**1.33E-07**
propene	115-07-1	1.86E-14	6.34E-11	2.19E-11	1.39E-10	1.05E-13	2.70E-14	1.45E-15	7.82E-16	2.02E-12	3.20E-09	n/a		**3.43E-09**
toluene	108-88-3	4.69E-13	5.19E-10	1.62E-10	6.98E-09	3.32E-12	8.15E-13	4.40E-14	2.37E-14	6.25E-11	8.35E-09	n/a		**1.61E-08**
trichlorofluoromethane	75-69-4	2.87E-16	3.99E-13	1.28E-13	4.47E-12	1.97E-12	4.91E-16	2.64E-14	1.42E-14	3.74E-11	7.59E-11	n/a		**1.20E-10**
xylenes	1330-20-7	7.91E-14	4.49E-11	1.47E-11	2.51E-10	5.01E-13	1.31E-13	7.25E-15	3.91E-15	9.33E-12	2.85E-10	n/a		**6.06E-10**
1,2,3,4,6,7,8-HpCDD	35822-46-9											n/a		
1,2,3,4,6,7,8,9-OCDD	3268-87-9											n/a		
1,2,3,4,6,7,8-HpCDF	67562-39-4											n/a		
1,2,3,4,6,7,8,9-OCDF	39001-02-0											n/a		
Total PCDDs and PCDFs	NA	1.08E-17	1.17E-15	4.36E-18	1.26E-17	5.19E-14	6.99E-16	7.14E-17	7.13E-17	1.64E-12	8.54E-17	n/a	1.15E-10	**1.17E-10**
ammonia	7664-41-7	8.24E-14	2.17E-09	7.56E-10	6.20E-09	1.61E-13	4.14E-14	2.21E-15	1.20E-15	3.13E-12	1.29E-10	n/a		**9.25E-09**
aluminum	7429-90-5	1.06E-13	1.06E-13	3.70E-14	1.33E-14	5.24E-15	0.00E+00	0.00E+00	0.00E+00	3.07E-14	5.79E-11	n/a		**5.82E-11**
antimony	7440-36-0	2.56E-14	1.46E-08	2.63E-13	1.48E-13	1.08E-10	0.00E+00	0.00E+00	0.00E+00	8.74E-10	3.07E-11	n/a		**1.56E-08**
barium	7440-39-3	4.77E-14	2.93E-09	4.94E-13	1.37E-13	3.25E-12	0.00E+00	0.00E+00	0.00E+00	6.12E-10	9.78E-11	n/a		**3.64E-09**
beryllium	7440-41-7	7.05E-14	1.38E-09	5.85E-14	2.03E-14	1.02E-11	0.00E+00	0.00E+00	0.00E+00	7.41E-13	4.48E-12	n/a		**1.39E-09**
cadmium	7440-43-9	3.48E-14	1.48E-08	1.40E-12	1.00E-12	1.32E-11	4.82E-13	1.22E-14	2.70E-16	5.76E-11	7.05E-10	n/a		**1.56E-08**
chlorine	7782-50-5	5.74E-12	4.44E-08	1.55E-08	3.24E-08	1.31E-11	3.38E-12	1.81E-13	9.78E-14	2.54E-10	4.02E-10	n/a		**9.31E-08**
chromium (3+)	7440-47-3	1.05E-14	2.28E-08	1.66E-14	9.10E-15	9.31E-10	0.00E+00	0.00E+00	0.00E+00	2.05E-08	3.36E-12	n/a		**4.43E-08**
chromium (6+)	18540-29-9	1.05E-14	2.28E-08	1.66E-14	9.10E-15	9.31E-10	0.00E+00	0.00E+00	0.00E+00	2.05E-08	3.36E-12	n/a	3.82E-08	**8.24E-08**
cobalt	7440-48-4	5.68E-15	5.16E-09	1.58E-14	7.64E-15	7.65E-10	0.00E+00	0.00E+00	0.00E+00	6.17E-09	7.53E-13	n/a		**1.21E-08**
copper	7440-50-8	2.81E-12	2.55E-07	2.43E-10	1.35E-10	1.88E-08	0.00E+00	0.00E+00	0.00E+00	2.28E-07	3.75E-11	n/a		**5.02E-07**
hydrogen chloride	7647-01-0	3.72E-12	6.48E-08	2.26E-08	1.54E-07	2.77E-12	7.12E-13	3.81E-14	2.05E-14	5.36E-11	1.31E-09	n/a		**2.43E-07**
iron	7439-89-6	1.32E-11	2.24E-05	5.87E-12	6.46E-10	3.32E-06	0.00E+00	0.00E+00	0.00E+00	3.35E-06	3.23E-09	n/a		**2.91E-05**
lead	7439-92-1	5.38E-13	1.54E-08	2.36E-12	9.30E-13	3.42E-11	0.00E+00	0.00E+00	0.00E+00	2.30E-09	7.21E-14	n/a	2.00E-08	**3.77E-08**
manganese	7439-96-5	1.73E-12	1.14E-06	4.19E-11	1.66E-11	3.37E-09	0.00E+00	0.00E+00	0.00E+00	2.38E-07	1.63E-10	n/a		**1.38E-06**
total mercury	NA											n/a		
mercuric chloride	7487-94-7	3.93E-12	3.70E-10	1.84E-11	2.72E-11	1.14E-11	3.82E-15	1.64E-13	1.55E-13	3.91E-10	0.00E+00	n/a		**8.22E-10**
methyl mercury	22967-92-6	7.79E-14	9.15E-11	7.37E-13	1.48E-12	4.48E-13	8.39E-17	5.43E-16	5.12E-16	1.57E-11	4.55E-08	n/a		**4.56E-08**
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	n/a		**0.00E+00**
nickel	7440-02-0	2.60E-14	1.03E-08	7.80E-14	3.00E-13	4.57E-10	0.00E+00	0.00E+00	0.00E+00	6.14E-09	4.20E-11	n/a		**1.69E-08**
selenium	7782-49-2	2.05E-14	4.08E-08	1.29E-13	9.84E-14	6.85E-10	1.30E-09	4.18E-14	3.95E-14	1.43E-07	2.76E-10	n/a		**1.86E-07**
silver	7440-22-4	1.18E-15	3.57E-09	5.24E-14	2.26E-14	7.94E-11	0.00E+00	0.00E+00	0.00E+00	4.27E-08	1.64E-11	n/a		**4.64E-08**
vanadium	7440-62-2	8.81E-13	3.97E-08	9.42E-13	5.07E-13	7.36E-10	0.00E+00	0.00E+00	0.00E+00	4.75E-10	5.55E-12	n/a		**4.09E-08**
zinc	7440-66-6	1.56E-12	6.48E-07	4.89E-11	2.70E-10	4.32E-10	1.41E-11	3.97E-14	3.74E-14	1.26E-08	6.99E-08	n/a		**7.31E-07**

a. Ingestion rates of total PCDDs/PCDFs and coplanar PCBs are presented in units of mg TEQ/day

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS:
Infant Resident Exposure Scenario

COPC	CAS Number	Incidental Ingestion of Soil (mg/day)[a]	Ingestion of Exposed Produce (mg/day)[a]	Ingestion of Protected Produce (mg/day)[a]	Ingestion of Belowground Produce (mg/day)[a]	Ingestion of Beef (mg/day)[a]	Ingestion of Pork (mg/day)[a]	Ingestion of Poultry (mg/day)[a]	Ingestion of Eggs (mg/day)[a]	Ingestion of Milk (mg/day)[a]	Ingestion of Fish (mg/day)[a]	Incidental Ingestion of Surface Water (mg/day)[a]	Ingestion of Breast Milk (mg/day)[a]	Total Daily COPC Ingestion (mg/day)[a]
1,4-dioxane	123-91-1	8.46E-13	6.56E-09	2.28E-09	1.05E-07	1.42E-13	3.66E-14	1.96E-15	1.05E-15	2.75E-12	9.42E-10	n/a		**1.15E-07**
2-butanone	78-93-3	1.09E-11	8.47E-08	2.95E-08	4.85E-08	7.29E-12	1.88E-12	1.00E-13	5.42E-14	1.41E-10	4.80E-10	n/a	4.34E-07	**5.98E-07**
2-ethyl 1,3-butadiene	3404-63-5	2.29E-15	1.46E-12	4.80E-13	7.32E-12	1.48E-14	3.82E-15	2.12E-16	1.14E-16	2.76E-13	3.44E-10	n/a		**3.54E-10**
acetone	67-64-1	4.55E-11	3.52E-07	1.23E-07	6.48E-07	8.25E-12	2.13E-12	1.14E-13	6.11E-14	1.59E-10	7.76E-09	n/a	4.49E-06	**5.63E-06**
benzene	71-43-2	4.82E-13	1.09E-09	3.68E-10	7.42E-09	3.05E-12	7.75E-13	4.17E-14	2.24E-14	5.85E-11	7.28E-09	n/a	2.00E-06	**2.02E-06**
bis(2-ethylhexyl)-phthalate	117-81-7	7.98E-11	2.26E-07	1.12E-09	1.31E-13	6.61E-08	1.91E-09	5.05E-10	2.72E-10	1.12E-05	3.66E-09	n/a		**1.15E-05**
chloromethane	74-87-3	1.05E-15	8.12E-12	2.82E-12	2.50E-11	2.71E-15	6.99E-16	3.73E-17	2.02E-17	5.24E-14	3.06E-11	n/a	1.94E-08	**1.95E-08**
dichlorodifluoromethane	75-71-8	4.07E-14	8.23E-11	2.87E-11	1.35E-10	2.53E-13	6.60E-11	3.57E-12	1.92E-12	4.86E-12	9.20E-11	n/a	2.32E-08	**2.36E-08**
di-n-butyl phthalate	84-74-2	2.72E-11	3.94E-09	6.49E-10	9.72E-12	5.35E-07	2.65E-08	1.88E-12	1.01E-10	9.12E-05	2.88E-08	n/a		**9.18E-05**
di-n-octyl phthalate	117-84-0	4.13E-18	2.83E-08	1.07E-18	2.44E-05	1.63E-06	4.52E-08	3.66E-17	1.97E-17	2.76E-05	9.79E-10	n/a		**5.38E-05**
ethane	74-84-0	1.22E-13	3.95E-10	1.36E-10	8.80E-10	6.96E-13	1.79E-13	9.65E-15	5.20E-15	1.34E-11	6.19E-08	n/a		**6.34E-08**
HD	505-60-2	1.37E-14	6.39E-11	6.92E-12	1.87E-11	2.50E-13	3.03E-14	1.25E-15	6.74E-16	4.43E-12	8.41E-11	n/a		**1.78E-10**
methane	74-82-8	8.32E-14	7.01E-10	2.43E-10	1.45E-09	3.35E-13	3.12E-15	1.67E-16	8.98E-17	2.34E-13	7.38E-08	n/a		**7.62E-08**
naphthalene	91-20-3	1.75E-10	7.77E-08	2.70E-08	9.05E-09	1.02E-09	2.81E-10	1.58E-11	8.52E-12	1.89E-08	1.43E-09	n/a	2.12E-07	**3.48E-07**
propene	115-07-1	1.86E-14	6.34E-11	2.19E-11	1.39E-10	1.05E-13	2.70E-14	1.45E-15	7.82E-16	2.02E-12	3.20E-09	n/a		**3.43E-09**
toluene	108-88-3	4.69E-13	5.19E-10	1.62E-10	6.98E-09	3.32E-12	8.15E-13	4.40E-14	2.37E-14	6.25E-11	8.35E-09	n/a	7.72E-07	**7.88E-07**
trichlorofluoromethane	75-69-4	2.87E-16	3.99E-13	1.28E-13	4.47E-12	1.97E-12	4.91E-16	2.64E-14	1.42E-14	3.74E-11	7.59E-11	n/a	1.02E-08	**1.03E-08**
xylenes	1330-20-7	7.91E-14	4.49E-11	1.47E-11	2.51E-10	5.01E-13	1.31E-13	7.25E-15	3.91E-15	9.33E-12	2.85E-10	n/a	1.26E-08	**1.32E-08**
1,2,3,4,6,7,8-HpCDD	35822-46-9											n/a		
1,2,3,4,6,7,8,9-OCDD	3268-87-9											n/a		
1,2,3,4,6,7,8-HpCDF	67562-39-4											n/a		
1,2,3,4,6,7,8,9-OCDF	39001-02-0											n/a		
Total PCDDs and PCDFs	NA	2.09E-17	1.19E-15	8.44E-18	2.45E-17	5.38E-14	9.69E-16	1.38E-16	1.38E-16	1.68E-12	1.43E-16	n/a	1.15E-10	**1.17E-10**
ammonia	7664-41-7	8.24E-14	2.17E-09	7.56E-10	6.20E-09	1.61E-13	4.14E-14	2.21E-15	1.20E-15	3.13E-12	1.29E-10	n/a		**9.25E-09**
aluminum	7429-90-5	1.06E-13	1.06E-13	3.70E-14	1.33E-14	5.24E-15	0.00E+00	0.00E+00	0.00E+00	3.07E-14	5.79E-11	n/a	5.55E-08	**5.56E-08**
antimony	7440-36-0	2.57E-14	1.46E-08	2.63E-13	1.48E-13	1.08E-10	0.00E+00	0.00E+00	0.00E+00	8.74E-10	3.07E-11	n/a	1.89E-08	**3.45E-08**
barium	7440-39-3	4.77E-14	2.93E-09	4.95E-13	1.37E-13	3.25E-12	0.00E+00	0.00E+00	0.00E+00	6.12E-10	9.78E-11	n/a	3.97E-09	**7.61E-09**
beryllium	7440-41-7	7.06E-14	1.38E-09	5.87E-14	2.03E-14	1.02E-11	0.00E+00	0.00E+00	0.00E+00	7.41E-13	4.48E-12	n/a	1.75E-09	**3.14E-09**
cadmium	7440-43-9	3.48E-14	1.48E-08	1.40E-12	1.00E-12	1.32E-11	4.82E-13	1.22E-14	2.70E-16	5.76E-11	7.05E-10	n/a	1.94E-08	**3.50E-08**
chlorine	7782-50-5	5.74E-12	4.44E-08	1.55E-08	3.24E-08	1.31E-11	3.38E-12	1.81E-13	9.78E-14	2.54E-10	4.02E-10	n/a	4.16E-07	**5.09E-07**
chromium (3+)	7440-47-3	1.05E-14	2.28E-08	1.66E-14	9.10E-15	9.31E-10	0.00E+00	0.00E+00	0.00E+00	2.05E-08	3.36E-12	n/a	3.82E-08	**8.24E-08**
chromium (6+)	18540-29-9	1.05E-14	2.28E-08	1.66E-14	9.10E-15	9.31E-10	0.00E+00	0.00E+00	0.00E+00	2.05E-08	3.36E-12	n/a	3.82E-08	**8.24E-08**
cobalt	7440-48-4	5.68E-15	5.16E-09	1.58E-14	7.64E-15	7.65E-10	0.00E+00	0.00E+00	0.00E+00	6.17E-09	7.53E-13	n/a	1.10E-08	**2.31E-08**
copper	7440-50-8	2.81E-12	2.55E-07	2.43E-10	1.35E-10	1.88E-08	0.00E+00	0.00E+00	0.00E+00	2.28E-07	3.75E-11	n/a	4.55E-07	**9.56E-07**
hydrogen chloride	7647-01-0	3.72E-12	6.48E-08	2.26E-08	1.54E-07	2.77E-12	7.12E-13	3.81E-14	2.05E-14	5.36E-11	1.31E-09	n/a		**2.43E-07**
iron	7439-89-6	1.32E-11	2.24E-05	5.87E-12	6.46E-10	3.32E-06	0.00E+00	0.00E+00	0.00E+00	3.35E-06	3.23E-09	n/a	4.01E-05	**6.92E-05**
lead	7439-92-1	5.39E-13	1.54E-08	2.36E-12	9.31E-13	3.42E-11	0.00E+00	0.00E+00	0.00E+00	2.30E-09	7.21E-14	n/a		**1.77E-08**
manganese	7439-96-5	1.73E-12	1.14E-06	4.19E-11	1.66E-11	3.37E-09	0.00E+00	0.00E+00	0.00E+00	2.38E-07	1.63E-10	n/a	1.50E-06	**2.88E-06**
total mercury	NA											n/a		
mercuric chloride	7487-94-7	7.87E-12	4.22E-10	3.67E-11	5.44E-11	1.40E-11	5.80E-15	3.28E-13	3.09E-13	4.71E-10	0.00E+00	n/a	9.21E-10	**1.93E-09**
methyl mercury	22967-92-6	1.53E-13	9.36E-11	1.45E-12	2.91E-12	5.23E-13	9.06E-17	1.07E-15	1.01E-15	1.82E-11	7.88E-08	n/a	1.00E-07	**1.79E-07**
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	n/a		**0.00E+00**
nickel	7440-02-0	2.60E-14	1.03E-08	7.80E-14	3.00E-13	4.57E-10	0.00E+00	0.00E+00	0.00E+00	6.14E-09	4.20E-11	n/a	1.63E-08	**3.33E-08**
selenium	7782-49-2	2.05E-14	4.08E-08	1.29E-13	9.84E-14	6.85E-10	1.30E-09	4.18E-14	3.95E-14	1.43E-07	2.76E-10	n/a	1.04E-07	**2.90E-07**
silver	7440-22-4	1.18E-15	3.57E-09	5.24E-14	2.26E-14	7.94E-11	0.00E+00	0.00E+00	0.00E+00	4.27E-08	1.64E-11	n/a	1.86E-08	**6.49E-08**
vanadium	7440-62-2	8.82E-13	3.97E-08	9.43E-13	5.08E-13	7.36E-10	0.00E+00	0.00E+00	0.00E+00	4.75E-10	5.55E-12	n/a	5.20E-08	**9.29E-08**
zinc	7440-66-6	1.56E-12	6.48E-07	4.89E-11	2.70E-10	4.32E-10	1.41E-11	3.97E-14	3.74E-14	1.26E-08	6.99E-08	n/a	8.99E-07	**1.63E-06**

a. Ingestion rates of total PCDDs/PCDFs are presented in units of mg TEQ/day

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS:
Infant Subsistence Fisher Exposure Scenario

COPC	CAS Number	Incidental Ingestion of Soil (mg/day)[a]	Ingestion of Exposed Produce (mg/day)[a]	Ingestion of Protected Produce (mg/day)[a]	Ingestion of Belowground Produce (mg/day)[a]	Ingestion of Beef (mg/day)[a]	Ingestion of Pork (mg/day)[a]	Ingestion of Poultry (mg/day)[a]	Ingestion of Eggs (mg/day)[a]	Ingestion of Milk (mg/day)[a]	Ingestion of Fish (mg/day)[a]	Incidental Ingestion of Surface Water (mg/day)[a]	Ingestion of Breast Milk (mg/day)[a]	Total Daily COPC Ingestion (mg/day)[a]
1,4-dioxane	123-91-1	8.46E-13	6.56E-09	2.28E-09	1.05E-07	1.42E-13	3.66E-14	1.96E-15	1.05E-15	2.75E-12	2.35E-09	n/a		**1.16E-07**
2-butanone	78-93-3	1.09E-11	8.47E-08	2.95E-08	4.85E-08	7.29E-12	1.88E-12	1.00E-13	5.42E-14	1.41E-10	1.20E-09	n/a		**1.64E-07**
2-ethyl 1,3-butadiene	3404-63-5	2.29E-15	1.46E-12	4.80E-13	7.32E-12	1.48E-14	3.82E-15	2.12E-16	1.14E-16	2.76E-13	8.60E-10	n/a		**8.70E-10**
acetone	67-64-1	4.55E-11	3.52E-07	1.23E-07	6.48E-07	8.25E-12	2.13E-12	1.14E-13	6.11E-14	1.59E-10	1.94E-08	n/a		**1.14E-06**
benzene	71-43-2	4.82E-13	1.09E-09	3.68E-10	7.42E-09	3.05E-12	7.75E-13	4.17E-14	2.24E-14	5.85E-11	1.82E-08	n/a	2.01E-06	**2.04E-06**
bis(2-ethylhexyl)-phthalate	117-81-7	7.84E-11	2.26E-07	1.10E-09	1.28E-13	6.61E-08	1.91E-09	4.96E-10	2.67E-10	1.12E-05	9.14E-09	n/a		**1.15E-05**
chloromethane	74-87-3	1.05E-15	8.12E-12	2.82E-12	2.50E-11	2.71E-15	6.99E-16	3.73E-17	2.02E-17	5.24E-14	7.66E-11	n/a		**1.13E-10**
dichlorodifluoromethane	75-71-8	4.07E-14	8.23E-11	2.87E-11	1.35E-10	2.53E-13	6.60E-11	3.57E-12	1.92E-12	4.86E-12	2.30E-10	n/a		**5.52E-10**
di-n-butyl phthalate	84-74-2	2.67E-11	3.91E-09	6.37E-10	9.54E-12	5.35E-07	2.65E-08	1.85E-12	9.95E-11	9.12E-05	7.20E-08	n/a		**9.18E-05**
di-n-octyl phthalate	117-84-0	4.13E-18	2.83E-08	1.07E-18	2.44E-05	1.63E-06	4.52E-08	3.66E-17	1.97E-17	2.76E-05	2.45E-09	n/a		**5.38E-05**
ethane	74-84-0	1.22E-13	3.95E-10	1.36E-10	8.80E-10	6.96E-13	1.79E-13	9.65E-15	5.20E-15	1.34E-11	1.55E-07	n/a		**1.56E-07**
HD	505-60-2	1.37E-14	6.39E-11	6.92E-12	1.87E-11	2.50E-13	3.03E-14	1.25E-15	6.74E-16	4.43E-12	2.10E-10	n/a		**3.05E-10**
methane	74-82-8	8.32E-14	7.01E-10	2.43E-10	1.45E-09	3.35E-13	3.12E-15	1.67E-16	8.98E-17	2.34E-13	1.85E-07	n/a		**1.87E-07**
naphthalene	91-20-3	1.72E-10	7.62E-08	2.65E-08	8.88E-09	1.00E-09	2.76E-10	1.54E-11	8.35E-12	1.86E-08	3.57E-09	n/a		**1.35E-07**
propene	115-07-1	1.86E-14	6.34E-11	2.19E-11	1.39E-10	1.05E-13	2.70E-14	1.45E-15	7.82E-16	2.02E-12	8.01E-09	n/a		**8.24E-09**
toluene	108-88-3	4.69E-13	5.19E-10	1.62E-10	6.98E-09	3.32E-12	8.15E-13	4.40E-14	2.37E-14	6.25E-11	2.09E-08	n/a		**2.86E-08**
trichlorofluoromethane	75-69-4	2.87E-16	3.99E-13	1.28E-13	4.47E-12	1.97E-12	4.91E-16	2.64E-14	1.42E-14	3.74E-11	1.90E-10	n/a		**2.34E-10**
xylenes	1330-20-7	7.91E-14	4.49E-11	1.47E-11	2.51E-10	5.01E-13	1.31E-13	7.25E-15	3.91E-15	9.33E-12	7.13E-10	n/a		**1.03E-09**
1,2,3,4,6,7,8-HpCDD	35822-46-9											n/a		
1,2,3,4,6,7,8,9-OCDD	3268-87-9											n/a		
1,2,3,4,6,7,8-HpCDF	67562-39-4											n/a		
1,2,3,4,6,7,8,9-OCDF	39001-02-0											n/a		
Total PCDDs and PCDFs	NA	1.08E-17	1.17E-15	4.36E-18	1.26E-17	5.19E-14	6.99E-16	7.14E-17	7.13E-17	1.64E-12	2.13E-16	n/a	1.15E-10	**1.17E-10**
ammonia	7664-41-7	8.24E-14	2.17E-09	7.56E-10	6.20E-09	1.61E-13	4.14E-14	2.21E-15	1.20E-15	3.13E-12	3.21E-10	n/a		**9.45E-09**
aluminum	7429-90-5	1.06E-13	1.06E-13	3.70E-14	1.33E-14	5.24E-15	0.00E+00	0.00E+00	0.00E+00	3.07E-14	1.45E-10	n/a		**1.45E-10**
antimony	7440-36-0	2.56E-14	1.46E-08	2.63E-13	1.48E-13	1.08E-10	0.00E+00	0.00E+00	0.00E+00	8.74E-10	7.67E-11	n/a		**1.57E-08**
barium	7440-39-3	4.77E-14	2.93E-09	4.94E-13	1.37E-13	3.25E-12	0.00E+00	0.00E+00	0.00E+00	6.12E-10	2.45E-10	n/a		**3.79E-09**
beryllium	7440-41-7	7.05E-14	1.38E-09	5.85E-14	2.03E-14	1.02E-11	0.00E+00	0.00E+00	0.00E+00	7.41E-13	1.12E-11	n/a		**1.40E-09**
cadmium	7440-43-9	3.48E-14	1.48E-08	1.40E-12	1.00E-12	1.32E-11	4.82E-13	1.22E-14	2.70E-16	5.76E-11	1.76E-09	n/a		**1.67E-08**
chlorine	7782-50-5	5.74E-12	4.44E-08	1.55E-08	3.24E-08	1.31E-11	3.38E-12	1.81E-13	9.78E-14	2.54E-10	1.00E-09	n/a		**9.37E-08**
chromium (3+)	7440-47-3	1.05E-14	2.28E-08	1.66E-14	9.10E-15	9.31E-10	0.00E+00	0.00E+00	0.00E+00	2.05E-08	8.40E-12	n/a		**4.43E-08**
chromium (6+)	18540-29-9	1.05E-14	2.28E-08	1.66E-14	9.10E-15	9.31E-10	0.00E+00	0.00E+00	0.00E+00	2.05E-08	8.40E-12	n/a	3.82E-08	**8.25E-08**
cobalt	7440-48-4	5.68E-15	5.16E-09	1.58E-14	7.64E-15	7.65E-10	0.00E+00	0.00E+00	0.00E+00	6.17E-09	1.88E-12	n/a		**1.21E-08**
copper	7440-50-8	2.81E-12	2.55E-07	2.43E-10	1.35E-10	1.88E-08	0.00E+00	0.00E+00	0.00E+00	2.28E-07	9.37E-11	n/a		**5.02E-07**
hydrogen chloride	7647-01-0	3.72E-12	6.48E-08	2.26E-08	1.54E-07	2.77E-12	7.12E-13	3.81E-14	2.05E-14	5.36E-11	3.27E-09	n/a		**2.44E-07**
iron	7439-89-6	1.32E-11	2.24E-05	5.87E-12	6.46E-10	3.32E-06	0.00E+00	0.00E+00	0.00E+00	3.35E-06	8.07E-09	n/a		**2.91E-05**
lead	7439-92-1	5.38E-13	1.54E-08	2.36E-12	9.30E-13	3.42E-11	0.00E+00	0.00E+00	0.00E+00	2.30E-09	1.80E-13	n/a	2.00E-08	**3.77E-08**
manganese	7439-96-5	1.73E-12	1.14E-06	4.19E-11	1.66E-11	3.37E-09	0.00E+00	0.00E+00	0.00E+00	2.38E-07	4.08E-10	n/a		**1.38E-06**
total mercury	NA											n/a		
mercuric chloride	7487-94-7	3.93E-12	3.70E-10	1.84E-11	2.72E-11	1.14E-11	3.82E-15	1.64E-13	1.55E-13	3.91E-10	0.00E+00	n/a		**8.22E-10**
methyl mercury	22967-92-6	7.79E-14	9.15E-11	7.37E-13	1.48E-12	4.48E-13	8.39E-17	5.43E-16	5.12E-16	1.57E-11	1.14E-07	n/a		**1.14E-07**
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	n/a		**0.00E+00**
nickel	7440-02-0	2.60E-14	1.03E-08	7.80E-14	3.00E-13	4.57E-10	0.00E+00	0.00E+00	0.00E+00	6.14E-09	1.05E-10	n/a		**1.70E-08**
selenium	7782-49-2	2.05E-14	4.08E-08	1.29E-13	9.84E-14	6.85E-10	1.30E-09	4.18E-14	3.95E-14	1.43E-07	6.91E-10	n/a		**1.86E-07**
silver	7440-22-4	1.18E-15	3.57E-09	5.24E-14	2.26E-14	7.94E-11	0.00E+00	0.00E+00	0.00E+00	4.27E-08	4.11E-11	n/a		**4.64E-08**
vanadium	7440-62-2	8.81E-13	3.97E-08	9.42E-13	5.07E-13	7.36E-10	0.00E+00	0.00E+00	0.00E+00	4.75E-10	1.39E-11	n/a		**4.10E-08**
zinc	7440-66-6	1.56E-12	6.48E-07	4.89E-11	2.70E-10	4.32E-10	1.41E-11	3.97E-14	3.74E-14	1.26E-08	1.75E-07	n/a		**8.36E-07**

a. Ingestion rates of total PCDDs/PCDFs and coplanar PCBs are presented in units of mg TEQ/day

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS: Infant Subsistence Fisher Exposure Scenario														
COPC	CAS Number	Incidental Ingestion of Soil (mg/day)[a]	Ingestion of Exposed Produce (mg/day)[a]	Ingestion of Protected Produce (mg/day)[a]	Ingestion of Belowground Produce (mg/day)[a]	Ingestion of Beef (mg/day)[a]	Ingestion of Pork (mg/day)[a]	Ingestion of Poultry (mg/day)[a]	Ingestion of Eggs (mg/day)[a]	Ingestion of Milk (mg/day)[a]	Ingestion of Fish (mg/day)[a]	Incidental Ingestion of Surface Water (mg/day)[a]	Ingestion of Breast Milk (mg/day)[a]	Total Daily COPC Ingestion (mg/day)[a]
1,4-dioxane	123-91-1	8.46E-13	6.56E-09	2.28E-09	1.05E-07	1.42E-13	3.66E-14	1.96E-15	1.05E-15	2.75E-12	2.35E-09	n/a		**1.16E-07**
2-butanone	78-93-3	1.09E-11	8.47E-08	2.95E-08	4.85E-08	7.29E-12	1.88E-12	1.00E-13	5.42E-14	1.41E-10	1.20E-09	n/a	4.35E-07	**5.99E-07**
2-ethyl 1,3-butadiene	3404-63-5	2.29E-15	1.46E-12	4.80E-13	7.32E-12	1.48E-14	3.82E-15	2.12E-16	1.14E-16	2.76E-13	8.60E-10	n/a		**8.70E-10**
acetone	67-64-1	4.55E-11	3.52E-07	1.23E-07	6.48E-07	8.25E-12	2.13E-12	1.14E-13	6.11E-14	1.59E-10	1.94E-08	n/a	4.51E-06	**5.65E-06**
benzene	71-43-2	4.82E-13	1.09E-09	3.68E-10	7.42E-09	3.05E-12	7.75E-13	4.17E-14	2.24E-14	5.85E-11	1.82E-08	n/a	2.01E-06	**2.04E-06**
bis(2-ethylhexyl)-phthalate	117-81-7	7.98E-11	2.26E-07	1.12E-09	1.31E-13	6.61E-08	1.91E-09	5.05E-10	2.72E-10	1.12E-05	9.15E-09	n/a		**1.15E-05**
chloromethane	74-87-3	1.05E-15	8.12E-12	2.82E-12	2.50E-11	2.71E-15	6.99E-16	3.73E-17	2.02E-17	5.24E-14	7.66E-11	n/a	1.95E-08	**1.96E-08**
dichlorodifluoromethane	75-71-8	4.07E-14	8.23E-11	2.87E-11	1.35E-10	2.53E-13	6.60E-11	3.57E-12	1.92E-12	4.86E-12	2.30E-10	n/a	2.34E-08	**2.39E-08**
di-n-butyl phthalate	84-74-2	2.72E-11	3.94E-09	6.49E-10	9.72E-12	5.35E-07	2.65E-08	1.88E-12	1.01E-10	9.12E-05	7.20E-08	n/a		**9.18E-05**
di-n-octyl phthalate	117-84-0	4.13E-18	2.83E-08	1.07E-18	2.44E-05	1.63E-06	4.52E-08	3.66E-17	1.97E-17	2.76E-05	2.45E-09	n/a		**5.38E-05**
ethane	74-84-0	1.22E-13	3.95E-10	1.36E-10	8.80E-10	6.96E-13	1.79E-13	9.65E-15	5.20E-15	1.34E-11	1.55E-07	n/a		**1.56E-07**
HD	505-60-2	1.37E-14	6.39E-11	6.92E-12	1.87E-11	2.50E-13	3.03E-14	1.25E-15	6.74E-16	4.43E-12	2.10E-10	n/a		**3.05E-10**
methane	74-82-8	8.32E-14	7.01E-10	2.43E-10	1.45E-09	3.35E-13	3.12E-15	1.67E-16	8.98E-17	2.34E-13	1.85E-07	n/a		**1.87E-07**
naphthalene	91-20-3	1.75E-10	7.77E-08	2.70E-08	9.05E-09	1.02E-09	2.81E-10	1.58E-11	8.52E-12	1.89E-08	3.58E-09	n/a	2.15E-07	**3.53E-07**
propene	115-07-1	1.86E-14	6.34E-11	2.19E-11	1.39E-10	1.05E-13	2.70E-14	1.45E-15	7.82E-16	2.02E-12	8.01E-09	n/a		**8.24E-09**
toluene	108-88-3	4.69E-13	5.19E-10	1.62E-10	6.98E-09	3.32E-12	8.15E-13	4.40E-14	2.37E-14	6.25E-11	2.09E-08	n/a	7.88E-07	**8.16E-07**
trichlorofluoromethane	75-69-4	2.87E-16	3.99E-13	1.28E-13	4.47E-12	1.97E-12	4.91E-16	2.64E-14	1.42E-14	3.74E-11	1.90E-10	n/a	1.03E-08	**1.06E-08**
xylenes	1330-20-7	7.91E-14	4.49E-11	1.47E-11	2.51E-10	5.01E-13	1.31E-13	7.25E-15	3.91E-15	9.33E-12	7.13E-10	n/a	1.32E-08	**1.42E-08**
1,2,3,4,6,7,8-HpCDD	35822-46-9											n/a		
1,2,3,4,6,7,8,9-OCDD	3268-87-9											n/a		
1,2,3,4,6,7,8-HpCDF	67562-39-4											n/a		
1,2,3,4,6,7,8,9-OCDF	39001-02-0											n/a		
Total PCDDs and PCDFs	NA	2.09E-17	1.19E-15	8.44E-18	2.45E-17	5.38E-14	9.69E-16	1.38E-16	1.38E-16	1.68E-12	3.57E-16	n/a	1.15E-10	**1.17E-10**
ammonia	7664-41-7	8.24E-14	2.17E-09	7.56E-10	6.20E-09	1.61E-13	4.14E-14	2.21E-15	1.20E-15	3.13E-12	3.21E-10	n/a		**9.45E-09**
aluminum	7429-90-5	1.06E-13	1.06E-13	3.70E-14	1.33E-14	5.24E-15	0.00E+00	0.00E+00	0.00E+00	3.07E-14	1.45E-10	n/a	5.56E-08	**5.58E-08**
antimony	7440-36-0	2.57E-14	1.46E-08	2.63E-13	1.48E-13	1.08E-10	0.00E+00	0.00E+00	0.00E+00	8.74E-10	7.67E-11	n/a	1.89E-08	**3.46E-08**
barium	7440-39-3	4.77E-14	2.93E-09	4.95E-13	1.37E-13	3.25E-12	0.00E+00	0.00E+00	0.00E+00	6.12E-10	2.45E-10	n/a	4.16E-09	**7.94E-09**
beryllium	7440-41-7	7.06E-14	1.38E-09	5.87E-14	2.03E-14	1.02E-11	0.00E+00	0.00E+00	0.00E+00	7.41E-13	1.12E-11	n/a	1.76E-09	**3.16E-09**
cadmium	7440-43-9	3.48E-14	1.48E-08	1.40E-12	1.00E-12	1.32E-11	4.82E-13	1.22E-14	2.70E-16	5.76E-11	1.76E-09	n/a	2.07E-08	**3.74E-08**
chlorine	7782-50-5	5.74E-12	4.44E-08	1.55E-08	3.24E-08	1.31E-11	3.38E-12	1.81E-13	9.78E-14	2.54E-10	1.00E-09	n/a	4.17E-07	**5.11E-07**
chromium (3+)	7440-47-3	1.05E-14	2.28E-08	1.66E-14	9.10E-15	9.31E-10	0.00E+00	0.00E+00	0.00E+00	2.05E-08	8.40E-12	n/a	3.82E-08	**8.25E-08**
chromium (6+)	18540-29-9	1.05E-14	2.28E-08	1.66E-14	9.10E-15	9.31E-10	0.00E+00	0.00E+00	0.00E+00	2.05E-08	8.40E-12	n/a	3.82E-08	**8.25E-08**
cobalt	7440-48-4	5.68E-15	5.16E-09	1.58E-14	7.64E-15	7.65E-10	0.00E+00	0.00E+00	0.00E+00	6.17E-09	1.88E-12	n/a	1.10E-08	**2.31E-08**
copper	7440-50-8	2.81E-12	2.55E-07	2.43E-10	1.35E-10	1.88E-08	0.00E+00	0.00E+00	0.00E+00	2.28E-07	9.37E-11	n/a	4.55E-07	**9.56E-07**
hydrogen chloride	7647-01-0	3.72E-12	6.48E-08	2.26E-08	1.54E-07	2.77E-12	7.12E-13	3.81E-14	2.05E-14	5.36E-11	3.27E-09	n/a		**2.44E-07**
iron	7439-89-6	1.32E-11	2.24E-05	5.87E-12	6.46E-10	3.32E-06	0.00E+00	0.00E+00	0.00E+00	3.35E-06	8.07E-09	n/a	4.01E-05	**6.92E-05**
lead	7439-92-1	5.39E-13	1.54E-08	2.36E-12	9.31E-13	3.42E-11	0.00E+00	0.00E+00	0.00E+00	2.30E-09	1.80E-13	n/a		**1.77E-08**
manganese	7439-96-5	1.73E-12	1.14E-06	4.19E-11	1.66E-11	3.37E-09	0.00E+00	0.00E+00	0.00E+00	2.38E-07	4.08E-10	n/a	1.50E-06	**2.88E-06**
total mercury	NA											n/a		
mercuric chloride	7487-94-7	7.87E-12	4.22E-10	3.67E-11	5.44E-11	1.40E-11	5.80E-15	3.28E-13	3.09E-13	4.71E-10	0.00E+00	n/a	9.21E-10	**1.93E-09**
methyl mercury	22967-92-6	1.53E-13	9.36E-11	1.45E-12	2.91E-12	5.23E-13	9.06E-17	1.07E-15	1.01E-15	1.82E-11	1.97E-07	n/a	2.50E-07	**4.47E-07**
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	n/a		**0.00E+00**
nickel	7440-02-0	2.60E-14	1.03E-08	7.80E-14	3.00E-13	4.57E-10	0.00E+00	0.00E+00	0.00E+00	6.14E-09	1.05E-10	n/a	1.64E-08	**3.34E-08**
selenium	7782-49-2	2.05E-14	4.08E-08	1.29E-13	9.84E-14	6.85E-10	1.30E-09	4.18E-14	3.95E-14	1.43E-07	6.91E-10	n/a	1.04E-07	**2.91E-07**
silver	7440-22-4	1.18E-15	3.57E-09	5.24E-14	2.26E-14	7.94E-11	0.00E+00	0.00E+00	0.00E+00	4.27E-08	4.11E-11	n/a	1.86E-08	**6.50E-08**
vanadium	7440-62-2	8.82E-13	3.97E-08	9.43E-13	5.08E-13	7.36E-10	0.00E+00	0.00E+00	0.00E+00	4.75E-10	1.39E-11	n/a	5.20E-08	**9.29E-08**
zinc	7440-66-6	1.56E-12	6.48E-07	4.89E-11	2.70E-10	4.32E-10	1.41E-11	3.97E-14	3.74E-14	1.26E-08	1.75E-07	n/a	1.03E-06	**1.87E-06**

a. Ingestion rates of total PCDDs/PCDFs are presented in units of mg TEQ/day

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS:
Infant Subsistence Farmer Exposure Scenario

COPC	CAS Number	Incidental Ingestion of Soil (mg/day)[a]	Ingestion of Exposed Produce (mg/day)[a]	Ingestion of Protected Produce (mg/day)[a]	Ingestion of Belowground Produce (mg/day)[a]	Ingestion of Beef (mg/day)[a]	Ingestion of Pork (mg/day)[a]	Ingestion of Poultry (mg/day)[a]	Ingestion of Eggs (mg/day)[a]	Ingestion of Milk (mg/day)[a]	Ingestion of Fish (mg/day)[a]	Incidental Ingestion of Surface Water (mg/day)[a]	Ingestion of Breast Milk (mg/day)[a]	Total Daily COPC Ingestion (mg/day)[a]
1,4-dioxane	123-91-1	8.46E-13	1.64E-08	5.71E-09	2.62E-07	3.56E-13	9.15E-14	4.90E-15	2.63E-15	6.87E-12	9.42E-10	n/a		**2.85E-07**
2-butanone	78-93-3	1.09E-11	2.12E-07	7.38E-08	1.21E-07	1.82E-11	4.69E-12	2.51E-13	1.35E-13	3.52E-10	4.80E-10	n/a		**4.08E-07**
2-ethyl 1,3-butadiene	3404-63-5	2.29E-15	3.66E-12	1.20E-12	1.83E-11	3.71E-14	9.56E-15	5.29E-16	2.85E-16	6.91E-13	3.44E-10	n/a		**3.68E-10**
acetone	67-64-1	4.55E-11	8.80E-07	3.07E-07	1.62E-06	2.06E-11	5.31E-12	2.85E-13	1.53E-13	3.99E-10	7.76E-09	n/a		**2.81E-06**
benzene	71-43-2	4.82E-13	2.74E-09	9.19E-10	1.85E-08	7.63E-12	1.94E-12	1.04E-13	5.60E-14	1.46E-10	7.28E-09	n/a	2.02E-06	**2.05E-06**
bis(2-ethylhexyl)-phthalate	117-81-7	7.84E-11	5.65E-07	2.76E-09	3.21E-13	1.65E-07	4.76E-09	1.24E-09	6.67E-10	2.80E-05	3.66E-09	n/a		**2.88E-05**
chloromethane	74-87-3	1.05E-15	2.03E-11	7.06E-12	6.26E-11	6.78E-15	1.75E-15	9.33E-17	5.04E-17	1.31E-13	3.06E-11	n/a		**1.21E-10**
dichlorodifluoromethane	75-71-8	4.07E-14	2.06E-10	7.17E-11	3.37E-10	6.32E-13	1.65E-10	8.92E-12	4.81E-12	1.21E-11	9.20E-11	n/a		**8.98E-10**
di-n-butyl phthalate	84-74-2	2.67E-11	9.77E-09	1.59E-09	2.38E-11	1.34E-06	6.61E-08	4.62E-12	2.49E-10	2.28E-04	2.88E-08	n/a		**2.29E-04**
di-n-octyl phthalate	117-84-0	4.13E-18	7.07E-08	2.68E-18	6.11E-05	4.07E-06	1.13E-07	9.16E-17	4.93E-17	6.91E-05	9.79E-10	n/a		**1.34E-04**
ethane	74-84-0	1.22E-13	9.88E-10	3.41E-10	2.20E-09	1.74E-12	4.48E-13	2.41E-14	1.30E-14	3.35E-11	6.19E-08	n/a		**6.55E-08**
HD	505-60-2	1.37E-14	1.60E-10	1.73E-11	4.68E-11	6.24E-13	7.57E-14	3.13E-15	1.68E-15	1.11E-11	8.41E-11	n/a		**3.20E-10**
methane	74-82-8	8.32E-14	1.75E-09	6.08E-10	3.63E-09	8.39E-13	7.80E-15	4.17E-16	2.24E-16	5.86E-13	7.38E-08	n/a		**7.98E-08**
naphthalene	91-20-3	1.72E-10	1.91E-07	6.63E-08	2.22E-08	2.50E-09	6.89E-10	3.86E-11	2.09E-11	4.64E-08	1.43E-09	n/a		**3.30E-07**
propene	115-07-1	1.86E-14	1.59E-10	5.48E-11	3.46E-10	2.62E-13	6.76E-14	3.63E-15	1.96E-15	5.04E-12	3.20E-09	n/a		**3.77E-09**
toluene	108-88-3	4.69E-13	1.30E-09	4.04E-10	1.75E-08	8.30E-12	2.04E-12	1.10E-13	5.92E-14	1.56E-10	8.35E-09	n/a		**2.77E-08**
trichlorofluoromethane	75-69-4	2.87E-16	9.98E-13	3.21E-13	1.12E-11	4.93E-12	1.23E-15	6.61E-14	3.56E-14	9.34E-11	7.59E-11	n/a		**1.87E-10**
xylenes	1330-20-7	7.91E-14	1.12E-10	3.68E-11	6.28E-10	1.25E-12	3.26E-13	1.81E-14	9.77E-15	2.33E-11	2.85E-10	n/a		**1.09E-09**
1,2,3,4,6,7,8-HpCDD	35822-46-9											n/a		
1,2,3,4,6,7,8,9-OCDD	3268-87-9											n/a		
1,2,3,4,6,7,8-HpCDF	67562-39-4											n/a		
1,2,3,4,6,7,8,9-OCDF	39001-02-0											n/a		
Total PCDDs and PCDFs	NA	1.08E-17	2.93E-15	1.09E-17	3.16E-17	1.30E-13	1.75E-15	1.78E-16	1.78E-16	4.11E-12	8.54E-17	n/a	2.88E-10	**2.92E-10**
ammonia	7664-41-7	8.24E-14	5.43E-09	1.89E-09	1.55E-08	4.04E-13	1.03E-13	5.54E-15	2.99E-15	7.83E-12	1.29E-10	n/a		**2.29E-08**
aluminum	7429-90-5	1.06E-13	2.66E-13	9.26E-14	3.32E-14	1.31E-14	0.00E+00	0.00E+00	0.00E+00	7.68E-14	5.79E-11	n/a		**5.84E-11**
antimony	7440-36-0	2.56E-14	3.66E-08	6.59E-13	3.69E-13	2.71E-10	0.00E+00	0.00E+00	0.00E+00	2.19E-09	3.07E-11	n/a		**3.91E-08**
barium	7440-39-3	4.77E-14	7.32E-09	1.24E-12	3.43E-13	8.13E-12	0.00E+00	0.00E+00	0.00E+00	1.53E-09	9.78E-11	n/a		**8.96E-09**
beryllium	7440-41-7	7.05E-14	3.44E-09	1.46E-13	5.07E-14	2.55E-11	0.00E+00	0.00E+00	0.00E+00	1.85E-12	4.48E-12	n/a		**3.47E-09**
cadmium	7440-43-9	3.48E-14	3.71E-08	3.50E-12	2.51E-12	3.30E-11	1.21E-12	3.04E-14	6.75E-16	1.44E-10	7.05E-10	n/a		**3.80E-08**
chlorine	7782-50-5	5.74E-12	1.11E-07	3.87E-08	8.11E-08	3.28E-11	8.46E-12	4.54E-13	2.44E-13	6.35E-10	4.02E-10	n/a		**2.32E-07**
chromium (3+)	7440-47-3	1.05E-14	5.71E-08	4.14E-14	2.28E-14	2.33E-09	0.00E+00	0.00E+00	0.00E+00	5.12E-08	3.36E-12	n/a		**1.11E-07**
chromium (6+)	18540-29-9	1.05E-14	5.71E-08	4.14E-14	2.28E-14	2.33E-09	0.00E+00	0.00E+00	0.00E+00	5.12E-08	3.36E-12	n/a	8.93E-08	**2.00E-07**
cobalt	7440-48-4	5.68E-15	1.29E-08	3.96E-14	1.91E-14	1.91E-09	0.00E+00	0.00E+00	0.00E+00	1.54E-08	7.53E-13	n/a		**3.03E-08**
copper	7440-50-8	2.81E-12	6.37E-07	6.08E-10	3.37E-10	4.71E-08	0.00E+00	0.00E+00	0.00E+00	5.69E-07	3.75E-11	n/a		**1.25E-06**
hydrogen chloride	7647-01-0	3.72E-12	1.62E-07	5.65E-08	3.84E-07	6.92E-12	1.78E-12	9.53E-14	5.12E-14	1.34E-10	1.31E-09	n/a		**6.04E-07**
iron	7439-89-6	1.32E-11	5.60E-05	1.47E-11	1.62E-09	8.30E-06	0.00E+00	0.00E+00	0.00E+00	8.37E-06	3.23E-09	n/a		**7.27E-05**
lead	7439-92-1	5.38E-13	3.84E-08	5.89E-12	2.32E-12	8.54E-11	0.00E+00	0.00E+00	0.00E+00	5.74E-09	7.21E-14	n/a	4.58E-08	**9.01E-08**
manganese	7439-96-5	1.73E-12	2.84E-06	1.05E-10	4.14E-11	8.42E-09	0.00E+00	0.00E+00	0.00E+00	5.95E-07	1.63E-10	n/a		**3.45E-06**
total mercury	NA											n/a		
mercuric chloride	7487-94-7	3.93E-12	9.24E-10	4.59E-11	6.80E-11	2.86E-11	9.54E-15	4.10E-13	3.87E-13	9.77E-10	0.00E+00	n/a		**2.05E-09**
methyl mercury	22967-92-6	7.79E-14	2.29E-10	1.84E-12	3.70E-12	1.12E-12	2.10E-16	1.36E-15	1.28E-15	3.92E-11	4.55E-08	n/a		**4.58E-08**
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	n/a		**0.00E+00**
nickel	7440-02-0	2.60E-14	2.57E-08	1.95E-13	7.49E-13	1.14E-09	0.00E+00	0.00E+00	0.00E+00	1.53E-08	4.20E-11	n/a		**4.22E-08**
selenium	7782-49-2	2.05E-14	1.02E-07	3.22E-13	2.46E-13	1.71E-09	3.26E-09	1.05E-13	9.86E-14	3.57E-07	2.76E-10	n/a		**4.64E-07**
silver	7440-22-4	1.18E-15	8.93E-09	1.31E-13	5.66E-14	1.98E-10	0.00E+00	0.00E+00	0.00E+00	1.07E-07	1.64E-11	n/a		**1.16E-07**
vanadium	7440-62-2	8.81E-13	9.93E-08	2.35E-12	1.27E-12	1.84E-09	0.00E+00	0.00E+00	0.00E+00	1.19E-09	5.55E-12	n/a		**1.02E-07**
zinc	7440-66-6	1.56E-12	1.62E-06	1.22E-10	6.76E-10	1.08E-09	3.53E-11	9.92E-14	9.35E-14	3.15E-08	6.99E-08	n/a		**1.72E-06**

a. Ingestion rates of total PCDDs/PCDFs and coplanar PCBs are presented in units of mg TEQ/day

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS: Infant Subsistence Farmer Exposure Scenario														
COPC	CAS Number	Incidental Ingestion of Soil (mg/day)[a]	Ingestion of Exposed Produce (mg/day)[a]	Ingestion of Protected Produce (mg/day)[a]	Ingestion of Belowground Produce (mg/day)[a]	Ingestion of Beef (mg/day)[a]	Ingestion of Pork (mg/day)[a]	Ingestion of Poultry (mg/day)[a]	Ingestion of Eggs (mg/day)[a]	Ingestion of Milk (mg/day)[a]	Ingestion of Fish (mg/day)[a]	Incidental Ingestion of Surface Water (mg/day)[a]	Ingestion of Breast Milk (mg/day)[a]	Total Daily COPC Ingestion (mg/day)[a]
1,4-dioxane	123-91-1	8.46E-13	1.64E-08	5.71E-09	2.62E-07	3.56E-13	9.15E-14	4.90E-15	2.63E-15	6.87E-12	9.42E-10	n/a		**2.85E-07**
2-butanone	78-93-3	1.09E-11	2.12E-07	7.38E-08	1.21E-07	1.82E-11	4.69E-12	2.51E-13	1.35E-13	3.52E-10	4.80E-10	n/a	8.18E-07	**1.23E-06**
2-ethyl 1,3-butadiene	3404-63-5	2.29E-15	3.66E-12	1.20E-12	1.83E-11	3.71E-14	9.56E-15	5.29E-16	2.85E-16	6.91E-13	3.44E-10	n/a		**3.68E-10**
acetone	67-64-1	4.55E-11	8.80E-07	3.07E-07	1.62E-06	2.06E-11	5.31E-12	2.85E-13	1.53E-13	3.99E-10	7.76E-09	n/a	7.39E-06	**1.02E-05**
benzene	71-43-2	4.82E-13	2.74E-09	9.19E-10	1.85E-08	7.63E-12	1.94E-12	1.04E-13	5.60E-14	1.46E-10	7.28E-09	n/a	2.02E-06	**2.05E-06**
bis(2-ethylhexyl)-phthalate	117-81-7	7.98E-11	5.66E-07	2.81E-09	3.26E-13	1.65E-07	4.77E-09	1.26E-09	6.80E-10	2.81E-05	3.66E-09	n/a		**2.88E-05**
chloromethane	74-87-3	1.05E-15	2.03E-11	7.06E-12	6.26E-11	6.78E-15	1.75E-15	9.33E-17	5.04E-17	1.31E-13	3.06E-11	n/a	1.95E-08	**1.97E-08**
dichlorodifluoromethane	75-71-8	4.07E-14	2.06E-10	7.17E-11	3.37E-10	6.32E-13	1.65E-10	8.92E-12	4.81E-12	1.21E-11	9.20E-11	n/a	2.41E-08	**2.50E-08**
di-n-butyl phthalate	84-74-2	2.72E-11	9.85E-09	1.62E-09	2.43E-11	1.34E-06	6.63E-08	4.70E-12	2.53E-10	2.28E-04	2.88E-08	n/a		**2.29E-04**
di-n-octyl phthalate	117-84-0	4.13E-18	7.07E-08	2.68E-18	6.11E-05	4.07E-06	1.13E-07	9.16E-17	4.93E-17	6.91E-05	9.79E-10	n/a		**1.34E-04**
ethane	74-84-0	1.22E-13	9.88E-10	3.41E-10	2.20E-09	1.74E-12	4.48E-13	2.41E-14	1.30E-14	3.35E-11	6.19E-08	n/a		**6.55E-08**
HD	505-60-2	1.37E-14	1.60E-10	1.73E-11	4.68E-11	6.24E-13	7.57E-14	3.13E-15	1.68E-15	1.11E-11	8.41E-11	n/a		**3.20E-10**
methane	74-82-8	8.32E-14	1.75E-09	6.08E-10	3.63E-09	8.39E-13	7.80E-15	4.17E-16	2.24E-16	5.86E-13	7.38E-08	n/a		**7.98E-08**
naphthalene	91-20-3	1.75E-10	1.94E-07	6.76E-08	2.26E-08	2.55E-09	7.03E-10	3.94E-11	2.13E-11	4.74E-08	1.43E-09	n/a	4.76E-07	**8.13E-07**
propene	115-07-1	1.86E-14	1.59E-10	5.48E-11	3.46E-10	2.62E-13	6.76E-14	3.63E-15	1.96E-15	5.04E-12	3.20E-09	n/a		**3.77E-09**
toluene	108-88-3	4.69E-13	1.30E-09	4.04E-10	1.75E-08	8.30E-12	2.04E-12	1.10E-13	5.92E-14	1.56E-10	8.35E-09	n/a	7.94E-07	**8.21E-07**
trichlorofluoromethane	75-69-4	2.87E-16	9.98E-13	3.21E-13	1.12E-11	4.93E-12	1.23E-15	6.61E-14	3.56E-14	9.34E-11	7.59E-11	n/a	1.02E-08	**1.04E-08**
xylenes	1330-20-7	7.91E-14	1.12E-10	3.68E-11	6.28E-10	1.25E-12	3.26E-13	1.81E-14	9.77E-15	2.33E-11	2.85E-10	n/a	1.35E-08	**1.46E-08**
1,2,3,4,6,7,8-HpCDD	35822-46-9											n/a		
1,2,3,4,6,7,8,9-OCDD	3268-87-9											n/a		
1,2,3,4,6,7,8-HpCDF	67562-39-4											n/a		
1,2,3,4,6,7,8,9-OCDF	39001-02-0											n/a		
Total PCDDs and PCDFs	NA	2.09E-17	2.96E-15	2.11E-17	6.12E-17	1.34E-13	2.42E-15	3.46E-16	3.46E-16	4.20E-12	1.43E-16	n/a	2.88E-10	**2.92E-10**
ammonia	7664-41-7	8.24E-14	5.43E-09	1.89E-09	1.55E-08	4.04E-13	1.04E-13	5.54E-15	2.99E-15	7.83E-12	1.29E-10	n/a		**2.29E-08**
aluminum	7429-90-5	1.06E-13	2.66E-13	9.26E-14	3.32E-14	1.31E-14	0.00E+00	0.00E+00	0.00E+00	7.68E-14	5.79E-11	n/a	5.55E-08	**5.56E-08**
antimony	7440-36-0	2.57E-14	3.66E-08	6.59E-13	3.69E-13	2.71E-10	0.00E+00	0.00E+00	0.00E+00	2.19E-09	3.07E-11	n/a	4.32E-08	**8.22E-08**
barium	7440-39-3	4.77E-14	7.32E-09	1.24E-12	3.43E-13	8.13E-12	0.00E+00	0.00E+00	0.00E+00	1.53E-09	9.78E-11	n/a	8.96E-09	**1.79E-08**
beryllium	7440-41-7	7.06E-14	3.44E-09	1.47E-13	5.09E-14	2.55E-11	0.00E+00	0.00E+00	0.00E+00	1.85E-12	4.48E-12	n/a	4.00E-09	**7.48E-09**
cadmium	7440-43-9	3.48E-14	3.71E-08	3.50E-12	2.51E-12	3.30E-11	1.21E-12	3.04E-14	6.75E-16	1.44E-10	7.05E-10	n/a	4.32E-08	**8.12E-08**
chlorine	7782-50-5	5.74E-12	1.11E-07	3.87E-08	8.11E-08	3.28E-11	8.46E-12	4.54E-13	2.44E-13	6.35E-10	4.02E-10	n/a	6.38E-07	**8.70E-07**
chromium (3+)	7440-47-3	1.05E-14	5.71E-08	4.14E-14	2.28E-14	2.33E-09	0.00E+00	0.00E+00	0.00E+00	5.12E-08	3.36E-12	n/a	8.93E-08	**2.00E-07**
chromium (6+)	18540-29-9	1.05E-14	5.71E-08	4.14E-14	2.28E-14	2.33E-09	0.00E+00	0.00E+00	0.00E+00	5.12E-08	3.36E-12	n/a	8.93E-08	**2.00E-07**
cobalt	7440-48-4	5.68E-15	1.29E-08	3.96E-14	1.91E-14	1.91E-09	0.00E+00	0.00E+00	0.00E+00	1.54E-08	7.53E-13	n/a	2.61E-08	**5.64E-08**
copper	7440-50-8	2.81E-12	6.37E-07	6.08E-10	3.37E-10	4.71E-08	0.00E+00	0.00E+00	0.00E+00	5.69E-07	3.75E-11	n/a	1.07E-06	**2.32E-06**
hydrogen chloride	7647-01-0	3.72E-12	1.62E-07	5.65E-08	3.84E-07	6.92E-12	1.78E-12	9.53E-14	5.12E-14	1.34E-10	1.31E-09	n/a		**6.04E-07**
iron	7439-89-6	1.32E-11	5.60E-05	1.47E-11	1.62E-09	8.30E-06	0.00E+00	0.00E+00	0.00E+00	8.37E-06	3.23E-09	n/a	9.44E-05	**1.67E-04**
lead	7439-92-1	5.39E-13	3.84E-08	5.90E-12	2.33E-12	8.54E-11	0.00E+00	0.00E+00	0.00E+00	5.74E-09	7.21E-14	n/a		**4.43E-08**
manganese	7439-96-5	1.73E-12	2.84E-06	1.05E-10	4.14E-11	8.42E-09	0.00E+00	0.00E+00	0.00E+00	5.95E-07	1.63E-10	n/a	3.45E-06	**6.90E-06**
total mercury	NA											n/a		
mercuric chloride	7487-94-7	7.87E-12	1.06E-09	9.18E-11	1.36E-10	3.51E-11	1.45E-14	8.20E-13	7.73E-13	1.18E-09	0.00E+00	n/a	2.19E-09	**4.69E-09**
methyl mercury	22967-92-6	1.53E-13	2.34E-10	3.63E-12	7.29E-12	1.31E-12	2.26E-16	2.67E-15	2.52E-15	4.56E-11	7.88E-08	n/a	1.00E-07	**1.79E-07**
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	n/a		**0.00E+00**
nickel	7440-02-0	2.60E-14	2.57E-08	1.95E-13	7.49E-13	1.14E-09	0.00E+00	0.00E+00	0.00E+00	1.53E-08	4.20E-11	n/a	3.80E-08	**8.03E-08**
selenium	7782-49-2	2.05E-14	1.02E-07	3.22E-13	2.46E-13	1.71E-09	3.26E-09	1.05E-13	9.86E-14	3.57E-07	2.76E-10	n/a	2.48E-07	**7.13E-07**
silver	7440-22-4	1.18E-15	8.93E-09	1.31E-13	5.66E-14	1.98E-10	0.00E+00	0.00E+00	0.00E+00	1.07E-07	1.64E-11	n/a	4.55E-08	**1.61E-07**
vanadium	7440-62-2	8.82E-13	9.93E-08	2.36E-12	1.27E-12	1.84E-09	0.00E+00	0.00E+00	0.00E+00	1.19E-09	5.55E-12	n/a	1.19E-07	**2.22E-07**
zinc	7440-66-6	1.56E-12	1.62E-06	1.22E-10	6.76E-10	1.08E-09	3.53E-11	9.92E-14	9.35E-14	3.15E-08	6.99E-08	n/a	1.94E-06	**3.67E-06**

a. Ingestion rates of total PCDDs/PCDFs are presented in units of mg TEQ/day

DERMAL UPTAKE OF COPCS FROM CONTACT WITH SOIL FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: All Exposure Scenarios							
COPC	CAS Number	Adult Resident DA_{event} mg/(cm^2-event)[a]	Adult Fisher DA_{event} mg/(cm^2-event)[a]	Adult Farmer DA_{event} mg/(cm^2-event)[a]	Adult Worker DA_{event} mg/(cm^2-event)[a]	Child DA_{event} mg/(cm^2-event)[a]	Infant DA_{event} mg/(cm^2-event)[a]
1,4-dioxane	123-91-1	4.94E-18	4.94E-18	3.70E-18	1.69E-17	8.46E-17	8.46E-17
2-butanone	78-93-3	6.38E-17	6.38E-17	4.79E-17	2.19E-16	1.09E-15	1.09E-15
2-ethyl 1,3-butadiene	3404-63-5	1.34E-20	1.34E-20	1.00E-20	4.59E-20	2.29E-19	2.29E-19
acetone	67-64-1	2.65E-16	2.65E-16	1.99E-16	9.09E-16	4.55E-15	4.55E-15
benzene	71-43-2	2.81E-18	2.81E-18	2.11E-18	9.64E-18	4.82E-17	4.82E-17
bis(2-ethylhexyl)-phthalate	117-81-7	8.47E-16	8.47E-16	6.35E-16	2.90E-15	1.43E-14	1.43E-14
chloromethane	74-87-3	6.11E-21	6.11E-21	4.58E-21	2.09E-20	1.05E-19	1.05E-19
dichlorodifluoromethane	75-71-8	9.03E-20	9.03E-20	6.77E-20	3.09E-19	1.55E-18	1.55E-18
di-n-butyl phthalate	84-74-2	5.65E-16	5.65E-16	4.23E-16	1.94E-15	9.50E-15	9.50E-15
di-n-octyl phthalate	117-84-0	4.18E-21	4.18E-21	3.13E-21	1.43E-20	7.16E-20	7.16E-20
ethane	74-84-0	7.09E-19	7.09E-19	5.32E-19	2.43E-18	1.22E-17	1.22E-17
HD	505-60-2	7.99E-20	7.99E-20	5.99E-20	2.74E-19	1.37E-18	1.37E-18
methane	74-82-8	4.85E-19	4.85E-19	3.64E-19	1.66E-18	8.32E-18	8.32E-18
naphthalene	91-20-3	1.02E-15	1.02E-15	7.67E-16	3.51E-15	1.72E-14	1.72E-14
propene	115-07-1	1.08E-19	1.08E-19	8.12E-20	3.71E-19	1.86E-18	1.86E-18
toluene	108-88-3	2.74E-18	2.74E-18	2.05E-18	9.39E-18	4.69E-17	4.69E-17
trichlorofluoromethane	75-69-4	9.80E-22	9.80E-22	7.35E-22	3.36E-21	1.68E-20	1.68E-20
xylenes	1330-20-7	4.61E-19	4.61E-19	3.46E-19	1.58E-18	7.91E-18	7.91E-18
1,2,3,4,6,7,8-HpCDD	35822-46-9						
1,2,3,4,6,7,8,9-OCDD	3268-87-9						
1,2,3,4,6,7,8-HpCDF	67562-39-4						
1,2,3,4,6,7,8,9-OCDF	39001-02-0						
Total PCDDs and PCDFs	NA	1.36E-22	1.36E-22	1.20E-22	4.14E-22	3.23E-22	3.23E-22
ammonia	7664-41-7	4.80E-19	4.80E-19	3.60E-19	1.65E-18	8.24E-18	8.24E-18
aluminum	7429-90-5	2.29E-20	2.29E-20	1.72E-20	7.86E-20	3.93E-19	3.93E-19
antimony	7440-36-0	6.35E-21	6.35E-21	4.76E-21	2.18E-20	1.09E-19	1.09E-19
barium	7440-39-3	1.25E-20	1.25E-20	9.40E-21	4.30E-20	2.15E-19	2.15E-19
beryllium	7440-41-7	4.76E-21	4.76E-21	3.57E-21	1.63E-20	8.13E-20	8.13E-20
cadmium	7440-43-9	2.03E-21	2.03E-21	1.52E-21	6.96E-21	3.48E-20	3.48E-20
chlorine	7782-50-5	2.51E-18	2.51E-18	1.88E-18	8.59E-18	4.30E-17	4.30E-17
chromium (3+)	7440-47-3	3.41E-21	3.41E-21	2.56E-21	1.17E-20	5.84E-20	5.84E-20
chromium (6+)	18540-29-9	3.41E-21	3.41E-21	2.56E-21	1.17E-20	5.84E-20	5.84E-20
cobalt	7440-48-4	1.03E-21	1.03E-21	7.72E-22	3.53E-21	1.76E-20	1.76E-20
copper	7440-50-8	5.02E-19	5.02E-19	3.77E-19	1.72E-18	8.60E-18	8.60E-18
hydrogen chloride	7647-01-0	1.13E-18	1.13E-18	8.49E-19	3.88E-18	1.94E-17	1.94E-17
iron	7439-89-6	5.30E-19	5.30E-19	3.98E-19	1.82E-18	9.09E-18	9.09E-18
lead	7439-92-1	5.78E-20	5.78E-20	4.34E-20	1.98E-19	9.90E-19	9.90E-19
manganese	7439-96-5	2.87E-19	2.87E-19	2.15E-19	9.84E-19	4.92E-18	4.92E-18
total mercury	NA						
mercuric chloride	7487-94-7	1.60E-17	1.60E-17	1.64E-17	4.49E-17	2.49E-17	2.49E-17
methyl mercury	22967-92-6	2.52E-20	2.52E-20	2.37E-20	7.39E-20	4.88E-20	4.88E-20
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	8.94E-21	8.94E-21	6.71E-21	3.07E-20	1.53E-19	1.53E-19
selenium	7782-49-2	4.09E-21	4.09E-21	3.06E-21	1.40E-20	7.01E-20	7.01E-20
silver	7440-22-4	1.65E-22	1.65E-22	1.24E-22	5.65E-22	2.83E-21	2.83E-21
vanadium	7440-62-2	1.41E-19	1.41E-19	1.06E-19	4.84E-19	2.42E-18	2.42E-18
zinc	7440-66-6	1.70E-19	1.70E-19	1.28E-19	5.84E-19	2.92E-18	2.92E-18

a. The dermally absorbed dose of total PCDDs/PCDFs and coplanar PCBs per event are presented in units of mg TEQ/(cm^2-event)

DERMAL UPTAKE OF COPCS FROM CONTACT WITH SOIL FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS: All Exposure Scenarios							
COPC	CAS Number	Adult Resident DA_{event} mg/(cm^2-event)[a]	Adult Fisher DA_{event} mg/(cm^2-event)[a]	Adult Farmer DA_{event} mg/(cm^2-event)[a]	Adult Worker DA_{event} mg/(cm^2-event)[a]	Child DA_{event} mg/(cm^2-event)[a]	Infant DA_{event} mg/(cm^2-event)[a]
1,4-dioxane	123-91-1	2.96E-17	2.96E-17	2.96E-17	8.46E-17	8.46E-17	8.46E-17
2-butanone	78-93-3	3.83E-16	3.83E-16	3.83E-16	1.09E-15	1.09E-15	1.09E-15
2-ethyl 1,3-butadiene	3404-63-5	8.03E-20	8.03E-20	8.03E-20	2.29E-19	2.29E-19	2.29E-19
acetone	67-64-1	1.59E-15	1.59E-15	1.59E-15	4.55E-15	4.55E-15	4.55E-15
benzene	71-43-2	1.69E-17	1.69E-17	1.69E-17	4.82E-17	4.82E-17	4.82E-17
bis(2-ethylhexyl)-phthalate	117-81-7	5.08E-15	5.08E-15	5.08E-15	1.45E-14	1.45E-14	1.45E-14
chloromethane	74-87-3	3.66E-20	3.66E-20	3.66E-20	1.05E-19	1.05E-19	1.05E-19
dichlorodifluoromethane	75-71-8	5.42E-19	5.42E-19	5.42E-19	1.55E-18	1.55E-18	1.55E-18
di-n-butyl phthalate	84-74-2	3.39E-15	3.39E-15	3.39E-15	9.68E-15	9.68E-15	9.68E-15
di-n-octyl phthalate	117-84-0	2.51E-20	2.51E-20	2.51E-20	7.16E-20	7.16E-20	7.16E-20
ethane	74-84-0	4.26E-18	4.26E-18	4.26E-18	1.22E-17	1.22E-17	1.22E-17
HD	505-60-2	4.79E-19	4.79E-19	4.79E-19	1.37E-18	1.37E-18	1.37E-18
methane	74-82-8	2.91E-18	2.91E-18	2.91E-18	8.32E-18	8.32E-18	8.32E-18
naphthalene	91-20-3	6.13E-15	6.13E-15	6.13E-15	1.75E-14	1.75E-14	1.75E-14
propene	115-07-1	6.49E-19	6.49E-19	6.49E-19	1.86E-18	1.86E-18	1.86E-18
toluene	108-88-3	1.64E-17	1.64E-17	1.64E-17	4.69E-17	4.69E-17	4.69E-17
trichlorofluoromethane	75-69-4	5.88E-21	5.88E-21	5.88E-21	1.68E-20	1.68E-20	1.68E-20
xylenes	1330-20-7	2.77E-18	2.77E-18	2.77E-18	7.91E-18	7.91E-18	7.91E-18
1,2,3,4,6,7,8-HpCDD	35822-46-9						
1,2,3,4,6,7,8,9-OCDD	3268-87-9						
1,2,3,4,6,7,8-HpCDF	67562-39-4						
1,2,3,4,6,7,8,9-OCDF	39001-02-0						
Total PCDDs and PCDFs	NA	2.19E-22	2.19E-22	2.19E-22	6.26E-22	6.26E-22	6.26E-22
ammonia	7664-41-7	2.88E-18	2.88E-18	2.88E-18	8.24E-18	8.24E-18	8.24E-18
aluminum	7429-90-5	1.38E-19	1.38E-19	1.38E-19	3.93E-19	3.93E-19	3.93E-19
antimony	7440-36-0	3.81E-20	3.81E-20	3.81E-20	1.09E-19	1.09E-19	1.09E-19
barium	7440-39-3	7.52E-20	7.52E-20	7.52E-20	2.15E-19	2.15E-19	2.15E-19
beryllium	7440-41-7	2.85E-20	2.85E-20	2.85E-20	8.16E-20	8.16E-20	8.16E-20
cadmium	7440-43-9	1.22E-20	1.22E-20	1.22E-20	3.48E-20	3.48E-20	3.48E-20
chlorine	7782-50-5	1.50E-17	1.50E-17	1.50E-17	4.30E-17	4.30E-17	4.30E-17
chromium (3+)	7440-47-3	2.04E-20	2.04E-20	2.04E-20	5.84E-20	5.84E-20	5.84E-20
chromium (6+)	18540-29-9	2.04E-20	2.04E-20	2.04E-20	5.84E-20	5.84E-20	5.84E-20
cobalt	7440-48-4	6.18E-21	6.18E-21	6.18E-21	1.76E-20	1.76E-20	1.76E-20
copper	7440-50-8	3.01E-18	3.01E-18	3.01E-18	8.61E-18	8.61E-18	8.61E-18
hydrogen chloride	7647-01-0	6.80E-18	6.80E-18	6.80E-18	1.94E-17	1.94E-17	1.94E-17
iron	7439-89-6	3.18E-18	3.18E-18	3.18E-18	9.09E-18	9.09E-18	9.09E-18
lead	7439-92-1	3.47E-19	3.47E-19	3.47E-19	9.91E-19	9.91E-19	9.91E-19
manganese	7439-96-5	1.72E-18	1.72E-18	1.72E-18	4.92E-18	4.92E-18	4.92E-18
total mercury	NA						
mercuric chloride	7487-94-7	1.75E-17	1.75E-17	1.75E-17	4.99E-17	4.99E-17	4.99E-17
methyl mercury	22967-92-6	3.36E-20	3.36E-20	3.36E-20	9.61E-20	9.61E-20	9.61E-20
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	5.37E-20	5.37E-20	5.37E-20	1.53E-19	1.53E-19	1.53E-19
selenium	7782-49-2	2.45E-20	2.45E-20	2.45E-20	7.01E-20	7.01E-20	7.01E-20
silver	7440-22-4	9.89E-22	9.89E-22	9.89E-22	2.83E-21	2.83E-21	2.83E-21
vanadium	7440-62-2	8.47E-19	8.47E-19	8.47E-19	2.42E-18	2.42E-18	2.42E-18
zinc	7440-66-6	1.02E-18	1.02E-18	1.02E-18	2.92E-18	2.92E-18	2.92E-18

a. The dermally absorbed dose of total PCDDs/PCDFs per event are presented in units of mg TEQ/(cm^2-event)

DERMAL UPTAKE OF COPCS FROM SWIMMING FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Adult Resident and Adult Subsistence Fisher Exposure Scenarios								
COPC	CAS Number	B (dimensionless)	D_{sc} (cm^2/hr)	τ_{event} (hr)	b (dimensionless)	c (dimensionless)	t* (hr)	Dermally Absorbed Dose per Event DA_{event} mg/(cm^2-event)[a]
1,4-dioxane	123-91-1	1.19E-03	5.09E-07	3.28E-01			7.86E-01	6.64E-15
2-butanone	78-93-3	3.14E-03	6.25E-07	2.66E-01			6.40E-01	8.94E-15
2-ethyl 1,3-butadiene	3404-63-5	2.03E-01	5.50E-07	3.03E-01			7.28E-01	2.62E-14
acetone	67-64-1	1.53E-03	7.49E-07	2.22E-01			5.34E-01	7.94E-14
benzene	71-43-2	5.10E-02	5.79E-07	2.88E-01			6.91E-01	8.53E-13
bis(2-ethylhexyl)-phthalate	117-81-7	1.82E-01	1.03E-08	1.62E+01			3.88E+01	1.50E-13
chloromethane	74-87-3	9.02E-03	8.27E-07	2.02E-01			4.84E-01	2.02E-15
dichlorodifluoromethane	75-71-8	3.81E-02	3.33E-07	5.00E-01			1.20E+00	6.59E-15
di-n-butyl phthalate	84-74-2	3.55E-01	4.38E-08	3.81E+00			9.14E+00	1.49E-13
di-n-octyl phthalate	117-84-0	1.74E+01	1.03E-08	1.62E+01	1.97E+02	1.74E+01	7.45E+01	1.74E-12
ethane	74-84-0	3.55E-02	1.08E-06	1.55E-01			3.72E-01	1.27E-11
HD	505-60-2	2.18E-02	2.04E-07	8.18E-01			1.96E+00	2.27E-15
methane	74-82-8	1.04E-02	1.29E-06	1.29E-01			3.10E-01	2.18E-11
naphthalene	91-20-3	2.05E-01	3.04E-07	5.49E-01			1.32E+00	6.07E-14
propene	115-07-1	3.39E-02	9.21E-07	1.81E-01			4.34E-01	5.78E-13
toluene	108-88-3	1.14E-01	4.83E-07	3.45E-01			8.28E-01	6.98E-13
trichlorofluoromethane	75-69-4	5.86E-02	2.70E-07	6.18E-01			1.48E+00	4.54E-15
xylenes	1330-20-7	2.10E-01	4.03E-07	4.13E-01			9.92E-01	1.81E-14
1,2,3,4,6,7,8-HpCDD	35822-46-9							
1,2,3,4,6,7,8,9-OCDD	3268-87-9							
1,2,3,4,6,7,8-HpCDF	67562-39-4							
1,2,3,4,6,7,8,9-OCDF	39001-02-0							
Total PCDDs and PCDFs	NA	5.30E+00	2.49E-08	6.68E+00	1.99E+01	5.35E+00	2.94E+01	1.20E-21
ammonia	7664-41-7							4.09E-15
aluminum	7429-90-5							1.89E-15
antimony	7440-36-0							4.29E-17
barium	7440-39-3							8.60E-18
beryllium	7440-41-7							3.99E-18
cadmium	7440-43-9							4.35E-17
chlorine	7782-50-5							1.57E-14
chromium (3+)	7440-47-3							1.19E-16
chromium (6+)	18540-29-9							1.19E-16
cobalt	7440-48-4							1.40E-17
copper	7440-50-8							6.62E-16
hydrogen chloride	7647-01-0							5.10E-14
iron	7439-89-6							1.37E-14
lead	7439-92-1							1.48E-17
manganese	7439-96-5							2.89E-15
total mercury	NA							
mercuric chloride	7487-94-7							3.41E-18
methyl mercury	22967-92-6							6.67E-20
elemental mercury	7439-97-6							0.00E+00
nickel	7440-02-0							6.02E-17
selenium	7782-49-2							1.20E-16
silver	7440-22-4							6.29E-18
vanadium	7440-62-2							9.78E-17
zinc	7440-66-6							1.14E-15

a. The dermally absorbed dose of total PCDDs/PCDFs and coplanar PCBs per event are presented in units of mg TEQ/(cm^2-event)

DERMAL UPTAKE OF COPCS FROM SWIMMING FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Adult Subsistence Farmer Exposure Scenario								
COPC	CAS Number	B (dimensionless)	D_{sc} (cm^2/hr)	τ_{event} (hr)	b (dimensionless)	c (dimensionless)	t* (hr)	Dermally Absorbed Dose per Event DA_{event} mg/(cm^2-event)
1,4-dioxane	123-91-1	1.19E-03	5.09E-07	3.28E-01			7.86E-01	6.64E-15
2-butanone	78-93-3	3.14E-03	6.25E-07	2.66E-01			6.40E-01	8.91E-15
2-ethyl 1,3-butadiene	3404-63-5	2.03E-01	5.50E-07	3.03E-01			7.28E-01	2.62E-14
acetone	67-64-1	1.53E-03	7.49E-07	2.22E-01			5.34E-01	7.93E-14
benzene	71-43-2	5.10E-02	5.79E-07	2.88E-01			6.91E-01	8.53E-13
bis(2-ethylhexyl)-phthalate	117-81-7	1.82E-01	1.03E-08	1.62E+01			3.88E+01	1.49E-13
chloromethane	74-87-3	9.02E-03	8.27E-07	2.02E-01			4.84E-01	2.02E-15
dichlorodifluoromethane	75-71-8	3.81E-02	3.33E-07	5.00E-01			1.20E+00	6.59E-15
di-n-butyl phthalate	84-74-2	3.55E-01	4.38E-08	3.81E+00			9.14E+00	1.49E-13
di-n-octyl phthalate	117-84-0	1.74E+01	1.03E-08	1.62E+01	1.97E+02	1.74E+01	7.45E+01	1.74E-12
ethane	74-84-0	3.55E-02	1.08E-06	1.55E-01			3.72E-01	1.27E-11
HD	505-60-2	2.18E-02	2.04E-07	8.18E-01			1.96E+00	2.27E-15
methane	74-82-8	1.04E-02	1.29E-06	1.29E-01			3.10E-01	2.18E-11
naphthalene	91-20-3	2.05E-01	3.04E-07	5.49E-01			1.32E+00	6.03E-14
propene	115-07-1	3.39E-02	9.21E-07	1.81E-01			4.34E-01	5.78E-13
toluene	108-88-3	1.14E-01	4.83E-07	3.45E-01			8.28E-01	6.98E-13
trichlorofluoromethane	75-69-4	5.86E-02	2.70E-07	6.18E-01			1.48E+00	4.54E-15
xylenes	1330-20-7	2.10E-01	4.03E-07	4.13E-01			9.92E-01	1.81E-14
1,2,3,4,6,7,8-HpCDD	35822-46-9							
1,2,3,4,6,7,8,9-OCDD	3268-87-9							
1,2,3,4,6,7,8-HpCDF	67562-39-4							
1,2,3,4,6,7,8,9-OCDF	39001-02-0							
Total PCDDs and PCDFs	NA	5.30E+00	2.49E-08	6.68E+00	1.99E+01	5.35E+00	2.94E+01	1.09E-21
ammonia	7664-41-7							4.09E-15
aluminum	7429-90-5							1.89E-15
antimony	7440-36-0							4.29E-17
barium	7440-39-3							8.59E-18
beryllium	7440-41-7							3.99E-18
cadmium	7440-43-9							4.35E-17
chlorine	7782-50-5							1.57E-14
chromium (3+)	7440-47-3							1.19E-16
chromium (6+)	18540-29-9							1.19E-16
cobalt	7440-48-4							1.40E-17
copper	7440-50-8							6.62E-16
hydrogen chloride	7647-01-0							5.10E-14
iron	7439-89-6							1.37E-14
lead	7439-92-1							1.48E-17
manganese	7439-96-5							2.89E-15
total mercury	NA							
mercuric chloride	7487-94-7							3.47E-18
methyl mercury	22967-92-6							6.79E-20
elemental mercury	7439-97-6							0.00E+00
nickel	7440-02-0							6.02E-17
selenium	7782-49-2							1.20E-16
silver	7440-22-4							6.29E-18
vanadium	7440-62-2							9.78E-17
zinc	7440-66-6							1.14E-15

a. The dermally absorbed dose of total PCDDs/PCDFs and coplanar PCBs per event are presented in units of mg TEQ/(cm^2-event)

DERMAL UPTAKE OF COPCS FROM SWIMMING FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Child Exposure Scenarios								
COPC	CAS Number	B (dimensionless)	D_{sc} (cm^2/hr)	τ_{event} (hr)	b (dimensionless)	c (dimensionless)	t* (hr)	Dermally Absorbed Dose per Event DA_{event} mg/(cm^2-event)
1,4-dioxane	123-91-1	1.19E-03	5.09E-07	3.28E-01			7.86E-01	6.70E-15
2-butanone	78-93-3	3.14E-03	6.25E-07	2.66E-01			6.40E-01	9.58E-15
2-ethyl 1,3-butadiene	3404-63-5	2.03E-01	5.50E-07	3.03E-01			7.28E-01	2.62E-14
acetone	67-64-1	1.53E-03	7.49E-07	2.22E-01			5.34E-01	8.21E-14
benzene	71-43-2	5.10E-02	5.79E-07	2.88E-01			6.91E-01	8.54E-13
bis(2-ethylhexyl)-phthalate	117-81-7	1.82E-01	1.03E-08	1.62E+01			3.88E+01	1.62E-13
chloromethane	74-87-3	9.02E-03	8.27E-07	2.02E-01			4.84E-01	2.02E-15
dichlorodifluoromethane	75-71-8	3.81E-02	3.33E-07	5.00E-01			1.20E+00	6.60E-15
di-n-butyl phthalate	84-74-2	3.55E-01	4.38E-08	3.81E+00			9.14E+00	1.54E-13
di-n-octyl phthalate	117-84-0	1.74E+01	1.03E-08	1.62E+01	1.97E+02	1.74E+01	7.45E+01	1.74E-12
ethane	74-84-0	3.55E-02	1.08E-06	1.55E-01			3.72E-01	1.27E-11
HD	505-60-2	2.18E-02	2.04E-07	8.18E-01			1.96E+00	2.27E-15
methane	74-82-8	1.04E-02	1.29E-06	1.29E-01			3.10E-01	2.18E-11
naphthalene	91-20-3	2.05E-01	3.04E-07	5.49E-01			1.32E+00	6.89E-14
propene	115-07-1	3.39E-02	9.21E-07	1.81E-01			4.34E-01	5.78E-13
toluene	108-88-3	1.14E-01	4.83E-07	3.45E-01			8.28E-01	6.99E-13
trichlorofluoromethane	75-69-4	5.86E-02	2.70E-07	6.18E-01			1.48E+00	4.54E-15
xylenes	1330-20-7	2.10E-01	4.03E-07	4.13E-01			9.92E-01	1.81E-14
1,2,3,4,6,7,8-HpCDD	35822-46-9							
1,2,3,4,6,7,8,9-OCDD	3268-87-9							
1,2,3,4,6,7,8-HpCDF	67562-39-4							
1,2,3,4,6,7,8,9-OCDF	39001-02-0							
Total PCDDs and PCDFs	NA	5.30E+00	2.49E-08	6.68E+00	1.99E+01	5.35E+00	2.94E+01	1.05E-21
ammonia	7664-41-7							4.11E-15
aluminum	7429-90-5							1.89E-15
antimony	7440-36-0							4.29E-17
barium	7440-39-3							8.65E-18
beryllium	7440-41-7							4.04E-18
cadmium	7440-43-9							4.35E-17
chlorine	7782-50-5							1.64E-14
chromium (3+)	7440-47-3							1.19E-16
chromium (6+)	18540-29-9							1.19E-16
cobalt	7440-48-4							1.40E-17
copper	7440-50-8							6.64E-16
hydrogen chloride	7647-01-0							5.20E-14
iron	7439-89-6							1.37E-14
lead	7439-92-1							1.49E-17
manganese	7439-96-5							2.89E-15
total mercury	NA							
mercuric chloride	7487-94-7							2.12E-18
methyl mercury	22967-92-6							4.16E-20
elemental mercury	7439-97-6							0.00E+00
nickel	7440-02-0							6.03E-17
selenium	7782-49-2							1.20E-16
silver	7440-22-4							6.29E-18
vanadium	7440-62-2							9.83E-17
zinc	7440-66-6							1.14E-15

a. The dermally absorbed dose of total PCDDs/PCDFs and coplanar PCBs per event are presented in units of mg TEQ/(cm^2-event)

DERMAL UPTAKE OF COPCS FROM SWIMMING FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS: All Exposure Scenarios (Except Infants and Adult Worker)								
COPC	CAS Number	B (dimensionless)	D_{sc} (cm^2/hr)	τ_{event} (hr)	b (dimensionless)	c (dimensionless)	t* (hr)	Dermally Absorbed Dose per Event DA_{event} mg/(cm^2-event)
1,4-dioxane	123-91-1	1.19E-03	5.09E-07	3.28E-01			7.86E-01	6.70E-15
2-butanone	78-93-3	3.14E-03	6.25E-07	2.66E-01			6.40E-01	9.58E-15
2-ethyl 1,3-butadiene	3404-63-5	2.03E-01	5.50E-07	3.03E-01			7.28E-01	2.62E-14
acetone	67-64-1	1.53E-03	7.49E-07	2.22E-01			5.34E-01	8.21E-14
benzene	71-43-2	5.10E-02	5.79E-07	2.88E-01			6.91E-01	8.54E-13
bis(2-ethylhexyl)-phthalate	117-81-7	1.82E-01	1.03E-08	1.62E+01			3.88E+01	1.62E-13
chloromethane	74-87-3	9.02E-03	8.27E-07	2.02E-01			4.84E-01	2.02E-15
dichlorodifluoromethane	75-71-8	3.81E-02	3.33E-07	5.00E-01			1.20E+00	6.60E-15
di-n-butyl phthalate	84-74-2	3.55E-01	4.38E-08	3.81E+00			9.14E+00	1.54E-13
di-n-octyl phthalate	117-84-0	1.74E+01	1.03E-08	1.62E+01	1.97E+02	1.74E+01	7.45E+01	1.74E-12
ethane	74-84-0	3.55E-02	1.08E-06	1.55E-01			3.72E-01	1.27E-11
HD	505-60-2	2.18E-02	2.04E-07	8.18E-01			1.96E+00	2.27E-15
methane	74-82-8	1.04E-02	1.29E-06	1.29E-01			3.10E-01	2.18E-11
naphthalene	91-20-3	2.05E-01	3.04E-07	5.49E-01			1.32E+00	6.90E-14
propene	115-07-1	3.39E-02	9.21E-07	1.81E-01			4.34E-01	5.78E-13
toluene	108-88-3	1.14E-01	4.83E-07	3.45E-01			8.28E-01	6.99E-13
trichlorofluoromethane	75-69-4	5.86E-02	2.70E-07	6.18E-01			1.48E+00	4.54E-15
xylenes	1330-20-7	2.10E-01	4.03E-07	4.13E-01			9.92E-01	1.81E-14
1,2,3,4,6,7,8-HpCDD	35822-46-9							
1,2,3,4,6,7,8,9-OCDD	3268-87-9							
1,2,3,4,6,7,8-HpCDF	67562-39-4							
1,2,3,4,6,7,8,9-OCDF	39001-02-0							
Total PCDDs and PCDFs	NA	5.30E+00	2.49E-08	6.68E+00	1.99E+01	5.35E+00	2.94E+01	1.77E-21
ammonia	7664-41-7							4.11E-15
aluminum	7429-90-5							1.89E-15
antimony	7440-36-0							4.29E-17
barium	7440-39-3							8.65E-18
beryllium	7440-41-7							4.04E-18
cadmium	7440-43-9							4.35E-17
chlorine	7782-50-5							1.64E-14
chromium (3+)	7440-47-3							1.19E-16
chromium (6+)	18540-29-9							1.19E-16
cobalt	7440-48-4							1.40E-17
copper	7440-50-8							6.64E-16
hydrogen chloride	7647-01-0							5.20E-14
iron	7439-89-6							1.37E-14
lead	7439-92-1							1.49E-17
manganese	7439-96-5							2.89E-15
total mercury	NA							
mercuric chloride	7487-94-7							3.68E-18
methyl mercury	22967-92-6							7.20E-20
elemental mercury	7439-97-6							0.00E+00
nickel	7440-02-0							6.03E-17
selenium	7782-49-2							1.20E-16
silver	7440-22-4							6.29E-18
vanadium	7440-62-2							9.83E-17
zinc	7440-66-6							1.14E-15

a. The dermally absorbed dose of total PCDDs/PCDFs per event are presented in units of mg TEQ/(cm^2-event)

TOTAL COPC UPTAKE FOR EACH EXPOSURE SCENARIO

Adult Resident Exposure Scenario													
		CARCINOGENIC EFFECTS:						NONCARCINOGENIC EFFECTS:					
		Direct Exposure		Indirect Exposure				Direct Exposure		Indirect Exposure			
COPC	CAS Number	Inhalation Cancer Slope Factor?	Inhalation Exposure (mg/kg-day)[a]	Oral Cancer Slope Factor?	Dermal Exposure (mg/kg-day)[a]	Total Ingestion Exposure (mg/kg-day)[a]	Total Indirect Exposure (mg/kg-day)[a]	Inhalation Reference Dose?	Inhalation Exposure (mg/kg-day)[b]	Oral Reference Dose?	Dermal Exposure (mg/kg-day)[b]	Total Ingestion Exposure (mg/kg-day)[b]	Total Indirect Exposure (mg/kg-day)[b]
1,4-dioxane	123-91-1	Yes	1.37E-10	Yes	2.42E-14	3.30E-10	3.30E-10	Yes	1.92E-09	Yes	5.90E-14	4.50E-09	4.50E-09
2-butanone	78-93-3		2.62E-10		3.45E-14	3.83E-10	3.83E-10	Yes	3.67E-09	Yes	1.11E-13	5.30E-09	5.30E-09
2-ethyl 1,3-butadiene	3404-63-5		2.58E-11		9.48E-14	3.89E-12	3.98E-12		3.62E-10		2.21E-13	9.37E-12	9.59E-12
acetone	67-64-1		3.76E-09		2.97E-13	2.94E-09	2.94E-09	Yes	5.27E-08	Yes	8.18E-13	4.01E-08	4.01E-08
benzene	71-43-2	Yes	2.91E-09	Yes	3.09E-12	1.07E-10	1.10E-10	Yes	4.08E-08	Yes	7.22E-12	5.33E-10	5.40E-10
bis(2-ethylhexyl)-phthalate	117-81-7	Yes	5.86E-11	Yes	5.71E-13	3.63E-08	3.63E-08		8.20E-10	Yes	1.77E-12	8.51E-08	8.51E-08
chloromethane	74-87-3		2.85E-11		7.31E-15	4.44E-13	4.51E-13	Yes	3.99E-10	Yes	1.71E-14	2.14E-12	2.16E-12
dichlorodifluoromethane	75-71-8		3.31E-11		2.39E-14	1.98E-12	2.00E-12	Yes	4.63E-10	Yes	5.59E-14	1.57E-11	1.57E-11
di-n-butyl phthalate	84-74-2		8.39E-12		5.60E-13	2.75E-07	2.75E-07		1.17E-10	Yes	1.57E-12	6.51E-07	6.51E-07
di-n-octyl phthalate	117-84-0		7.43E-12		6.30E-12	2.00E-07	2.00E-07		1.04E-10		1.47E-11	1.29E-06	1.29E-06
ethane	74-84-0		5.48E-08		4.59E-11	7.05E-10	7.51E-10		7.67E-07		1.07E-10	1.69E-09	1.79E-09
HD	505-60-2	Yes	8.97E-12	Yes	8.24E-15	1.48E-12	1.49E-12	Yes	1.26E-10	Yes	1.93E-14	4.76E-12	4.78E-12
methane	74-82-8		2.77E-07		7.89E-11	8.63E-10	9.42E-10		3.87E-06		1.84E-10	2.09E-09	2.27E-09
naphthalene	91-20-3	Yes	5.02E-11		2.54E-13	2.75E-10	2.75E-10	Yes	7.03E-10	Yes	1.06E-12	3.67E-09	3.67E-09
propene	115-07-1		2.80E-09		2.09E-12	3.69E-11	3.90E-11	Yes	3.92E-08		4.88E-12	9.28E-11	9.77E-11
toluene	108-88-3		1.10E-09		2.53E-12	1.16E-10	1.18E-10	Yes	1.54E-08	Yes	5.91E-12	5.20E-10	5.26E-10
trichlorofluoromethane	75-69-4		1.48E-11		1.64E-14	9.04E-13	9.21E-13	Yes	2.08E-10	Yes	3.84E-14	2.58E-12	2.62E-12
xylenes	1330-20-7		1.72E-11		6.55E-14	4.07E-12	4.14E-12	Yes	2.41E-10	Yes	1.53E-13	1.94E-11	1.96E-11
1,2,3,4,6,7,8-HpCDD	35822-46-9												
1,2,3,4,6,7,8,9-OCDD	3268-87-9												
1,2,3,4,6,7,8-HpCDF	67562-39-4												
1,2,3,4,6,7,8,9-OCDF	39001-02-0												
Total PCDDs and PCDFs	NA	Yes	3.05E-19	Yes	8.92E-21	6.34E-15	6.34E-15	Yes	4.27E-18	Yes	3.20E-20	1.51E-14	1.51E-14
ammonia	7664-41-7		3.29E-11		1.48E-14	2.54E-11	2.54E-11	Yes	4.61E-10		3.50E-14	3.38E-10	3.38E-10
aluminum	7429-90-5		8.18E-11		6.85E-15	6.59E-13	6.66E-13	Yes	1.15E-09	Yes	1.60E-14	1.54E-12	1.56E-12
antimony	7440-36-0		3.84E-12		1.56E-16	1.44E-10	1.44E-10		5.38E-11	Yes	3.66E-16	3.36E-10	3.36E-10
barium	7440-39-3		7.69E-13		3.16E-17	3.05E-11	3.05E-11	Yes	1.08E-11	Yes	7.90E-17	7.12E-11	7.12E-11
beryllium	7440-41-7	Yes	3.62E-13		1.46E-17	1.33E-11	1.33E-11	Yes	5.07E-12	Yes	3.64E-17	3.11E-11	3.11E-11
cadmium	7440-43-9	Yes	3.90E-12		1.58E-16	1.48E-10	1.48E-10	Yes	5.46E-11	Yes	3.69E-16	3.46E-10	3.46E-10
chlorine	7782-50-5		3.95E-10		5.71E-14	2.23E-10	2.23E-10	Yes	5.53E-09	Yes	1.40E-13	3.07E-09	3.07E-09
chromium (3+)	7440-47-3		6.00E-12		4.31E-16	3.02E-10	3.02E-10		8.41E-11	Yes	1.01E-15	7.04E-10	7.04E-10
chromium (6+)	18540-29-9	Yes	6.00E-12	Yes	4.31E-16	3.02E-10	3.02E-10	Yes	8.41E-11	Yes	1.01E-15	7.04E-10	7.04E-10
cobalt	7440-48-4		1.36E-12		5.08E-17	8.92E-11	8.92E-11	Yes	1.90E-11	Yes	1.19E-16	2.08E-10	2.08E-10
copper	7440-50-8		6.67E-11		2.41E-15	3.61E-09	3.61E-09		9.34E-10	Yes	5.85E-15	8.45E-09	8.45E-09
hydrogen chloride	7647-01-0		1.32E-09		1.85E-13	6.39E-10	6.39E-10	Yes	1.84E-08		4.41E-13	8.77E-09	8.77E-09
iron	7439-89-6		5.89E-09		4.96E-14	3.20E-07	3.20E-07		8.24E-08	Yes	1.16E-13	7.47E-07	7.47E-07
lead	7439-92-1	Yes	4.04E-12	Yes	5.54E-17	1.52E-10	1.52E-10		5.66E-11		1.53E-16	3.56E-10	3.56E-10
manganese	7439-96-5		2.99E-10		1.05E-14	1.15E-08	1.15E-08	Yes	4.18E-09	Yes	2.45E-14	2.68E-08	2.68E-08
total mercury	NA												
mercuric chloride	7487-94-7		1.07E-13		5.48E-16	7.26E-12	7.26E-12	Yes	1.50E-12	Yes	1.39E-15	1.75E-11	1.75E-11
methyl mercury	22967-92-6		0.00E+00		1.09E-18	8.21E-10	8.21E-10		0.00E+00	Yes	3.24E-18	2.07E-09	2.07E-09
elemental mercury	7439-97-6		0.00E+00		0.00E+00	0.00E+00	0.00E+00	Yes	0.00E+00		0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	Yes	2.70E-12		2.18E-16	1.28E-10	1.28E-10	Yes	3.78E-11	Yes	5.14E-16	3.00E-10	3.00E-10
selenium	7782-49-2		1.07E-11		4.34E-16	8.54E-10	8.54E-10	Yes	1.50E-10	Yes	1.02E-15	1.99E-09	1.99E-09
silver	7440-22-4		9.39E-13		2.28E-17	1.59E-10	1.59E-10		1.31E-11	Yes	5.32E-17	3.71E-10	3.71E-10
vanadium	7440-62-2		1.04E-11		3.59E-16	3.97E-10	3.97E-10	Yes	1.46E-10	Yes	8.97E-16	9.28E-10	9.28E-10
zinc	7440-66-6		1.70E-10		4.13E-15	6.93E-09	6.93E-09		2.38E-09	Yes	9.72E-15	1.62E-08	1.62E-08

a. Exposures to total PCDDs/PCDFs and total coplanar PCBs are presented in units of mg TEQ/(kg-day)

b. Exposures to total PCDDs/PCDFs are presented in units of mg TEQ/(kg-day)

TOTAL COPC UPTAKE FOR EACH EXPOSURE SCENARIO

Adult Subsistence Fisher Exposure Scenario													
		CARCINOGENIC EFFECTS:						NONCARCINOGENIC EFFECTS:					
		Direct Exposure		Indirect Exposure				Direct Exposure		Indirect Exposure			
COPC	CAS Number	Inhalation Cancer Slope Factor?	Inhalation Exposure (mg/kg-day)[a]	Oral Cancer Slope Factor?	Dermal Exposure (mg/kg-day)[a]	Total Ingestion Exposure (mg/kg-day)[a]	Total Indirect Exposure (mg/kg-day)[a]	Inhalation Reference Dose?	Inhalation Exposure (mg/kg-day)[b]	Oral Reference Dose?	Dermal Exposure (mg/kg-day)[b]	Total Ingestion Exposure (mg/kg-day)[b]	Total Indirect Exposure (mg/kg-day)[b]
1,4-dioxane	123-91-1	Yes	1.37E-10	Yes	2.42E-14	3.46E-10	3.46E-10	Yes	1.92E-09	Yes	5.90E-14	4.54E-09	4.54E-09
2-butanone	78-93-3		2.62E-10		3.45E-14	3.90E-10	3.90E-10	Yes	3.67E-09	Yes	1.11E-13	5.32E-09	5.32E-09
2-ethyl 1,3-butadiene	3404-63-5		2.58E-11		9.48E-14	9.68E-12	9.77E-12		3.62E-10		2.21E-13	2.29E-11	2.31E-11
acetone	67-64-1		3.76E-09		2.97E-13	3.06E-09	3.06E-09	Yes	5.27E-08	Yes	8.18E-13	4.04E-08	4.04E-08
benzene	71-43-2	Yes	2.91E-09	Yes	3.09E-12	2.29E-10	2.32E-10	Yes	4.08E-08	Yes	7.22E-12	8.19E-10	8.26E-10
bis(2-ethylhexyl)-phthalate	117-81-7	Yes	5.86E-11	Yes	5.71E-13	3.64E-08	3.64E-08		8.20E-10	Yes	1.77E-12	8.52E-08	8.52E-08
chloromethane	74-87-3		2.85E-11		7.31E-15	9.59E-13	9.66E-13	Yes	3.99E-10	Yes	1.71E-14	3.34E-12	3.36E-12
dichlorodifluoromethane	75-71-8		3.31E-11		2.39E-14	3.53E-12	3.55E-12	Yes	4.63E-10	Yes	5.59E-14	1.93E-11	1.93E-11
di-n-butyl phthalate	84-74-2		8.39E-12		5.60E-13	2.76E-07	2.76E-07		1.17E-10	Yes	1.57E-12	6.52E-07	6.52E-07
di-n-octyl phthalate	117-84-0		7.43E-12		6.30E-12	2.00E-07	2.00E-07		1.04E-10		1.47E-11	1.29E-06	1.29E-06
ethane	74-84-0		5.48E-08		4.59E-11	1.75E-09	1.79E-09		7.67E-07		1.07E-10	4.12E-09	4.23E-09
HD	505-60-2	Yes	8.97E-12	Yes	8.24E-15	2.90E-12	2.91E-12	Yes	1.26E-10	Yes	1.93E-14	8.06E-12	8.08E-12
methane	74-82-8		2.77E-07		7.89E-11	2.11E-09	2.18E-09		3.87E-06		1.84E-10	4.98E-09	5.17E-09
naphthalene	91-20-3	Yes	5.02E-11		2.54E-13	2.96E-10	2.97E-10	Yes	7.03E-10	Yes	1.06E-12	3.73E-09	3.73E-09
propene	115-07-1		2.80E-09		2.09E-12	9.08E-11	9.29E-11	Yes	3.92E-08		4.88E-12	2.19E-10	2.23E-10
toluene	108-88-3		1.10E-09		2.53E-12	2.56E-10	2.59E-10	Yes	1.54E-08	Yes	5.91E-12	8.48E-10	8.54E-10
trichlorofluoromethane	75-69-4		1.48E-11		1.64E-14	2.18E-12	2.20E-12	Yes	2.08E-10	Yes	3.84E-14	5.56E-12	5.59E-12
xylenes	1330-20-7		1.72E-11		6.55E-14	8.86E-12	8.93E-12	Yes	2.41E-10	Yes	1.53E-13	3.06E-11	3.07E-11
1,2,3,4,6,7,8-HpCDD	35822-46-9												
1,2,3,4,6,7,8,9-OCDD	3268-87-9												
1,2,3,4,6,7,8-HpCDF	67562-39-4												
1,2,3,4,6,7,8,9-OCDF	39001-02-0												
Total PCDDs and PCDFs	NA	Yes	3.05E-19	Yes	8.92E-21	6.35E-15	6.35E-15	Yes	4.27E-18	Yes	3.20E-20	1.51E-14	1.51E-14
ammonia	7664-41-7		3.29E-11		1.48E-14	2.75E-11	2.75E-11	Yes	4.61E-10		3.50E-14	3.43E-10	3.43E-10
aluminum	7429-90-5		8.18E-11		6.85E-15	1.63E-12	1.64E-12	Yes	1.15E-09	Yes	1.60E-14	3.81E-12	3.83E-12
antimony	7440-36-0		3.84E-12		1.56E-16	1.44E-10	1.44E-10		5.38E-11	Yes	3.66E-16	3.37E-10	3.37E-10
barium	7440-39-3		7.69E-13		3.16E-17	3.21E-11	3.21E-11	Yes	1.08E-11	Yes	7.90E-17	7.51E-11	7.51E-11
beryllium	7440-41-7	Yes	3.62E-13		1.46E-17	1.34E-11	1.34E-11	Yes	5.07E-12	Yes	3.64E-17	3.13E-11	3.13E-11
cadmium	7440-43-9	Yes	3.90E-12		1.58E-16	1.60E-10	1.60E-10	Yes	5.46E-11	Yes	3.69E-16	3.74E-10	3.74E-10
chlorine	7782-50-5		3.95E-10		5.71E-14	2.29E-10	2.29E-10	Yes	5.53E-09	Yes	1.40E-13	3.08E-09	3.08E-09
chromium (3+)	7440-47-3		6.00E-12		4.31E-16	3.02E-10	3.02E-10		8.41E-11	Yes	1.01E-15	7.04E-10	7.04E-10
chromium (6+)	18540-29-9	Yes	6.00E-12	Yes	4.31E-16	3.02E-10	3.02E-10	Yes	8.41E-11	Yes	1.01E-15	7.04E-10	7.04E-10
cobalt	7440-48-4		1.36E-12		5.08E-17	8.92E-11	8.92E-11	Yes	1.90E-11	Yes	1.19E-16	2.08E-10	2.08E-10
copper	7440-50-8		6.67E-11		2.41E-15	3.61E-09	3.61E-09		9.34E-10	Yes	5.85E-15	8.46E-09	8.46E-09
hydrogen chloride	7647-01-0		1.32E-09		1.85E-13	6.60E-10	6.60E-10	Yes	1.84E-08		4.41E-13	8.82E-09	8.82E-09
iron	7439-89-6		5.89E-09		4.96E-14	3.20E-07	3.20E-07		8.24E-08	Yes	1.16E-13	7.47E-07	7.47E-07
lead	7439-92-1	Yes	4.04E-12	Yes	5.54E-17	1.52E-10	1.52E-10		5.66E-11		1.53E-16	3.56E-10	3.56E-10
manganese	7439-96-5		2.99E-10		1.05E-14	1.15E-08	1.15E-08	Yes	4.18E-09	Yes	2.45E-14	2.68E-08	2.68E-08
total mercury	NA												
mercuric chloride	7487-94-7		1.07E-13		5.48E-16	7.26E-12	7.26E-12	Yes	1.50E-12	Yes	1.39E-15	1.75E-11	1.75E-11
methyl mercury	22967-92-6		0.00E+00		1.09E-18	2.05E-09	2.05E-09		0.00E+00	Yes	3.24E-18	5.16E-09	5.16E-09
elemental mercury	7439-97-6		0.00E+00		0.00E+00	0.00E+00	0.00E+00	Yes	0.00E+00		0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	Yes	2.70E-12		2.18E-16	1.29E-10	1.29E-10	Yes	3.78E-11	Yes	5.14E-16	3.01E-10	3.01E-10
selenium	7782-49-2		1.07E-11		4.34E-16	8.59E-10	8.59E-10	Yes	1.50E-10	Yes	1.02E-15	2.00E-09	2.00E-09
silver	7440-22-4		9.39E-13		2.28E-17	1.59E-10	1.59E-10		1.31E-11	Yes	5.32E-17	3.71E-10	3.71E-10
vanadium	7440-62-2		1.04E-11		3.59E-16	3.98E-10	3.98E-10	Yes	1.46E-10	Yes	8.97E-16	9.28E-10	9.28E-10
zinc	7440-66-6		1.70E-10		4.13E-15	8.11E-09	8.11E-09		2.38E-09	Yes	9.72E-15	1.89E-08	1.89E-08

a. Exposures to total PCDDs/PCDFs and total coplanar PCBs are presented in units of mg TEQ/(kg-day)

b. Exposures to total PCDDs/PCDFs are presented in units of mg TEQ/(kg-day)

TOTAL COPC UPTAKE FOR EACH EXPOSURE SCENARIO

Adult Subsistence Farmer Exposure Scenario													
		CARCINOGENIC EFFECTS:						NONCARCINOGENIC EFFECTS:					
		Direct Exposure		Indirect Exposure				Direct Exposure		Indirect Exposure			
COPC	CAS Number	Inhalation Cancer Slope Factor?	Inhalation Exposure (mg/kg-day)[a]	Oral Cancer Slope Factor?	Dermal Exposure (mg/kg-day)[a]	Total Ingestion Exposure (mg/kg-day)[a]	Total Indirect Exposure (mg/kg-day)[a]	Inhalation Reference Dose?	Inhalation Exposure (mg/kg-day)[b]	Oral Reference Dose?	Dermal Exposure (mg/kg-day)[b]	Total Ingestion Exposure (mg/kg-day)[b]	Total Indirect Exposure (mg/kg-day)[b]
1,4-dioxane	123-91-1	Yes	1.37E-10	Yes	3.22E-14	8.13E-10	8.13E-10	Yes	1.92E-09	Yes	5.90E-14	1.12E-08	1.12E-08
2-butanone	78-93-3		2.62E-10		4.52E-14	9.50E-10	9.51E-10	Yes	3.67E-09	Yes	1.11E-13	1.32E-08	1.32E-08
2-ethyl 1,3-butadiene	3404-63-5		2.58E-11		1.26E-13	5.22E-12	5.34E-12		3.62E-10		2.21E-13	9.90E-12	1.01E-11
acetone	67-64-1		3.76E-09		3.92E-13	7.24E-09	7.24E-09	Yes	5.27E-08	Yes	8.18E-13	1.00E-07	1.00E-07
benzene	71-43-2	Yes	2.91E-09	Yes	4.12E-12	1.72E-10	1.76E-10	Yes	4.08E-08	Yes	7.22E-12	1.05E-09	1.05E-09
bis(2-ethylhexyl)-phthalate	117-81-7	Yes	5.86E-11	Yes	7.49E-13	1.21E-07	1.21E-07		8.20E-10	Yes	1.77E-12	2.13E-07	2.13E-07
chloromethane	74-87-3		2.85E-11		9.74E-15	7.02E-13	7.12E-13	Yes	3.99E-10	Yes	1.71E-14	4.13E-12	4.15E-12
dichlorodifluoromethane	75-71-8		3.31E-11		3.18E-14	3.74E-12	3.78E-12	Yes	4.63E-10	Yes	5.59E-14	3.55E-11	3.56E-11
di-n-butyl phthalate	84-74-2		8.39E-12		7.39E-13	9.17E-07	9.17E-07		1.17E-10	Yes	1.57E-12	1.63E-06	1.63E-06
di-n-octyl phthalate	117-84-0		7.43E-12		8.40E-12	6.08E-07	6.08E-07		1.04E-10		1.47E-11	3.21E-06	3.21E-06
ethane	74-84-0		5.48E-08		6.12E-11	9.44E-10	1.01E-09		7.67E-07		1.07E-10	1.76E-09	1.87E-09
HD	505-60-2	Yes	8.97E-12	Yes	1.10E-14	2.96E-12	2.97E-12	Yes	1.26E-10	Yes	1.93E-14	8.58E-12	8.60E-12
methane	74-82-8		2.77E-07		1.05E-10	1.16E-09	1.26E-09		3.87E-06		1.84E-10	2.21E-09	2.40E-09
naphthalene	91-20-3	Yes	5.02E-11		3.25E-13	6.72E-10	6.73E-10	Yes	7.03E-10	Yes	1.06E-12	9.13E-09	9.13E-09
propene	115-07-1		2.80E-09		2.79E-12	4.99E-11	5.27E-11	Yes	3.92E-08		4.88E-12	1.05E-10	1.10E-10
toluene	108-88-3		1.10E-09		3.37E-12	1.80E-10	1.84E-10	Yes	1.54E-08	Yes	5.91E-12	9.72E-10	9.78E-10
trichlorofluoromethane	75-69-4		1.48E-11		2.19E-14	1.27E-12	1.29E-12	Yes	2.08E-10	Yes	3.84E-14	3.45E-12	3.49E-12
xylenes	1330-20-7		1.72E-11		8.74E-14	6.47E-12	6.56E-12	Yes	2.41E-10	Yes	1.53E-13	3.73E-11	3.74E-11
1,2,3,4,6,7,8-HpCDD	35822-46-9												
1,2,3,4,6,7,8,9-OCDD	3268-87-9												
1,2,3,4,6,7,8-HpCDF	67562-39-4												
1,2,3,4,6,7,8,9-OCDF	39001-02-0												
Total PCDDs and PCDFs	NA	Yes	3.05E-19	Yes	1.06E-20	2.11E-14	2.11E-14	Yes	4.27E-18	Yes	3.20E-20	3.78E-14	3.78E-14
ammonia	7664-41-7		3.29E-11		1.98E-14	6.17E-11	6.17E-11	Yes	4.61E-10		3.50E-14	8.40E-10	8.40E-10
aluminum	7429-90-5		8.18E-11		9.14E-15	8.79E-13	8.88E-13	Yes	1.15E-09	Yes	1.60E-14	1.55E-12	1.57E-12
antimony	7440-36-0		3.84E-12		2.07E-16	4.79E-10	4.79E-10		5.38E-11	Yes	3.66E-16	8.38E-10	8.38E-10
barium	7440-39-3		7.69E-13		4.19E-17	9.95E-11	9.95E-11	Yes	1.08E-11	Yes	7.90E-17	1.74E-10	1.74E-10
beryllium	7440-41-7	Yes	3.62E-13		1.94E-17	4.43E-11	4.43E-11	Yes	5.07E-12	Yes	3.64E-17	7.76E-11	7.76E-11
cadmium	7440-43-9	Yes	3.90E-12		2.10E-16	4.78E-10	4.78E-10	Yes	5.46E-11	Yes	3.69E-16	8.37E-10	8.37E-10
chlorine	7782-50-5		3.95E-10		7.59E-14	5.52E-10	5.52E-10	Yes	5.53E-09	Yes	1.40E-13	7.65E-09	7.65E-09
chromium (3+)	7440-47-3		6.00E-12		5.75E-16	1.01E-09	1.01E-09		8.41E-11	Yes	1.01E-15	1.76E-09	1.76E-09
chromium (6+)	18540-29-9	Yes	6.00E-12	Yes	5.75E-16	1.01E-09	1.01E-09	Yes	8.41E-11	Yes	1.01E-15	1.76E-09	1.76E-09
cobalt	7440-48-4		1.36E-12		6.77E-17	2.97E-10	2.97E-10	Yes	1.90E-11	Yes	1.19E-16	5.21E-10	5.21E-10
copper	7440-50-8		6.67E-11		3.21E-15	1.20E-08	1.20E-08		9.34E-10	Yes	5.85E-15	2.11E-08	2.11E-08
hydrogen chloride	7647-01-0		1.32E-09		2.46E-13	1.58E-09	1.58E-09	Yes	1.84E-08		4.41E-13	2.19E-08	2.19E-08
iron	7439-89-6		5.89E-09		6.61E-14	1.07E-06	1.07E-06		8.24E-08	Yes	1.16E-13	1.87E-06	1.87E-06
lead	7439-92-1	Yes	4.04E-12	Yes	7.32E-17	5.08E-10	5.08E-10		5.66E-11		1.53E-16	8.89E-10	8.89E-10
manganese	7439-96-5		2.99E-10		1.40E-14	3.83E-08	3.83E-08	Yes	4.18E-09	Yes	2.45E-14	6.70E-08	6.70E-08
total mercury	NA												
mercuric chloride	7487-94-7		1.07E-13		7.47E-16	2.44E-11	2.44E-11	Yes	1.50E-12	Yes	1.39E-15	4.37E-11	4.37E-11
methyl mercury	22967-92-6		0.00E+00		1.39E-18	1.12E-09	1.12E-09		0.00E+00	Yes	3.24E-18	2.07E-09	2.07E-09
elemental mercury	7439-97-6		0.00E+00		0.00E+00	0.00E+00	0.00E+00	Yes	0.00E+00		0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	Yes	2.70E-12		2.91E-16	4.27E-10	4.27E-10	Yes	3.78E-11	Yes	5.14E-16	7.48E-10	7.48E-10
selenium	7782-49-2		1.07E-11		5.79E-16	2.84E-09	2.84E-09	Yes	1.50E-10	Yes	1.02E-15	4.97E-09	4.97E-09
silver	7440-22-4		9.39E-13		3.04E-17	5.29E-10	5.29E-10		1.31E-11	Yes	5.32E-17	9.26E-10	9.26E-10
vanadium	7440-62-2		1.04E-11		4.77E-16	1.32E-09	1.32E-09	Yes	1.46E-10	Yes	8.97E-16	2.32E-09	2.32E-09
zinc	7440-66-6		1.70E-10		5.51E-15	2.15E-08	2.15E-08		2.38E-09	Yes	9.72E-15	3.77E-08	3.77E-08

a. Exposures to total PCDDs/PCDFs and total coplanar PCBs are presented in units of mg TEQ/(kg-day)

b. Exposures to total PCDDs/PCDFs are presented in units of mg TEQ/(kg-day)

TOTAL COPC UPTAKE FOR EACH EXPOSURE SCENARIO

Adult Worker Exposure Scenario													
		CARCINOGENIC EFFECTS:						NONCARCINOGENIC EFFECTS:					
		Direct Exposure		Indirect Exposure				Direct Exposure		Indirect Exposure			
COPC	CAS Number	Inhalation Cancer Slope Factor?	Inhalation Exposure (mg/kg-day)[a]	Oral Cancer Slope Factor?	Dermal Exposure (mg/kg-day)[a]	Total Ingestion Exposure (mg/kg-day)[a]	Total Indirect Exposure (mg/kg-day)[a]	Inhalation Reference Dose?	Inhalation Exposure (mg/kg-day)[b]	Oral Reference Dose?	Dermal Exposure (mg/kg-day)[b]	Total Ingestion Exposure (mg/kg-day)[b]	Total Indirect Exposure (mg/kg-day)[b]
1,4-dioxane	123-91-1	Yes	3.26E-11	Yes	1.95E-16	1.48E-16	3.43E-16	Yes	4.56E-10	Yes	2.73E-15	1.81E-15	4.54E-15
2-butanone	78-93-3		6.25E-11		2.52E-15	1.91E-15	4.43E-15	Yes	8.75E-10	Yes	3.53E-14	2.34E-14	5.87E-14
2-ethyl 1,3-butadiene	3404-63-5		6.15E-12		5.29E-19	4.01E-19	9.30E-19		8.61E-11		7.40E-18	4.91E-18	1.23E-17
acetone	67-64-1		8.96E-10		1.05E-14	7.94E-15	1.84E-14	Yes	1.25E-08	Yes	1.47E-13	9.73E-14	2.44E-13
benzene	71-43-2	Yes	6.93E-10	Yes	1.11E-16	8.42E-17	1.95E-16	Yes	9.70E-09	Yes	1.56E-15	1.03E-15	2.59E-15
bis(2-ethylhexyl)-phthalate	117-81-7	Yes	1.40E-11	Yes	3.35E-14	1.39E-14	4.74E-14		1.95E-10	Yes	4.69E-13	1.71E-13	6.40E-13
chloromethane	74-87-3		6.79E-12		2.41E-19	1.83E-19	4.24E-19	Yes	9.51E-11	Yes	3.38E-18	2.24E-18	5.62E-18
dichlorodifluoromethane	75-71-8		7.88E-12		3.57E-18	7.10E-18	1.07E-17	Yes	1.10E-10	Yes	5.00E-17	8.70E-17	1.37E-16
di-n-butyl phthalate	84-74-2		2.00E-12		2.23E-14	4.76E-15	2.71E-14		2.80E-11	Yes	3.12E-13	5.83E-14	3.71E-13
di-n-octyl phthalate	117-84-0		1.77E-12		1.65E-19	7.21E-22	1.66E-19		2.48E-11		2.31E-18	8.83E-21	2.32E-18
ethane	74-84-0		1.30E-08		2.80E-17	2.12E-17	4.93E-17		1.83E-07		3.93E-16	2.60E-16	6.53E-16
HD	505-60-2	Yes	2.13E-12	Yes	3.16E-18	2.39E-18	5.55E-18	Yes	2.99E-11	Yes	4.42E-17	2.93E-17	7.35E-17
methane	74-82-8		6.59E-08		1.92E-17	1.45E-17	3.37E-17		9.22E-07		2.69E-16	1.78E-16	4.47E-16
naphthalene	91-20-3	Yes	1.20E-11		4.04E-14	3.06E-14	7.10E-14	Yes	1.67E-10	Yes	5.66E-13	3.75E-13	9.41E-13
propene	115-07-1		6.66E-10		4.28E-18	3.24E-18	7.52E-18	Yes	9.33E-09		5.99E-17	3.97E-17	9.96E-17
toluene	108-88-3		2.62E-10		1.08E-16	8.20E-17	1.90E-16	Yes	3.67E-09	Yes	1.52E-15	1.00E-15	2.52E-15
trichlorofluoromethane	75-69-4		3.53E-12		3.88E-20	5.01E-20	8.89E-20	Yes	4.94E-11	Yes	5.43E-19	6.14E-19	1.16E-18
xylenes	1330-20-7		4.10E-12		1.82E-17	1.38E-17	3.21E-17	Yes	5.74E-11	Yes	2.55E-16	1.69E-16	4.25E-16
1,2,3,4,6,7,8-HpCDD	35822-46-9												
1,2,3,4,6,7,8,9-OCDD	3268-87-9												
1,2,3,4,6,7,8-HpCDF	67562-39-4												
1,2,3,4,6,7,8,9-OCDF	39001-02-0												
Total PCDDs and PCDFs	NA	Yes	7.26E-20	Yes	4.77E-21	1.21E-20	1.68E-20	Yes	1.02E-18	Yes	2.02E-20	4.47E-20	6.49E-20
ammonia	7664-41-7		7.84E-12		1.90E-17	1.44E-17	3.34E-17	Yes	1.10E-10		2.66E-16	1.76E-16	4.42E-16
aluminum	7429-90-5		1.95E-11		9.07E-19	1.86E-17	1.95E-17	Yes	2.73E-10	Yes	1.27E-17	2.28E-16	2.41E-16
antimony	7440-36-0		9.15E-13		2.51E-19	4.48E-18	4.73E-18		1.28E-11	Yes	3.52E-18	5.49E-17	5.84E-17
barium	7440-39-3		1.83E-13		4.96E-19	8.33E-18	8.83E-18	Yes	2.56E-12	Yes	6.94E-18	1.02E-16	1.09E-16
beryllium	7440-41-7	Yes	8.62E-14		1.88E-19	1.23E-17	1.25E-17	Yes	1.21E-12	Yes	2.63E-18	1.51E-16	1.54E-16
cadmium	7440-43-9	Yes	9.28E-13		8.03E-20	6.08E-18	6.16E-18	Yes	1.30E-11	Yes	1.12E-18	7.45E-17	7.57E-17
chlorine	7782-50-5		9.41E-11		9.91E-17	1.00E-15	1.10E-15	Yes	1.32E-09	Yes	1.39E-15	1.23E-14	1.37E-14
chromium (3+)	7440-47-3		1.43E-12		1.35E-19	1.84E-18	1.98E-18		2.00E-11	Yes	1.89E-18	2.25E-17	2.44E-17
chromium (6+)	18540-29-9	Yes	1.43E-12	Yes	1.35E-19	1.84E-18	1.98E-18	Yes	2.00E-11	Yes	1.89E-18	2.25E-17	2.44E-17
cobalt	7440-48-4		3.23E-13		4.07E-20	9.93E-19	1.03E-18	Yes	4.52E-12	Yes	5.70E-19	1.22E-17	1.27E-17
copper	7440-50-8		1.59E-11		1.98E-17	4.91E-16	5.10E-16		2.22E-10	Yes	2.78E-16	6.01E-15	6.29E-15
hydrogen chloride	7647-01-0		3.14E-10		4.48E-17	6.49E-16	6.94E-16	Yes	4.39E-09		6.27E-16	7.95E-15	8.58E-15
iron	7439-89-6		1.40E-09		2.10E-17	2.31E-15	2.33E-15		1.96E-08	Yes	2.94E-16	2.83E-14	2.86E-14
lead	7439-92-1	Yes	9.62E-13	Yes	2.29E-18	9.42E-17	9.65E-17		1.35E-11		3.20E-17	1.15E-15	1.19E-15
manganese	7439-96-5		7.11E-11		1.13E-17	3.01E-16	3.13E-16	Yes	9.96E-10	Yes	1.59E-16	3.69E-15	3.85E-15
total mercury	NA												
mercuric chloride	7487-94-7		2.54E-14		5.18E-16	6.19E-15	6.70E-15	Yes	3.56E-13	Yes	1.61E-15	1.68E-14	1.85E-14
methyl mercury	22967-92-6		0.00E+00		8.52E-19	1.03E-16	1.04E-16		0.00E+00	Yes	3.10E-18	3.28E-16	3.31E-16
elemental mercury	7439-97-6		0.00E+00		0.00E+00	0.00E+00	0.00E+00	Yes	0.00E+00		0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	Yes	6.43E-13		3.54E-19	4.55E-18	4.90E-18	Yes	9.00E-12	Yes	4.95E-18	5.57E-17	6.06E-17
selenium	7782-49-2		2.55E-12		1.62E-19	3.58E-18	3.74E-18	Yes	3.58E-11	Yes	2.26E-18	4.39E-17	4.61E-17
silver	7440-22-4		2.23E-13		6.52E-21	2.06E-19	2.12E-19		3.13E-12	Yes	9.12E-20	2.52E-18	2.61E-18
vanadium	7440-62-2		2.49E-12		5.58E-18	1.54E-16	1.60E-16	Yes	3.48E-11	Yes	7.82E-17	1.89E-15	1.97E-15
zinc	7440-66-6		4.05E-11		6.73E-18	2.73E-16	2.80E-16		5.67E-10	Yes	9.43E-17	3.35E-15	3.44E-15

a. Exposures to total PCDDs/PCDFs and total coplanar PCBs are presented in units of mg TEQ/(kg-day)

b. Exposures to total PCDDs/PCDFs are presented in units of mg TEQ/(kg-day)

TOTAL COPC UPTAKE FOR EACH EXPOSURE SCENARIO

Child Resident Exposure Scenario													
		CARCINOGENIC EFFECTS:						NONCARCINOGENIC EFFECTS:					
		Direct Exposure		Indirect Exposure				Direct Exposure		Indirect Exposure			
COPC	CAS Number	Inhalation Cancer Slope Factor?	Inhalation Exposure (mg/kg-day)[a]	Oral Cancer Slope Factor?	Dermal Exposure (mg/kg-day)[a]	Total Ingestion Exposure (mg/kg-day)[a]	Total Indirect Exposure (mg/kg-day)[a]	Inhalation Reference Dose?	Inhalation Exposure (mg/kg-day)[b]	Oral Reference Dose?	Dermal Exposure (mg/kg-day)[b]	Total Ingestion Exposure (mg/kg-day)[b]	Total Indirect Exposure (mg/kg-day)[b]
1,4-dioxane	123-91-1	Yes	3.83E-10	Yes	8.01E-15	6.33E-10	6.33E-10	Yes	5.37E-09	Yes	1.12E-13	8.86E-09	8.86E-09
2-butanone	78-93-3		7.35E-10		2.39E-14	1.05E-09	1.05E-09	Yes	1.03E-08	Yes	3.34E-13	1.47E-08	1.47E-08
2-ethyl 1,3-butadiene	3404-63-5		7.23E-11		2.70E-14	1.63E-12	1.66E-12		1.01E-09		3.78E-13	2.28E-11	2.32E-11
acetone	67-64-1		1.05E-08		1.43E-13	6.80E-09	6.80E-09	Yes	1.48E-07	Yes	2.00E-12	9.52E-08	9.52E-08
benzene	71-43-2	Yes	8.15E-09	Yes	8.83E-13	8.39E-11	8.48E-11	Yes	1.14E-07	Yes	1.24E-11	1.18E-09	1.19E-09
bis(2-ethylhexyl)-phthalate	117-81-7	Yes	1.64E-10	Yes	3.49E-13	2.36E-08	2.36E-08		2.30E-09	Yes	4.94E-12	3.30E-07	3.30E-07
chloromethane	74-87-3		7.99E-11		2.09E-15	3.55E-13	3.57E-13	Yes	1.12E-09	Yes	2.92E-14	4.96E-12	4.99E-12
dichlorodifluoromethane	75-71-8		9.26E-11		6.84E-15	2.62E-12	2.63E-12	Yes	1.30E-09	Yes	9.58E-14	3.67E-11	3.68E-11
di-n-butyl phthalate	84-74-2		2.35E-11		2.81E-13	1.82E-07	1.82E-07		3.29E-10	Yes	3.97E-12	2.55E-06	2.55E-06
di-n-octyl phthalate	117-84-0		2.08E-11		1.80E-12	1.99E-07	1.99E-07		2.91E-10		2.51E-11	2.79E-06	2.79E-06
ethane	74-84-0		1.53E-07		1.31E-11	2.96E-10	3.10E-10		2.15E-06		1.83E-10	4.15E-09	4.33E-09
HD	505-60-2	Yes	2.51E-11	Yes	2.37E-15	9.18E-13	9.21E-13	Yes	3.51E-10	Yes	3.31E-14	1.29E-11	1.29E-11
methane	74-82-8		7.75E-07		2.25E-11	3.74E-10	3.96E-10		1.08E-05		3.15E-10	5.24E-09	5.55E-09
naphthalene	91-20-3	Yes	1.41E-10		2.91E-13	8.04E-10	8.05E-10	Yes	1.97E-09	Yes	4.14E-12	1.15E-08	1.15E-08
propene	115-07-1		7.84E-09		5.97E-13	1.63E-11	1.69E-11	Yes	1.10E-07		8.35E-12	2.28E-10	2.36E-10
toluene	108-88-3		3.08E-09		7.23E-13	8.09E-11	8.16E-11	Yes	4.32E-08	Yes	1.01E-11	1.13E-09	1.14E-09
trichlorofluoromethane	75-69-4		4.15E-11		4.69E-15	4.64E-13	4.69E-13	Yes	5.81E-10	Yes	6.57E-14	6.50E-12	6.57E-12
xylenes	1330-20-7		4.82E-11		1.88E-14	3.09E-12	3.11E-12	Yes	6.75E-10	Yes	2.63E-13	4.33E-11	4.36E-11
1,2,3,4,6,7,8-HpCDD	35822-46-9												
1,2,3,4,6,7,8,9-OCDD	3268-87-9												
1,2,3,4,6,7,8-HpCDF	67562-39-4												
1,2,3,4,6,7,8,9-OCDF	39001-02-0												
Total PCDDs and PCDFs	NA	Yes	8.54E-19	Yes	5.22E-21	3.61E-15	3.61E-15	Yes	1.20E-17	Yes	1.38E-19	5.18E-14	5.18E-14
ammonia	7664-41-7		9.22E-11		4.35E-15	5.42E-11	5.42E-11	Yes	1.29E-09		6.09E-14	7.59E-10	7.59E-10
aluminum	7429-90-5		2.29E-10		1.96E-15	2.74E-13	2.75E-13	Yes	3.21E-09	Yes	2.74E-14	3.83E-12	3.86E-12
antimony	7440-36-0		1.08E-11		4.57E-17	8.12E-11	8.12E-11		1.51E-10	Yes	6.40E-16	1.14E-09	1.14E-09
barium	7440-39-3		2.15E-12		1.17E-17	1.74E-11	1.74E-11	Yes	3.01E-11	Yes	1.64E-16	2.43E-10	2.43E-10
beryllium	7440-41-7	Yes	1.01E-12		5.22E-18	7.49E-12	7.49E-12	Yes	1.42E-11	Yes	7.31E-17	1.05E-10	1.05E-10
cadmium	7440-43-9	Yes	1.09E-11		4.54E-17	8.31E-11	8.31E-11	Yes	1.53E-10	Yes	6.36E-16	1.16E-09	1.16E-09
chlorine	7782-50-5		1.11E-09		1.75E-14	5.88E-10	5.88E-10	Yes	1.55E-08	Yes	2.46E-13	8.24E-09	8.24E-09
chromium (3+)	7440-47-3		1.68E-11		1.24E-16	1.70E-10	1.70E-10		2.35E-10	Yes	1.73E-15	2.38E-09	2.38E-09
chromium (6+)	18540-29-9	Yes	1.68E-11	Yes	1.24E-16	1.70E-10	1.70E-10	Yes	2.35E-10	Yes	1.73E-15	2.38E-09	2.38E-09
cobalt	7440-48-4		3.80E-12		1.47E-17	4.56E-11	4.56E-11	Yes	5.32E-11	Yes	2.06E-16	6.39E-10	6.39E-10
copper	7440-50-8		1.87E-10		7.96E-16	1.96E-09	1.96E-09		2.62E-09	Yes	1.11E-14	2.74E-08	2.74E-08
hydrogen chloride	7647-01-0		3.69E-09		5.40E-14	1.44E-09	1.44E-09	Yes	5.17E-08		7.56E-13	2.01E-08	2.01E-08
iron	7439-89-6		1.65E-08		1.43E-14	1.52E-07	1.52E-07		2.31E-07	Yes	2.00E-13	2.13E-06	2.13E-06
lead	7439-92-1	Yes	1.13E-11	Yes	2.80E-17	8.73E-11	8.73E-11		1.58E-10		3.93E-16	1.22E-09	1.22E-09
manganese	7439-96-5		8.37E-10		3.05E-15	6.59E-09	6.59E-09	Yes	1.17E-08	Yes	4.26E-14	9.23E-08	9.23E-08
total mercury	NA												
mercuric chloride	7487-94-7		2.99E-13		3.21E-16	3.33E-12	3.33E-12	Yes	4.19E-12	Yes	8.98E-15	5.65E-11	5.65E-11
methyl mercury	22967-92-6		0.00E+00		6.67E-19	2.08E-10	2.08E-10		0.00E+00	Yes	1.82E-17	5.05E-09	5.05E-09
elemental mercury	7439-97-6		0.00E+00		0.00E+00	0.00E+00	0.00E+00	Yes	0.00E+00		0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	Yes	7.56E-12		6.42E-17	7.08E-11	7.08E-11	Yes	1.06E-10	Yes	8.99E-16	9.91E-10	9.91E-10
selenium	7782-49-2		3.00E-11		1.25E-16	5.16E-10	5.16E-10	Yes	4.20E-10	Yes	1.75E-15	7.23E-09	7.23E-09
silver	7440-22-4		2.63E-12		6.53E-18	1.03E-10	1.03E-10		3.68E-11	Yes	9.15E-17	1.44E-09	1.44E-09
vanadium	7440-62-2		2.92E-11		1.32E-16	2.20E-10	2.20E-10	Yes	4.09E-10	Yes	1.86E-15	3.08E-09	3.08E-09
zinc	7440-66-6		4.77E-10		1.22E-15	3.83E-09	3.83E-09		6.67E-09	Yes	1.70E-14	5.36E-08	5.36E-08

a. Exposures to total PCDDs/PCDFs and total coplanar PCBs are presented in units of mg TEQ/(kg-day)

b. Exposures to total PCDDs/PCDFs are presented in units of mg TEQ/(kg-day)

TOTAL COPC UPTAKE FOR EACH EXPOSURE SCENARIO

Child Subsistence Fisher Exposure Scenario													
		CARCINOGENIC EFFECTS:						NONCARCINOGENIC EFFECTS:					
		Direct Exposure		Indirect Exposure				Direct Exposure		Indirect Exposure			
COPC	CAS Number	Inhalation Cancer Slope Factor?	Inhalation Exposure (mg/kg-day)[a]	Oral Cancer Slope Factor?	Dermal Exposure (mg/kg-day)[a]	Total Ingestion Exposure (mg/kg-day)[a]	Total Indirect Exposure (mg/kg-day)[a]	Inhalation Reference Dose?	Inhalation Exposure (mg/kg-day)[b]	Oral Reference Dose?	Dermal Exposure (mg/kg-day)[b]	Total Ingestion Exposure (mg/kg-day)[b]	Total Indirect Exposure (mg/kg-day)[b]
1,4-dioxane	123-91-1	Yes	3.83E-10	Yes	8.01E-15	6.39E-10	6.40E-10	Yes	5.37E-09	Yes	1.12E-13	8.95E-09	8.95E-09
2-butanone	78-93-3		7.35E-10		2.39E-14	1.05E-09	1.05E-09	Yes	1.03E-08	Yes	3.34E-13	1.47E-08	1.47E-08
2-ethyl 1,3-butadiene	3404-63-5		7.23E-11		2.70E-14	3.99E-12	4.01E-12		1.01E-09		3.78E-13	5.58E-11	5.62E-11
acetone	67-64-1		1.05E-08		1.43E-13	6.85E-09	6.85E-09	Yes	1.48E-07	Yes	2.00E-12	9.59E-08	9.59E-08
benzene	71-43-2	Yes	8.15E-09	Yes	8.83E-13	1.34E-10	1.35E-10	Yes	1.14E-07	Yes	1.24E-11	1.87E-09	1.89E-09
bis(2-ethylhexyl)-phthalate	117-81-7	Yes	1.64E-10	Yes	3.49E-13	2.36E-08	2.36E-08		2.30E-09	Yes	4.94E-12	3.31E-07	3.31E-07
chloromethane	74-87-3		7.99E-11		2.09E-15	5.64E-13	5.67E-13	Yes	1.12E-09	Yes	2.92E-14	7.90E-12	7.93E-12
dichlorodifluoromethane	75-71-8		9.26E-11		6.84E-15	3.25E-12	3.26E-12	Yes	1.30E-09	Yes	9.58E-14	4.56E-11	4.57E-11
di-n-butyl phthalate	84-74-2		2.35E-11		2.81E-13	1.82E-07	1.82E-07		3.29E-10	Yes	3.97E-12	2.55E-06	2.55E-06
di-n-octyl phthalate	117-84-0		2.08E-11		1.80E-12	1.99E-07	1.99E-07		2.91E-10		2.51E-11	2.79E-06	2.79E-06
ethane	74-84-0		1.53E-07		1.31E-11	7.21E-10	7.34E-10		2.15E-06		1.83E-10	1.01E-08	1.03E-08
HD	505-60-2	Yes	2.51E-11	Yes	2.37E-15	1.49E-12	1.50E-12	Yes	3.51E-10	Yes	3.31E-14	2.09E-11	2.10E-11
methane	74-82-8		7.75E-07		2.25E-11	8.80E-10	9.02E-10		1.08E-05		3.15E-10	1.23E-08	1.26E-08
naphthalene	91-20-3	Yes	1.41E-10		2.91E-13	8.14E-10	8.14E-10	Yes	1.97E-09	Yes	4.14E-12	1.16E-08	1.16E-08
propene	115-07-1		7.84E-09		5.97E-13	3.82E-11	3.88E-11	Yes	1.10E-07		8.35E-12	5.35E-10	5.43E-10
toluene	108-88-3		3.08E-09		7.23E-13	1.38E-10	1.39E-10	Yes	4.32E-08	Yes	1.01E-11	1.93E-09	1.94E-09
trichlorofluoromethane	75-69-4		4.15E-11		4.69E-15	9.84E-13	9.89E-13	Yes	5.81E-10	Yes	6.57E-14	1.38E-11	1.38E-11
xylenes	1330-20-7		4.82E-11		1.88E-14	5.05E-12	5.07E-12	Yes	6.75E-10	Yes	2.63E-13	7.07E-11	7.09E-11
1,2,3,4,6,7,8-HpCDD	35822-46-9												
1,2,3,4,6,7,8,9-OCDD	3268-87-9												
1,2,3,4,6,7,8-HpCDF	67562-39-4												
1,2,3,4,6,7,8,9-OCDF	39001-02-0												
Total PCDDs and PCDFs	NA	Yes	8.54E-19	Yes	5.22E-21	3.61E-15	3.61E-15	Yes	1.20E-17	Yes	1.38E-19	5.18E-14	5.18E-14
ammonia	7664-41-7		9.22E-11		4.35E-15	5.51E-11	5.51E-11	Yes	1.29E-09		6.09E-14	7.71E-10	7.71E-10
aluminum	7429-90-5		2.29E-10		1.96E-15	6.70E-13	6.72E-13	Yes	3.21E-09	Yes	2.74E-14	9.38E-12	9.41E-12
antimony	7440-36-0		1.08E-11		4.57E-17	8.14E-11	8.14E-11		1.51E-10	Yes	6.40E-16	1.14E-09	1.14E-09
barium	7440-39-3		2.15E-12		1.17E-17	1.80E-11	1.80E-11	Yes	3.01E-11	Yes	1.64E-16	2.53E-10	2.53E-10
beryllium	7440-41-7	Yes	1.01E-12		5.22E-18	7.52E-12	7.52E-12	Yes	1.42E-11	Yes	7.31E-17	1.05E-10	1.05E-10
cadmium	7440-43-9	Yes	1.09E-11		4.54E-17	8.79E-11	8.79E-11	Yes	1.53E-10	Yes	6.36E-16	1.23E-09	1.23E-09
chlorine	7782-50-5		1.11E-09		1.75E-14	5.91E-10	5.91E-10	Yes	1.55E-08	Yes	2.46E-13	8.28E-09	8.28E-09
chromium (3+)	7440-47-3		1.68E-11		1.24E-16	1.70E-10	1.70E-10		2.35E-10	Yes	1.73E-15	2.38E-09	2.38E-09
chromium (6+)	18540-29-9	Yes	1.68E-11	Yes	1.24E-16	1.70E-10	1.70E-10	Yes	2.35E-10	Yes	1.73E-15	2.38E-09	2.38E-09
cobalt	7440-48-4		3.80E-12		1.47E-17	4.56E-11	4.56E-11	Yes	5.32E-11	Yes	2.06E-16	6.39E-10	6.39E-10
copper	7440-50-8		1.87E-10		7.96E-16	1.96E-09	1.96E-09		2.62E-09	Yes	1.11E-14	2.74E-08	2.74E-08
hydrogen chloride	7647-01-0		3.69E-09		5.40E-14	1.45E-09	1.45E-09	Yes	5.17E-08		7.56E-13	2.03E-08	2.03E-08
iron	7439-89-6		1.65E-08		1.43E-14	1.52E-07	1.52E-07		2.31E-07	Yes	2.00E-13	2.13E-06	2.13E-06
lead	7439-92-1	Yes	1.13E-11	Yes	2.80E-17	8.73E-11	8.73E-11		1.58E-10		3.93E-16	1.22E-09	1.22E-09
manganese	7439-96-5		8.37E-10		3.05E-15	6.59E-09	6.59E-09	Yes	1.17E-08	Yes	4.26E-14	9.23E-08	9.23E-08
total mercury	NA												
mercuric chloride	7487-94-7		2.99E-13		3.21E-16	3.33E-12	3.33E-12	Yes	4.19E-12	Yes	8.98E-15	5.65E-11	5.65E-11
methyl mercury	22967-92-6		0.00E+00		6.67E-19	5.20E-10	5.20E-10		0.00E+00	Yes	1.82E-17	1.26E-08	1.26E-08
elemental mercury	7439-97-6		0.00E+00		0.00E+00	0.00E+00	0.00E+00	Yes	0.00E+00		0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	Yes	7.56E-12		6.42E-17	7.11E-11	7.11E-11	Yes	1.06E-10	Yes	8.99E-16	9.95E-10	9.95E-10
selenium	7782-49-2		3.00E-11		1.25E-16	5.18E-10	5.18E-10	Yes	4.20E-10	Yes	1.75E-15	7.26E-09	7.26E-09
silver	7440-22-4		2.63E-12		6.53E-18	1.03E-10	1.03E-10		3.68E-11	Yes	9.15E-17	1.44E-09	1.44E-09
vanadium	7440-62-2		2.92E-11		1.32E-16	2.20E-10	2.20E-10	Yes	4.09E-10	Yes	1.86E-15	3.08E-09	3.08E-09
zinc	7440-66-6		4.77E-10		1.22E-15	4.31E-09	4.31E-09		6.67E-09	Yes	1.70E-14	6.03E-08	6.03E-08

a. Exposures to total PCDDs/PCDFs and total coplanar PCBs are presented in units of mg TEQ/(kg-day)

b. Exposures to total PCDDs/PCDFs are presented in units of mg TEQ/(kg-day)

TOTAL COPC UPTAKE FOR EACH EXPOSURE SCENARIO

Child Subsistence Farmer Exposure Scenario													
		CARCINOGENIC EFFECTS:						NONCARCINOGENIC EFFECTS:					
		Direct Exposure		Indirect Exposure				Direct Exposure		Indirect Exposure			
COPC	CAS Number	Inhalation Cancer Slope Factor?	Inhalation Exposure (mg/kg-day)[a]	Oral Cancer Slope Factor?	Dermal Exposure (mg/kg-day)[a]	Total Ingestion Exposure (mg/kg-day)[a]	Total Indirect Exposure (mg/kg-day)[a]	Inhalation Reference Dose?	Inhalation Exposure (mg/kg-day)[b]	Oral Reference Dose?	Dermal Exposure (mg/kg-day)[b]	Total Ingestion Exposure (mg/kg-day)[b]	Total Indirect Exposure (mg/kg-day)[b]
1,4-dioxane	123-91-1	Yes	3.83E-10	Yes	8.01E-15	1.58E-09	1.58E-09	Yes	5.37E-09	Yes	1.12E-13	2.21E-08	2.21E-08
2-butanone	78-93-3		7.35E-10		2.39E-14	2.61E-09	2.61E-09	Yes	1.03E-08	Yes	3.34E-13	3.66E-08	3.66E-08
2-ethyl 1,3-butadiene	3404-63-5		7.23E-11		2.70E-14	1.71E-12	1.74E-12		1.01E-09		3.78E-13	2.39E-11	2.43E-11
acetone	67-64-1		1.05E-08		1.43E-13	1.69E-08	1.69E-08	Yes	1.48E-07	Yes	2.00E-12	2.37E-07	2.37E-07
benzene	71-43-2	Yes	8.15E-09	Yes	8.83E-13	1.59E-10	1.60E-10	Yes	1.14E-07	Yes	1.24E-11	2.23E-09	2.24E-09
bis(2-ethylhexyl)-phthalate	117-81-7	Yes	1.64E-10	Yes	3.49E-13	5.90E-08	5.90E-08		2.30E-09	Yes	4.94E-12	8.26E-07	8.26E-07
chloromethane	74-87-3		7.99E-11		2.09E-15	6.71E-13	6.73E-13	Yes	1.12E-09	Yes	2.92E-14	9.39E-12	9.42E-12
dichlorodifluoromethane	75-71-8		9.26E-11		6.84E-15	5.92E-12	5.93E-12	Yes	1.30E-09	Yes	9.58E-14	8.29E-11	8.30E-11
di-n-butyl phthalate	84-74-2		2.35E-11		2.81E-13	4.54E-07	4.54E-07		3.29E-10	Yes	3.97E-12	6.36E-06	6.36E-06
di-n-octyl phthalate	117-84-0		2.08E-11		1.80E-12	4.99E-07	4.99E-07		2.91E-10		2.51E-11	6.98E-06	6.98E-06
ethane	74-84-0		1.53E-07		1.31E-11	3.09E-10	3.22E-10		2.15E-06		1.83E-10	4.33E-09	4.51E-09
HD	505-60-2	Yes	2.51E-11	Yes	2.37E-15	1.72E-12	1.72E-12	Yes	3.51E-10	Yes	3.31E-14	2.40E-11	2.41E-11
methane	74-82-8		7.75E-07		2.25E-11	3.95E-10	4.18E-10		1.08E-05		3.15E-10	5.54E-09	5.85E-09
naphthalene	91-20-3	Yes	1.41E-10		2.91E-13	2.00E-09	2.00E-09	Yes	1.97E-09	Yes	4.14E-12	2.86E-08	2.86E-08
propene	115-07-1		7.84E-09		5.97E-13	1.83E-11	1.89E-11	Yes	1.10E-07		8.35E-12	2.56E-10	2.64E-10
toluene	108-88-3		3.08E-09		7.23E-13	1.45E-10	1.45E-10	Yes	4.32E-08	Yes	1.01E-11	2.03E-09	2.04E-09
trichlorofluoromethane	75-69-4		4.15E-11		4.69E-15	6.38E-13	6.43E-13	Yes	5.81E-10	Yes	6.57E-14	8.94E-12	9.00E-12
xylenes	1330-20-7		4.82E-11		1.88E-14	5.78E-12	5.79E-12	Yes	6.75E-10	Yes	2.63E-13	8.09E-11	8.11E-11
1,2,3,4,6,7,8-HpCDD	35822-46-9												
1,2,3,4,6,7,8,9-OCDD	3268-87-9												
1,2,3,4,6,7,8-HpCDF	67562-39-4												
1,2,3,4,6,7,8,9-OCDF	39001-02-0												
Total PCDDs and PCDFs	NA	Yes	8.54E-19	Yes	5.22E-21	9.03E-15	9.03E-15	Yes	1.20E-17	Yes	1.38E-19	1.29E-13	1.29E-13
ammonia	7664-41-7		9.22E-11		4.35E-15	1.35E-10	1.35E-10	Yes	1.29E-09		6.09E-14	1.89E-09	1.89E-09
aluminum	7429-90-5		2.29E-10		1.96E-15	2.75E-13	2.77E-13	Yes	3.21E-09	Yes	2.74E-14	3.85E-12	3.88E-12
antimony	7440-36-0		1.08E-11		4.57E-17	2.03E-10	2.03E-10		1.51E-10	Yes	6.40E-16	2.84E-09	2.84E-09
barium	7440-39-3		2.15E-12		1.17E-17	4.28E-11	4.28E-11	Yes	3.01E-11	Yes	1.64E-16	5.99E-10	5.99E-10
beryllium	7440-41-7	Yes	1.01E-12		5.22E-18	1.87E-11	1.87E-11	Yes	1.42E-11	Yes	7.31E-17	2.62E-10	2.62E-10
cadmium	7440-43-9	Yes	1.09E-11		4.54E-17	2.03E-10	2.03E-10	Yes	1.53E-10	Yes	6.36E-16	2.84E-09	2.84E-09
chlorine	7782-50-5		1.11E-09		1.75E-14	1.47E-09	1.47E-09	Yes	1.55E-08	Yes	2.46E-13	2.06E-08	2.06E-08
chromium (3+)	7440-47-3		1.68E-11		1.24E-16	4.24E-10	4.24E-10		2.35E-10	Yes	1.73E-15	5.94E-09	5.94E-09
chromium (6+)	18540-29-9	Yes	1.68E-11	Yes	1.24E-16	4.24E-10	4.24E-10	Yes	2.35E-10	Yes	1.73E-15	5.94E-09	5.94E-09
cobalt	7440-48-4		3.80E-12		1.47E-17	1.14E-10	1.14E-10	Yes	5.32E-11	Yes	2.06E-16	1.60E-09	1.60E-09
copper	7440-50-8		1.87E-10		7.96E-16	4.90E-09	4.90E-09		2.62E-09	Yes	1.11E-14	6.85E-08	6.85E-08
hydrogen chloride	7647-01-0		3.69E-09		5.40E-14	3.58E-09	3.59E-09	Yes	5.17E-08		7.56E-13	5.02E-08	5.02E-08
iron	7439-89-6		1.65E-08		1.43E-14	3.81E-07	3.81E-07		2.31E-07	Yes	2.00E-13	5.33E-06	5.33E-06
lead	7439-92-1	Yes	1.13E-11	Yes	2.80E-17	2.18E-10	2.18E-10		1.58E-10		3.93E-16	3.06E-09	3.06E-09
manganese	7439-96-5		8.37E-10		3.05E-15	1.65E-08	1.65E-08	Yes	1.17E-08	Yes	4.26E-14	2.31E-07	2.31E-07
total mercury	NA												
mercuric chloride	7487-94-7		2.99E-13		3.21E-16	8.30E-12	8.30E-12	Yes	4.19E-12	Yes	8.98E-15	1.40E-10	1.40E-10
methyl mercury	22967-92-6		0.00E+00		6.67E-19	2.09E-10	2.09E-10		0.00E+00	Yes	1.82E-17	5.06E-09	5.06E-09
elemental mercury	7439-97-6		0.00E+00		0.00E+00	0.00E+00	0.00E+00	Yes	0.00E+00		0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	Yes	7.56E-12		6.42E-17	1.77E-10	1.77E-10	Yes	1.06E-10	Yes	8.99E-16	2.47E-09	2.47E-09
selenium	7782-49-2		3.00E-11		1.25E-16	1.29E-09	1.29E-09	Yes	4.20E-10	Yes	1.75E-15	1.80E-08	1.80E-08
silver	7440-22-4		2.63E-12		6.53E-18	2.57E-10	2.57E-10		3.68E-11	Yes	9.15E-17	3.60E-09	3.60E-09
vanadium	7440-62-2		2.92E-11		1.32E-16	5.50E-10	5.50E-10	Yes	4.09E-10	Yes	1.86E-15	7.69E-09	7.69E-09
zinc	7440-66-6		4.77E-10		1.22E-15	9.09E-09	9.09E-09		6.67E-09	Yes	1.70E-14	1.27E-07	1.27E-07

a. Exposures to total PCDDs/PCDFs and total coplanar PCBs are presented in units of mg TEQ/(kg-day)

b. Exposures to total PCDDs/PCDFs are presented in units of mg TEQ/(kg-day)

TOTAL COPC UPTAKE FOR EACH EXPOSURE SCENARIO

Infant Resident Exposure Scenario													
		CARCINOGENIC EFFECTS:						NONCARCINOGENIC EFFECTS:					
		Direct Exposure		Indirect Exposure				Direct Exposure		Indirect Exposure			
COPC	CAS Number	Inhalation Cancer Slope Factor?	Inhalation Exposure (mg/kg-day)[a]	Oral Cancer Slope Factor?	Dermal Exposure (mg/kg-day)[a]	Total Ingestion Exposure (mg/kg-day)[a]	Total Indirect Exposure (mg/kg-day)[a]	Inhalation Reference Dose?	Inhalation Exposure (mg/kg-day)[b]	Oral Reference Dose?	Dermal Exposure (mg/kg-day)[b]	Total Ingestion Exposure (mg/kg-day)[b]	Total Indirect Exposure (mg/kg-day)[b]
1,4-dioxane	123-91-1	Yes	4.31E-11	Yes	3.04E-16	1.57E-10	1.57E-10	Yes	3.02E-09	Yes	2.13E-14	1.10E-08	1.10E-08
2-butanone	78-93-3		8.27E-11		3.93E-15	2.24E-10	2.24E-10	Yes	5.79E-09	Yes	2.75E-13	5.73E-08	5.73E-08
2-ethyl 1,3-butadiene	3404-63-5		8.14E-12		8.25E-19	4.84E-13	4.84E-13		5.70E-10		5.77E-17	3.39E-11	3.39E-11
acetone	67-64-1		1.19E-09		1.63E-14	1.55E-09	1.55E-09	Yes	8.30E-08	Yes	1.14E-12	5.39E-07	5.39E-07
benzene	71-43-2	Yes	9.17E-10	Yes	1.73E-16	2.76E-09	2.76E-09	Yes	6.42E-08	Yes	1.21E-14	1.93E-07	1.93E-07
bis(2-ethylhexyl)-phthalate	117-81-7	Yes	1.85E-11	Yes	5.12E-14	1.58E-08	1.58E-08		1.29E-09	Yes	3.65E-12	1.10E-06	1.10E-06
chloromethane	74-87-3		8.98E-12		3.76E-19	9.13E-14	9.13E-14	Yes	6.29E-10	Yes	2.64E-17	1.87E-09	1.87E-09
dichlorodifluoromethane	75-71-8		1.04E-11		5.56E-18	5.68E-13	5.68E-13	Yes	7.29E-10	Yes	3.90E-16	2.26E-09	2.26E-09
di-n-butyl phthalate	84-74-2		2.64E-12		3.42E-14	1.26E-07	1.26E-07		1.85E-10	Yes	2.44E-12	8.80E-06	8.80E-06
di-n-octyl phthalate	117-84-0		2.34E-12		2.57E-19	7.37E-08	7.37E-08		1.64E-10		1.80E-17	5.16E-06	5.16E-06
ethane	74-84-0		1.73E-08		4.37E-17	8.68E-11	8.68E-11		1.21E-06		3.06E-15	6.08E-09	6.08E-09
HD	505-60-2	Yes	2.82E-12	Yes	4.92E-18	2.44E-13	2.44E-13	Yes	1.98E-10	Yes	3.45E-16	1.71E-11	1.71E-11
methane	74-82-8		8.71E-08		2.99E-17	1.04E-10	1.04E-10		6.10E-06		2.09E-15	7.31E-09	7.31E-09
naphthalene	91-20-3	Yes	1.58E-11		6.18E-14	1.82E-10	1.82E-10	Yes	1.11E-09	Yes	4.41E-12	3.33E-08	3.33E-08
propene	115-07-1		8.82E-10		6.67E-18	4.70E-12	4.70E-12	Yes	6.17E-08		4.67E-16	3.29E-10	3.29E-10
toluene	108-88-3		3.47E-10		1.69E-16	2.20E-11	2.20E-11	Yes	2.43E-08	Yes	1.18E-14	7.56E-08	7.56E-08
trichlorofluoromethane	75-69-4		4.67E-12		6.04E-20	1.65E-13	1.65E-13	Yes	3.27E-10	Yes	4.23E-18	9.88E-10	9.88E-10
xylenes	1330-20-7		5.43E-12		2.84E-17	8.30E-13	8.30E-13	Yes	3.80E-10	Yes	1.99E-15	1.27E-09	1.27E-09
1,2,3,4,6,7,8-HpCDD	35822-46-9												
1,2,3,4,6,7,8,9-OCDD	3268-87-9												
1,2,3,4,6,7,8-HpCDF	67562-39-4												
1,2,3,4,6,7,8,9-OCDF	39001-02-0												
Total PCDDs and PCDFs	NA	Yes	9.61E-20	Yes	1.16E-21	1.60E-13	1.60E-13	Yes	6.73E-18	Yes	1.58E-19	1.12E-11	1.12E-11
ammonia	7664-41-7		1.04E-11		2.96E-17	1.27E-11	1.27E-11	Yes	7.26E-10		2.07E-15	8.87E-10	8.87E-10
aluminum	7429-90-5		2.58E-11		1.41E-18	7.97E-14	7.97E-14	Yes	1.80E-09	Yes	9.90E-17	5.33E-09	5.33E-09
antimony	7440-36-0		1.21E-12		3.91E-19	2.14E-11	2.14E-11		8.48E-11	Yes	2.74E-17	3.31E-09	3.31E-09
barium	7440-39-3		2.42E-13		7.72E-19	4.99E-12	4.99E-12	Yes	1.70E-11	Yes	5.41E-17	7.30E-10	7.30E-10
beryllium	7440-41-7	Yes	1.14E-13		2.92E-19	1.91E-12	1.91E-12	Yes	7.98E-12	Yes	2.05E-17	3.01E-10	3.01E-10
cadmium	7440-43-9	Yes	1.23E-12		1.25E-19	2.14E-11	2.14E-11	Yes	8.60E-11	Yes	8.77E-18	3.36E-09	3.36E-09
chlorine	7782-50-5		1.25E-10		1.55E-16	1.27E-10	1.27E-10	Yes	8.72E-09	Yes	1.08E-14	4.89E-08	4.89E-08
chromium (3+)	7440-47-3		1.89E-12		2.10E-19	6.06E-11	6.06E-11		1.32E-10	Yes	1.47E-17	7.91E-09	7.91E-09
chromium (6+)	18540-29-9	Yes	1.89E-12	Yes	2.10E-19	1.13E-10	1.13E-10	Yes	1.32E-10	Yes	1.47E-17	7.91E-09	7.91E-09
cobalt	7440-48-4		4.27E-13		6.35E-20	1.66E-11	1.66E-11	Yes	2.99E-11	Yes	4.44E-18	2.22E-09	2.22E-09
copper	7440-50-8		2.10E-11		3.09E-17	6.87E-10	6.87E-10		1.47E-09	Yes	2.17E-15	9.17E-08	9.17E-08
hydrogen chloride	7647-01-0		4.15E-10		6.98E-17	3.32E-10	3.32E-10	Yes	2.91E-08		4.89E-15	2.33E-08	2.33E-08
iron	7439-89-6		1.85E-09		3.27E-17	3.98E-08	3.98E-08		1.30E-07	Yes	2.29E-15	6.64E-06	6.64E-06
lead	7439-92-1	Yes	1.27E-12	Yes	3.56E-18	5.16E-11	5.16E-11		8.91E-11		2.50E-16	1.70E-09	1.70E-09
manganese	7439-96-5		9.41E-11		1.77E-17	1.89E-09	1.89E-09	Yes	6.59E-09	Yes	1.24E-15	2.76E-07	2.76E-07
total mercury	NA												
mercuric chloride	7487-94-7		3.36E-14		8.97E-17	1.13E-12	1.13E-12	Yes	2.36E-12	Yes	1.26E-14	1.85E-10	1.85E-10
methyl mercury	22967-92-6		0.00E+00		1.75E-19	6.25E-11	6.25E-11		0.00E+00	Yes	2.42E-17	1.72E-08	1.72E-08
elemental mercury	7439-97-6		0.00E+00		0.00E+00	0.00E+00	0.00E+00	Yes	0.00E+00		0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	Yes	8.50E-13		5.51E-19	2.32E-11	2.32E-11	Yes	5.95E-11	Yes	3.86E-17	3.19E-09	3.19E-09
selenium	7782-49-2		3.38E-12		2.52E-19	2.55E-10	2.55E-10	Yes	2.37E-10	Yes	1.76E-17	2.78E-08	2.78E-08
silver	7440-22-4		2.96E-13		1.02E-20	6.35E-11	6.35E-11		2.07E-11	Yes	7.11E-19	6.23E-09	6.23E-09
vanadium	7440-62-2		3.29E-12		8.69E-18	5.61E-11	5.61E-11	Yes	2.30E-10	Yes	6.09E-16	8.91E-09	8.91E-09
zinc	7440-66-6		5.36E-11		1.05E-17	1.00E-09	1.00E-09		3.75E-09	Yes	7.35E-16	1.56E-07	1.56E-07

a. Exposures to total PCDDs/PCDFs and total coplanar PCBs are presented in units of mg TEQ/(kg-day)

b. Exposures to total PCDDs/PCDFs are presented in units of mg TEQ/(kg-day)

TOTAL COPC UPTAKE FOR EACH EXPOSURE SCENARIO

Infant Subsistence Fisher Exposure Scenario													
		CARCINOGENIC EFFECTS:						NONCARCINOGENIC EFFECTS:					
		Direct Exposure		Indirect Exposure				Direct Exposure		Indirect Exposure			
COPC	CAS Number	Inhalation Cancer Slope Factor?	Inhalation Exposure (mg/kg-day)[a]	Oral Cancer Slope Factor?	Dermal Exposure (mg/kg-day)[a]	Total Ingestion Exposure (mg/kg-day)[a]	Total Indirect Exposure (mg/kg-day)[a]	Inhalation Reference Dose?	Inhalation Exposure (mg/kg-day)[b]	Oral Reference Dose?	Dermal Exposure (mg/kg-day)[b]	Total Ingestion Exposure (mg/kg-day)[b]	Total Indirect Exposure (mg/kg-day)[b]
1,4-dioxane	123-91-1	Yes	4.31E-11	Yes	3.04E-16	1.59E-10	1.59E-10	Yes	3.02E-09	Yes	2.13E-14	1.11E-08	1.11E-08
2-butanone	78-93-3		8.27E-11		3.93E-15	2.25E-10	2.25E-10	Yes	5.79E-09	Yes	2.75E-13	5.75E-08	5.75E-08
2-ethyl 1,3-butadiene	3404-63-5		8.14E-12		8.25E-19	1.19E-12	1.19E-12		5.70E-10		5.77E-17	8.34E-11	8.34E-11
acetone	67-64-1		1.19E-09		1.63E-14	1.56E-09	1.56E-09	Yes	8.30E-08	Yes	1.14E-12	5.42E-07	5.42E-07
benzene	71-43-2	Yes	9.17E-10	Yes	1.73E-16	2.80E-09	2.80E-09	Yes	6.42E-08	Yes	1.21E-14	1.96E-07	1.96E-07
bis(2-ethylhexyl)-phthalate	117-81-7	Yes	1.85E-11	Yes	5.12E-14	1.58E-08	1.58E-08		1.29E-09	Yes	3.65E-12	1.11E-06	1.11E-06
chloromethane	74-87-3		8.98E-12		3.76E-19	1.54E-13	1.54E-13	Yes	6.29E-10	Yes	2.64E-17	1.88E-09	1.88E-09
dichlorodifluoromethane	75-71-8		1.04E-11		5.56E-18	7.57E-13	7.57E-13	Yes	7.29E-10	Yes	3.90E-16	2.29E-09	2.29E-09
di-n-butyl phthalate	84-74-2		2.64E-12		3.42E-14	1.26E-07	1.26E-07		1.85E-10	Yes	2.44E-12	8.80E-06	8.80E-06
di-n-octyl phthalate	117-84-0		2.34E-12		2.57E-19	7.37E-08	7.37E-08		1.64E-10		1.80E-17	5.16E-06	5.16E-06
ethane	74-84-0		1.73E-08		4.37E-17	2.14E-10	2.14E-10		1.21E-06		3.06E-15	1.50E-08	1.50E-08
HD	505-60-2	Yes	2.82E-12	Yes	4.92E-18	4.17E-13	4.17E-13	Yes	1.98E-10	Yes	3.45E-16	2.92E-11	2.92E-11
methane	74-82-8		8.71E-08		2.99E-17	2.56E-10	2.56E-10		6.10E-06		2.09E-15	1.79E-08	1.79E-08
naphthalene	91-20-3	Yes	1.58E-11		6.18E-14	1.85E-10	1.85E-10	Yes	1.11E-09	Yes	4.41E-12	3.38E-08	3.38E-08
propene	115-07-1		8.82E-10		6.67E-18	1.13E-11	1.13E-11	Yes	6.17E-08		4.67E-16	7.90E-10	7.90E-10
toluene	108-88-3		3.47E-10		1.69E-16	3.92E-11	3.92E-11	Yes	2.43E-08	Yes	1.18E-14	7.83E-08	7.83E-08
trichlorofluoromethane	75-69-4		4.67E-12		6.04E-20	3.21E-13	3.21E-13	Yes	3.27E-10	Yes	4.23E-18	1.01E-09	1.01E-09
xylenes	1330-20-7		5.43E-12		2.84E-17	1.42E-12	1.42E-12	Yes	3.80E-10	Yes	1.99E-15	1.36E-09	1.36E-09
1,2,3,4,6,7,8-HpCDD	35822-46-9												
1,2,3,4,6,7,8,9-OCDD	3268-87-9												
1,2,3,4,6,7,8-HpCDF	67562-39-4												
1,2,3,4,6,7,8,9-OCDF	39001-02-0												
Total PCDDs and PCDFs	NA	Yes	9.61E-20	Yes	1.16E-21	1.60E-13	1.60E-13	Yes	6.73E-18	Yes	1.58E-19	1.12E-11	1.12E-11
ammonia	7664-41-7		1.04E-11		2.96E-17	1.29E-11	1.29E-11	Yes	7.26E-10		2.07E-15	9.06E-10	9.06E-10
aluminum	7429-90-5		2.58E-11		1.41E-18	1.99E-13	1.99E-13	Yes	1.80E-09	Yes	9.90E-17	5.35E-09	5.35E-09
antimony	7440-36-0		1.21E-12		3.91E-19	2.15E-11	2.15E-11		8.48E-11	Yes	2.74E-17	3.32E-09	3.32E-09
barium	7440-39-3		2.42E-13		7.72E-19	5.19E-12	5.19E-12	Yes	1.70E-11	Yes	5.41E-17	7.62E-10	7.62E-10
beryllium	7440-41-7	Yes	1.14E-13		2.92E-19	1.92E-12	1.92E-12	Yes	7.98E-12	Yes	2.05E-17	3.03E-10	3.03E-10
cadmium	7440-43-9	Yes	1.23E-12		1.25E-19	2.28E-11	2.28E-11	Yes	8.60E-11	Yes	8.77E-18	3.59E-09	3.59E-09
chlorine	7782-50-5		1.25E-10		1.55E-16	1.28E-10	1.28E-10	Yes	8.72E-09	Yes	1.08E-14	4.90E-08	4.90E-08
chromium (3+)	7440-47-3		1.89E-12		2.10E-19	6.06E-11	6.06E-11		1.32E-10	Yes	1.47E-17	7.91E-09	7.91E-09
chromium (6+)	18540-29-9	Yes	1.89E-12	Yes	2.10E-19	1.13E-10	1.13E-10	Yes	1.32E-10	Yes	1.47E-17	7.91E-09	7.91E-09
cobalt	7440-48-4		4.27E-13		6.35E-20	1.66E-11	1.66E-11	Yes	2.99E-11	Yes	4.44E-18	2.22E-09	2.22E-09
copper	7440-50-8		2.10E-11		3.09E-17	6.87E-10	6.87E-10		1.47E-09	Yes	2.17E-15	9.17E-08	9.17E-08
hydrogen chloride	7647-01-0		4.15E-10		6.98E-17	3.35E-10	3.35E-10	Yes	2.91E-08		4.89E-15	2.34E-08	2.34E-08
iron	7439-89-6		1.85E-09		3.27E-17	3.98E-08	3.98E-08		1.30E-07	Yes	2.29E-15	6.64E-06	6.64E-06
lead	7439-92-1	Yes	1.27E-12	Yes	3.56E-18	5.16E-11	5.16E-11		8.91E-11		2.50E-16	1.70E-09	1.70E-09
manganese	7439-96-5		9.41E-11		1.77E-17	1.89E-09	1.89E-09	Yes	6.59E-09	Yes	1.24E-15	2.76E-07	2.76E-07
total mercury	NA												
mercuric chloride	7487-94-7		3.36E-14		8.97E-17	1.13E-12	1.13E-12	Yes	2.36E-12	Yes	1.26E-14	1.85E-10	1.85E-10
methyl mercury	22967-92-6		0.00E+00		1.75E-19	1.56E-10	1.56E-10		0.00E+00	Yes	2.42E-17	4.29E-08	4.29E-08
elemental mercury	7439-97-6		0.00E+00		0.00E+00	0.00E+00	0.00E+00	Yes	0.00E+00		0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	Yes	8.50E-13		5.51E-19	2.33E-11	2.33E-11	Yes	5.95E-11	Yes	3.86E-17	3.20E-09	3.20E-09
selenium	7782-49-2		3.38E-12		2.52E-19	2.55E-10	2.55E-10	Yes	2.37E-10	Yes	1.76E-17	2.79E-08	2.79E-08
silver	7440-22-4		2.96E-13		1.02E-20	6.35E-11	6.35E-11		2.07E-11	Yes	7.11E-19	6.23E-09	6.23E-09
vanadium	7440-62-2		3.29E-12		8.69E-18	5.61E-11	5.61E-11	Yes	2.30E-10	Yes	6.09E-16	8.91E-09	8.91E-09
zinc	7440-66-6		5.36E-11		1.05E-17	1.15E-09	1.15E-09		3.75E-09	Yes	7.35E-16	1.79E-07	1.79E-07

a. Exposures to total PCDDs/PCDFs and total coplanar PCBs are presented in units of mg TEQ/(kg-day)

b. Exposures to total PCDDs/PCDFs are presented in units of mg TEQ/(kg-day)

TOTAL COPC UPTAKE FOR EACH EXPOSURE SCENARIO

Infant Subsistence Farmer Exposure Scenario													
		CARCINOGENIC EFFECTS:						NONCARCINOGENIC EFFECTS:					
		Direct Exposure		Indirect Exposure				Direct Exposure		Indirect Exposure			
COPC	CAS Number	Inhalation Cancer Slope Factor?	Inhalation Exposure (mg/kg-day)[a]	Oral Cancer Slope Factor?	Dermal Exposure (mg/kg-day)[a]	Total Ingestion Exposure (mg/kg-day)[a]	Total Indirect Exposure (mg/kg-day)[a]	Inhalation Reference Dose?	Inhalation Exposure (mg/kg-day)[b]	Oral Reference Dose?	Dermal Exposure (mg/kg-day)[b]	Total Ingestion Exposure (mg/kg-day)[b]	Total Indirect Exposure (mg/kg-day)[b]
1,4-dioxane	123-91-1	Yes	4.31E-11	Yes	3.04E-16	3.90E-10	3.90E-10	Yes	3.02E-09	Yes	2.13E-14	2.73E-08	2.73E-08
2-butanone	78-93-3		8.27E-11		3.93E-15	5.58E-10	5.58E-10	Yes	5.79E-09	Yes	2.75E-13	1.18E-07	1.18E-07
2-ethyl 1,3-butadiene	3404-63-5		8.14E-12		8.25E-19	5.04E-13	5.04E-13		5.70E-10		5.77E-17	3.53E-11	3.53E-11
acetone	67-64-1		1.19E-09		1.63E-14	3.86E-09	3.86E-09	Yes	8.30E-08	Yes	1.14E-12	9.79E-07	9.79E-07
benzene	71-43-2	Yes	9.17E-10	Yes	1.73E-16	2.81E-09	2.81E-09	Yes	6.42E-08	Yes	1.21E-14	1.97E-07	1.97E-07
bis(2-ethylhexyl)-phthalate	117-81-7	Yes	1.85E-11	Yes	5.12E-14	3.94E-08	3.94E-08		1.29E-09	Yes	3.65E-12	2.76E-06	2.76E-06
chloromethane	74-87-3		8.98E-12		3.76E-19	1.65E-13	1.65E-13	Yes	6.29E-10	Yes	2.64E-17	1.88E-09	1.88E-09
dichlorodifluoromethane	75-71-8		1.04E-11		5.56E-18	1.23E-12	1.23E-12	Yes	7.29E-10	Yes	3.90E-16	2.40E-09	2.40E-09
di-n-butyl phthalate	84-74-2		2.64E-12		3.42E-14	3.14E-07	3.14E-07		1.85E-10	Yes	2.44E-12	2.20E-05	2.20E-05
di-n-octyl phthalate	117-84-0		2.34E-12		2.57E-19	1.84E-07	1.84E-07		1.64E-10		1.80E-17	1.29E-05	1.29E-05
ethane	74-84-0		1.73E-08		4.37E-17	8.97E-11	8.97E-11		1.21E-06		3.06E-15	6.28E-09	6.28E-09
HD	505-60-2	Yes	2.82E-12	Yes	4.92E-18	4.38E-13	4.38E-13	Yes	1.98E-10	Yes	3.45E-16	3.07E-11	3.07E-11
methane	74-82-8		8.71E-08		2.99E-17	1.09E-10	1.09E-10		6.10E-06		2.09E-15	7.66E-09	7.66E-09
naphthalene	91-20-3	Yes	1.58E-11		6.18E-14	4.52E-10	4.52E-10	Yes	1.11E-09	Yes	4.41E-12	7.79E-08	7.79E-08
propene	115-07-1		8.82E-10		6.67E-18	5.16E-12	5.16E-12	Yes	6.17E-08		4.67E-16	3.61E-10	3.61E-10
toluene	108-88-3		3.47E-10		1.69E-16	3.79E-11	3.79E-11	Yes	2.43E-08	Yes	1.18E-14	7.88E-08	7.88E-08
trichlorofluoromethane	75-69-4		4.67E-12		6.04E-20	2.56E-13	2.56E-13	Yes	3.27E-10	Yes	4.23E-18	9.98E-10	9.98E-10
xylenes	1330-20-7		5.43E-12		2.84E-17	1.49E-12	1.49E-12	Yes	3.80E-10	Yes	1.99E-15	1.40E-09	1.40E-09
1,2,3,4,6,7,8-HpCDD	35822-46-9												
1,2,3,4,6,7,8,9-OCDD	3268-87-9												
1,2,3,4,6,7,8-HpCDF	67562-39-4												
1,2,3,4,6,7,8,9-OCDF	39001-02-0												
Total PCDDs and PCDFs	NA	Yes	9.61E-20	Yes	1.16E-21	4.00E-13	4.00E-13	Yes	6.73E-18	Yes	1.58E-19	2.80E-11	2.80E-11
ammonia	7664-41-7		1.04E-11		2.96E-17	3.14E-11	3.14E-11	Yes	7.26E-10		2.07E-15	2.20E-09	2.20E-09
aluminum	7429-90-5		2.58E-11		1.41E-18	8.01E-14	8.01E-14	Yes	1.80E-09	Yes	9.90E-17	5.33E-09	5.33E-09
antimony	7440-36-0		1.21E-12		3.91E-19	5.35E-11	5.35E-11		8.48E-11	Yes	2.74E-17	7.89E-09	7.89E-09
barium	7440-39-3		2.42E-13		7.72E-19	1.23E-11	1.23E-11	Yes	1.70E-11	Yes	5.41E-17	1.72E-09	1.72E-09
beryllium	7440-41-7	Yes	1.14E-13		2.92E-19	4.76E-12	4.76E-12	Yes	7.98E-12	Yes	2.05E-17	7.17E-10	7.17E-10
cadmium	7440-43-9	Yes	1.23E-12		1.25E-19	5.20E-11	5.20E-11	Yes	8.60E-11	Yes	8.77E-18	7.78E-09	7.78E-09
chlorine	7782-50-5		1.25E-10		1.55E-16	3.18E-10	3.18E-10	Yes	8.72E-09	Yes	1.08E-14	8.35E-08	8.35E-08
chromium (3+)	7440-47-3		1.89E-12		2.10E-19	1.52E-10	1.52E-10		1.32E-10	Yes	1.47E-17	1.92E-08	1.92E-08
chromium (6+)	18540-29-9	Yes	1.89E-12	Yes	2.10E-19	2.74E-10	2.74E-10	Yes	1.32E-10	Yes	1.47E-17	1.92E-08	1.92E-08
cobalt	7440-48-4		4.27E-13		6.35E-20	4.14E-11	4.14E-11	Yes	2.99E-11	Yes	4.44E-18	5.41E-09	5.41E-09
copper	7440-50-8		2.10E-11		3.09E-17	1.72E-09	1.72E-09		1.47E-09	Yes	2.17E-15	2.23E-07	2.23E-07
hydrogen chloride	7647-01-0		4.15E-10		6.98E-17	8.28E-10	8.28E-10	Yes	2.91E-08		4.89E-15	5.80E-08	5.80E-08
iron	7439-89-6		1.85E-09		3.27E-17	9.96E-08	9.96E-08		1.30E-07	Yes	2.29E-15	1.60E-05	1.60E-05
lead	7439-92-1	Yes	1.27E-12	Yes	3.56E-18	1.23E-10	1.23E-10		8.91E-11		2.50E-16	4.25E-09	4.25E-09
manganese	7439-96-5		9.41E-11		1.77E-17	4.72E-09	4.72E-09	Yes	6.59E-09	Yes	1.24E-15	6.61E-07	6.61E-07
total mercury	NA												
mercuric chloride	7487-94-7		3.36E-14		8.97E-17	2.81E-12	2.81E-12	Yes	2.36E-12	Yes	1.26E-14	4.50E-10	4.50E-10
methyl mercury	22967-92-6		0.00E+00		1.75E-19	6.27E-11	6.27E-11		0.00E+00	Yes	2.42E-17	1.72E-08	1.72E-08
elemental mercury	7439-97-6		0.00E+00		0.00E+00	0.00E+00	0.00E+00	Yes	0.00E+00		0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	Yes	8.50E-13		5.51E-19	5.78E-11	5.78E-11	Yes	5.95E-11	Yes	3.86E-17	7.70E-09	7.70E-09
selenium	7782-49-2		3.38E-12		2.52E-19	6.36E-10	6.36E-10	Yes	2.37E-10	Yes	1.76E-17	6.83E-08	6.83E-08
silver	7440-22-4		2.96E-13		1.02E-20	1.59E-10	1.59E-10		2.07E-11	Yes	7.11E-19	1.55E-08	1.55E-08
vanadium	7440-62-2		3.29E-12		8.69E-18	1.40E-10	1.40E-10	Yes	2.30E-10	Yes	6.09E-16	2.13E-08	2.13E-08
zinc	7440-66-6		5.36E-11		1.05E-17	2.36E-09	2.36E-09		3.75E-09	Yes	7.35E-16	3.51E-07	3.51E-07

a. Exposures to total PCDDs/PCDFs and total coplanar PCBs are presented in units of mg TEQ/(kg-day)

b. Exposures to total PCDDs/PCDFs are presented in units of mg TEQ/(kg-day)

MEDIA CONCENTRATIONS OF COPCS

CONCENTRATIONS OF COPCS IN SOIL FOR EACH EXPOSURE SCENARIO

		Soil Loss Constants							Soil Concentrations					
		Due to Leaching	Due to Erosion	Due to Runoff	Due to Degradation	Due to Volatilization	Due to All Processes	Deposition Term	Highest Annual Average Soil Concentration	Soil Concentration Averaged Over 30 Year Exposure Duration	Soil Concentration Averaged Over 40 Year Exposure Duration	Soil Concentration Averaged Over 25 Year Exposure Duration	Soil Concentration Averaged Over 5 Year Exposure Duration	Soil Concentration Averaged Over 1 Year Exposure Duration
		(yr^{-1})	(yr^{-1})	(yr^{-1})	(yr^{-1})	(yr^{-1})	(yr^{-1})	(mg COPC/kg soil-yr)	(mg COPC/kg soil)[a]	(mg COPC/kg soil)	(mg COPC/kg soil)	(mg COPC/kg soil)	(mg COPC/kg soil)	(mg COPC/kg soil)
COPC	CAS No.	ksl	kse	ksr	ksg	ksv	ks	Ds	Cs_{ID}	Cs	Cs	Cs	Cs	Cs
1,4-dioxane	123-91-1	0.00	0	2.95	1.41	5,775.87	5,780.23	2.45E-05	4.23E-09	7.05E-10	5.29E-10	8.46E-10	4.23E-09	4.23E-09
2-butanone	78-93-3	0.00	0	1.00	36.14	819.86	857.00	4.69E-05	5.47E-08	9.12E-09	6.84E-09	1.09E-08	5.47E-08	5.47E-08
2-ethyl 1,3-butadiene	3404-63-5	0.00	0	0.13	0	402,555.36	402,555.49	4.62E-06	1.15E-11	1.91E-12	1.43E-12	2.29E-12	1.15E-11	1.15E-11
acetone	67-64-1	0.00	0	1.92	36.14	2,920.84	2,958.90	6.72E-04	2.27E-07	3.79E-08	2.84E-08	4.55E-08	2.27E-07	2.27E-07
benzene	71-43-2	0.00	0	1.67	15.81	215,789.41	215,806.89	5.20E-04	2.41E-09	4.02E-10	3.01E-10	4.82E-10	2.41E-09	2.41E-09
bis(2-ethylhexyl)-phthalate	117-81-7	0.00	0	0.00	11.04	0.00	11.04	4.41E-06	3.99E-07	6.65E-08	4.99E-08	7.98E-08	3.92E-07	3.92E-07
chloromethane	74-87-3	0.00	0	2.19	9.03	973,259.29	973,270.51	5.09E-06	5.23E-12	8.72E-13	6.54E-13	1.05E-12	5.23E-12	5.23E-12
dichlorodifluoromethane	75-71-8	0.00	0	0.56	1.41	29,069.87	29,071.84	5.91E-06	2.03E-10	3.39E-11	2.54E-11	4.07E-11	2.03E-10	2.03E-10
di-n-butyl phthalate	84-74-2	0.00	0	0.00	11	0.00	11.00	1.50E-06	1.36E-07	2.27E-08	1.70E-08	2.72E-08	1.34E-07	1.34E-07
di-n-octyl phthalate	117-84-0	0.00	0	3.17	9.03	27,081,463.42	27,081,475.62	5.59E-07	2.06E-14	3.44E-15	2.58E-15	4.13E-15	2.06E-14	2.06E-14
ethane	74-84-0	0.00	0	0.93	0	16,092,250.18	16,092,251.12	9.78E-03	6.08E-10	1.01E-10	7.60E-11	1.22E-10	6.08E-10	6.08E-10
HD	505-60-2	0.00	0	0.17	23349	48.17	23,397.34	1.60E-06	6.84E-11	1.14E-11	8.56E-12	1.37E-11	6.84E-11	6.84E-11
methane	74-82-8	0.00	0	1.92	0	118,827,923.45	118,827,925.37	4.94E-02	4.16E-10	6.93E-11	5.20E-11	8.32E-11	4.16E-10	4.16E-10
naphthalene	91-20-3	0.00	0	0.00	5.27	4.96	10.23	8.97E-06	8.76E-07	1.46E-07	1.10E-07	1.75E-07	8.59E-07	8.59E-07
propene	115-07-1	0.00	0	0.98	9.03	5,389,830.99	5,389,841.00	5.00E-04	9.28E-11	1.55E-11	1.16E-11	1.86E-11	9.28E-11	9.28E-11
toluene	108-88-3	0.00	0	0.86	11.5	83,811.07	83,823.42	1.97E-04	2.35E-09	3.91E-10	2.93E-10	4.69E-10	2.35E-09	2.35E-09
trichlorofluoromethane	75-69-4	0.00	0	1.13	0.7	1,847,653.05	1,847,654.89	2.65E-06	1.43E-12	2.39E-13	1.79E-13	2.87E-13	1.43E-12	1.43E-12
xylenes	1330-20-7	0.00	0	0.11	9.03	7,772.27	7,781.41	3.08E-06	3.95E-10	6.59E-11	4.94E-11	7.91E-11	3.95E-10	3.95E-10
1,2,3,4,6,7,8-HpCDD	35822-46-9	0.00	0	0.00	0.03	0.01	0.04	1.26E-12	5.71E-12	3.53E-12	3.09E-12	3.76E-12	2.95E-12	2.95E-12
1,2,3,4,6,7,8,9-OCDD	3268-87-9	0.00	0	0.00	0.03	0.00	0.03	7.70E-12	3.55E-11	2.31E-11	2.07E-11	2.44E-11	1.82E-11	1.82E-11
1,2,3,4,6,7,8-HpCDF	67562-39-4	0.00	0	0.00	0.03	0.01	0.04	7.29E-13	3.31E-12	2.03E-12	1.78E-12	2.17E-12	1.71E-12	1.71E-12
1,2,3,4,6,7,8,9-OCDF	39001-02-0	0.00	0	0.00	0.03	0.00	0.03	2.50E-12	1.16E-11	7.76E-12	7.00E-12	8.14E-12	5.94E-12	5.94E-12
Total PCDDs and PCDFs	NA													
ammonia	7664-41-7	0.00	0	2.82	0	14,284.38	14,287.20	5.88E-06	4.12E-10	6.86E-11	5.15E-11	8.24E-11	4.12E-10	4.12E-10
aluminum	7429-90-5	0.00	0	0.04	0	27,452.55	27,452.59	1.46E-05	5.32E-10	8.87E-11	6.66E-11	1.06E-10	5.32E-10	5.32E-10
antimony	7440-36-0	0.00	0	0.01	0	2,253.64	2,253.65	2.89E-07	1.28E-10	2.14E-11	1.60E-11	2.57E-11	1.28E-10	1.28E-10
barium	7440-39-3	0.00	0	0.01	0	242.40	242.41	5.78E-08	2.38E-10	3.97E-11	2.98E-11	4.77E-11	2.38E-10	2.38E-10
beryllium	7440-41-7	0.00	0	0.00	0	77.02	77.02	2.72E-08	3.53E-10	5.89E-11	4.41E-11	7.06E-11	3.52E-10	3.52E-10
cadmium	7440-43-9	0.00	0	0.01	0	1,683.23	1,683.23	2.93E-07	1.74E-10	2.90E-11	2.18E-11	3.48E-11	1.74E-10	1.74E-10
chlorine	7782-50-5	0.00	0	1.10	0	2,459.16	2,460.26	7.06E-05	2.87E-08	4.78E-09	3.59E-09	5.74E-09	2.87E-08	2.87E-08
chromium (3+)	7440-47-3	0.00	0	0.02	0	8,571.24	8,571.26	4.51E-07	5.27E-11	8.78E-12	6.58E-12	1.05E-11	5.27E-11	5.27E-11
chromium (6+)	18540-29-9	0.00	0	0.02	0	8,571.24	8,571.26	4.51E-07	5.27E-11	8.78E-12	6.58E-12	1.05E-11	5.27E-11	5.27E-11
cobalt	7440-48-4	0.00	0	0.01	0	3,589.41	3,589.42	1.02E-07	2.84E-11	4.74E-12	3.55E-12	5.68E-12	2.84E-11	2.84E-11
copper	7440-50-8	0.00	0	0.00	0	357.39	357.39	5.02E-06	1.40E-08	2.34E-09	1.76E-09	2.81E-09	1.40E-08	1.40E-08
hydrogen chloride	7647-01-0	0.00	0	2.56	0	12,667.60	12,670.15	2.35E-04	1.86E-08	3.10E-09	2.32E-09	3.72E-09	1.86E-08	1.86E-08
iron	7439-89-6	0.00	0	0.02	0	6,700.35	6,700.37	4.43E-04	6.61E-08	1.10E-08	8.26E-09	1.32E-08	6.61E-08	6.61E-08
lead	7439-92-1	0.00	0	0.00	0	112.68	112.68	3.04E-07	2.69E-09	4.49E-10	3.37E-10	5.39E-10	2.69E-09	2.69E-09
manganese	7439-96-5	0.00	0	0.01	0	2,603.88	2,603.89	2.25E-05	8.63E-09	1.44E-09	1.08E-09	1.73E-09	8.63E-09	8.63E-09
total mercury	NA													
mercuric chloride	7487-94-7	0.00	0	0.00	0	0.00	0.00	7.87E-09	3.93E-08	3.61E-08	3.69E-08	3.54E-08	1.97E-08	1.97E-08
methyl mercury	22967-92-6	0.00	0	0.00	0	0.02	0.02	1.61E-10	7.67E-10	5.75E-10	5.41E-10	5.90E-10	3.89E-10	3.89E-10
elemental mercury	7439-97-6	0.00	0	0.00	0	4.07	4.07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	0.00	0	0.01	0	1,560.22	1,560.22	2.03E-07	1.30E-10	2.17E-11	1.63E-11	2.60E-11	1.30E-10	1.30E-10
selenium	7782-49-2	0.00	0	0.08	0	7,869.73	7,869.81	8.06E-07	1.02E-10	1.71E-11	1.28E-11	2.05E-11	1.02E-10	1.02E-10
silver	7440-22-4	0.00	0	0.05	0	11,974.19	11,974.24	7.06E-08	5.89E-12	9.82E-13	7.37E-13	1.18E-12	5.89E-12	5.89E-12
vanadium	7440-62-2	0.00	0	0.00	0	178.00	178.00	7.85E-07	4.41E-09	7.35E-10	5.51E-10	8.82E-10	4.40E-09	4.40E-09
zinc	7440-66-6	0.00	0	0.01	0	1,635.71	1,635.72	1.28E-05	7.82E-09	1.30E-09	9.78E-10	1.56E-09	7.82E-09	7.82E-09

CONCENTRATIONS OF COPCS IN SOIL FOR EACH EXPOSURE SCENARIO (TEQ BASIS)

COPC	CAS No.	Soil Concentrations					
		Highest Annual Average Soil Concentration	Soil Concentration Averaged Over 30 Year Exposure Duration	Soil Concentration Averaged Over 40 Year Exposure Duration	Soil Concentration Averaged Over 25 Year Exposure Duration	Soil Concentration Averaged Over 5 Year Exposure Duration	Soil Concentration Averaged Over 1 Year Exposure Duration
		(mg COPC TEQ/kg soil)[a]	(mg COPC TEQ/kg soil)[a]	(mg COPC TEQ/kg soil)[a]	(mg COPC TEQ/kg soil)[a]	(mg COPC TEQ/kg soil)[a]	(mg COPC TEQ/kg soil)[a]
		Cs_{ID}	Cs	Cs	Cs	Cs	Cs
1,4-dioxane	123-91-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-butanone	78-93-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-ethyl 1,3-butadiene	3404-63-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
acetone	67-64-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzene	71-43-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bis(2-ethylhexyl)-phthalate	117-81-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloromethane	74-87-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dichlorodifluoromethane	75-71-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
di-n-butyl phthalate	84-74-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
di-n-octyl phthalate	117-84-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ethane	74-84-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
HD	505-60-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methane	74-82-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
naphthalene	91-20-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
propene	115-07-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
toluene	108-88-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trichlorofluoromethane	75-69-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
xylenes	1330-20-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2,3,4,6,7,8-HpCDD	35822-46-9	5.71E-14	3.53E-14	3.09E-14	3.76E-14	2.95E-14	2.95E-14
1,2,3,4,6,7,8,9-OCDD	3268-87-9	1.06E-14	6.94E-15	6.20E-15	7.32E-15	5.47E-15	5.47E-15
1,2,3,4,6,7,8-HpCDF	67562-39-4	3.31E-14	2.03E-14	1.78E-14	2.17E-14	1.71E-14	1.71E-14
1,2,3,4,6,7,8,9-OCDF	39001-02-0	3.48E-15	2.33E-15	2.10E-15	2.44E-15	1.78E-15	1.78E-15
Total PCDDs and PCDFs	NA	1.04E-13	6.48E-14	5.69E-14	6.90E-14	5.38E-14	5.38E-14
ammonia	7664-41-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
aluminum	7429-90-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
antimony	7440-36-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
barium	7440-39-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
beryllium	7440-41-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cadmium	7440-43-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chlorine	7782-50-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (3+)	7440-47-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (6+)	18540-29-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cobalt	7440-48-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
copper	7440-50-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
hydrogen chloride	7647-01-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
iron	7439-89-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
lead	7439-92-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
manganese	7439-96-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
total mercury	NA						
mercuric chloride	7487-94-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methyl mercury	22967-92-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
selenium	7782-49-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
silver	7440-22-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
vanadium	7440-62-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
zinc	7440-66-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

a. The concentration of individual PCDDs and PCDFs congeners and coplanar PCBs in soil are presented in units of mg COPC TEQ/kg soil. The concentration of total PCDDs and PCDFs as well as the concentration of total coplanar PCBs in soil are presented in units of mg TEQ/kg soil and are calculated as the sum of the concentrations of all individual PCDD and PCDF congeners in soil and the concentrations of all coplanar PCBs in soil, respectively.

CONCENTRATIONS OF COPCS IN PRODUCE FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Adult Resident and Adult Subsistence Fisher Exposure Scenarios								
		Aboveground Produce - Individual Uptake Mechanisms			Exposed Produce	Protected Produce	Belowground Produce	
		Due to Direct Deposition	Due to Air-to-Plant Transfer	Due to Direct Uptake from Soil	Due to All Processes	Due to All Processes	Due to Direct Uptake from Soil	Due to All Processes
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
COPC	CAS Number	Pd	Pv	Pr	P_{ag}	P_p	Pr_{bg}	P_{bg}
1,4-dioxane	123-91-1	0	3.50E-11	5.91E-09	5.94E-09	5.91E-09	4.55E-07	4.55E-07
2-butanone	78-93-3	0	2.27E-11	7.64E-08	7.64E-08	7.64E-08	2.11E-07	2.11E-07
2-ethyl 1,3-butadiene	3404-63-5	0	4.68E-13	1.24E-12	1.71E-12	1.24E-12	3.18E-11	3.18E-11
acetone	67-64-1	0	1.28E-10	3.17E-07	3.18E-07	3.17E-07	2.81E-06	2.81E-06
benzene	71-43-2	0	2.13E-10	9.52E-10	1.16E-09	9.52E-10	3.22E-08	3.22E-08
bis(2-ethylhexyl)-phthalate	117-81-7	1.20667E-06	0.00E+00	2.91E-09	1.21E-06	2.91E-09	5.67E-13	5.67E-13
chloromethane	74-87-3	0	7.17E-14	7.31E-12	7.38E-12	7.31E-12	1.09E-10	1.09E-10
dichlorodifluoromethane	75-71-8	0	4.58E-14	7.42E-11	7.42E-11	7.42E-11	5.85E-10	5.85E-10
di-n-butyl phthalate	84-74-2	0	1.13E-08	1.68E-09	1.29E-08	1.68E-09	4.22E-11	4.22E-11
di-n-octyl phthalate	117-84-0	1.53002E-07	0.00E+00	2.77E-18	1.53E-07	2.77E-18	1.06E-04	1.06E-04
ethane	74-84-0	0	2.21E-11	3.53E-10	3.75E-10	3.53E-10	3.82E-09	3.82E-09
HD	505-60-2	0	2.38E-10	1.79E-11	2.56E-10	1.79E-11	8.12E-11	8.12E-11
methane	74-82-8	0	1.45E-11	6.29E-10	6.44E-10	6.29E-10	6.30E-09	6.30E-09
naphthalene	91-20-3	0	8.14E-10	7.00E-08	7.08E-08	7.00E-08	3.93E-08	3.93E-08
propene	115-07-1	0	2.61E-12	5.67E-11	5.94E-11	5.67E-11	6.01E-10	6.01E-10
toluene	108-88-3	0	2.98E-10	4.18E-10	7.17E-10	4.18E-10	3.03E-08	3.03E-08
trichlorofluoromethane	75-69-4	0	1.67E-13	3.32E-13	5.00E-13	3.32E-13	1.94E-11	1.94E-11
xylenes	1330-20-7	0	1.43E-11	3.81E-11	5.24E-11	3.81E-11	1.09E-09	1.09E-09
1,2,3,4,6,7,8-HpCDD	35822-46-9	3.44733E-13	0.00E+00	3.24E-15	3.48E-13	3.24E-15	1.92E-14	1.92E-14
1,2,3,4,6,7,8,9-OCDD	3268-87-9	2.10938E-12	0.00E+00	1.63E-14	2.13E-12	1.63E-14	1.13E-13	1.13E-13
1,2,3,4,6,7,8-HpCDF	67562-39-4	1.99657E-13	0.00E+00	4.16E-15	2.04E-13	4.16E-15	1.52E-14	1.52E-14
1,2,3,4,6,7,8,9-OCDF	39001-02-0	6.84421E-13	0.00E+00	7.14E-15	6.92E-13	7.14E-15	6.03E-14	6.03E-14
Total PCDDs and PCDFs	NA							
ammonia	7664-41-7	0	0.00E+00	1.96E-09	1.96E-09	1.96E-09	2.69E-08	2.69E-08
aluminum	7429-90-5	0	0.00E+00	9.58E-14	9.58E-14	9.58E-14	5.77E-14	5.77E-14
antimony	7440-36-0	7.91654E-08	0.00E+00	6.82E-13	7.92E-08	6.82E-13	6.41E-13	6.41E-13
barium	7440-39-3	1.58331E-08	0.00E+00	1.28E-12	1.58E-08	1.28E-12	5.96E-13	5.96E-13
beryllium	7440-41-7	7.45086E-09	0.00E+00	1.52E-13	7.45E-09	1.52E-13	8.83E-14	8.83E-14
cadmium	7440-43-9	8.02684E-08	0.00E+00	3.63E-12	8.03E-08	3.63E-12	4.35E-12	4.35E-12
chlorine	7782-50-5	0	0.00E+00	4.01E-08	4.01E-08	4.01E-08	1.41E-07	1.41E-07
chromium (3+)	7440-47-3	1.23637E-07	0.00E+00	4.28E-14	1.24E-07	4.28E-14	3.95E-14	3.95E-14
chromium (6+)	18540-29-9	1.23637E-07	0.00E+00	4.28E-14	1.24E-07	4.28E-14	3.95E-14	3.95E-14
cobalt	7440-48-4	2.79407E-08	0.00E+00	4.10E-14	2.79E-08	4.10E-14	3.32E-14	3.32E-14
copper	7440-50-8	1.37432E-06	0.00E+00	6.29E-10	1.37E-06	6.29E-10	5.85E-10	5.85E-10
hydrogen chloride	7647-01-0	0	0.00E+00	5.84E-08	5.84E-08	5.84E-08	6.67E-07	6.67E-07
iron	7439-89-6	0.000121254	0.00E+00	1.52E-11	1.21E-04	1.52E-11	2.80E-09	2.80E-09
lead	7439-92-1	8.31743E-08	0.00E+00	6.11E-12	8.32E-08	6.11E-12	4.04E-12	4.04E-12
manganese	7439-96-5	6.15272E-06	0.00E+00	1.08E-10	6.15E-06	1.08E-10	7.19E-11	7.19E-11
total mercury	NA			0.00E+00			0.00E+00	
mercuric chloride	7487-94-7	1.71535E-09	0.00E+00	5.23E-10	2.24E-09	5.23E-10	1.30E-09	1.30E-09
methyl mercury	22967-92-6	4.83818E-10	0.00E+00	1.69E-11	5.01E-10	1.69E-11	5.70E-11	5.70E-11
elemental mercury	7439-97-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	5.55815E-08	0.00E+00	2.02E-13	5.56E-08	2.02E-13	1.30E-12	1.30E-12
selenium	7782-49-2	2.20857E-07	0.00E+00	3.33E-13	2.21E-07	3.33E-13	4.27E-13	4.27E-13
silver	7440-22-4	1.93257E-08	0.00E+00	1.36E-13	1.93E-08	1.36E-13	9.82E-14	9.82E-14
vanadium	7440-62-2	2.14939E-07	0.00E+00	2.44E-12	2.15E-07	2.44E-12	2.20E-12	2.20E-12
zinc	7440-66-6	3.50484E-06	0.00E+00	1.26E-10	3.50E-06	1.26E-10	1.17E-09	1.17E-09

CONCENTRATIONS OF COPCS IN PRODUCE FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Adult Subsistence Farmer Exposure Scenario								
		Aboveground Produce - Individual Uptake Mechanisms			Exposed Produce	Protected Produce	Belowground Produce	
		Due to Direct Deposition	Due to Air-to-Plant Transfer	Due to Direct Uptake from Soil	Due to All Processes	Due to All Processes	Due to Direct Uptake from Soil	Due to All Processes
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
COPC	CAS Number	Pd	Pv	Pr	P_{ag}	P_p	Pr_{bg}	P_{bg}
1,4-dioxane	123-91-1	0	3.50E-11	4.43E-09	4.47E-09	4.43E-09	3.41E-07	3.41E-07
2-butanone	78-93-3	0	2.27E-11	5.73E-08	5.73E-08	5.73E-08	1.58E-07	1.58E-07
2-ethyl 1,3-butadiene	3404-63-5	0	4.68E-13	9.32E-13	1.40E-12	9.32E-13	2.38E-11	2.38E-11
acetone	67-64-1	0	1.28E-10	2.38E-07	2.38E-07	2.38E-07	2.11E-06	2.11E-06
benzene	71-43-2	0	2.13E-10	7.14E-10	9.27E-10	7.14E-10	2.41E-08	2.41E-08
bis(2-ethylhexyl)-phthalate	117-81-7	1.20667E-06	0.00E+00	2.18E-09	1.21E-06	2.18E-09	4.25E-13	4.25E-13
chloromethane	74-87-3	0	7.17E-14	5.48E-12	5.55E-12	5.48E-12	8.15E-11	8.15E-11
dichlorodifluoromethane	75-71-8	0	4.58E-14	5.56E-11	5.57E-11	5.56E-11	4.39E-10	4.39E-10
di-n-butyl phthalate	84-74-2	0	1.13E-08	1.26E-09	1.25E-08	1.26E-09	3.16E-11	3.16E-11
di-n-octyl phthalate	117-84-0	1.53002E-07	0.00E+00	2.08E-18	1.53E-07	2.08E-18	7.95E-05	7.95E-05
ethane	74-84-0	0	2.21E-11	2.64E-10	2.86E-10	2.64E-10	2.86E-09	2.86E-09
HD	505-60-2	0	2.38E-10	1.34E-11	2.52E-10	1.34E-11	6.09E-11	6.09E-11
methane	74-82-8	0	1.45E-11	4.72E-10	4.87E-10	4.72E-10	4.73E-09	4.73E-09
naphthalene	91-20-3	0	8.14E-10	5.25E-08	5.33E-08	5.25E-08	2.95E-08	2.95E-08
propene	115-07-1	0	2.61E-12	4.26E-11	4.52E-11	4.26E-11	4.51E-10	4.51E-10
toluene	108-88-3	0	2.98E-10	3.14E-10	6.12E-10	3.14E-10	2.27E-08	2.27E-08
trichlorofluoromethane	75-69-4	0	1.67E-13	2.49E-13	4.16E-13	2.49E-13	1.46E-11	1.46E-11
xylenes	1330-20-7	0	1.43E-11	2.86E-11	4.29E-11	2.86E-11	8.17E-10	8.17E-10
1,2,3,4,6,7,8-HpCDD	35822-46-9	3.44733E-13	0.00E+00	2.84E-15	3.48E-13	2.84E-15	1.68E-14	1.68E-14
1,2,3,4,6,7,8,9-OCDD	3268-87-9	2.10938E-12	0.00E+00	1.46E-14	2.12E-12	1.46E-14	1.01E-13	1.01E-13
1,2,3,4,6,7,8-HpCDF	67562-39-4	1.99657E-13	0.00E+00	3.64E-15	2.03E-13	3.64E-15	1.33E-14	1.33E-14
1,2,3,4,6,7,8,9-OCDF	39001-02-0	6.84421E-13	0.00E+00	6.44E-15	6.91E-13	6.44E-15	5.43E-14	5.43E-14
Total PCDDs and PCDFs	NA							
ammonia	7664-41-7	0	0.00E+00	1.47E-09	1.47E-09	1.47E-09	2.02E-08	2.02E-08
aluminum	7429-90-5	0	0.00E+00	7.19E-14	7.19E-14	7.19E-14	4.33E-14	4.33E-14
antimony	7440-36-0	7.91654E-08	0.00E+00	5.11E-13	7.92E-08	5.11E-13	4.81E-13	4.81E-13
barium	7440-39-3	1.58331E-08	0.00E+00	9.60E-13	1.58E-08	9.60E-13	4.47E-13	4.47E-13
beryllium	7440-41-7	7.45086E-09	0.00E+00	1.14E-13	7.45E-09	1.14E-13	6.62E-14	6.62E-14
cadmium	7440-43-9	8.02684E-08	0.00E+00	2.72E-12	8.03E-08	2.72E-12	3.26E-12	3.26E-12
chlorine	7782-50-5	0	0.00E+00	3.01E-08	3.01E-08	3.01E-08	1.06E-07	1.06E-07
chromium (3+)	7440-47-3	1.23637E-07	0.00E+00	3.21E-14	1.24E-07	3.21E-14	2.96E-14	2.96E-14
chromium (6+)	18540-29-9	1.23637E-07	0.00E+00	3.21E-14	1.24E-07	3.21E-14	2.96E-14	2.96E-14
cobalt	7440-48-4	2.79407E-08	0.00E+00	3.07E-14	2.79E-08	3.07E-14	2.49E-14	2.49E-14
copper	7440-50-8	1.37432E-06	0.00E+00	4.72E-10	1.37E-06	4.72E-10	4.39E-10	4.39E-10
hydrogen chloride	7647-01-0	0	0.00E+00	4.38E-08	4.38E-08	4.38E-08	5.01E-07	5.01E-07
iron	7439-89-6	0.000121254	0.00E+00	1.14E-11	1.21E-04	1.14E-11	2.10E-09	2.10E-09
lead	7439-92-1	8.31743E-08	0.00E+00	4.58E-12	8.32E-08	4.58E-12	3.03E-12	3.03E-12
manganese	7439-96-5	6.15272E-06	0.00E+00	8.13E-11	6.15E-06	8.13E-11	5.39E-11	5.39E-11
total mercury	NA			0.00E+00			0.00E+00	
mercuric chloride	7487-94-7	1.71535E-09	0.00E+00	5.35E-10	2.25E-09	5.35E-10	1.33E-09	1.33E-09
methyl mercury	22967-92-6	4.83818E-10	0.00E+00	1.59E-11	5.00E-10	1.59E-11	5.36E-11	5.36E-11
elemental mercury	7439-97-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	5.55815E-08	0.00E+00	1.51E-13	5.56E-08	1.51E-13	9.76E-13	9.76E-13
selenium	7782-49-2	2.20857E-07	0.00E+00	2.50E-13	2.21E-07	2.50E-13	3.20E-13	3.20E-13
silver	7440-22-4	1.93257E-08	0.00E+00	1.02E-13	1.93E-08	1.02E-13	7.37E-14	7.37E-14
vanadium	7440-62-2	2.14939E-07	0.00E+00	1.83E-12	2.15E-07	1.83E-12	1.65E-12	1.65E-12
zinc	7440-66-6	3.50484E-06	0.00E+00	9.49E-11	3.50E-06	9.49E-11	8.80E-10	8.80E-10

CONCENTRATIONS OF COPCS IN PRODUCE FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Child Exposure Scenarios								
		Aboveground Produce - Individual Uptake Mechanisms			Exposed Produce	Protected Produce	Belowground Produce	
		Due to Direct Deposition	Due to Air-to-Plant Transfer	Due to Direct Uptake from Soil	Due to All Processes	Due to All Processes	Due to Direct Uptake from Soil	Due to All Processes
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
COPC	CAS Number	Pd	Pv	Pr	P_{ag}	P_p	Pr_{bg}	P_{bg}
1,4-dioxane	123-91-1	0	3.50E-11	3.55E-08	3.55E-08	3.55E-08	2.73E-06	2.73E-06
2-butanone	78-93-3	0	2.27E-11	4.58E-07	4.58E-07	4.58E-07	1.26E-06	1.26E-06
2-ethyl 1,3-butadiene	3404-63-5	0	4.68E-13	7.45E-12	7.92E-12	7.45E-12	1.91E-10	1.91E-10
acetone	67-64-1	0	1.28E-10	1.90E-06	1.90E-06	1.90E-06	1.69E-05	1.69E-05
benzene	71-43-2	0	2.13E-10	5.71E-09	5.92E-09	5.71E-09	1.93E-07	1.93E-07
bis(2-ethylhexyl)-phthalate	117-81-7	1.20667E-06	0.00E+00	1.71E-08	1.22E-06	1.71E-08	3.34E-12	3.34E-12
chloromethane	74-87-3	0	7.17E-14	4.39E-11	4.39E-11	4.39E-11	6.52E-10	6.52E-10
dichlorodifluoromethane	75-71-8	0	4.58E-14	4.45E-10	4.45E-10	4.45E-10	3.51E-09	3.51E-09
di-n-butyl phthalate	84-74-2	0	1.13E-08	9.90E-09	2.11E-08	9.90E-09	2.48E-10	2.48E-10
di-n-octyl phthalate	117-84-0	1.53002E-07	0.00E+00	1.66E-17	1.53E-07	1.66E-17	6.36E-04	6.36E-04
ethane	74-84-0	0	2.21E-11	2.12E-09	2.14E-09	2.12E-09	2.29E-08	2.29E-08
HD	505-60-2	0	2.38E-10	1.07E-10	3.46E-10	1.07E-10	4.87E-10	4.87E-10
methane	74-82-8	0	1.45E-11	3.78E-09	3.79E-09	3.78E-09	3.78E-08	3.78E-08
naphthalene	91-20-3	0	8.14E-10	4.12E-07	4.12E-07	4.12E-07	2.31E-07	2.31E-07
propene	115-07-1	0	2.61E-12	3.40E-10	3.43E-10	3.40E-10	3.61E-09	3.61E-09
toluene	108-88-3	0	2.98E-10	2.51E-09	2.81E-09	2.51E-09	1.82E-07	1.82E-07
trichlorofluoromethane	75-69-4	0	1.67E-13	1.99E-12	2.16E-12	1.99E-12	1.16E-10	1.16E-10
xylenes	1330-20-7	0	1.43E-11	2.29E-10	2.43E-10	2.29E-10	6.54E-09	6.54E-09
1,2,3,4,6,7,8-HpCDD	35822-46-9	3.44733E-13	0.00E+00	2.71E-15	3.47E-13	2.71E-15	1.61E-14	1.61E-14
1,2,3,4,6,7,8,9-OCDD	3268-87-9	2.10938E-12	0.00E+00	1.29E-14	2.12E-12	1.29E-14	8.94E-14	8.94E-14
1,2,3,4,6,7,8-HpCDF	67562-39-4	1.99657E-13	0.00E+00	3.50E-15	2.03E-13	3.50E-15	1.28E-14	1.28E-14
1,2,3,4,6,7,8,9-OCDF	39001-02-0	6.84421E-13	0.00E+00	5.47E-15	6.90E-13	5.47E-15	4.61E-14	4.61E-14
Total PCDDs and PCDFs	NA							
ammonia	7664-41-7	0	0.00E+00	1.17E-08	1.17E-08	1.17E-08	1.61E-07	1.61E-07
aluminum	7429-90-5	0	0.00E+00	5.75E-13	5.75E-13	5.75E-13	3.46E-13	3.46E-13
antimony	7440-36-0	7.91654E-08	0.00E+00	4.09E-12	7.92E-08	4.09E-12	3.85E-12	3.85E-12
barium	7440-39-3	1.58331E-08	0.00E+00	7.67E-12	1.58E-08	7.67E-12	3.57E-12	3.57E-12
beryllium	7440-41-7	7.45086E-09	0.00E+00	9.09E-13	7.45E-09	9.09E-13	5.28E-13	5.28E-13
cadmium	7440-43-9	8.02684E-08	0.00E+00	2.18E-11	8.03E-08	2.18E-11	2.61E-11	2.61E-11
chlorine	7782-50-5	0	0.00E+00	2.40E-07	2.40E-07	2.40E-07	8.45E-07	8.45E-07
chromium (3+)	7440-47-3	1.23637E-07	0.00E+00	2.57E-13	1.24E-07	2.57E-13	2.37E-13	2.37E-13
chromium (6+)	18540-29-9	1.23637E-07	0.00E+00	2.57E-13	1.24E-07	2.57E-13	2.37E-13	2.37E-13
cobalt	7440-48-4	2.79407E-08	0.00E+00	2.46E-13	2.79E-08	2.46E-13	1.99E-13	1.99E-13
copper	7440-50-8	1.37432E-06	0.00E+00	3.77E-09	1.38E-06	3.77E-09	3.51E-09	3.51E-09
hydrogen chloride	7647-01-0	0	0.00E+00	3.51E-07	3.51E-07	3.51E-07	4.00E-06	4.00E-06
iron	7439-89-6	0.000121254	0.00E+00	9.12E-11	1.21E-04	9.12E-11	1.68E-08	1.68E-08
lead	7439-92-1	8.31743E-08	0.00E+00	3.66E-11	8.32E-08	3.66E-11	2.42E-11	2.42E-11
manganese	7439-96-5	6.15272E-06	0.00E+00	6.50E-10	6.15E-06	6.50E-10	4.31E-10	4.31E-10
total mercury	NA			0.00E+00			0.00E+00	
mercuric chloride	7487-94-7	1.71535E-09	0.00E+00	2.85E-10	2.00E-09	2.85E-10	7.08E-10	7.08E-10
methyl mercury	22967-92-6	4.83818E-10	0.00E+00	1.14E-11	4.95E-10	1.14E-11	3.85E-11	3.85E-11
elemental mercury	7439-97-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	5.55815E-08	0.00E+00	1.21E-12	5.56E-08	1.21E-12	7.80E-12	7.80E-12
selenium	7782-49-2	2.20857E-07	0.00E+00	2.00E-12	2.21E-07	2.00E-12	2.56E-12	2.56E-12
silver	7440-22-4	1.93257E-08	0.00E+00	8.13E-13	1.93E-08	8.13E-13	5.89E-13	5.89E-13
vanadium	7440-62-2	2.14939E-07	0.00E+00	1.46E-11	2.15E-07	1.46E-11	1.32E-11	1.32E-11
zinc	7440-66-6	3.50484E-06	0.00E+00	7.59E-10	3.51E-06	7.59E-10	7.04E-09	7.04E-09

CONCENTRATIONS OF COPCS IN PRODUCE FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Infant Exposure Scenarios								
		Aboveground Produce - Individual Uptake Mechanisms			Exposed Produce	Protected Produce	Belowground Produce	
		Due to Direct Deposition	Due to Air-to-Plant Transfer	Due to Direct Uptake from Soil	Due to All Processes	Due to All Processes	Due to Direct Uptake from Soil	Due to All Processes
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
COPC	CAS Number	Pd	Pv	Pr	P_{ag}	P_p	Pr_{bg}	P_{bg}
1,4-dioxane	123-91-1	0	3.50E-11	3.55E-08	3.55E-08	3.55E-08	2.73E-06	2.73E-06
2-butanone	78-93-3	0	2.27E-11	4.58E-07	4.58E-07	4.58E-07	1.26E-06	1.26E-06
2-ethyl 1,3-butadiene	3404-63-5	0	4.68E-13	7.45E-12	7.92E-12	7.45E-12	1.91E-10	1.91E-10
acetone	67-64-1	0	1.28E-10	1.90E-06	1.90E-06	1.90E-06	1.69E-05	1.69E-05
benzene	71-43-2	0	2.13E-10	5.71E-09	5.92E-09	5.71E-09	1.93E-07	1.93E-07
bis(2-ethylhexyl)-phthalate	117-81-7	1.20667E-06	0.00E+00	1.71E-08	1.22E-06	1.71E-08	3.34E-12	3.34E-12
chloromethane	74-87-3	0	7.17E-14	4.39E-11	4.39E-11	4.39E-11	6.52E-10	6.52E-10
dichlorodifluoromethane	75-71-8	0	4.58E-14	4.45E-10	4.45E-10	4.45E-10	3.51E-09	3.51E-09
di-n-butyl phthalate	84-74-2	0	1.13E-08	9.90E-09	2.11E-08	9.90E-09	2.48E-10	2.48E-10
di-n-octyl phthalate	117-84-0	1.53002E-07	0.00E+00	1.66E-17	1.53E-07	1.66E-17	6.36E-04	6.36E-04
ethane	74-84-0	0	2.21E-11	2.12E-09	2.14E-09	2.12E-09	2.29E-08	2.29E-08
HD	505-60-2	0	2.38E-10	1.07E-10	3.46E-10	1.07E-10	4.87E-10	4.87E-10
methane	74-82-8	0	1.45E-11	3.78E-09	3.79E-09	3.78E-09	3.78E-08	3.78E-08
naphthalene	91-20-3	0	8.14E-10	4.12E-07	4.12E-07	4.12E-07	2.31E-07	2.31E-07
propene	115-07-1	0	2.61E-12	3.40E-10	3.43E-10	3.40E-10	3.61E-09	3.61E-09
toluene	108-88-3	0	2.98E-10	2.51E-09	2.81E-09	2.51E-09	1.82E-07	1.82E-07
trichlorofluoromethane	75-69-4	0	1.67E-13	1.99E-12	2.16E-12	1.99E-12	1.16E-10	1.16E-10
xylenes	1330-20-7	0	1.43E-11	2.29E-10	2.43E-10	2.29E-10	6.54E-09	6.54E-09
1,2,3,4,6,7,8-HpCDD	35822-46-9	3.44733E-13	0.00E+00	2.71E-15	3.47E-13	2.71E-15	1.61E-14	1.61E-14
1,2,3,4,6,7,8,9-OCDD	3268-87-9	2.10938E-12	0.00E+00	1.29E-14	2.12E-12	1.29E-14	8.94E-14	8.94E-14
1,2,3,4,6,7,8-HpCDF	67562-39-4	1.99657E-13	0.00E+00	3.50E-15	2.03E-13	3.50E-15	1.28E-14	1.28E-14
1,2,3,4,6,7,8,9-OCDF	39001-02-0	6.84421E-13	0.00E+00	5.47E-15	6.90E-13	5.47E-15	4.61E-14	4.61E-14
Total PCDDs and PCDFs	NA							
ammonia	7664-41-7	0	0.00E+00	1.17E-08	1.17E-08	1.17E-08	1.61E-07	1.61E-07
aluminum	7429-90-5	0	0.00E+00	5.75E-13	5.75E-13	5.75E-13	3.46E-13	3.46E-13
antimony	7440-36-0	7.91654E-08	0.00E+00	4.09E-12	7.92E-08	4.09E-12	3.85E-12	3.85E-12
barium	7440-39-3	1.58331E-08	0.00E+00	7.67E-12	1.58E-08	7.67E-12	3.57E-12	3.57E-12
beryllium	7440-41-7	7.45086E-09	0.00E+00	9.09E-13	7.45E-09	9.09E-13	5.28E-13	5.28E-13
cadmium	7440-43-9	8.02684E-08	0.00E+00	2.18E-11	8.03E-08	2.18E-11	2.61E-11	2.61E-11
chlorine	7782-50-5	0	0.00E+00	2.40E-07	2.40E-07	2.40E-07	8.45E-07	8.45E-07
chromium (3+)	7440-47-3	1.23637E-07	0.00E+00	2.57E-13	1.24E-07	2.57E-13	2.37E-13	2.37E-13
chromium (6+)	18540-29-9	1.23637E-07	0.00E+00	2.57E-13	1.24E-07	2.57E-13	2.37E-13	2.37E-13
cobalt	7440-48-4	2.79407E-08	0.00E+00	2.46E-13	2.79E-08	2.46E-13	1.99E-13	1.99E-13
copper	7440-50-8	1.37432E-06	0.00E+00	3.77E-09	1.38E-06	3.77E-09	3.51E-09	3.51E-09
hydrogen chloride	7647-01-0	0	0.00E+00	3.51E-07	3.51E-07	3.51E-07	4.00E-06	4.00E-06
iron	7439-89-6	0.000121254	0.00E+00	9.12E-11	1.21E-04	9.12E-11	1.68E-08	1.68E-08
lead	7439-92-1	8.31743E-08	0.00E+00	3.66E-11	8.32E-08	3.66E-11	2.42E-11	2.42E-11
manganese	7439-96-5	6.15272E-06	0.00E+00	6.50E-10	6.15E-06	6.50E-10	4.31E-10	4.31E-10
total mercury	NA			0.00E+00			0.00E+00	
mercuric chloride	7487-94-7	1.71535E-09	0.00E+00	2.85E-10	2.00E-09	2.85E-10	7.08E-10	7.08E-10
methyl mercury	22967-92-6	4.83818E-10	0.00E+00	1.14E-11	4.95E-10	1.14E-11	3.85E-11	3.85E-11
elemental mercury	7439-97-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	5.55815E-08	0.00E+00	1.21E-12	5.56E-08	1.21E-12	7.80E-12	7.80E-12
selenium	7782-49-2	2.20857E-07	0.00E+00	2.00E-12	2.21E-07	2.00E-12	2.56E-12	2.56E-12
silver	7440-22-4	1.93257E-08	0.00E+00	8.13E-13	1.93E-08	8.13E-13	5.89E-13	5.89E-13
vanadium	7440-62-2	2.14939E-07	0.00E+00	1.46E-11	2.15E-07	1.46E-11	1.32E-11	1.32E-11
zinc	7440-66-6	3.50484E-06	0.00E+00	7.59E-10	3.51E-06	7.59E-10	7.04E-09	7.04E-09

CONCENTRATIONS OF COPCS IN PRODUCE FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS: All Exposure Scenarios								
		Aboveground Produce - Individual Uptake Mechanisms			Exposed Produce	Protected Produce	Belowground Produce	
		Due to Direct Deposition	Due to Air-to-Plant Transfer	Due to Direct Uptake from Soil	Due to All Processes	Due to All Processes	Due to Direct Uptake from Soil	Due to All Processes
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
COPC	CAS Number	Pd	Pv	Pr	P_{ag}	P_p	Pr_{bg}	P_{bg}
1,4-dioxane	123-91-1	0	3.50E-11	3.55E-08	3.55E-08	3.55E-08	2.73E-06	2.73E-06
2-butanone	78-93-3	0	2.27E-11	4.58E-07	4.58E-07	4.58E-07	1.26E-06	1.26E-06
2-ethyl 1,3-butadiene	3404-63-5	0	4.68E-13	7.45E-12	7.92E-12	7.45E-12	1.91E-10	1.91E-10
acetone	67-64-1	0	1.28E-10	1.90E-06	1.90E-06	1.90E-06	1.69E-05	1.69E-05
benzene	71-43-2	0	2.13E-10	5.71E-09	5.92E-09	5.71E-09	1.93E-07	1.93E-07
bis(2-ethylhexyl)-phthalate	117-81-7	1.20667E-06	0.00E+00	1.74E-08	1.22E-06	1.74E-08	3.40E-12	3.40E-12
chloromethane	74-87-3	0	7.17E-14	4.39E-11	4.39E-11	4.39E-11	6.52E-10	6.52E-10
dichlorodifluoromethane	75-71-8	0	4.58E-14	4.45E-10	4.45E-10	4.45E-10	3.51E-09	3.51E-09
di-n-butyl phthalate	84-74-2	0	1.13E-08	1.01E-08	2.13E-08	1.01E-08	2.53E-10	2.53E-10
di-n-octyl phthalate	117-84-0	1.53002E-07	0.00E+00	1.66E-17	1.53E-07	1.66E-17	6.36E-04	6.36E-04
ethane	74-84-0	0	2.21E-11	2.12E-09	2.14E-09	2.12E-09	2.29E-08	2.29E-08
HD	505-60-2	0	2.38E-10	1.07E-10	3.46E-10	1.07E-10	4.87E-10	4.87E-10
methane	74-82-8	0	1.45E-11	3.78E-09	3.79E-09	3.78E-09	3.78E-08	3.78E-08
naphthalene	91-20-3	0	8.14E-10	4.20E-07	4.21E-07	4.20E-07	2.36E-07	2.36E-07
propene	115-07-1	0	2.61E-12	3.40E-10	3.43E-10	3.40E-10	3.61E-09	3.61E-09
toluene	108-88-3	0	2.98E-10	2.51E-09	2.81E-09	2.51E-09	1.82E-07	1.82E-07
trichlorofluoromethane	75-69-4	0	1.67E-13	1.99E-12	2.16E-12	1.99E-12	1.16E-10	1.16E-10
xylenes	1330-20-7	0	1.43E-11	2.29E-10	2.43E-10	2.29E-10	6.54E-09	6.54E-09
1,2,3,4,6,7,8-HpCDD	35822-46-9	3.44733E-13	0.00E+00	5.26E-15	3.50E-13	5.26E-15	3.11E-14	3.11E-14
1,2,3,4,6,7,8,9-OCDD	3268-87-9	2.10938E-12	0.00E+00	2.50E-14	2.13E-12	2.50E-14	1.74E-13	1.74E-13
1,2,3,4,6,7,8-HpCDF	67562-39-4	1.99657E-13	0.00E+00	6.78E-15	2.06E-13	6.78E-15	2.47E-14	2.47E-14
1,2,3,4,6,7,8,9-OCDF	39001-02-0	6.84421E-13	0.00E+00	1.07E-14	6.95E-13	1.07E-14	9.00E-14	9.00E-14
Total PCDDs and PCDFs	NA							
ammonia	7664-41-7	0	0.00E+00	1.17E-08	1.17E-08	1.17E-08	1.61E-07	1.61E-07
aluminum	7429-90-5	0	0.00E+00	5.75E-13	5.75E-13	5.75E-13	3.46E-13	3.46E-13
antimony	7440-36-0	7.91654E-08	0.00E+00	4.09E-12	7.92E-08	4.09E-12	3.85E-12	3.85E-12
barium	7440-39-3	1.58331E-08	0.00E+00	7.68E-12	1.58E-08	7.68E-12	3.58E-12	3.58E-12
beryllium	7440-41-7	7.45086E-09	0.00E+00	9.11E-13	7.45E-09	9.11E-13	5.30E-13	5.30E-13
cadmium	7440-43-9	8.02684E-08	0.00E+00	2.18E-11	8.03E-08	2.18E-11	2.61E-11	2.61E-11
chlorine	7782-50-5	0	0.00E+00	2.41E-07	2.41E-07	2.41E-07	8.45E-07	8.45E-07
chromium (3+)	7440-47-3	1.23637E-07	0.00E+00	2.57E-13	1.24E-07	2.57E-13	2.37E-13	2.37E-13
chromium (6+)	18540-29-9	1.23637E-07	0.00E+00	2.57E-13	1.24E-07	2.57E-13	2.37E-13	2.37E-13
cobalt	7440-48-4	2.79407E-08	0.00E+00	2.46E-13	2.79E-08	2.46E-13	1.99E-13	1.99E-13
copper	7440-50-8	1.37432E-06	0.00E+00	3.78E-09	1.38E-06	3.78E-09	3.51E-09	3.51E-09
hydrogen chloride	7647-01-0	0	0.00E+00	3.51E-07	3.51E-07	3.51E-07	4.00E-06	4.00E-06
iron	7439-89-6	0.000121254	0.00E+00	9.12E-11	1.21E-04	9.12E-11	1.68E-08	1.68E-08
lead	7439-92-1	8.31743E-08	0.00E+00	3.67E-11	8.32E-08	3.67E-11	2.43E-11	2.43E-11
manganese	7439-96-5	6.15272E-06	0.00E+00	6.50E-10	6.15E-06	6.50E-10	4.31E-10	4.31E-10
total mercury	NA			0.00E+00			0.00E+00	
mercuric chloride	7487-94-7	1.71535E-09	0.00E+00	5.70E-10	2.29E-09	5.70E-10	1.42E-09	1.42E-09
methyl mercury	22967-92-6	4.83818E-10	0.00E+00	2.25E-11	5.06E-10	2.25E-11	7.59E-11	7.59E-11
elemental mercury	7439-97-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	5.55815E-08	0.00E+00	1.21E-12	5.56E-08	1.21E-12	7.80E-12	7.80E-12
selenium	7782-49-2	2.20857E-07	0.00E+00	2.00E-12	2.21E-07	2.00E-12	2.56E-12	2.56E-12
silver	7440-22-4	1.93257E-08	0.00E+00	8.13E-13	1.93E-08	8.13E-13	5.89E-13	5.89E-13
vanadium	7440-62-2	2.14939E-07	0.00E+00	1.46E-11	2.15E-07	1.46E-11	1.32E-11	1.32E-11
zinc	7440-66-6	3.50484E-06	0.00E+00	7.59E-10	3.51E-06	7.59E-10	7.04E-09	7.04E-09

CONCENTRATIONS OF COPCS IN PRODUCE FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS (TEQ BASIS): Adult Resident and Adult Subsistence Fisher Exposure Scenarios								
		Aboveground Produce - Individual Uptake Mechanisms			Exposed Produce	Protected Produce	Belowground Produce	
		Due to Direct Deposition	Due to Air-to-Plant Transfer	Due to Direct Uptake from Soil	Due to All Processes	Due to All Processes	Due to Direct Uptake from Soil	Due to All Processes
		(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]
COPC	CAS Number	Pd	Pv	Pr	Pag	Pp	Prbg	Pbg
1,4-dioxane	123-91-1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-butanone	78-93-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-ethyl 1,3-butadiene	3404-63-5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
acetone	67-64-1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzene	71-43-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bis(2-ethylhexyl)-phthalate	117-81-7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloromethane	74-87-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dichlorodifluoromethane	75-71-8	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
di-n-butyl phthalate	84-74-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
di-n-octyl phthalate	117-84-0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ethane	74-84-0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
HD	505-60-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methane	74-82-8	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
naphthalene	91-20-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
propene	115-07-1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
toluene	108-88-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trichlorofluoromethane	75-69-4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
xylenes	1330-20-7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2,3,4,6,7,8-HpCDD	35822-46-9	3.44733E-15	0.00E+00	3.24E-17	3.48E-15	3.24E-17	1.92E-16	1.92E-16
1,2,3,4,6,7,8,9-OCDD	3268-87-9	6.32814E-16	0.00E+00	4.89E-18	6.38E-16	4.89E-18	3.40E-17	3.40E-17
1,2,3,4,6,7,8-HpCDF	67562-39-4	1.99657E-15	0.00E+00	4.16E-17	2.04E-15	4.16E-17	1.52E-16	1.52E-16
1,2,3,4,6,7,8,9-OCDF	39001-02-0	2.05326E-16	0.00E+00	2.14E-18	2.07E-16	2.14E-18	1.81E-17	1.81E-17
Total PCDDs and PCDFs	NA	6.28204E-15	0.00E+00	8.11E-17	6.36E-15	8.11E-17	3.96E-16	3.96E-16
ammonia	7664-41-7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
aluminum	7429-90-5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
antimony	7440-36-0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
barium	7440-39-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
beryllium	7440-41-7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cadmium	7440-43-9	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chlorine	7782-50-5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (3+)	7440-47-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (6+)	18540-29-9	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cobalt	7440-48-4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
copper	7440-50-8	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
hydrogen chloride	7647-01-0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
iron	7439-89-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
lead	7439-92-1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
manganese	7439-96-5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
total mercury	NA							
mercuric chloride	7487-94-7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methyl mercury	22967-92-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
elemental mercury	7439-97-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
selenium	7782-49-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
silver	7440-22-4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
vanadium	7440-62-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
zinc	7440-66-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

a. The concentration of individual PCDDs and PCDFs congeners and coplanar PCBs in produce are presented in units of mg COPC TEQ/kg. The concentration of total PCDDs and PCDFs as well as the concentration of total coplanar PCBs in produce are presented in units of mg TEQ/kg produce and are calculated as the sum of the concentrations of all individual PCDD and PCDF congeners in produce and the concentrations of all coplanar produce in plants, respectively.

CONCENTRATIONS OF COPCS IN PRODUCE FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS (TEQ BASIS): Adult Subsistence Farmer Exposure Scenario								
		Aboveground Produce - Individual Uptake Mechanisms			Exposed Produce	Protected Produce	Belowground Produce	
		Due to Direct Deposition	Due to Air-to-Plant Transfer	Due to Direct Uptake from Soil	Due to All Processes	Due to All Processes	Due to Direct Uptake from Soil	Due to All Processes
		(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]
COPC	CAS Number	Pd	Pv	Pr	Pag	Pp	Prbg	Pbg
1,4-dioxane	123-91-1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-butanone	78-93-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-ethyl 1,3-butadiene	3404-63-5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
acetone	67-64-1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzene	71-43-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bis(2-ethylhexyl)-phthalate	117-81-7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloromethane	74-87-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dichlorodifluoromethane	75-71-8	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
di-n-butyl phthalate	84-74-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
di-n-octyl phthalate	117-84-0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ethane	74-84-0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
HD	505-60-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methane	74-82-8	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
naphthalene	91-20-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
propene	115-07-1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
toluene	108-88-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trichlorofluoromethane	75-69-4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
xylenes	1330-20-7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2,3,4,6,7,8-HpCDD	35822-46-9	3.44733E-15	0.00E+00	2.84E-17	3.48E-15	2.84E-17	1.68E-16	1.68E-16
1,2,3,4,6,7,8,9-OCDD	3268-87-9	6.32814E-16	0.00E+00	4.37E-18	6.37E-16	4.37E-18	3.04E-17	3.04E-17
1,2,3,4,6,7,8-HpCDF	67562-39-4	1.99657E-15	0.00E+00	3.64E-17	2.03E-15	3.64E-17	1.33E-16	1.33E-16
1,2,3,4,6,7,8,9-OCDF	39001-02-0	2.05326E-16	0.00E+00	1.93E-18	2.07E-16	1.93E-18	1.63E-17	1.63E-17
Total PCDDs and PCDFs	NA	6.28204E-15	0.00E+00	7.11E-17	6.35E-15	7.11E-17	3.48E-16	3.48E-16
ammonia	7664-41-7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
aluminum	7429-90-5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
antimony	7440-36-0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
barium	7440-39-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
beryllium	7440-41-7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cadmium	7440-43-9	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chlorine	7782-50-5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (3+)	7440-47-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (6+)	18540-29-9	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cobalt	7440-48-4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
copper	7440-50-8	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
hydrogen chloride	7647-01-0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
iron	7439-89-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
lead	7439-92-1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
manganese	7439-96-5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
total mercury	NA							
mercuric chloride	7487-94-7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methyl mercury	22967-92-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
elemental mercury	7439-97-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
selenium	7782-49-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
silver	7440-22-4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
vanadium	7440-62-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
zinc	7440-66-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

a. The concentration of individual PCDDs and PCDFs congeners and coplanar PCBs in produce are presented in units of mg COPC TEQ/kg. The concentration of total PCDDs and PCDFs as well as the concentration of total coplanar PCBs in produce are presented in units of mg TEQ/kg produce and are calculated as the sum of the concentrations of all individual PCDD and PCDF congeners in produce and the concentrations of all coplanar produce in plants, respectively.

CONCENTRATIONS OF COPCS IN PRODUCE FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS (TEQ BASIS): Child Exposure Scenarios								
		Aboveground Produce - Individual Uptake Mechanisms			Exposed Produce	Protected Produce	Belowground Produce	
		Due to Direct Deposition	Due to Air-to-Plant Transfer	Due to Direct Uptake from Soil	Due to All Processes	Due to All Processes	Due to Direct Uptake from Soil	Due to All Processes
		(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]
COPC	CAS Number	Pd	Pv	Pr	Pag	Pp	Prbg	Pbg
1,4-dioxane	123-91-1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-butanone	78-93-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-ethyl 1,3-butadiene	3404-63-5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
acetone	67-64-1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzene	71-43-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bis(2-ethylhexyl)-phthalate	117-81-7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloromethane	74-87-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dichlorodifluoromethane	75-71-8	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
di-n-butyl phthalate	84-74-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
di-n-octyl phthalate	117-84-0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ethane	74-84-0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
HD	505-60-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methane	74-82-8	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
naphthalene	91-20-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
propene	115-07-1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
toluene	108-88-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trichlorofluoromethane	75-69-4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
xylenes	1330-20-7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2,3,4,6,7,8-HpCDD	35822-46-9	3.44733E-15	0.00E+00	2.71E-17	3.47E-15	2.71E-17	1.61E-16	1.61E-16
1,2,3,4,6,7,8,9-OCDD	3268-87-9	6.32814E-16	0.00E+00	3.86E-18	6.37E-16	3.86E-18	2.68E-17	2.68E-17
1,2,3,4,6,7,8-HpCDF	67562-39-4	1.99657E-15	0.00E+00	3.50E-17	2.03E-15	3.50E-17	1.28E-16	1.28E-16
1,2,3,4,6,7,8,9-OCDF	39001-02-0	2.05326E-16	0.00E+00	1.64E-18	2.07E-16	1.64E-18	1.38E-17	1.38E-17
Total PCDDs and PCDFs	NA	6.28204E-15	0.00E+00	6.76E-17	6.35E-15	6.76E-17	3.29E-16	3.29E-16
ammonia	7664-41-7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
aluminum	7429-90-5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
antimony	7440-36-0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
barium	7440-39-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
beryllium	7440-41-7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cadmium	7440-43-9	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chlorine	7782-50-5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (3+)	7440-47-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (6+)	18540-29-9	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cobalt	7440-48-4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
copper	7440-50-8	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
hydrogen chloride	7647-01-0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
iron	7439-89-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
lead	7439-92-1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
manganese	7439-96-5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
total mercury	NA							
mercuric chloride	7487-94-7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methyl mercury	22967-92-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
elemental mercury	7439-97-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
selenium	7782-49-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
silver	7440-22-4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
vanadium	7440-62-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
zinc	7440-66-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

a. The concentration of individual PCDDs and PCDFs congeners and coplanar PCBs in produce are presented in units of mg COPC TEQ/kg. The concentration of total PCDDs and PCDFs as well as the concentration of total coplanar PCBs in produce are presented in units of mg TEQ/kg produce and are calculated as the sum of the concentrations of all individual PCDD and PCDF congeners in produce and the concentrations of all coplanar produce in plants, respectively.

CONCENTRATIONS OF COPCS IN PRODUCE FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS (TEQ BASIS): Infant Exposure Scenarios								
		Aboveground Produce - Individual Uptake Mechanisms			Exposed Produce	Protected Produce	Belowground Produce	
		Due to Direct Deposition	Due to Air-to-Plant Transfer	Due to Direct Uptake from Soil	Due to All Processes	Due to All Processes	Due to Direct Uptake from Soil	Due to All Processes
		(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]
COPC	CAS Number	Pd	Pv	Pr	Pag	Pp	Prbg	Pbg
1,4-dioxane	123-91-1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-butanone	78-93-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-ethyl 1,3-butadiene	3404-63-5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
acetone	67-64-1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzene	71-43-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bis(2-ethylhexyl)-phthalate	117-81-7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloromethane	74-87-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dichlorodifluoromethane	75-71-8	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
di-n-butyl phthalate	84-74-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
di-n-octyl phthalate	117-84-0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ethane	74-84-0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
HD	505-60-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methane	74-82-8	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
naphthalene	91-20-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
propene	115-07-1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
toluene	108-88-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trichlorofluoromethane	75-69-4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
xylenes	1330-20-7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2,3,4,6,7,8-HpCDD	35822-46-9	3.44733E-15	0.00E+00	2.71E-17	3.47E-15	2.71E-17	1.61E-16	1.61E-16
1,2,3,4,6,7,8,9-OCDD	3268-87-9	6.32814E-16	0.00E+00	3.86E-18	6.37E-16	3.86E-18	2.68E-17	2.68E-17
1,2,3,4,6,7,8-HpCDF	67562-39-4	1.99657E-15	0.00E+00	3.50E-17	2.03E-15	3.50E-17	1.28E-16	1.28E-16
1,2,3,4,6,7,8,9-OCDF	39001-02-0	2.05326E-16	0.00E+00	1.64E-18	2.07E-16	1.64E-18	1.38E-17	1.38E-17
Total PCDDs and PCDFs	NA	6.28204E-15	0.00E+00	6.76E-17	6.35E-15	6.76E-17	3.29E-16	3.29E-16
ammonia	7664-41-7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
aluminum	7429-90-5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
antimony	7440-36-0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
barium	7440-39-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
beryllium	7440-41-7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cadmium	7440-43-9	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chlorine	7782-50-5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (3+)	7440-47-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (6+)	18540-29-9	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cobalt	7440-48-4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
copper	7440-50-8	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
hydrogen chloride	7647-01-0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
iron	7439-89-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
lead	7439-92-1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
manganese	7439-96-5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
total mercury	NA							
mercuric chloride	7487-94-7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methyl mercury	22967-92-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
elemental mercury	7439-97-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
selenium	7782-49-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
silver	7440-22-4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
vanadium	7440-62-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
zinc	7440-66-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

a. The concentration of individual PCDDs and PCDFs congeners and coplanar PCBs in produce are presented in units of mg COPC TEQ/kg. The concentration of total PCDDs and PCDFs as well as the concentration of total coplanar PCBs in produce are presented in units of mg TEQ/kg produce and are calculated as the sum of the concentrations of all individual PCDD and PCDF congeners in produce and the concentrations of all coplanar produce in plants, respectively.

CONCENTRATIONS OF COPCS IN PRODUCE FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS: All Exposure Scenarios								
		Aboveground Produce - Individual Uptake Mechanisms			Exposed Produce	Protected Produce	Belowground Produce	
		Due to Direct Deposition	Due to Air-to-Plant Transfer	Due to Direct Uptake from Soil	Due to All Processes	Due to All Processes	Due to Direct Uptake from Soil	Due to All Processes
		(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]
COPC	CAS Number	Pd	Pv	Pr	Pag	Pp	Prbg	Pbg
1,4-dioxane	123-91-1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-butanone	78-93-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-ethyl 1,3-butadiene	3404-63-5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
acetone	67-64-1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzene	71-43-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bis(2-ethylhexyl)-phthalate	117-81-7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloromethane	74-87-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dichlorodifluoromethane	75-71-8	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
di-n-butyl phthalate	84-74-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
di-n-octyl phthalate	117-84-0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ethane	74-84-0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
HD	505-60-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methane	74-82-8	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
naphthalene	91-20-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
propene	115-07-1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
toluene	108-88-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trichlorofluoromethane	75-69-4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
xylenes	1330-20-7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2,3,4,6,7,8-HpCDD	35822-46-9	3.44733E-15	0.00E+00	5.26E-17	3.50E-15	5.26E-17	3.11E-16	3.11E-16
1,2,3,4,6,7,8,9-OCDD	3268-87-9	6.32814E-16	0.00E+00	7.51E-18	6.40E-16	7.51E-18	5.22E-17	5.22E-17
1,2,3,4,6,7,8-HpCDF	67562-39-4	1.99657E-15	0.00E+00	6.78E-17	2.06E-15	6.78E-17	2.47E-16	2.47E-16
1,2,3,4,6,7,8,9-OCDF	39001-02-0	2.05326E-16	0.00E+00	3.20E-18	2.09E-16	3.20E-18	2.70E-17	2.70E-17
Total PCDDs and PCDFs	NA	6.28204E-15	0.00E+00	1.31E-16	6.41E-15	1.31E-16	6.38E-16	6.38E-16
ammonia	7664-41-7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
aluminum	7429-90-5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
antimony	7440-36-0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
barium	7440-39-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
beryllium	7440-41-7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cadmium	7440-43-9	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chlorine	7782-50-5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (3+)	7440-47-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (6+)	18540-29-9	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cobalt	7440-48-4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
copper	7440-50-8	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
hydrogen chloride	7647-01-0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
iron	7439-89-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
lead	7439-92-1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
manganese	7439-96-5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
total mercury	NA							
mercuric chloride	7487-94-7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methyl mercury	22967-92-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
elemental mercury	7439-97-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
selenium	7782-49-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
silver	7440-22-4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
vanadium	7440-62-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
zinc	7440-66-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

a. The concentration of individual PCDDs and PCDFs congeners and coplanar PCBs in produce are presented in units of mg COPC TEQ/kg. The concentration of total PCDDs and PCDFs as well as the concentration of total coplanar PCBs in produce are presented in units of mg TEQ/kg produce and are calculated as the sum of the concentrations of all individual PCDD and PCDF congeners in produce and the concentrations of all coplanar produce in plants, respectively.

CONCENTRATIONS OF COPCS IN ANIMAL FEED FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Adult Resident and Adult Subsistence Fisher Exposure Scenarios									
		Concentration Due to Individual Uptake Mechanisms					Forage	Silage	Grain[1]
		Due to Direct Deposition - Forage	Due to Direct Deposition - Silage	Due to Air-to-Plant Transfer - Forage	Due to Air-to-Plant Transfer - Silage	Due to Direct Uptake from Soil	Due to All Processes	Due to All Processes	Due to All Processes
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
COPC	CAS Number	Pd_{forage}	Pd_{silage}	Pv_{forage}	Pv_{silage}	Pr	P_{forage}	P_{silage}	P_{grain}
1,4-dioxane	123-91-1	0.00E+00	0.00E+00	3.50E-11	1.75E-11	5.91E-09	5.94E-09	5.93E-09	5.91E-09
2-butanone	78-93-3	0.00E+00	0.00E+00	2.27E-11	1.13E-11	7.64E-08	7.64E-08	7.64E-08	7.64E-08
2-ethyl 1,3-butadiene	3404-63-5	0.00E+00	0.00E+00	4.68E-13	2.34E-13	1.24E-12	1.71E-12	1.48E-12	1.24E-12
acetone	67-64-1	0.00E+00	0.00E+00	1.28E-10	6.38E-11	3.17E-07	3.18E-07	3.17E-07	3.17E-07
benzene	71-43-2	0.00E+00	0.00E+00	2.13E-10	1.07E-10	9.52E-10	1.16E-09	1.06E-09	9.52E-10
bis(2-ethylhexyl)-phthalate	117-81-7	1.35E-05	3.99E-06	0.00E+00	0.00E+00	2.91E-09	1.35E-05	3.99E-06	2.91E-09
chloromethane	74-87-3	0.00E+00	0.00E+00	7.17E-14	3.58E-14	7.31E-12	7.38E-12	7.35E-12	7.31E-12
dichlorodifluoromethane	75-71-8	0.00E+00	0.00E+00	4.58E-14	2.29E-14	7.42E-11	7.42E-11	7.42E-11	7.42E-11
di-n-butyl phthalate	84-74-2	0.00E+00	0.00E+00	1.13E-06	5.63E-07	1.68E-09	1.13E-06	5.64E-07	1.68E-09
di-n-octyl phthalate	117-84-0	1.72E-06	5.05E-07	0.00E+00	0.00E+00	2.77E-18	1.72E-06	5.05E-07	2.77E-18
ethane	74-84-0	0.00E+00	0.00E+00	2.21E-11	1.10E-11	3.53E-10	3.75E-10	3.64E-10	3.53E-10
HD	505-60-2	0.00E+00	0.00E+00	2.38E-10	1.19E-10	1.79E-11	2.56E-10	1.37E-10	1.79E-11
methane	74-82-8	0.00E+00	0.00E+00	1.45E-11	7.24E-12	6.29E-10	6.44E-10	6.37E-10	6.29E-10
naphthalene	91-20-3	0.00E+00	0.00E+00	8.14E-10	4.07E-10	7.00E-08	7.08E-08	7.04E-08	7.00E-08
propene	115-07-1	0.00E+00	0.00E+00	2.61E-12	1.31E-12	5.67E-11	5.94E-11	5.81E-11	5.67E-11
toluene	108-88-3	0.00E+00	0.00E+00	2.98E-10	1.49E-10	4.18E-10	7.17E-10	5.68E-10	4.18E-10
trichlorofluoromethane	75-69-4	0.00E+00	0.00E+00	1.67E-13	8.37E-14	3.32E-13	5.00E-13	4.16E-13	3.32E-13
xylenes	1330-20-7	0.00E+00	0.00E+00	1.43E-11	7.15E-12	3.81E-11	5.24E-11	4.52E-11	3.81E-11
1,2,3,4,6,7,8-HpCDD	35822-46-9	3.87E-12	1.14E-12	0.00E+00	0.00E+00	3.24E-15	3.87E-12	1.14E-12	3.24E-15
1,2,3,4,6,7,8,9-OCDD	3268-87-9	2.37E-11	6.97E-12	0.00E+00	0.00E+00	1.63E-14	2.37E-11	6.98E-12	1.63E-14
1,2,3,4,6,7,8-HpCDF	67562-39-4	2.24E-12	6.59E-13	0.00E+00	0.00E+00	4.16E-15	2.24E-12	6.64E-13	4.16E-15
1,2,3,4,6,7,8,9-OCDF	39001-02-0	7.68E-12	2.26E-12	0.00E+00	0.00E+00	7.14E-15	7.68E-12	2.27E-12	7.14E-15
Total PCDDs and PCDFs	NA								
ammonia	7664-41-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.96E-09	1.96E-09	1.96E-09	1.96E-09
aluminum	7429-90-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.58E-14	9.58E-14	9.58E-14	9.58E-14
antimony	7440-36-0	8.88E-07	2.61E-07	0.00E+00	0.00E+00	6.82E-13	8.88E-07	2.61E-07	6.82E-13
barium	7440-39-3	1.78E-07	5.23E-08	0.00E+00	0.00E+00	1.28E-12	1.78E-07	5.23E-08	1.28E-12
beryllium	7440-41-7	8.36E-08	2.46E-08	0.00E+00	0.00E+00	1.52E-13	8.36E-08	2.46E-08	1.52E-13
cadmium	7440-43-9	9.00E-07	2.65E-07	0.00E+00	0.00E+00	3.63E-12	9.00E-07	2.65E-07	3.63E-12
chlorine	7782-50-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.01E-08	4.01E-08	4.01E-08	4.01E-08
chromium (3+)	7440-47-3	1.39E-06	4.08E-07	0.00E+00	0.00E+00	4.28E-14	1.39E-06	4.08E-07	4.28E-14
chromium (6+)	18540-29-9	1.39E-06	4.08E-07	0.00E+00	0.00E+00	4.28E-14	1.39E-06	4.08E-07	4.28E-14
cobalt	7440-48-4	3.13E-07	9.23E-08	0.00E+00	0.00E+00	4.10E-14	3.13E-07	9.23E-08	4.10E-14
copper	7440-50-8	1.54E-05	4.54E-06	0.00E+00	0.00E+00	6.29E-10	1.54E-05	4.54E-06	6.29E-10
hydrogen chloride	7647-01-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.84E-08	5.84E-08	5.84E-08	5.84E-08
iron	7439-89-6	1.36E-03	4.00E-04	0.00E+00	0.00E+00	1.52E-11	1.36E-03	4.00E-04	1.52E-11
lead	7439-92-1	9.33E-07	2.75E-07	0.00E+00	0.00E+00	6.11E-12	9.33E-07	2.75E-07	6.11E-12
manganese	7439-96-5	6.90E-05	2.03E-05	0.00E+00	0.00E+00	1.08E-10	6.90E-05	2.03E-05	1.08E-10
total mercury	NA								
mercuric chloride	7487-94-7	1.92E-08	5.67E-09	0.00E+00	0.00E+00	5.23E-10	1.98E-08	6.19E-09	5.23E-10
methyl mercury	22967-92-6	5.43E-09	1.60E-09	0.00E+00	0.00E+00	1.69E-11	5.44E-09	1.61E-09	1.69E-11
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	6.23E-07	1.84E-07	0.00E+00	0.00E+00	2.02E-13	6.23E-07	1.84E-07	2.02E-13
selenium	7782-49-2	2.48E-06	7.29E-07	0.00E+00	0.00E+00	3.33E-13	2.48E-06	7.29E-07	3.33E-13
silver	7440-22-4	2.17E-07	6.38E-08	0.00E+00	0.00E+00	1.36E-13	2.17E-07	6.38E-08	1.36E-13
vanadium	7440-62-2	2.41E-06	7.10E-07	0.00E+00	0.00E+00	2.44E-12	2.41E-06	7.10E-07	2.44E-12
zinc	7440-66-6	3.93E-05	1.16E-05	0.00E+00	0.00E+00	1.26E-10	3.93E-05	1.16E-05	1.26E-10

1. Grain was assumed grown on untilled land (Zs = 2cm). This causes a higher COPC concentration in grain, rather than using the default tilled soil depth of 20cm.

CONCENTRATIONS OF COPCS IN ANIMAL FEED FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Adult Farmer Exposure Scenario									
		Concentration Due to Individual Uptake Mechanisms					Forage	Silage	Grain[1]
		Due to Direct Deposition - Forage	Due to Direct Deposition - Silage	Due to Air-to-Plant Transfer - Forage	Due to Air-to-Plant Transfer - Silage	Due to Direct Uptake from Soil	Due to All Processes	Due to All Processes	Due to All Processes
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
COPC	CAS Number	Pd_{forage}	Pd_{silage}	Pv_{forage}	Pv_{silage}	Pr	P_{forage}	P_{silage}	P_{grain}
1,4-dioxane	123-91-1	0.00E+00	0.00E+00	3.50E-11	1.75E-11	4.43E-09	4.47E-09	4.45E-09	4.43E-09
2-butanone	78-93-3	0.00E+00	0.00E+00	2.27E-11	1.13E-11	5.73E-08	5.73E-08	5.73E-08	5.73E-08
2-ethyl 1,3-butadiene	3404-63-5	0.00E+00	0.00E+00	4.68E-13	2.34E-13	9.32E-13	1.40E-12	1.17E-12	9.32E-13
acetone	67-64-1	0.00E+00	0.00E+00	1.28E-10	6.38E-11	2.38E-07	2.38E-07	2.38E-07	2.38E-07
benzene	71-43-2	0.00E+00	0.00E+00	2.13E-10	1.07E-10	7.14E-10	9.27E-10	8.20E-10	7.14E-10
bis(2-ethylhexyl)-phthalate	117-81-7	1.35E-05	3.99E-06	0.00E+00	0.00E+00	2.18E-09	1.35E-05	3.99E-06	2.18E-09
chloromethane	74-87-3	0.00E+00	0.00E+00	7.17E-14	3.58E-14	5.48E-12	5.55E-12	5.52E-12	5.48E-12
dichlorodifluoromethane	75-71-8	0.00E+00	0.00E+00	4.58E-14	2.29E-14	5.56E-11	5.57E-11	5.57E-11	5.56E-11
di-n-butyl phthalate	84-74-2	0.00E+00	0.00E+00	1.13E-06	5.63E-07	1.26E-09	1.13E-06	5.64E-07	1.26E-09
di-n-octyl phthalate	117-84-0	1.72E-06	5.05E-07	0.00E+00	0.00E+00	2.08E-18	1.72E-06	5.05E-07	2.08E-18
ethane	74-84-0	0.00E+00	0.00E+00	2.21E-11	1.10E-11	2.64E-10	2.86E-10	2.75E-10	2.64E-10
HD	505-60-2	0.00E+00	0.00E+00	2.38E-10	1.19E-10	1.34E-11	2.52E-10	1.33E-10	1.34E-11
methane	74-82-8	0.00E+00	0.00E+00	1.45E-11	7.24E-12	4.72E-10	4.87E-10	4.79E-10	4.72E-10
naphthalene	91-20-3	0.00E+00	0.00E+00	8.14E-10	4.07E-10	5.25E-08	5.33E-08	5.29E-08	5.25E-08
propene	115-07-1	0.00E+00	0.00E+00	2.61E-12	1.31E-12	4.26E-11	4.52E-11	4.39E-11	4.26E-11
toluene	108-88-3	0.00E+00	0.00E+00	2.98E-10	1.49E-10	3.14E-10	6.12E-10	4.63E-10	3.14E-10
trichlorofluoromethane	75-69-4	0.00E+00	0.00E+00	1.67E-13	8.37E-14	2.49E-13	4.16E-13	3.33E-13	2.49E-13
xylenes	1330-20-7	0.00E+00	0.00E+00	1.43E-11	7.15E-12	2.86E-11	4.29E-11	3.57E-11	2.86E-11
1,2,3,4,6,7,8-HpCDD	35822-46-9	3.87E-12	1.14E-12	0.00E+00	0.00E+00	2.84E-15	3.87E-12	1.14E-12	2.84E-15
1,2,3,4,6,7,8,9-OCDD	3268-87-9	2.37E-11	6.97E-12	0.00E+00	0.00E+00	1.46E-14	2.37E-11	6.98E-12	1.46E-14
1,2,3,4,6,7,8-HpCDF	67562-39-4	2.24E-12	6.59E-13	0.00E+00	0.00E+00	3.64E-15	2.24E-12	6.63E-13	3.64E-15
1,2,3,4,6,7,8,9-OCDF	39001-02-0	7.68E-12	2.26E-12	0.00E+00	0.00E+00	6.44E-15	7.68E-12	2.27E-12	6.44E-15
Total PCDDs and PCDFs	NA								
ammonia	7664-41-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.47E-09	1.47E-09	1.47E-09	1.47E-09
aluminum	7429-90-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.19E-14	7.19E-14	7.19E-14	7.19E-14
antimony	7440-36-0	8.88E-07	2.61E-07	0.00E+00	0.00E+00	5.11E-13	8.88E-07	2.61E-07	5.11E-13
barium	7440-39-3	1.78E-07	5.23E-08	0.00E+00	0.00E+00	9.60E-13	1.78E-07	5.23E-08	9.60E-13
beryllium	7440-41-7	8.36E-08	2.46E-08	0.00E+00	0.00E+00	1.14E-13	8.36E-08	2.46E-08	1.14E-13
cadmium	7440-43-9	9.00E-07	2.65E-07	0.00E+00	0.00E+00	2.72E-12	9.00E-07	2.65E-07	2.72E-12
chlorine	7782-50-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.01E-08	3.01E-08	3.01E-08	3.01E-08
chromium (3+)	7440-47-3	1.39E-06	4.08E-07	0.00E+00	0.00E+00	3.21E-14	1.39E-06	4.08E-07	3.21E-14
chromium (6+)	18540-29-9	1.39E-06	4.08E-07	0.00E+00	0.00E+00	3.21E-14	1.39E-06	4.08E-07	3.21E-14
cobalt	7440-48-4	3.13E-07	9.23E-08	0.00E+00	0.00E+00	3.07E-14	3.13E-07	9.23E-08	3.07E-14
copper	7440-50-8	1.54E-05	4.54E-06	0.00E+00	0.00E+00	4.72E-10	1.54E-05	4.54E-06	4.72E-10
hydrogen chloride	7647-01-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.38E-08	4.38E-08	4.38E-08	4.38E-08
iron	7439-89-6	1.36E-03	4.00E-04	0.00E+00	0.00E+00	1.14E-11	1.36E-03	4.00E-04	1.14E-11
lead	7439-92-1	9.33E-07	2.75E-07	0.00E+00	0.00E+00	4.58E-12	9.33E-07	2.75E-07	4.58E-12
manganese	7439-96-5	6.90E-05	2.03E-05	0.00E+00	0.00E+00	8.13E-11	6.90E-05	2.03E-05	8.13E-11
total mercury	NA								
mercuric chloride	7487-94-7	1.92E-08	5.67E-09	0.00E+00	0.00E+00	5.35E-10	1.98E-08	6.20E-09	5.35E-10
methyl mercury	22967-92-6	5.43E-09	1.60E-09	0.00E+00	0.00E+00	1.59E-11	5.44E-09	1.61E-09	1.59E-11
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	6.23E-07	1.84E-07	0.00E+00	0.00E+00	1.51E-13	6.23E-07	1.84E-07	1.51E-13
selenium	7782-49-2	2.48E-06	7.29E-07	0.00E+00	0.00E+00	2.50E-13	2.48E-06	7.29E-07	2.50E-13
silver	7440-22-4	2.17E-07	6.38E-08	0.00E+00	0.00E+00	1.02E-13	2.17E-07	6.38E-08	1.02E-13
vanadium	7440-62-2	2.41E-06	7.10E-07	0.00E+00	0.00E+00	1.83E-12	2.41E-06	7.10E-07	1.83E-12
zinc	7440-66-6	3.93E-05	1.16E-05	0.00E+00	0.00E+00	9.49E-11	3.93E-05	1.16E-05	9.49E-11

1. Grain was assumed grown on untilled land (Zs = 2cm). This causes a higher COPC concentration in grain, rather than using the default tilled soil depth of 20cm.

CONCENTRATIONS OF COPCS IN ANIMAL FEED FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Child Exposure Scenarios									
		Concentration Due to Individual Uptake Mechanisms					Forage	Silage	Grain[1]
		Due to Direct Deposition - Forage	Due to Direct Deposition - Silage	Due to Air-to-Plant Transfer - Forage	Due to Air-to-Plant Transfer - Silage	Due to Direct Uptake from Soil	Due to All Processes	Due to All Processes	Due to All Processes
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
COPC	CAS Number	Pd_{forage}	Pd_{silage}	Pv_{forage}	Pv_{silage}	Pr	P_{forage}	P_{silage}	P_{grain}
1,4-dioxane	123-91-1	0.00E+00	0.00E+00	3.50E-11	1.75E-11	3.55E-08	3.55E-08	3.55E-08	3.55E-08
2-butanone	78-93-3	0.00E+00	0.00E+00	2.27E-11	1.13E-11	4.58E-07	4.58E-07	4.58E-07	4.58E-07
2-ethyl 1,3-butadiene	3404-63-5	0.00E+00	0.00E+00	4.68E-13	2.34E-13	7.45E-12	7.92E-12	7.69E-12	7.45E-12
acetone	67-64-1	0.00E+00	0.00E+00	1.28E-10	6.38E-11	1.90E-06	1.90E-06	1.90E-06	1.90E-06
benzene	71-43-2	0.00E+00	0.00E+00	2.13E-10	1.07E-10	5.71E-09	5.92E-09	5.82E-09	5.71E-09
bis(2-ethylhexyl)-phthalate	117-81-7	1.35E-05	3.99E-06	0.00E+00	0.00E+00	1.71E-08	1.36E-05	4.00E-06	1.71E-08
chloromethane	74-87-3	0.00E+00	0.00E+00	7.17E-14	3.58E-14	4.39E-11	4.39E-11	4.39E-11	4.39E-11
dichlorodifluoromethane	75-71-8	0.00E+00	0.00E+00	4.58E-14	2.29E-14	4.45E-10	4.45E-10	4.45E-10	4.45E-10
di-n-butyl phthalate	84-74-2	0.00E+00	0.00E+00	1.13E-06	5.63E-07	9.90E-09	1.13E-06	5.72E-07	9.90E-09
di-n-octyl phthalate	117-84-0	1.72E-06	5.05E-07	0.00E+00	0.00E+00	1.66E-17	1.72E-06	5.05E-07	1.66E-17
ethane	74-84-0	0.00E+00	0.00E+00	2.21E-11	1.10E-11	2.12E-09	2.14E-09	2.13E-09	2.12E-09
HD	505-60-2	0.00E+00	0.00E+00	2.38E-10	1.19E-10	1.07E-10	3.46E-10	2.27E-10	1.07E-10
methane	74-82-8	0.00E+00	0.00E+00	1.45E-11	7.24E-12	3.78E-09	3.79E-09	3.78E-09	3.78E-09
naphthalene	91-20-3	0.00E+00	0.00E+00	8.14E-10	4.07E-10	4.12E-07	4.12E-07	4.12E-07	4.12E-07
propene	115-07-1	0.00E+00	0.00E+00	2.61E-12	1.31E-12	3.40E-10	3.43E-10	3.42E-10	3.40E-10
toluene	108-88-3	0.00E+00	0.00E+00	2.98E-10	1.49E-10	2.51E-09	2.81E-09	2.66E-09	2.51E-09
trichlorofluoromethane	75-69-4	0.00E+00	0.00E+00	1.67E-13	8.37E-14	1.99E-12	2.16E-12	2.08E-12	1.99E-12
xylenes	1330-20-7	0.00E+00	0.00E+00	1.43E-11	7.15E-12	2.29E-10	2.43E-10	2.36E-10	2.29E-10
1,2,3,4,6,7,8-HpCDD	35822-46-9	3.87E-12	1.14E-12	0.00E+00	0.00E+00	2.71E-15	3.87E-12	1.14E-12	2.71E-15
1,2,3,4,6,7,8,9-OCDD	3268-87-9	2.37E-11	6.97E-12	0.00E+00	0.00E+00	1.29E-14	2.37E-11	6.98E-12	1.29E-14
1,2,3,4,6,7,8-HpCDF	67562-39-4	2.24E-12	6.59E-13	0.00E+00	0.00E+00	3.50E-15	2.24E-12	6.63E-13	3.50E-15
1,2,3,4,6,7,8,9-OCDF	39001-02-0	7.68E-12	2.26E-12	0.00E+00	0.00E+00	5.47E-15	7.68E-12	2.27E-12	5.47E-15
Total PCDDs and PCDFs	NA								
ammonia	7664-41-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.17E-08	1.17E-08	1.17E-08	1.17E-08
aluminum	7429-90-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.75E-13	5.75E-13	5.75E-13	5.75E-13
antimony	7440-36-0	8.88E-07	2.61E-07	0.00E+00	0.00E+00	4.09E-12	8.88E-07	2.61E-07	4.09E-12
barium	7440-39-3	1.78E-07	5.23E-08	0.00E+00	0.00E+00	7.67E-12	1.78E-07	5.23E-08	7.67E-12
beryllium	7440-41-7	8.36E-08	2.46E-08	0.00E+00	0.00E+00	9.09E-13	8.36E-08	2.46E-08	9.09E-13
cadmium	7440-43-9	9.00E-07	2.65E-07	0.00E+00	0.00E+00	2.18E-11	9.00E-07	2.65E-07	2.18E-11
chlorine	7782-50-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-07	2.40E-07	2.40E-07	2.40E-07
chromium (3+)	7440-47-3	1.39E-06	4.08E-07	0.00E+00	0.00E+00	2.57E-13	1.39E-06	4.08E-07	2.57E-13
chromium (6+)	18540-29-9	1.39E-06	4.08E-07	0.00E+00	0.00E+00	2.57E-13	1.39E-06	4.08E-07	2.57E-13
cobalt	7440-48-4	3.13E-07	9.23E-08	0.00E+00	0.00E+00	2.46E-13	3.13E-07	9.23E-08	2.46E-13
copper	7440-50-8	1.54E-05	4.54E-06	0.00E+00	0.00E+00	3.77E-09	1.54E-05	4.54E-06	3.77E-09
hydrogen chloride	7647-01-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.51E-07	3.51E-07	3.51E-07	3.51E-07
iron	7439-89-6	1.36E-03	4.00E-04	0.00E+00	0.00E+00	9.12E-11	1.36E-03	4.00E-04	9.12E-11
lead	7439-92-1	9.33E-07	2.75E-07	0.00E+00	0.00E+00	3.66E-11	9.33E-07	2.75E-07	3.66E-11
manganese	7439-96-5	6.90E-05	2.03E-05	0.00E+00	0.00E+00	6.50E-10	6.90E-05	2.03E-05	6.50E-10
total mercury	NA								
mercuric chloride	7487-94-7	1.92E-08	5.67E-09	0.00E+00	0.00E+00	2.85E-10	1.95E-08	5.95E-09	2.85E-10
methyl mercury	22967-92-6	5.43E-09	1.60E-09	0.00E+00	0.00E+00	1.14E-11	5.44E-09	1.61E-09	1.14E-11
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	6.23E-07	1.84E-07	0.00E+00	0.00E+00	1.21E-12	6.23E-07	1.84E-07	1.21E-12
selenium	7782-49-2	2.48E-06	7.29E-07	0.00E+00	0.00E+00	2.00E-12	2.48E-06	7.29E-07	2.00E-12
silver	7440-22-4	2.17E-07	6.38E-08	0.00E+00	0.00E+00	8.13E-13	2.17E-07	6.38E-08	8.13E-13
vanadium	7440-62-2	2.41E-06	7.10E-07	0.00E+00	0.00E+00	1.46E-11	2.41E-06	7.10E-07	1.46E-11
zinc	7440-66-6	3.93E-05	1.16E-05	0.00E+00	0.00E+00	7.59E-10	3.93E-05	1.16E-05	7.59E-10

1. Grain was assumed grown on untilled land (Zs = 2cm). This causes a higher COPC concentration in grain, rather than using the default tilled soil depth of 20cm.

CONCENTRATIONS OF COPCS IN ANIMAL FEED FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Infant Exposure Scenarios									
		Concentration Due to Individual Uptake Mechanisms					Forage	Silage	Grain[1]
		Due to Direct Deposition - Forage	Due to Direct Deposition - Silage	Due to Air-to-Plant Transfer - Forage	Due to Air-to-Plant Transfer - Silage	Due to Direct Uptake from Soil	Due to All Processes	Due to All Processes	Due to All Processes
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
COPC	CAS Number	Pd_{forage}	Pd_{silage}	Pv_{forage}	Pv_{silage}	Pr	P_{forage}	P_{silage}	P_{grain}
1,4-dioxane	123-91-1	0.00E+00	0.00E+00	3.50E-11	1.75E-11	3.55E-08	3.55E-08	3.55E-08	3.55E-08
2-butanone	78-93-3	0.00E+00	0.00E+00	2.27E-11	1.13E-11	4.58E-07	4.58E-07	4.58E-07	4.58E-07
2-ethyl 1,3-butadiene	3404-63-5	0.00E+00	0.00E+00	4.68E-13	2.34E-13	7.45E-12	7.92E-12	7.69E-12	7.45E-12
acetone	67-64-1	0.00E+00	0.00E+00	1.28E-10	6.38E-11	1.90E-06	1.90E-06	1.90E-06	1.90E-06
benzene	71-43-2	0.00E+00	0.00E+00	2.13E-10	1.07E-10	5.71E-09	5.92E-09	5.82E-09	5.71E-09
bis(2-ethylhexyl)-phthalate	117-81-7	1.35E-05	3.99E-06	0.00E+00	0.00E+00	1.71E-08	1.36E-05	4.00E-06	1.71E-08
chloromethane	74-87-3	0.00E+00	0.00E+00	7.17E-14	3.58E-14	4.39E-11	4.39E-11	4.39E-11	4.39E-11
dichlorodifluoromethane	75-71-8	0.00E+00	0.00E+00	4.58E-14	2.29E-14	4.45E-10	4.45E-10	4.45E-10	4.45E-10
di-n-butyl phthalate	84-74-2	0.00E+00	0.00E+00	1.13E-06	5.63E-07	9.90E-09	1.13E-06	5.72E-07	9.90E-09
di-n-octyl phthalate	117-84-0	1.72E-06	5.05E-07	0.00E+00	0.00E+00	1.66E-17	1.72E-06	5.05E-07	1.66E-17
ethane	74-84-0	0.00E+00	0.00E+00	2.21E-11	1.10E-11	2.12E-09	2.14E-09	2.13E-09	2.12E-09
HD	505-60-2	0.00E+00	0.00E+00	2.38E-10	1.19E-10	1.07E-10	3.46E-10	2.27E-10	1.07E-10
methane	74-82-8	0.00E+00	0.00E+00	1.45E-11	7.24E-12	3.78E-09	3.79E-09	3.78E-09	3.78E-09
naphthalene	91-20-3	0.00E+00	0.00E+00	8.14E-10	4.07E-10	4.12E-07	4.12E-07	4.12E-07	4.12E-07
propene	115-07-1	0.00E+00	0.00E+00	2.61E-12	1.31E-12	3.40E-10	3.43E-10	3.42E-10	3.40E-10
toluene	108-88-3	0.00E+00	0.00E+00	2.98E-10	1.49E-10	2.51E-09	2.81E-09	2.66E-09	2.51E-09
trichlorofluoromethane	75-69-4	0.00E+00	0.00E+00	1.67E-13	8.37E-14	1.99E-12	2.16E-12	2.08E-12	1.99E-12
xylenes	1330-20-7	0.00E+00	0.00E+00	1.43E-11	7.15E-12	2.29E-10	2.43E-10	2.36E-10	2.29E-10
1,2,3,4,6,7,8-HpCDD	35822-46-9	3.87E-12	1.14E-12	0.00E+00	0.00E+00	2.71E-15	3.87E-12	1.14E-12	2.71E-15
1,2,3,4,6,7,8,9-OCDD	3268-87-9	2.37E-11	6.97E-12	0.00E+00	0.00E+00	1.29E-14	2.37E-11	6.98E-12	1.29E-14
1,2,3,4,6,7,8-HpCDF	67562-39-4	2.24E-12	6.59E-13	0.00E+00	0.00E+00	3.50E-15	2.24E-12	6.63E-13	3.50E-15
1,2,3,4,6,7,8,9-OCDF	39001-02-0	7.68E-12	2.26E-12	0.00E+00	0.00E+00	5.47E-15	7.68E-12	2.27E-12	5.47E-15
Total PCDDs and PCDFs	NA								
ammonia	7664-41-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.17E-08	1.17E-08	1.17E-08	1.17E-08
aluminum	7429-90-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.75E-13	5.75E-13	5.75E-13	5.75E-13
antimony	7440-36-0	8.88E-07	2.61E-07	0.00E+00	0.00E+00	4.09E-12	8.88E-07	2.61E-07	4.09E-12
barium	7440-39-3	1.78E-07	5.23E-08	0.00E+00	0.00E+00	7.67E-12	1.78E-07	5.23E-08	7.67E-12
beryllium	7440-41-7	8.36E-08	2.46E-08	0.00E+00	0.00E+00	9.09E-13	8.36E-08	2.46E-08	9.09E-13
cadmium	7440-43-9	9.00E-07	2.65E-07	0.00E+00	0.00E+00	2.18E-11	9.00E-07	2.65E-07	2.18E-11
chlorine	7782-50-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-07	2.40E-07	2.40E-07	2.40E-07
chromium (3+)	7440-47-3	1.39E-06	4.08E-07	0.00E+00	0.00E+00	2.57E-13	1.39E-06	4.08E-07	2.57E-13
chromium (6+)	18540-29-9	1.39E-06	4.08E-07	0.00E+00	0.00E+00	2.57E-13	1.39E-06	4.08E-07	2.57E-13
cobalt	7440-48-4	3.13E-07	9.23E-08	0.00E+00	0.00E+00	2.46E-13	3.13E-07	9.23E-08	2.46E-13
copper	7440-50-8	1.54E-05	4.54E-06	0.00E+00	0.00E+00	3.77E-09	1.54E-05	4.54E-06	3.77E-09
hydrogen chloride	7647-01-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.51E-07	3.51E-07	3.51E-07	3.51E-07
iron	7439-89-6	1.36E-03	4.00E-04	0.00E+00	0.00E+00	9.12E-11	1.36E-03	4.00E-04	9.12E-11
lead	7439-92-1	9.33E-07	2.75E-07	0.00E+00	0.00E+00	3.66E-11	9.33E-07	2.75E-07	3.66E-11
manganese	7439-96-5	6.90E-05	2.03E-05	0.00E+00	0.00E+00	6.50E-10	6.90E-05	2.03E-05	6.50E-10
total mercury	NA								
mercuric chloride	7487-94-7	1.64E-08	5.67E-09	0.00E+00	0.00E+00	2.85E-10	1.66E-08	5.95E-09	2.85E-10
methyl mercury	22967-92-6	4.61E-09	1.60E-09	0.00E+00	0.00E+00	1.14E-11	4.62E-09	1.61E-09	1.14E-11
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	6.23E-07	1.84E-07	0.00E+00	0.00E+00	1.21E-12	6.23E-07	1.84E-07	1.21E-12
selenium	7782-49-2	2.48E-06	7.29E-07	0.00E+00	0.00E+00	2.00E-12	2.48E-06	7.29E-07	2.00E-12
silver	7440-22-4	2.17E-07	6.38E-08	0.00E+00	0.00E+00	8.13E-13	2.17E-07	6.38E-08	8.13E-13
vanadium	7440-62-2	2.41E-06	7.10E-07	0.00E+00	0.00E+00	1.46E-11	2.41E-06	7.10E-07	1.46E-11
zinc	7440-66-6	3.93E-05	1.16E-05	0.00E+00	0.00E+00	7.59E-10	3.93E-05	1.16E-05	7.59E-10

1. Grain was assumed grown on untilled land (Zs = 2cm). This causes a higher COPC concentration in grain, rather than using the default tilled soil depth of 20cm.

CONCENTRATIONS OF COPCS IN ANIMAL FEED FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS: All Exposure Scenarios									
		Concentration Due to Individual Uptake Mechanisms					Forage	Silage	Grain[1]
		Due to Direct Deposition - Forage	Due to Direct Deposition - Silage	Due to Air-to-Plant Transfer - Forage	Due to Air-to-Plant Transfer - Silage	Due to Direct Uptake from Soil	Due to All Processes	Due to All Processes	Due to All Processes
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
COPC	CAS Number	Pd_{forage}	Pd_{silage}	Pv_{forage}	Pv_{silage}	Pr	P_{forage}	P_{silage}	P_{grain}
1,4-dioxane	123-91-1	0.00E+00	0.00E+00	3.50E-11	1.75E-11	3.55E-08	3.55E-08	3.55E-08	3.55E-08
2-butanone	78-93-3	0.00E+00	0.00E+00	2.27E-11	1.13E-11	4.58E-07	4.58E-07	4.58E-07	4.58E-07
2-ethyl 1,3-butadiene	3404-63-5	0.00E+00	0.00E+00	4.68E-13	2.34E-13	7.45E-12	7.92E-12	7.69E-12	7.45E-12
acetone	67-64-1	0.00E+00	0.00E+00	1.28E-10	6.38E-11	1.90E-06	1.90E-06	1.90E-06	1.90E-06
benzene	71-43-2	0.00E+00	0.00E+00	2.13E-10	1.07E-10	5.71E-09	5.92E-09	5.82E-09	5.71E-09
bis(2-ethylhexyl)-phthalate	117-81-7	1.35E-05	3.99E-06	0.00E+00	0.00E+00	1.74E-08	1.36E-05	4.00E-06	1.74E-08
chloromethane	74-87-3	0.00E+00	0.00E+00	7.17E-14	3.58E-14	4.39E-11	4.39E-11	4.39E-11	4.39E-11
dichlorodifluoromethane	75-71-8	0.00E+00	0.00E+00	4.58E-14	2.29E-14	4.45E-10	4.45E-10	4.45E-10	4.45E-10
di-n-butyl phthalate	84-74-2	0.00E+00	0.00E+00	1.13E-06	5.63E-07	1.01E-08	1.14E-06	5.73E-07	1.01E-08
di-n-octyl phthalate	117-84-0	1.72E-06	5.05E-07	0.00E+00	0.00E+00	1.66E-17	1.72E-06	5.05E-07	1.66E-17
ethane	74-84-0	0.00E+00	0.00E+00	2.21E-11	1.10E-11	2.12E-09	2.14E-09	2.13E-09	2.12E-09
HD	505-60-2	0.00E+00	0.00E+00	2.38E-10	1.19E-10	1.07E-10	3.46E-10	2.27E-10	1.07E-10
methane	74-82-8	0.00E+00	0.00E+00	1.45E-11	7.24E-12	3.78E-09	3.79E-09	3.78E-09	3.78E-09
naphthalene	91-20-3	0.00E+00	0.00E+00	8.14E-10	4.07E-10	4.20E-07	4.21E-07	4.20E-07	4.20E-07
propene	115-07-1	0.00E+00	0.00E+00	2.61E-12	1.31E-12	3.40E-10	3.43E-10	3.42E-10	3.40E-10
toluene	108-88-3	0.00E+00	0.00E+00	2.98E-10	1.49E-10	2.51E-09	2.81E-09	2.66E-09	2.51E-09
trichlorofluoromethane	75-69-4	0.00E+00	0.00E+00	1.67E-13	8.37E-14	1.99E-12	2.16E-12	2.08E-12	1.99E-12
xylenes	1330-20-7	0.00E+00	0.00E+00	1.43E-11	7.15E-12	2.29E-10	2.43E-10	2.36E-10	2.29E-10
1,2,3,4,6,7,8-HpCDD	35822-46-9	3.87E-12	1.14E-12	0.00E+00	0.00E+00	5.26E-15	3.87E-12	1.14E-12	5.26E-15
1,2,3,4,6,7,8,9-OCDD	3268-87-9	2.37E-11	6.97E-12	0.00E+00	0.00E+00	2.50E-14	2.37E-11	6.99E-12	2.50E-14
1,2,3,4,6,7,8-HpCDF	67562-39-4	2.24E-12	6.59E-13	0.00E+00	0.00E+00	6.78E-15	2.25E-12	6.66E-13	6.78E-15
1,2,3,4,6,7,8,9-OCDF	39001-02-0	7.68E-12	2.26E-12	0.00E+00	0.00E+00	1.07E-14	7.69E-12	2.27E-12	1.07E-14
Total PCDDs and PCDFs	NA								
ammonia	7664-41-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.17E-08	1.17E-08	1.17E-08	1.17E-08
aluminum	7429-90-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.75E-13	5.75E-13	5.75E-13	5.75E-13
antimony	7440-36-0	8.88E-07	2.61E-07	0.00E+00	0.00E+00	4.09E-12	8.88E-07	2.61E-07	4.09E-12
barium	7440-39-3	1.78E-07	5.23E-08	0.00E+00	0.00E+00	7.68E-12	1.78E-07	5.23E-08	7.68E-12
beryllium	7440-41-7	8.36E-08	2.46E-08	0.00E+00	0.00E+00	9.11E-13	8.36E-08	2.46E-08	9.11E-13
cadmium	7440-43-9	9.00E-07	2.65E-07	0.00E+00	0.00E+00	2.18E-11	9.00E-07	2.65E-07	2.18E-11
chlorine	7782-50-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.41E-07	2.41E-07	2.41E-07	2.41E-07
chromium (3+)	7440-47-3	1.39E-06	4.08E-07	0.00E+00	0.00E+00	2.57E-13	1.39E-06	4.08E-07	2.57E-13
chromium (6+)	18540-29-9	1.39E-06	4.08E-07	0.00E+00	0.00E+00	2.57E-13	1.39E-06	4.08E-07	2.57E-13
cobalt	7440-48-4	3.13E-07	9.23E-08	0.00E+00	0.00E+00	2.46E-13	3.13E-07	9.23E-08	2.46E-13
copper	7440-50-8	1.54E-05	4.54E-06	0.00E+00	0.00E+00	3.78E-09	1.54E-05	4.54E-06	3.78E-09
hydrogen chloride	7647-01-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.51E-07	3.51E-07	3.51E-07	3.51E-07
iron	7439-89-6	1.36E-03	4.00E-04	0.00E+00	0.00E+00	9.12E-11	1.36E-03	4.00E-04	9.12E-11
lead	7439-92-1	9.33E-07	2.75E-07	0.00E+00	0.00E+00	3.67E-11	9.33E-07	2.75E-07	3.67E-11
manganese	7439-96-5	6.90E-05	2.03E-05	0.00E+00	0.00E+00	6.50E-10	6.90E-05	2.03E-05	6.50E-10
total mercury	NA								
mercuric chloride	7487-94-7	1.92E-08	5.67E-09	0.00E+00	0.00E+00	5.70E-10	1.98E-08	6.24E-09	5.70E-10
methyl mercury	22967-92-6	5.43E-09	1.60E-09	0.00E+00	0.00E+00	2.25E-11	5.45E-09	1.62E-09	2.25E-11
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	6.23E-07	1.84E-07	0.00E+00	0.00E+00	1.21E-12	6.23E-07	1.84E-07	1.21E-12
selenium	7782-49-2	2.48E-06	7.29E-07	0.00E+00	0.00E+00	2.00E-12	2.48E-06	7.29E-07	2.00E-12
silver	7440-22-4	2.17E-07	6.38E-08	0.00E+00	0.00E+00	8.13E-13	2.17E-07	6.38E-08	8.13E-13
vanadium	7440-62-2	2.41E-06	7.10E-07	0.00E+00	0.00E+00	1.46E-11	2.41E-06	7.10E-07	1.46E-11
zinc	7440-66-6	3.93E-05	1.16E-05	0.00E+00	0.00E+00	7.59E-10	3.93E-05	1.16E-05	7.59E-10

1. Grain was assumed grown on untilled land (Zs = 2cm). This causes a higher COPC concentration in grain, rather than using the default tilled soil depth of 20cm.

CONCENTRATIONS OF COPCS IN ANIMAL PRODUCTS FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Adult Resident and Adult Subsistence Fisher Exposure Scenarios						
		Beef Concentration	Pork Concentration	Poultry Concentration	Egg Concentration	Milk Concentration
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
COPC	CAS Number	A_{beef}	A_{pork}	$A_{poultry}$	A_{egg}	A_{milk}
1,4-dioxane	123-91-1	1.86E-12	8.98E-13	2.33E-14	1.33E-14	6.73E-13
2-butanone	78-93-3	9.49E-11	4.60E-11	1.20E-12	6.84E-13	3.44E-11
2-ethyl 1,3-butadiene	3404-63-5	2.39E-13	9.76E-14	2.52E-15	1.44E-15	8.21E-14
acetone	67-64-1	1.07E-10	5.21E-11	1.36E-12	7.72E-13	3.89E-11
benzene	71-43-2	4.58E-11	1.95E-11	4.96E-13	2.83E-13	1.62E-11
bis(2-ethylhexyl)-phthalate	117-81-7	5.15E-06	2.71E-07	6.01E-09	3.43E-09	1.64E-05
chloromethane	74-87-3	3.56E-14	1.72E-14	4.44E-16	2.55E-16	1.29E-14
dichlorodifluoromethane	75-71-8	3.29E-12	1.62E-09	4.25E-11	2.43E-11	1.18E-12
di-n-butyl phthalate	84-74-2	4.12E-05	3.54E-06	2.24E-11	1.28E-09	1.32E-04
di-n-octyl phthalate	117-84-0	1.27E-04	6.65E-06	4.36E-16	2.49E-16	4.04E-05
ethane	74-84-0	9.46E-12	4.43E-12	1.15E-13	6.57E-14	3.40E-12
HD	505-60-2	1.38E-11	1.63E-12	1.49E-14	8.51E-15	4.44E-12
methane	74-82-8	4.44E-12	7.66E-14	1.99E-15	1.13E-15	5.80E-14
naphthalene	91-20-3	1.34E-08	6.90E-09	1.88E-10	1.08E-10	4.65E-09
propene	115-07-1	1.41E-12	6.66E-13	1.73E-14	9.88E-15	5.06E-13
toluene	108-88-3	6.24E-11	2.16E-11	5.23E-13	2.99E-13	2.14E-11
trichlorofluoromethane	75-69-4	3.40E-11	1.27E-14	3.15E-13	1.80E-13	1.18E-11
xylenes	1330-20-7	8.06E-12	3.33E-12	8.63E-14	4.93E-14	2.77E-12
1,2,3,4,6,7,8-HpCDD	35822-46-9	3.39E-10	3.09E-12	5.05E-13	2.89E-13	1.06E-10
1,2,3,4,6,7,8,9-OCDD	3268-87-9	1.63E-09	1.53E-10	2.59E-12	1.48E-12	5.06E-10
1,2,3,4,6,7,8-HpCDF	67562-39-4	3.68E-13	3.37E-12	5.51E-16	2.97E-13	1.15E-10
1,2,3,4,6,7,8,9-OCDF	39001-02-0	6.76E-10	6.44E-12	1.11E-12	6.36E-13	2.10E-10
Total PCDDs and PCDFs	NA					
ammonia	7664-41-7	2.10E-12	1.01E-12	2.64E-14	1.51E-14	7.63E-13
aluminum	7429-90-5	6.82E-14	0.00E+00	0.00E+00	0.00E+00	7.49E-15
antimony	7440-36-0	8.47E-09	0.00E+00	0.00E+00	0.00E+00	1.28E-09
barium	7440-39-3	2.54E-10	0.00E+00	0.00E+00	0.00E+00	8.95E-10
beryllium	7440-41-7	7.97E-10	0.00E+00	0.00E+00	0.00E+00	1.08E-12
cadmium	7440-43-9	1.03E-09	7.09E-11	1.45E-13	3.41E-15	8.43E-11
chlorine	7782-50-5	1.71E-10	8.29E-11	2.16E-12	1.23E-12	6.19E-11
chromium (3+)	7440-47-3	7.27E-08	0.00E+00	0.00E+00	0.00E+00	3.00E-08
chromium (6+)	18540-29-9	7.27E-08	0.00E+00	0.00E+00	0.00E+00	3.00E-08
cobalt	7440-48-4	5.98E-08	0.00E+00	0.00E+00	0.00E+00	9.03E-09
copper	7440-50-8	1.47E-06	0.00E+00	0.00E+00	0.00E+00	3.33E-07
hydrogen chloride	7647-01-0	3.61E-11	1.75E-11	4.54E-13	2.59E-13	1.31E-11
iron	7439-89-6	2.59E-04	0.00E+00	0.00E+00	0.00E+00	4.90E-06
lead	7439-92-1	2.67E-09	0.00E+00	0.00E+00	0.00E+00	3.36E-09
manganese	7439-96-5	2.63E-07	0.00E+00	0.00E+00	0.00E+00	3.48E-07
total mercury	NA					
mercuric chloride	7487-94-7	1.08E-09	8.04E-13	2.15E-11	2.15E-11	6.84E-10
methyl mercury	22967-92-6	4.07E-11	1.28E-14	5.73E-14	5.73E-14	2.66E-11
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	3.57E-08	0.00E+00	0.00E+00	0.00E+00	8.98E-09
selenium	7782-49-2	5.35E-08	1.92E-07	4.98E-13	4.98E-13	2.09E-07
silver	7440-22-4	6.20E-09	0.00E+00	0.00E+00	0.00E+00	6.25E-08
vanadium	7440-62-2	5.75E-08	0.00E+00	0.00E+00	0.00E+00	6.95E-10
zinc	7440-66-6	3.37E-08	2.07E-09	4.72E-13	4.72E-13	1.84E-08

CONCENTRATIONS OF COPCS IN ANIMAL PRODUCTS FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Adult Subsistence Farmer Exposure Scenario						
		Beef Concentration	Pork Concentration	Poultry Concentration	Egg Concentration	Milk Concentration
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
COPC	CAS Number	A_{beef}	A_{pork}	$A_{poultry}$	A_{egg}	A_{milk}
1,4-dioxane	123-91-1	1.40E-12	6.74E-13	1.75E-14	9.97E-15	5.05E-13
2-butanone	78-93-3	7.12E-11	3.45E-11	8.97E-13	5.13E-13	2.58E-11
2-ethyl 1,3-butadiene	3404-63-5	1.93E-13	7.44E-14	1.89E-15	1.08E-15	6.60E-14
acetone	67-64-1	8.06E-11	3.91E-11	1.02E-12	5.79E-13	2.92E-11
benzene	71-43-2	3.61E-11	1.48E-11	3.72E-13	2.12E-13	1.27E-11
bis(2-ethylhexyl)-phthalate	117-81-7	5.15E-06	2.71E-07	4.51E-09	2.57E-09	1.64E-05
chloromethane	74-87-3	2.68E-14	1.29E-14	3.33E-16	1.91E-16	9.67E-15
dichlorodifluoromethane	75-71-8	2.47E-12	1.21E-09	3.19E-11	1.82E-11	8.88E-13
di-n-butyl phthalate	84-74-2	4.12E-05	3.52E-06	1.68E-11	9.60E-10	1.32E-04
di-n-octyl phthalate	117-84-0	1.27E-04	6.65E-06	3.27E-16	1.87E-16	4.04E-05
ethane	74-84-0	7.22E-12	3.33E-12	8.62E-14	4.93E-14	2.59E-12
HD	505-60-2	1.35E-11	1.49E-12	1.12E-14	6.38E-15	4.34E-12
methane	74-82-8	3.35E-12	5.75E-14	1.49E-15	8.50E-16	4.37E-14
naphthalene	91-20-3	1.01E-08	5.18E-09	1.41E-10	8.07E-11	3.50E-09
propene	115-07-1	1.07E-12	5.01E-13	1.30E-14	7.41E-15	3.83E-13
toluene	108-88-3	5.26E-11	1.67E-11	3.93E-13	2.24E-13	1.79E-11
trichlorofluoromethane	75-69-4	2.80E-11	9.77E-15	2.36E-13	1.35E-13	9.63E-12
xylenes	1330-20-7	6.51E-12	2.54E-12	6.48E-14	3.70E-14	2.22E-12
1,2,3,4,6,7,8-HpCDD	35822-46-9	3.37E-10	2.92E-12	4.42E-13	2.53E-13	1.05E-10
1,2,3,4,6,7,8,9-OCDD	3268-87-9	1.62E-09	1.45E-10	2.31E-12	1.32E-12	5.04E-10
1,2,3,4,6,7,8-HpCDF	67562-39-4	3.66E-13	3.18E-12	4.82E-16	2.59E-13	1.14E-10
1,2,3,4,6,7,8,9-OCDF	39001-02-0	6.73E-10	6.14E-12	1.00E-12	5.73E-13	2.09E-10
Total PCDDs and PCDFs	NA					
ammonia	7664-41-7	1.58E-12	7.61E-13	1.98E-14	1.13E-14	5.73E-13
aluminum	7429-90-5	5.12E-14	0.00E+00	0.00E+00	0.00E+00	5.62E-15
antimony	7440-36-0	8.47E-09	0.00E+00	0.00E+00	0.00E+00	1.28E-09
barium	7440-39-3	2.54E-10	0.00E+00	0.00E+00	0.00E+00	8.95E-10
beryllium	7440-41-7	7.97E-10	0.00E+00	0.00E+00	0.00E+00	1.08E-12
cadmium	7440-43-9	1.03E-09	7.09E-11	1.09E-13	2.56E-15	8.43E-11
chlorine	7782-50-5	1.28E-10	6.22E-11	1.62E-12	9.26E-13	4.64E-11
chromium (3+)	7440-47-3	7.27E-08	0.00E+00	0.00E+00	0.00E+00	3.00E-08
chromium (6+)	18540-29-9	7.27E-08	0.00E+00	0.00E+00	0.00E+00	3.00E-08
cobalt	7440-48-4	5.98E-08	0.00E+00	0.00E+00	0.00E+00	9.03E-09
copper	7440-50-8	1.47E-06	0.00E+00	0.00E+00	0.00E+00	3.33E-07
hydrogen chloride	7647-01-0	2.70E-11	1.31E-11	3.40E-13	1.94E-13	9.80E-12
iron	7439-89-6	2.59E-04	0.00E+00	0.00E+00	0.00E+00	4.90E-06
lead	7439-92-1	2.67E-09	0.00E+00	0.00E+00	0.00E+00	3.36E-09
manganese	7439-96-5	2.63E-07	0.00E+00	0.00E+00	0.00E+00	3.48E-07
total mercury	NA					
mercuric chloride	7487-94-7	1.09E-09	8.17E-13	2.20E-11	2.20E-11	6.85E-10
methyl mercury	22967-92-6	4.07E-11	1.27E-14	5.39E-14	5.39E-14	2.66E-11
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	3.57E-08	0.00E+00	0.00E+00	0.00E+00	8.98E-09
selenium	7782-49-2	5.35E-08	1.92E-07	3.74E-13	3.74E-13	2.09E-07
silver	7440-22-4	6.20E-09	0.00E+00	0.00E+00	0.00E+00	6.25E-08
vanadium	7440-62-2	5.75E-08	0.00E+00	0.00E+00	0.00E+00	6.95E-10
zinc	7440-66-6	3.37E-08	2.07E-09	3.54E-13	3.54E-13	1.84E-08

CONCENTRATIONS OF COPCS IN ANIMAL PRODUCTS FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Child Exposure Scenarios						
		Beef Concentration	Pork Concentration	Poultry Concentration	Egg Concentration	Milk Concentration
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
COPC	CAS Number	A_{beef}	A_{pork}	$A_{poultry}$	A_{egg}	A_{milk}
1,4-dioxane	123-91-1	1.11E-11	5.38E-12	1.40E-13	7.97E-14	4.02E-12
2-butanone	78-93-3	5.69E-10	2.76E-10	7.18E-12	4.10E-12	2.06E-10
2-ethyl 1,3-butadiene	3404-63-5	1.16E-12	5.62E-13	1.51E-14	8.63E-15	4.04E-13
acetone	67-64-1	6.44E-10	3.13E-10	8.14E-12	4.63E-12	2.33E-10
benzene	71-43-2	2.39E-10	1.14E-10	2.98E-12	1.70E-12	8.55E-11
bis(2-ethylhexyl)-phthalate	117-81-7	5.16E-06	2.80E-07	3.54E-08	2.02E-08	1.64E-05
chloromethane	74-87-3	2.12E-13	1.03E-13	2.67E-15	1.53E-15	7.67E-14
dichlorodifluoromethane	75-71-8	1.98E-11	9.71E-09	2.55E-10	1.46E-10	7.10E-12
di-n-butyl phthalate	84-74-2	4.18E-05	3.89E-06	1.32E-10	7.54E-09	1.33E-04
di-n-octyl phthalate	117-84-0	1.27E-04	6.65E-06	2.62E-15	1.50E-15	4.04E-05
ethane	74-84-0	5.44E-11	2.64E-11	6.90E-13	3.94E-13	1.96E-11
HD	505-60-2	1.95E-11	4.45E-12	8.95E-14	5.11E-14	6.48E-12
methane	74-82-8	2.62E-11	4.59E-13	1.19E-14	6.80E-15	3.43E-13
naphthalene	91-20-3	7.82E-08	4.06E-08	1.10E-09	6.33E-10	2.72E-08
propene	115-07-1	8.20E-12	3.98E-12	1.04E-13	5.93E-14	2.95E-12
toluene	108-88-3	2.59E-10	1.20E-10	3.14E-12	1.79E-12	9.15E-11
trichlorofluoromethane	75-69-4	1.54E-10	7.22E-14	1.89E-12	1.08E-12	5.47E-11
xylenes	1330-20-7	3.91E-11	1.92E-11	5.18E-13	2.96E-13	1.36E-11
1,2,3,4,6,7,8-HpCDD	35822-46-9	3.36E-10	2.86E-12	4.23E-13	2.42E-13	1.05E-10
1,2,3,4,6,7,8,9-OCDD	3268-87-9	1.61E-09	1.37E-10	2.04E-12	1.17E-12	5.03E-10
1,2,3,4,6,7,8-HpCDF	67562-39-4	3.65E-13	3.12E-12	4.63E-16	2.49E-13	1.14E-10
1,2,3,4,6,7,8,9-OCDF	39001-02-0	6.68E-10	5.72E-12	8.52E-13	4.87E-13	2.09E-10
Total PCDDs and PCDFs	NA					
ammonia	7664-41-7	1.26E-11	6.09E-12	1.58E-13	9.05E-14	4.58E-12
aluminum	7429-90-5	4.09E-13	0.00E+00	0.00E+00	0.00E+00	4.49E-14
antimony	7440-36-0	8.47E-09	0.00E+00	0.00E+00	0.00E+00	1.28E-09
barium	7440-39-3	2.54E-10	0.00E+00	0.00E+00	0.00E+00	8.96E-10
beryllium	7440-41-7	7.97E-10	0.00E+00	0.00E+00	0.00E+00	1.08E-12
cadmium	7440-43-9	1.03E-09	7.09E-11	8.69E-13	2.05E-14	8.43E-11
chlorine	7782-50-5	1.02E-09	4.97E-10	1.30E-11	7.41E-12	3.71E-10
chromium (3+)	7440-47-3	7.27E-08	0.00E+00	0.00E+00	0.00E+00	3.00E-08
chromium (6+)	18540-29-9	7.27E-08	0.00E+00	0.00E+00	0.00E+00	3.00E-08
cobalt	7440-48-4	5.98E-08	0.00E+00	0.00E+00	0.00E+00	9.03E-09
copper	7440-50-8	1.47E-06	0.00E+00	0.00E+00	0.00E+00	3.33E-07
hydrogen chloride	7647-01-0	2.16E-10	1.05E-10	2.72E-12	1.55E-12	7.84E-11
iron	7439-89-6	2.59E-04	0.00E+00	0.00E+00	0.00E+00	4.90E-06
lead	7439-92-1	2.67E-09	0.00E+00	0.00E+00	0.00E+00	3.36E-09
manganese	7439-96-5	2.63E-07	0.00E+00	0.00E+00	0.00E+00	3.48E-07
total mercury	NA					
mercuric chloride	7487-94-7	1.03E-09	5.61E-13	1.17E-11	1.17E-11	6.58E-10
methyl mercury	22967-92-6	4.06E-11	1.23E-14	3.88E-14	3.88E-14	2.66E-11
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	3.57E-08	0.00E+00	0.00E+00	0.00E+00	8.98E-09
selenium	7782-49-2	5.35E-08	1.92E-07	2.99E-12	2.99E-12	2.09E-07
silver	7440-22-4	6.20E-09	0.00E+00	0.00E+00	0.00E+00	6.25E-08
vanadium	7440-62-2	5.75E-08	0.00E+00	0.00E+00	0.00E+00	6.95E-10
zinc	7440-66-6	3.37E-08	2.08E-09	2.83E-12	2.83E-12	1.84E-08

CONCENTRATIONS OF COPCS IN ANIMAL PRODUCTS FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Infant Exposure Scenarios						
		Beef Concentration	Pork Concentration	Poultry Concentration	Egg Concentration	Milk Concentration
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
COPC	CAS Number	A_{beef}	A_{pork}	$A_{poultry}$	A_{egg}	A_{milk}
1,4-dioxane	123-91-1	1.11E-11	5.38E-12	1.40E-13	7.97E-14	4.02E-12
2-butanone	78-93-3	5.69E-10	2.76E-10	7.18E-12	4.10E-12	2.06E-10
2-ethyl 1,3-butadiene	3404-63-5	1.16E-12	5.62E-13	1.51E-14	8.63E-15	4.04E-13
acetone	67-64-1	6.44E-10	3.13E-10	8.14E-12	4.63E-12	2.33E-10
benzene	71-43-2	2.39E-10	1.14E-10	2.98E-12	1.70E-12	8.55E-11
bis(2-ethylhexyl)-phthalate	117-81-7	5.16E-06	2.80E-07	3.54E-08	2.02E-08	1.64E-05
chloromethane	74-87-3	2.12E-13	1.03E-13	2.67E-15	1.53E-15	7.67E-14
dichlorodifluoromethane	75-71-8	1.98E-11	9.71E-09	2.55E-10	1.46E-10	7.10E-12
di-n-butyl phthalate	84-74-2	4.18E-05	3.89E-06	1.32E-10	7.54E-09	1.33E-04
di-n-octyl phthalate	117-84-0	1.27E-04	6.65E-06	2.62E-15	1.50E-15	4.04E-05
ethane	74-84-0	5.44E-11	2.64E-11	6.90E-13	3.94E-13	1.96E-11
HD	505-60-2	1.95E-11	4.45E-12	8.95E-14	5.11E-14	6.48E-12
methane	74-82-8	2.62E-11	4.59E-13	1.19E-14	6.80E-15	3.43E-13
naphthalene	91-20-3	7.82E-08	4.06E-08	1.10E-09	6.33E-10	2.72E-08
propene	115-07-1	8.20E-12	3.98E-12	1.04E-13	5.93E-14	2.95E-12
toluene	108-88-3	2.59E-10	1.20E-10	3.14E-12	1.79E-12	9.15E-11
trichlorofluoromethane	75-69-4	1.54E-10	7.22E-14	1.89E-12	1.08E-12	5.47E-11
xylenes	1330-20-7	3.91E-11	1.92E-11	5.18E-13	2.96E-13	1.36E-11
1,2,3,4,6,7,8-HpCDD	35822-46-9	3.36E-10	2.86E-12	4.23E-13	2.42E-13	1.05E-10
1,2,3,4,6,7,8,9-OCDD	3268-87-9	1.61E-09	1.37E-10	2.04E-12	1.17E-12	5.03E-10
1,2,3,4,6,7,8-HpCDF	67562-39-4	3.65E-13	3.12E-12	4.63E-16	2.49E-13	1.14E-10
1,2,3,4,6,7,8,9-OCDF	39001-02-0	6.68E-10	5.72E-12	8.52E-13	4.87E-13	2.09E-10
Total PCDDs and PCDFs	NA					
ammonia	7664-41-7	1.26E-11	6.09E-12	1.58E-13	9.05E-14	4.58E-12
aluminum	7429-90-5	4.09E-13	0.00E+00	0.00E+00	0.00E+00	4.49E-14
antimony	7440-36-0	8.47E-09	0.00E+00	0.00E+00	0.00E+00	1.28E-09
barium	7440-39-3	2.54E-10	0.00E+00	0.00E+00	0.00E+00	8.96E-10
beryllium	7440-41-7	7.97E-10	0.00E+00	0.00E+00	0.00E+00	1.08E-12
cadmium	7440-43-9	1.03E-09	7.09E-11	8.69E-13	2.05E-14	8.43E-11
chlorine	7782-50-5	1.02E-09	4.97E-10	1.30E-11	7.41E-12	3.71E-10
chromium (3+)	7440-47-3	7.27E-08	0.00E+00	0.00E+00	0.00E+00	3.00E-08
chromium (6+)	18540-29-9	7.27E-08	0.00E+00	0.00E+00	0.00E+00	3.00E-08
cobalt	7440-48-4	5.98E-08	0.00E+00	0.00E+00	0.00E+00	9.03E-09
copper	7440-50-8	1.47E-06	0.00E+00	0.00E+00	0.00E+00	3.33E-07
hydrogen chloride	7647-01-0	2.16E-10	1.05E-10	2.72E-12	1.55E-12	7.84E-11
iron	7439-89-6	2.59E-04	0.00E+00	0.00E+00	0.00E+00	4.90E-06
lead	7439-92-1	2.67E-09	0.00E+00	0.00E+00	0.00E+00	3.36E-09
manganese	7439-96-5	2.63E-07	0.00E+00	0.00E+00	0.00E+00	3.48E-07
total mercury	NA					
mercuric chloride	7487-94-7	8.94E-10	5.61E-13	1.17E-11	1.17E-11	5.72E-10
methyl mercury	22967-92-6	3.50E-11	1.23E-14	3.88E-14	3.88E-14	2.29E-11
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	3.57E-08	0.00E+00	0.00E+00	0.00E+00	8.98E-09
selenium	7782-49-2	5.35E-08	1.92E-07	2.99E-12	2.99E-12	2.09E-07
silver	7440-22-4	6.20E-09	0.00E+00	0.00E+00	0.00E+00	6.25E-08
vanadium	7440-62-2	5.75E-08	0.00E+00	0.00E+00	0.00E+00	6.95E-10
zinc	7440-66-6	3.37E-08	2.08E-09	2.83E-12	2.83E-12	1.84E-08

CONCENTRATIONS OF COPCS IN ANIMAL PRODUCTS FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS: All Exposure Scenarios						
		Beef Concentration	Pork Concentration	Poultry Concentration	Egg Concentration	Milk Concentration
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
COPC	CAS Number	A_{beef}	A_{pork}	$A_{poultry}$	A_{egg}	A_{milk}
1,4-dioxane	123-91-1	1.11E-11	5.38E-12	1.40E-13	7.97E-14	4.02E-12
2-butanone	78-93-3	5.69E-10	2.76E-10	7.18E-12	4.10E-12	2.06E-10
2-ethyl 1,3-butadiene	3404-63-5	1.16E-12	5.62E-13	1.51E-14	8.63E-15	4.04E-13
acetone	67-64-1	6.44E-10	3.13E-10	8.14E-12	4.63E-12	2.33E-10
benzene	71-43-2	2.39E-10	1.14E-10	2.98E-12	1.70E-12	8.55E-11
bis(2-ethylhexyl)-phthalate	117-81-7	5.16E-06	2.80E-07	3.60E-08	2.06E-08	1.64E-05
chloromethane	74-87-3	2.12E-13	1.03E-13	2.67E-15	1.53E-15	7.67E-14
dichlorodifluoromethane	75-71-8	1.98E-11	9.71E-09	2.55E-10	1.46E-10	7.10E-12
di-n-butyl phthalate	84-74-2	4.18E-05	3.90E-06	1.34E-10	7.68E-09	1.33E-04
di-n-octyl phthalate	117-84-0	1.27E-04	6.65E-06	2.62E-15	1.50E-15	4.04E-05
ethane	74-84-0	5.44E-11	2.64E-11	6.90E-13	3.94E-13	1.96E-11
HD	505-60-2	1.95E-11	4.45E-12	8.95E-14	5.11E-14	6.48E-12
methane	74-82-8	2.62E-11	4.59E-13	1.19E-14	6.80E-15	3.43E-13
naphthalene	91-20-3	7.97E-08	4.14E-08	1.13E-09	6.45E-10	2.77E-08
propene	115-07-1	8.20E-12	3.98E-12	1.04E-13	5.93E-14	2.95E-12
toluene	108-88-3	2.59E-10	1.20E-10	3.14E-12	1.79E-12	9.15E-11
trichlorofluoromethane	75-69-4	1.54E-10	7.22E-14	1.89E-12	1.08E-12	5.47E-11
xylenes	1330-20-7	3.91E-11	1.92E-11	5.18E-13	2.96E-13	1.36E-11
1,2,3,4,6,7,8-HpCDD	35822-46-9	3.49E-10	3.96E-12	8.19E-13	4.68E-13	1.07E-10
1,2,3,4,6,7,8,9-OCDD	3268-87-9	1.67E-09	1.91E-10	3.97E-12	2.27E-12	5.13E-10
1,2,3,4,6,7,8-HpCDF	67562-39-4	3.79E-13	4.33E-12	8.97E-16	4.83E-13	1.17E-10
1,2,3,4,6,7,8,9-OCDF	39001-02-0	6.94E-10	7.96E-12	1.66E-12	9.49E-13	2.13E-10
Total PCDDs and PCDFs	NA					
ammonia	7664-41-7	1.26E-11	6.09E-12	1.58E-13	9.05E-14	4.58E-12
aluminum	7429-90-5	4.09E-13	0.00E+00	0.00E+00	0.00E+00	4.49E-14
antimony	7440-36-0	8.47E-09	0.00E+00	0.00E+00	0.00E+00	1.28E-09
barium	7440-39-3	2.54E-10	0.00E+00	0.00E+00	0.00E+00	8.96E-10
beryllium	7440-41-7	7.97E-10	0.00E+00	0.00E+00	0.00E+00	1.08E-12
cadmium	7440-43-9	1.03E-09	7.09E-11	8.69E-13	2.05E-14	8.43E-11
chlorine	7782-50-5	1.02E-09	4.97E-10	1.30E-11	7.41E-12	3.71E-10
chromium (3+)	7440-47-3	7.27E-08	0.00E+00	0.00E+00	0.00E+00	3.00E-08
chromium (6+)	18540-29-9	7.27E-08	0.00E+00	0.00E+00	0.00E+00	3.00E-08
cobalt	7440-48-4	5.98E-08	0.00E+00	0.00E+00	0.00E+00	9.03E-09
copper	7440-50-8	1.47E-06	0.00E+00	0.00E+00	0.00E+00	3.33E-07
hydrogen chloride	7647-01-0	2.16E-10	1.05E-10	2.72E-12	1.55E-12	7.84E-11
iron	7439-89-6	2.59E-04	0.00E+00	0.00E+00	0.00E+00	4.90E-06
lead	7439-92-1	2.67E-09	0.00E+00	0.00E+00	0.00E+00	3.36E-09
manganese	7439-96-5	2.63E-07	0.00E+00	0.00E+00	0.00E+00	3.48E-07
total mercury	NA					
mercuric chloride	7487-94-7	1.10E-09	8.53E-13	2.34E-11	2.34E-11	6.89E-10
methyl mercury	22967-92-6	4.09E-11	1.33E-14	7.64E-14	7.64E-14	2.67E-11
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	3.57E-08	0.00E+00	0.00E+00	0.00E+00	8.98E-09
selenium	7782-49-2	5.35E-08	1.92E-07	2.99E-12	2.99E-12	2.09E-07
silver	7440-22-4	6.20E-09	0.00E+00	0.00E+00	0.00E+00	6.25E-08
vanadium	7440-62-2	5.75E-08	0.00E+00	0.00E+00	0.00E+00	6.95E-10
zinc	7440-66-6	3.37E-08	2.08E-09	2.83E-12	2.83E-12	1.84E-08

CONCENTRATIONS OF COPCS IN ANIMAL PRODUCTS FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS (TEQ BASIS): Adult Resident and Adult Subsistence Fisher Exposure Scenarios						
		Beef Concentration	Pork Concentration	Poultry Concentration	Egg Concentration	Milk Concentration
		(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]
COPC	CAS Number	A_{beef}	A_{pork}	$A_{poultry}$	A_{egg}	A_{milk}
1,4-dioxane	123-91-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-butanone	78-93-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-ethyl 1,3-butadiene	3404-63-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
acetone	67-64-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzene	71-43-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bis(2-ethylhexyl)-phthalate	117-81-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloromethane	74-87-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dichlorodifluoromethane	75-71-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
di-n-butyl phthalate	84-74-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
di-n-octyl phthalate	117-84-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ethane	74-84-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
HD	505-60-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methane	74-82-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
naphthalene	91-20-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
propene	115-07-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
toluene	108-88-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trichlorofluoromethane	75-69-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
xylenes	1330-20-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2,3,4,6,7,8-HpCDD	35822-46-9	3.39E-12	3.09E-14	5.05E-15	2.89E-15	1.06E-12
1,2,3,4,6,7,8,9-OCDD	3268-87-9	4.88E-13	4.58E-14	7.76E-16	4.44E-16	1.52E-13
1,2,3,4,6,7,8-HpCDF	67562-39-4	3.68E-15	3.37E-14	5.51E-18	2.97E-15	1.15E-12
1,2,3,4,6,7,8,9-OCDF	39001-02-0	2.03E-13	1.93E-15	3.34E-16	1.91E-16	6.30E-14
Total PCDDs and PCDFs	NA	4.08E-12	1.12E-13	6.17E-15	6.49E-15	2.42E-12
ammonia	7664-41-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
aluminum	7429-90-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
antimony	7440-36-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
barium	7440-39-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
beryllium	7440-41-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cadmium	7440-43-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chlorine	7782-50-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (3+)	7440-47-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (6+)	18540-29-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cobalt	7440-48-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
copper	7440-50-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
hydrogen chloride	7647-01-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
iron	7439-89-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
lead	7439-92-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
manganese	7439-96-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
total mercury	NA					
mercuric chloride	7487-94-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methyl mercury	22967-92-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
selenium	7782-49-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
silver	7440-22-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
vanadium	7440-62-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
zinc	7440-66-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

a. The concentration of individual PCDDs and PCDFs congeners and coplanar PCBs in animal products are presented in units of mg COPC TEQ/kg. The concentration of total PCDDs and PCDFs as well as the concentration of total coplanar PCBs in animal products are presented in units of mg TEQ/kg produce and are calculated as the sum of the concentrations of all individual PCDD and PCDF congeners in animal products and the concentrations of all coplanar produce in animal products, respectively.

CONCENTRATIONS OF COPCS IN ANIMAL PRODUCTS FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS (TEQ BASIS): Adult Subsistence Farmer Exposure Scenario						
		Beef Concentration	Pork Concentration	Poultry Concentration	Egg Concentration	Milk Concentration
		(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]
COPC	CAS Number	A_{beef}	A_{pork}	$A_{poultry}$	A_{egg}	A_{milk}
1,4-dioxane	123-91-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-butanone	78-93-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-ethyl 1,3-butadiene	3404-63-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
acetone	67-64-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzene	71-43-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bis(2-ethylhexyl)-phthalate	117-81-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloromethane	74-87-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dichlorodifluoromethane	75-71-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
di-n-butyl phthalate	84-74-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
di-n-octyl phthalate	117-84-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ethane	74-84-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
HD	505-60-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methane	74-82-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
naphthalene	91-20-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
propene	115-07-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
toluene	108-88-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trichlorofluoromethane	75-69-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
xylenes	1330-20-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2,3,4,6,7,8-HpCDD	35822-46-9	3.37E-12	2.92E-14	4.42E-15	2.53E-15	1.05E-12
1,2,3,4,6,7,8,9-OCDD	3268-87-9	4.86E-13	4.35E-14	6.93E-16	3.96E-16	1.51E-13
1,2,3,4,6,7,8-HpCDF	67562-39-4	3.66E-15	3.18E-14	4.82E-18	2.59E-15	1.14E-12
1,2,3,4,6,7,8,9-OCDF	39001-02-0	2.02E-13	1.84E-15	3.01E-16	1.72E-16	6.28E-14
Total PCDDs and PCDFs	NA	4.06E-12	1.06E-13	5.42E-15	5.69E-15	2.41E-12
ammonia	7664-41-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
aluminum	7429-90-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
antimony	7440-36-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
barium	7440-39-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
beryllium	7440-41-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cadmium	7440-43-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chlorine	7782-50-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (3+)	7440-47-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (6+)	18540-29-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cobalt	7440-48-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
copper	7440-50-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
hydrogen chloride	7647-01-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
iron	7439-89-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
lead	7439-92-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
manganese	7439-96-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
total mercury	NA					
mercuric chloride	7487-94-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methyl mercury	22967-92-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
selenium	7782-49-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
silver	7440-22-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
vanadium	7440-62-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
zinc	7440-66-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

a. The concentration of individual PCDDs and PCDFs congeners and coplanar PCBs in animal products are presented in units of mg COPC TEQ/kg. The concentration of total PCDDs and PCDFs as well as the concentration of total coplanar PCBs in animal products are presented in units of mg TEQ/kg produce and are calculated as the sum of the concentrations of all individual PCDD and PCDF congeners in animal products and the concentrations of all coplanar produce in animal products, respectively.

CONCENTRATIONS OF COPCS IN ANIMAL PRODUCTS FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS (TEQ BASIS): Child Exposure Scenarios						
COPC	CAS Number	Beef Concentration (mg TEQ/kg)[a] A_{beef}	Pork Concentration (mg TEQ/kg)[a] A_{pork}	Poultry Concentration (mg TEQ/kg)[a] $A_{poultry}$	Egg Concentration (mg TEQ/kg)[a] A_{egg}	Milk Concentration (mg TEQ/kg)[a] A_{milk}
1,4-dioxane	123-91-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-butanone	78-93-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-ethyl 1,3-butadiene	3404-63-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
acetone	67-64-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzene	71-43-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bis(2-ethylhexyl)-phthalate	117-81-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloromethane	74-87-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dichlorodifluoromethane	75-71-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
di-n-butyl phthalate	84-74-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
di-n-octyl phthalate	117-84-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ethane	74-84-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
HD	505-60-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methane	74-82-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
naphthalene	91-20-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
propene	115-07-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
toluene	108-88-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trichlorofluoromethane	75-69-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
xylenes	1330-20-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2,3,4,6,7,8-HpCDD	35822-46-9	3.36E-12	2.86E-14	4.23E-15	2.42E-15	1.05E-12
1,2,3,4,6,7,8,9-OCDD	3268-87-9	4.83E-13	4.12E-14	6.12E-16	3.50E-16	1.51E-13
1,2,3,4,6,7,8-HpCDF	67562-39-4	3.65E-15	3.12E-14	4.63E-18	2.49E-15	1.14E-12
1,2,3,4,6,7,8,9-OCDF	39001-02-0	2.00E-13	1.72E-15	2.55E-16	1.46E-16	6.26E-14
Total PCDDs and PCDFs	NA	4.05E-12	1.03E-13	5.10E-15	5.40E-15	2.41E-12
ammonia	7664-41-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
aluminum	7429-90-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
antimony	7440-36-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
barium	7440-39-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
beryllium	7440-41-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cadmium	7440-43-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chlorine	7782-50-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (3+)	7440-47-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (6+)	18540-29-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cobalt	7440-48-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
copper	7440-50-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
hydrogen chloride	7647-01-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
iron	7439-89-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
lead	7439-92-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
manganese	7439-96-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
total mercury	NA					
mercuric chloride	7487-94-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methyl mercury	22967-92-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
selenium	7782-49-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
silver	7440-22-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
vanadium	7440-62-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
zinc	7440-66-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

a. The concentration of individual PCDDs and PCDFs congeners and coplanar PCBs in animal products are presented in units of mg COPC TEQ/kg. The concentration of total PCDDs and PCDFs as well as the concentration of total coplanar PCBs in animal products are presented in units of mg TEQ/kg produce and are calculated as the sum of the concentrations of all individual PCDD and PCDF congeners in animal products and the concentrations of all coplanar produce in animal products, respectively.

CONCENTRATIONS OF COPCS IN ANIMAL PRODUCTS FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS (TEQ BASIS): Infant Exposure Scenarios						
COPC	CAS Number	Beef Concentration (mg TEQ/kg)[a] A_{beef}	Pork Concentration (mg TEQ/kg)[a] A_{pork}	Poultry Concentration (mg TEQ/kg)[a] $A_{poultry}$	Egg Concentration (mg TEQ/kg)[a] A_{egg}	Milk Concentration (mg TEQ/kg)[a] A_{milk}
1,4-dioxane	123-91-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-butanone	78-93-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-ethyl 1,3-butadiene	3404-63-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
acetone	67-64-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzene	71-43-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bis(2-ethylhexyl)-phthalate	117-81-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloromethane	74-87-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dichlorodifluoromethane	75-71-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
di-n-butyl phthalate	84-74-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
di-n-octyl phthalate	117-84-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ethane	74-84-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
HD	505-60-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methane	74-82-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
naphthalene	91-20-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
propene	115-07-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
toluene	108-88-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trichlorofluoromethane	75-69-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
xylenes	1330-20-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2,3,4,6,7,8-HpCDD	35822-46-9	3.36E-12	2.86E-14	4.23E-15	2.42E-15	1.05E-12
1,2,3,4,6,7,8,9-OCDD	3268-87-9	4.83E-13	4.12E-14	6.12E-16	3.50E-16	1.51E-13
1,2,3,4,6,7,8-HpCDF	67562-39-4	3.65E-15	3.12E-14	4.63E-18	2.49E-15	1.14E-12
1,2,3,4,6,7,8,9-OCDF	39001-02-0	2.00E-13	1.72E-15	2.55E-16	1.46E-16	6.26E-14
Total PCDDs and PCDFs	NA	4.05E-12	1.03E-13	5.10E-15	5.40E-15	2.41E-12
ammonia	7664-41-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
aluminum	7429-90-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
antimony	7440-36-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
barium	7440-39-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
beryllium	7440-41-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cadmium	7440-43-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chlorine	7782-50-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (3+)	7440-47-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (6+)	18540-29-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cobalt	7440-48-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
copper	7440-50-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
hydrogen chloride	7647-01-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
iron	7439-89-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
lead	7439-92-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
manganese	7439-96-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
total mercury	NA					
mercuric chloride	7487-94-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methyl mercury	22967-92-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
selenium	7782-49-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
silver	7440-22-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
vanadium	7440-62-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
zinc	7440-66-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

a. The concentration of individual PCDDs and PCDFs congeners and coplanar PCBs in animal products are presented in units of mg COPC TEQ/kg. The concentration of total PCDDs and PCDFs as well as the concentration of total coplanar PCBs in animal products are presented in units of mg TEQ/kg produce and are calculated as the sum of the concentrations of all individual PCDD and PCDF congeners in animal products and the concentrations of all coplanar produce in animal products, respectively.

CONCENTRATIONS OF COPCS IN ANIMAL PRODUCTS FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS (TEQ BASIS): All Exposure Scenarios						
COPC	CAS Number	Beef Concentration (mg TEQ/kg)[a] A_{beef}	Pork Concentration (mg TEQ/kg)[a] A_{pork}	Poultry Concentration (mg TEQ/kg)[a] $A_{poultry}$	Egg Concentration (mg TEQ/kg)[a] A_{egg}	Milk Concentration (mg TEQ/kg)[a] A_{milk}
1,4-dioxane	123-91-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-butanone	78-93-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-ethyl 1,3-butadiene	3404-63-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
acetone	67-64-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzene	71-43-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bis(2-ethylhexyl)-phthalate	117-81-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloromethane	74-87-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dichlorodifluoromethane	75-71-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
di-n-butyl phthalate	84-74-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
di-n-octyl phthalate	117-84-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ethane	74-84-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
HD	505-60-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methane	74-82-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
naphthalene	91-20-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
propene	115-07-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
toluene	108-88-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trichlorofluoromethane	75-69-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
xylenes	1330-20-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2,3,4,6,7,8-HpCDD	35822-46-9	3.49E-12	3.96E-14	8.19E-15	4.68E-15	1.07E-12
1,2,3,4,6,7,8,9-OCDD	3268-87-9	5.01E-13	5.73E-14	1.19E-15	6.80E-16	1.54E-13
1,2,3,4,6,7,8-HpCDF	67562-39-4	3.79E-15	4.33E-14	8.97E-18	4.83E-15	1.17E-12
1,2,3,4,6,7,8,9-OCDF	39001-02-0	2.08E-13	2.39E-15	4.98E-16	2.85E-16	6.39E-14
Total PCDDs and PCDFs	NA	4.20E-12	1.43E-13	9.88E-15	1.05E-14	2.46E-12
ammonia	7664-41-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
aluminum	7429-90-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
antimony	7440-36-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
barium	7440-39-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
beryllium	7440-41-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cadmium	7440-43-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chlorine	7782-50-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (3+)	7440-47-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (6+)	18540-29-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cobalt	7440-48-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
copper	7440-50-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
hydrogen chloride	7647-01-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
iron	7439-89-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
lead	7439-92-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
manganese	7439-96-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
total mercury	NA					
mercuric chloride	7487-94-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methyl mercury	22967-92-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
selenium	7782-49-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
silver	7440-22-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
vanadium	7440-62-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
zinc	7440-66-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

a. The concentration of individual PCDDs and PCDFs congeners and coplanar PCBs in animal products are presented in units of mg COPC TEQ/kg. The concentration of total PCDDs and PCDFs as well as the concentration of total coplanar PCBs in animal products are presented in units of mg TEQ/kg produce and are calculated as the sum of the concentrations of all individual PCDD and PCDF congeners in animal products and the concentrations of all coplanar produce in animal products, respectively.

CONCENTRATIONS OF COPCS IN SURFACE WATER AND FISH FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Adult Resident and Adult Subsistence Fisher Exposure Scenarios												
		Diffusive Mass Transfer Coefficient			Erosion Loading Supporting Calculation		Contaminant Load To The Waterbody					
		Liquid Phase Transfer Coefficient	Gas Phase Transfer Coefficient	Overall Transfer Rate	Unit Soil Loss	Watershed Sediment Delivery Ratio	Due to Direct Deposition	Due to Impervious Runoff	Due to Pervious Runoff	Due to Erosion	Due to Diffusion	Due to All Processes
		(m/yr)	(m/yr)	(m/yr)	(kg/m^2-yr)	(dimensionless)	(g/yr)	(g/yr)	(g/yr)	(g/yr)	(g/yr)	(g/yr)
COPC	CAS Number	K_L	K_G	K_v	X_s	SD	L_{Dep}	L_{RI}	L_R	L_E	L_{Dif}	L_T
1,4-dioxane	123-91-1	1.82E+02	9.97E+05	1.07E+02	3.86E-01	3.59E-01	1.62E-03	2.00E-03	3.77E-05	1.23E-08	1.69E-02	2.06E-02
2-butanone	78-93-3	1.77E+02	4.96E+05	1.74E+02	3.86E-01	3.59E-01	3.11E-03	3.83E-03	1.65E-04	1.57E-06	4.51E-03	1.16E-02
2-ethyl 1,3-butadiene	3404-63-5	1.98E+02	5.76E+05	2.25E+02	3.86E-01	3.59E-01	3.06E-04	3.77E-04	4.36E-09	4.60E-10	1.31E-07	6.83E-04
acetone	67-64-1	1.96E+02	6.61E+05	1.88E+02	3.86E-01	3.59E-01	4.46E-02	5.49E-02	1.32E-03	3.75E-06	1.00E-01	2.01E-01
benzene	71-43-2	1.82E+02	5.25E+05	2.07E+02	3.86E-01	3.59E-01	3.45E-02	4.25E-02	1.22E-05	4.77E-08	5.93E-04	7.75E-02
bis(2-ethylhexyl)-phthalate	117-81-7	9.15E+01	2.84E+05	1.30E+00	3.86E-01	3.59E-01	4.53E-04	5.58E-04	2.22E-10	1.67E-05	0.00E+00	1.03E-03
chloromethane	74-87-3	1.35E+02	6.68E+05	1.53E+02	3.86E-01	3.59E-01	3.38E-04	4.16E-04	3.46E-08	6.79E-11	2.73E-06	7.57E-04
dichlorodifluoromethane	75-71-8	1.80E+02	2.62E+04	2.04E+02	3.86E-01	3.59E-01	3.92E-04	4.83E-04	3.45E-07	6.99E-09	1.09E-07	8.75E-04
di-n-butyl phthalate	84-74-2	1.53E+02	3.29E+05	2.38E+01	3.86E-01	3.59E-01	9.93E-05	1.22E-04	3.35E-08	5.69E-06	6.12E-04	8.40E-04
di-n-octyl phthalate	117-84-0	1.80E+02	2.62E+04	5.82E+01	3.86E-01	3.59E-01	5.74E-05	7.07E-05	1.98E-10	8.40E-19	0.00E+00	1.28E-04
ethane	74-84-0	3.12E+02	8.98E+05	3.55E+02	3.86E-01	3.59E-01	6.48E-01	7.99E-01	1.71E-06	1.79E-08	2.15E-04	1.45E+00
HD	505-60-2	1.48E+02	4.29E+05	1.34E+02	3.86E-01	3.59E-01	1.06E-04	1.31E-04	3.54E-08	2.71E-09	2.01E-04	4.38E-04
methane	74-82-8	4.12E+02	1.19E+06	4.69E+02	3.86E-01	3.59E-01	3.28E+00	4.04E+00	2.41E-06	6.86E-09	1.09E-03	7.31E+00
naphthalene	91-20-3	1.48E+02	4.02E+05	1.65E+02	3.86E-01	3.59E-01	5.94E-04	7.32E-04	3.73E-06	3.66E-05	9.55E-05	1.46E-03
propene	115-07-1	2.68E+02	7.74E+05	3.05E+02	3.86E-01	3.59E-01	3.31E-02	4.08E-02	2.74E-07	2.68E-09	2.41E-05	7.40E-02
toluene	108-88-3	1.62E+02	5.21E+05	1.84E+02	3.86E-01	3.59E-01	1.30E-02	1.61E-02	6.08E-06	7.16E-08	1.70E-04	2.93E-02
trichlorofluoromethane	75-69-4	1.76E+02	5.21E+05	2.00E+02	3.86E-01	3.59E-01	1.76E-04	2.16E-04	4.91E-09	3.85E-11	1.69E-07	3.92E-04
xylenes	1330-20-7	1.77E+02	5.13E+05	2.01E+02	3.86E-01	3.59E-01	2.04E-04	2.51E-04	1.28E-07	1.60E-08	2.89E-06	4.58E-04
1,2,3,4,6,7,8-HpCDD	35822-46-9	1.55E+02	1.17E+07	1.71E+02	3.86E-01	3.59E-01	1.29E-10	1.59E-10	4.38E-14	8.84E-10	0.00E+00	1.17E-09
1,2,3,4,6,7,8,9-OCDD	3268-87-9	1.55E+02	1.14E+07	1.68E+02	3.86E-01	3.59E-01	7.92E-10	9.75E-10	1.82E-13	5.80E-09	0.00E+00	7.57E-09
1,2,3,4,6,7,8-HpCDF	67562-39-4	1.55E+02	4.30E+06	1.65E+02	3.86E-01	3.59E-01	7.49E-11	9.23E-11	1.00E-13	5.09E-10	0.00E+00	6.77E-10
1,2,3,4,6,7,8,9-OCDF	39001-02-0	1.55E+02	4.19E+06	1.18E+02	3.86E-01	3.59E-01	2.57E-10	3.16E-10	9.65E-14	1.95E-09	0.00E+00	2.52E-09
Total PCDDs and PCDFs	NA											
ammonia	7664-41-7	4.02E+02	1.16E+06	2.99E+02	3.86E-01	3.59E-01	3.90E-04	4.81E-04	3.50E-06	1.95E-09	3.39E-03	4.26E-03
aluminum	7429-90-5	3.27E+02	9.44E+05	3.71E+02	3.86E-01	3.59E-01	9.69E-04	1.19E-03	6.78E-08	2.20E-08	6.86E-06	2.17E-03
antimony	7440-36-0	1.74E+02	4.81E+05	1.98E+02	3.86E-01	3.59E-01	2.97E-05	3.66E-05	3.63E-09	5.34E-09	0.00E+00	6.63E-05
barium	7440-39-3	1.74E+02	1.03E+05	1.98E+02	3.86E-01	3.59E-01	5.94E-06	7.32E-06	7.41E-09	9.93E-09	0.00E+00	1.33E-05
beryllium	7440-41-7	1.74E+02	4.81E+05	1.98E+02	3.86E-01	3.59E-01	2.80E-06	3.44E-06	5.71E-10	1.48E-08	0.00E+00	6.26E-06
cadmium	7440-43-9	1.74E+02	4.82E+05	1.98E+02	3.86E-01	3.59E-01	3.01E-05	3.71E-05	2.96E-09	7.26E-09	0.00E+00	6.72E-05
chlorine	7782-50-5	1.80E+02	2.62E+04	2.01E+02	3.86E-01	3.59E-01	4.68E-03	5.77E-03	9.57E-05	7.82E-07	3.76E-05	1.06E-02
chromium (3+)	7440-47-3	2.26E+02	6.70E+05	2.57E+02	3.86E-01	3.59E-01	4.64E-05	5.72E-05	3.52E-09	2.19E-09	0.00E+00	1.04E-04
chromium (6+)	18540-29-9	2.26E+02	6.70E+05	2.57E+02	3.86E-01	3.59E-01	4.64E-05	5.72E-05	3.52E-09	2.19E-09	0.00E+00	1.04E-04
cobalt	7440-48-4	2.31E+02	6.66E+05	2.62E+02	3.86E-01	3.59E-01	1.05E-05	1.29E-05	8.05E-10	1.18E-09	0.00E+00	2.34E-05
copper	7440-50-8	2.23E+02	6.44E+05	2.53E+02	3.86E-01	3.59E-01	5.16E-04	6.35E-04	4.17E-08	5.87E-07	0.00E+00	1.15E-03
hydrogen chloride	7647-01-0	1.80E+02	2.62E+04	2.00E+02	3.86E-01	3.59E-01	1.56E-02	1.92E-02	1.44E-04	1.50E-07	1.88E-04	3.52E-02
iron	7439-89-6	2.36E+02	6.83E+05	2.68E+02	3.86E-01	3.59E-01	4.55E-02	5.61E-02	3.36E-06	2.75E-06	0.00E+00	1.02E-01
lead	7439-92-1	1.74E+02	4.81E+05	1.98E+02	3.86E-01	3.59E-01	3.12E-05	3.85E-05	3.83E-09	1.13E-07	0.00E+00	6.98E-05
manganese	7439-96-5	2.38E+02	6.87E+05	2.70E+02	3.86E-01	3.59E-01	2.31E-03	2.84E-03	1.69E-07	3.60E-07	0.00E+00	5.15E-03
total mercury	NA	1.17E+02	7.37E+06	2.43E-01	3.86E-01	3.59E-01	8.25E-07	1.02E-06			0.00E+00	1.10E-05
mercuric chloride	7487-94-7	1.17E+02	7.37E+06	2.43E-01	3.86E-01	3.59E-01	0.00E+00	0.00E+00	4.77E-09	9.04E-06	0.00E+00	0.00E+00
methyl mercury	22967-92-6	1.29E+02	8.16E+06	8.05E+01	3.86E-01	3.59E-01	0.00E+00	0.00E+00	6.30E-10	1.44E-07	0.00E+00	0.00E+00
elemental mercury	7439-97-6	3.76E+02	1.30E+05	4.23E+02	3.86E-01	3.59E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	1.74E+02	4.81E+05	1.98E+02	3.86E-01	3.59E-01	2.09E-05	2.57E-05	2.55E-09	5.42E-09	0.00E+00	4.66E-05
selenium	7782-49-2	1.74E+02	4.81E+05	1.98E+02	3.86E-01	3.59E-01	8.29E-05	1.02E-04	2.55E-08	4.17E-09	0.00E+00	1.85E-04
silver	7440-22-4	1.74E+02	4.81E+05	1.98E+02	3.86E-01	3.59E-01	7.25E-06	8.93E-06	8.93E-10	2.42E-10	0.00E+00	1.62E-05
vanadium	7440-62-2	2.46E+02	7.11E+05	2.80E+02	3.86E-01	3.59E-01	8.07E-05	9.94E-05	5.63E-09	1.84E-07	0.00E+00	1.80E-04
zinc	7440-66-6	1.74E+02	4.81E+05	1.98E+02	3.86E-01	3.59E-01	1.32E-03	1.62E-03	1.61E-07	3.26E-07	0.00E+00	2.94E-03

CONCENTRATIONS OF COPCS IN SURFACE WATER AND FISH FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS:
Adult Resident and Adult Subsistence Fisher Exposure Scenarios

			Waterbody Dissipation Rate Constant					Concentration in Water				Concentration in Fish
COPC	CAS Number	Oral Cancer Slope Factor?	Fraction in Water Column (dimensionless) f_{wc}	Fraction in Benthic Sediment (dimensionless) f_{bs}	Water Column Volatilization Rate Constant (yr^{-1}) k_v	Benthic Burial Rate Constant (yr^{-1}) k_b	Overall Total Waterbody Dissipation Rate Constant (yr^{-1}) k_{wt}	Total Waterbody Concentration Including Water Column and Bed Sediment (mg/ℓ) C_{wtot}	Total Concentration in Water Column (mg/ℓ) C_{wctot}	Dissolved Phase Water Concentration (mg/ℓ) C_{dw}	Concentration Sorbed to Bed Sediment (mg/kg) C_{sb}	Fish Concentration (mg/kg) C_{fish}
1,4-dioxane	123-91-1	Yes	9.96E-01	3.71E-03	2.13E+01	1.95E-01	2.12E+01	5.50E-09	5.51E-09	5.51E-09		1.74E-08
2-butanone	78-93-3		9.96E-01	4.06E-03	3.46E+01	1.95E-01	3.45E+01	2.64E-09	2.64E-09	2.64E-09		8.35E-09
2-ethyl 1,3-butadiene	3404-63-5		9.25E-01	7.51E-02	4.48E+01	1.95E-01	4.15E+01	1.50E-10	1.39E-10	1.39E-10		6.42E-09
acetone	67-64-1		9.96E-01	3.71E-03	3.74E+01	1.95E-01	3.72E+01	4.43E-08	4.44E-08	4.44E-08		1.40E-07
benzene	71-43-2	Yes	9.82E-01	1.81E-02	4.11E+01	1.95E-01	4.03E+01	1.66E-08	1.64E-08	1.64E-08		1.36E-07
bis(2-ethylhexyl)-phthalate	117-81-7	Yes	3.91E-02	9.61E-01	2.39E-01	1.95E-01	1.97E-01	8.96E-09	3.52E-10	3.25E-10		6.32E-08
chloromethane	74-87-3		9.95E-01	5.07E-03	3.04E+01	1.95E-01	3.02E+01	1.81E-10	1.81E-10	1.81E-10		5.71E-10
dichlorodifluoromethane	75-71-8		9.82E-01	1.80E-02	4.06E+01	1.95E-01	3.98E+01	1.89E-10	1.86E-10	1.86E-10		1.71E-09
di-n-butyl phthalate	84-74-2		7.25E-01	2.75E-01	4.72E+00	1.95E-01	3.48E+00	3.97E-10	2.89E-10	2.89E-10		5.20E-07
di-n-octyl phthalate	117-84-0		9.96E-01	3.59E-03	1.16E+01	1.95E-01	1.15E+01	3.94E-11	3.95E-11	3.95E-11		1.83E-08
ethane	74-84-0		9.89E-01	1.13E-02	7.05E+01	1.95E-01	6.97E+01	2.35E-07	2.34E-07	2.34E-07		1.16E-06
HD	505-60-2	Yes	9.44E-01	5.64E-02	2.66E+01	1.95E-01	2.51E+01	1.15E-10	1.10E-10	1.10E-10		1.57E-09
methane	74-82-8		9.94E-01	5.67E-03	9.32E+01	1.95E-01	9.27E+01	9.98E-07	9.98E-07	9.98E-07		1.38E-06
naphthalene	91-20-3		7.76E-01	2.24E-01	3.28E+01	1.95E-01	2.55E+01	4.35E-10	3.39E-10	3.39E-10		2.35E-08
propene	115-07-1		9.89E-01	1.07E-02	6.06E+01	1.95E-01	6.00E+01	1.31E-08	1.30E-08	1.30E-08		5.98E-08
toluene	108-88-3		9.64E-01	3.59E-02	3.66E+01	1.95E-01	3.53E+01	6.71E-09	6.51E-09	6.51E-09		1.56E-07
trichlorofluoromethane	75-69-4		9.70E-01	3.01E-02	3.97E+01	1.95E-01	3.86E+01	8.64E-11	8.43E-11	8.43E-11		1.42E-09
xylenes	1330-20-7		9.13E-01	8.68E-02	4.00E+01	1.95E-01	3.65E+01	1.07E-10	9.82E-11	9.82E-11		5.31E-09
1,2,3,4,6,7,8-HpCDD	35822-46-9		1.27E-03	9.99E-01	7.21E-01	1.95E-01	1.96E-01	8.85E-14	1.13E-16	2.40E-18	1.48E-11	1.30E-13
1,2,3,4,6,7,8,9-OCDD	3268-87-9		3.16E-03	9.97E-01	4.48E-01	1.95E-01	1.96E-01	4.13E-13	1.31E-15	1.77E-17	6.91E-11	1.21E-14
1,2,3,4,6,7,8-HpCDF	67562-39-4		3.38E-03	9.97E-01	2.61E+00	1.95E-01	2.03E-01	3.51E-14	1.19E-16	9.47E-18	5.87E-12	5.14E-14
1,2,3,4,6,7,8,9-OCDF	39001-02-0		3.17E-03	9.97E-01	4.98E-01	1.95E-01	1.96E-01	1.37E-13	4.38E-16	9.29E-18	2.29E-11	4.01E-15
Total PCDDs and PCDFs	NA	Yes										
ammonia	7664-41-7		9.96E-01	4.02E-03	5.95E+01	1.95E-01	5.93E+01	7.54E-10	7.55E-10	7.55E-10		2.39E-09
aluminum	7429-90-5		9.41E-01	5.93E-02	7.38E+01	1.95E-01	6.95E+01	3.61E-10	3.41E-10	3.41E-10		1.08E-09
antimony	7440-36-0		7.85E-01	2.15E-01	3.94E+01	1.95E-01	3.10E+01	1.81E-11	1.43E-11	1.43E-11		5.72E-10
barium	7440-39-3		8.00E-01	2.00E-01	3.93E+01	1.95E-01	3.15E+01	3.56E-12	2.87E-12	2.87E-12		1.81E-09
beryllium	7440-41-7		1.75E-01	8.25E-01	3.91E+01	1.95E-01	7.01E+00	7.61E-12	1.34E-12	1.33E-12		8.25E-11
cadmium	7440-43-9		6.88E-01	3.12E-01	3.94E+01	1.95E-01	2.71E+01	2.09E-11	1.45E-11	1.45E-11		1.31E-08
chlorine	7782-50-5		9.95E-01	5.07E-03	4.00E+01	1.95E-01	3.98E+01	2.27E-09	2.27E-09	2.27E-09		7.17E-09
chromium (3+)	7440-47-3		8.95E-01	1.05E-01	5.11E+01	1.95E-01	4.57E+01	2.20E-11	1.98E-11	1.98E-11		6.27E-11
chromium (6+)	18540-29-9	Yes	8.95E-01	1.05E-01	5.11E+01	1.95E-01	4.57E+01	2.20E-11	1.98E-11	1.98E-11		6.27E-11
cobalt	7440-48-4		7.85E-01	2.15E-01	5.21E+01	1.95E-01	4.09E+01	5.62E-12	4.44E-12	4.44E-12		1.40E-11
copper	7440-50-8		2.80E-01	7.20E-01	5.02E+01	1.95E-01	1.42E+01	7.87E-10	2.22E-10	2.21E-10		6.98E-10
hydrogen chloride	7647-01-0		9.96E-01	4.35E-03	3.97E+01	1.95E-01	3.95E+01	7.55E-09	7.56E-09	7.56E-09		2.39E-08
iron	7439-89-6		8.67E-01	1.33E-01	5.34E+01	1.95E-01	4.63E+01	2.18E-08	1.90E-08	1.90E-08		6.02E-08
lead	7439-92-1	Yes	1.57E-01	8.43E-01	3.90E+01	1.95E-01	6.31E+00	9.44E-11	1.49E-11	1.48E-11		1.33E-12
manganese	7439-96-5		7.18E-01	2.82E-01	5.37E+01	1.95E-01	3.86E+01	1.33E-09	9.63E-10	9.62E-10		3.04E-09
total mercury	NA		6.62E-03	9.93E-01	2.41E-02	1.95E-01	1.94E-01	4.01E-10	2.67E-12	0.00E+00		
mercuric chloride	7487-94-7		6.62E-03	9.93E-01	2.41E-02	1.95E-01	1.94E-01	0.00E+00	0.00E+00	1.14E-12		0.00E+00
methyl mercury	22967-92-6		1.00E-01	9.00E-01	8.00E+00	1.95E-01	9.75E-01	0.00E+00	0.00E+00	2.00E-13		1.36E-06
elemental mercury	7439-97-6		5.31E-02	9.47E-01	8.32E+01	1.95E-01	4.61E+00	0.00E+00	0.00E+00	0.00E+00		0.00E+00
nickel	7440-02-0		7.18E-01	2.82E-01	3.94E+01	1.95E-01	2.83E+01	1.39E-11	1.00E-11	1.00E-11		7.83E-10
selenium	7782-49-2		9.67E-01	3.25E-02	3.94E+01	1.95E-01	3.81E+01	4.10E-11	3.99E-11	3.99E-11		5.15E-09
silver	7440-22-4		9.49E-01	5.07E-02	3.94E+01	1.95E-01	3.74E+01	3.66E-12	3.49E-12	3.49E-12		3.06E-10
vanadium	7440-62-2		1.44E-01	8.56E-01	5.50E+01	1.95E-01	8.09E+00	2.27E-10	3.29E-11	3.26E-11		1.03E-10
zinc	7440-66-6		7.27E-01	2.73E-01	3.94E+01	1.95E-01	2.87E+01	8.66E-10	6.33E-10	6.33E-10		1.30E-06

CONCENTRATIONS OF COPCS IN SURFACE WATER AND FISH FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS (TEQ BASIS):
Adult Resident and Adult Subsistence Fisher Exposure Scenarios

		Concentration in Water				Concentration in Fish
		Total Waterbody Concentration Including Water Column and Bed Sediment	Total Concentration in Water Column	Dissolved Phase Water Concentration	Concentration Sorbed to Bed Sediment	Fish Concentration
		(mg TEQ/ℓ)[a]	(mg TEQ/ℓ)[a]	(mg TEQ/ℓ)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]
COPC	CAS Number	C_{wtot}	C_{wctot}	C_{dw}	C_{sb}	C_{fish}
1,4-dioxane	123-91-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-butanone	78-93-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-ethyl 1,3-butadiene	3404-63-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
acetone	67-64-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzene	71-43-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bis(2-ethylhexyl)-phthalate	117-81-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloromethane	74-87-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dichlorodifluoromethane	75-71-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
di-n-butyl phthalate	84-74-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
di-n-octyl phthalate	117-84-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ethane	74-84-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
HD	505-60-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methane	74-82-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
naphthalene	91-20-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
propene	115-07-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
toluene	108-88-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trichlorofluoromethane	75-69-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
xylenes	1330-20-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2,3,4,6,7,8-HpCDD	35822-46-9	8.85E-16	1.13E-18	2.40E-20	1.48E-13	1.30E-15
1,2,3,4,6,7,8,9-OCDD	3268-87-9	1.24E-16	3.94E-19	5.30E-21	2.07E-14	3.63E-18
1,2,3,4,6,7,8-HpCDF	67562-39-4	3.51E-16	1.19E-18	9.47E-20	5.87E-14	5.14E-16
1,2,3,4,6,7,8,9-OCDF	39001-02-0	4.12E-17	1.31E-19	2.79E-21	6.88E-15	1.20E-18
Total PCDDs and PCDFs	NA	1.40E-15	2.85E-18	1.27E-19	2.35E-13	1.82E-15
ammonia	7664-41-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
aluminum	7429-90-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
antimony	7440-36-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
barium	7440-39-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
beryllium	7440-41-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cadmium	7440-43-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chlorine	7782-50-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (3+)	7440-47-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (6+)	18540-29-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cobalt	7440-48-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
copper	7440-50-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
hydrogen chloride	7647-01-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
iron	7439-89-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
lead	7439-92-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
manganese	7439-96-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
total mercury	NA					
mercuric chloride	7487-94-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methyl mercury	22967-92-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
selenium	7782-49-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
silver	7440-22-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
vanadium	7440-62-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
zinc	7440-66-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

a. The concentration of individual PCDDs and PCDFs congeners and coplanar PCBs in water and fish are presented in units of mg COPC TEQ/kg. The concentration of total PCDDs and PCDFs as well as the concentration of total coplanar PCBs in water and fish are presented in units of mg TEQ/kg produce and are calculated as the sum of the concentrations of all individual PCDD and PCDF congeners in water or fish and the concentrations of all coplanar produce in water and fish, respectively.

CONCENTRATIONS OF COPCS IN SURFACE WATER AND FISH FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Adult Subsistence Farmer Exposure Scenario												
		Diffusive Mass Transfer Coefficient			Erosion Loading Supporting Calculation		Contaminant Load To The Waterbody					
		Liquid Phase Transfer Coefficient	Gas Phase Transfer Coefficient	Overall Transfer Rate	Unit Soil Loss	Watershed Sediment Delivery Ratio	Due to Direct Deposition	Due to Impervious Runoff	Due to Pervious Runoff	Due to Erosion	Due to Diffusion	Due to All Processes
		(m/yr)	(m/yr)	(m/yr)	(kg/m^2-yr)	(dimensionless)	(g/yr)	(g/yr)	(g/yr)	(g/yr)	(g/yr)	(g/yr)
COPC	CAS Number	K_L	K_G	K_v	X_s	SD	L_{Dep}	L_{RI}	L_R	L_E	L_{Dif}	L_T
1,4-dioxane	123-91-1	181.91	996974.21	107.19	0.39	0.36	1.62E-03	2.00E-03	2.83E-05	9.25E-09	1.69E-02	2.05E-02
2-butanone	78-93-3	177.10	496089.19	174.20	0.39	0.36	3.11E-03	3.83E-03	1.24E-04	1.17E-06	4.51E-03	1.16E-02
2-ethyl 1,3-butadiene	3404-63-5	198.28	576088.85	225.43	0.39	0.36	3.06E-04	3.77E-04	3.27E-09	3.45E-10	1.31E-07	6.83E-04
acetone	67-64-1	195.98	660977.51	187.89	0.39	0.36	4.46E-02	5.49E-02	9.89E-04	2.81E-06	1.00E-01	2.01E-01
benzene	71-43-2	181.91	525288.08	206.51	0.39	0.36	3.45E-02	4.25E-02	9.12E-06	3.58E-08	5.93E-04	7.75E-02
bis(2-ethylhexyl)-phthalate	117-81-7	91.54	283759.18	1.30	0.39	0.36	4.53E-04	5.58E-04	1.66E-10	1.25E-05	0.00E+00	1.02E-03
chloromethane	74-87-3	134.51	668101.45	152.84	0.39	0.36	3.38E-04	4.16E-04	2.59E-08	5.09E-11	2.73E-06	7.57E-04
dichlorodifluoromethane	75-71-8	179.51	26157.37	203.99	0.39	0.36	3.92E-04	4.83E-04	2.59E-07	5.24E-09	1.09E-07	8.75E-04
di-n-butyl phthalate	84-74-2	152.77	329140.86	23.78	0.39	0.36	9.93E-05	1.22E-04	2.51E-08	4.27E-06	6.12E-04	8.38E-04
di-n-octyl phthalate	117-84-0	179.51	26157.37	58.24	0.39	0.36	5.74E-05	7.07E-05	1.48E-10	6.30E-19	0.00E+00	1.28E-04
ethane	74-84-0	311.82	898267.57	354.52	0.39	0.36	6.48E-01	7.99E-01	1.29E-06	1.34E-08	2.15E-04	1.45E+00
HD	505-60-2	147.91	428791.43	133.93	0.39	0.36	1.06E-04	1.31E-04	2.65E-08	2.03E-09	2.01E-04	4.38E-04
methane	74-82-8	412.36	1192048.29	468.82	0.39	0.36	3.28E+00	4.04E+00	1.81E-06	5.15E-09	1.09E-03	7.31E+00
naphthalene	91-20-3	148.04	401850.95	165.21	0.39	0.36	5.94E-04	7.32E-04	2.80E-06	2.75E-05	9.55E-05	1.45E-03
propene	115-07-1	268.13	774188.86	304.83	0.39	0.36	3.31E-02	4.08E-02	2.05E-07	2.01E-09	2.41E-05	7.40E-02
toluene	108-88-3	162.26	521281.19	184.27	0.39	0.36	1.30E-02	1.61E-02	4.56E-06	5.37E-08	1.70E-04	2.93E-02
trichlorofluoromethane	75-69-4	175.89	521281.19	199.95	0.39	0.36	1.76E-04	2.16E-04	3.68E-09	2.89E-11	1.69E-07	3.92E-04
xylenes	1330-20-7	177.22	513221.49	201.23	0.39	0.36	2.04E-04	2.51E-04	9.61E-08	1.20E-08	2.89E-06	4.58E-04
1,2,3,4,6,7,8-HpCDD	35822-46-9	154.58	11708808.08	171.15	0.39	0.36	1.29E-10	1.59E-10	3.84E-14	7.74E-10	0.00E+00	1.06E-09
1,2,3,4,6,7,8,9-OCDD	3268-87-9	154.58	11398943.85	167.52	0.39	0.36	7.92E-10	9.75E-10	1.62E-13	5.18E-09	0.00E+00	6.94E-09
1,2,3,4,6,7,8-HpCDF	67562-39-4	154.58	4304021.11	165.45	0.39	0.36	7.49E-11	9.23E-11	8.78E-14	4.45E-10	0.00E+00	6.13E-10
1,2,3,4,6,7,8,9-OCDF	39001-02-0	154.58	4185987.64	118.32	0.39	0.36	2.57E-10	3.16E-10	8.69E-14	1.75E-09	0.00E+00	2.33E-09
Total PCDDs and PCDFs	NA											
ammonia	7664-41-7	401.91	1159889.25	299.40	0.39	0.36	3.90E-04	4.81E-04	2.63E-06	1.46E-09	3.39E-03	4.26E-03
aluminum	7429-90-5	326.72	944096.93	371.33	0.39	0.36	9.69E-04	1.19E-03	5.09E-08	1.65E-08	6.86E-06	2.17E-03
antimony	7440-36-0	174.30	481169.11	198.10	0.39	0.36	2.97E-05	3.66E-05	2.72E-09	4.01E-09	0.00E+00	6.63E-05
barium	7440-39-3	174.30	102872.13	197.84	0.39	0.36	5.94E-06	7.32E-06	5.56E-09	7.45E-09	0.00E+00	1.33E-05
beryllium	7440-41-7	174.30	481169.11	198.05	0.39	0.36	2.80E-06	3.44E-06	4.28E-10	1.11E-08	0.00E+00	6.25E-06
cadmium	7440-43-9	174.30	482421.10	198.12	0.39	0.36	3.01E-05	3.71E-05	2.22E-09	5.45E-09	0.00E+00	6.72E-05
chlorine	7782-50-5	179.51	26157.37	201.21	0.39	0.36	4.68E-03	5.77E-03	7.18E-05	5.87E-07	3.76E-05	1.06E-02
chromium (3+)	7440-47-3	225.98	669876.60	256.84	0.39	0.36	4.64E-05	5.72E-05	2.64E-09	1.64E-09	0.00E+00	1.04E-04
chromium (6+)	18540-29-9	225.98	669876.60	256.84	0.39	0.36	4.64E-05	5.72E-05	2.64E-09	1.64E-09	0.00E+00	1.04E-04
cobalt	7440-48-4	230.55	666206.38	262.03	0.39	0.36	1.05E-05	1.29E-05	6.03E-10	8.88E-10	0.00E+00	2.34E-05
copper	7440-50-8	222.99	644347.48	253.43	0.39	0.36	5.16E-04	6.35E-04	3.13E-08	4.40E-07	0.00E+00	1.15E-03
hydrogen chloride	7647-01-0	179.51	26157.37	199.76	0.39	0.36	1.56E-02	1.92E-02	1.08E-04	1.13E-07	1.88E-04	3.51E-02
iron	7439-89-6	236.24	682646.38	268.50	0.39	0.36	4.55E-02	5.61E-02	2.52E-06	2.06E-06	0.00E+00	1.02E-01
lead	7439-92-1	174.30	481169.11	198.10	0.39	0.36	3.12E-05	3.85E-05	2.87E-09	8.45E-08	0.00E+00	6.98E-05
manganese	7439-96-5	237.88	687398.85	270.37	0.39	0.36	2.31E-03	2.84E-03	1.27E-07	2.70E-07	0.00E+00	5.15E-03
total mercury	NA	116.57	7366494.52	0.24	0.39	0.36	8.25E-07	1.02E-06			0.00E+00	1.12E-05
mercuric chloride	7487-94-7	116.57	7366494.52	0.24	0.39	0.36	0.00E+00	0.00E+00	4.87E-09	9.25E-06	0.00E+00	0.00E+00
methyl mercury	22967-92-6	129.05	8159012.80	80.49	0.39	0.36	0.00E+00	0.00E+00	5.93E-10	1.36E-07	0.00E+00	0.00E+00
elemental mercury	7439-97-6	375.61	129619.37	422.82	0.39	0.36	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	174.30	481169.11	198.10	0.39	0.36	2.09E-05	2.57E-05	1.91E-09	4.07E-09	0.00E+00	4.66E-05
selenium	7782-49-2	174.30	481169.11	197.99	0.39	0.36	8.29E-05	1.02E-04	1.91E-08	3.13E-09	0.00E+00	1.85E-04
silver	7440-22-4	174.30	481169.11	198.10	0.39	0.36	7.25E-06	8.93E-06	6.70E-10	1.82E-10	0.00E+00	1.62E-05
vanadium	7440-62-2	246.05	711005.14	279.65	0.39	0.36	8.07E-05	9.94E-05	4.22E-09	1.38E-07	0.00E+00	1.80E-04
zinc	7440-66-6	174.30	481169.11	198.10	0.39	0.36	1.32E-03	1.62E-03	1.21E-07	2.45E-07	0.00E+00	2.94E-03

CONCENTRATIONS OF COPCS IN SURFACE WATER AND FISH FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS:
Adult Subsistence Farmer Exposure Scenario

			Waterbody Dissipation Rate Constant					Concentration in Water				Concentration in Fish
COPC	CAS Number	Oral Cancer Slope Factor?	Fraction in Water Column (dimensionless) f_{wc}	Fraction in Benthic Sediment (dimensionless) f_{bs}	Water Column Volatilization Rate Constant (yr^{-1}) k_v	Benthic Burial Rate Constant (yr^{-1}) k_b	Overall Total Waterbody Dissipation Rate Constant (yr^{-1}) k_{wt}	Total Waterbody Concentration Including Water Column and Bed Sediment (mg/ℓ) C_{wtot}	Total Concentration in Water Column (mg/ℓ) C_{wctot}	Dissolved Phase Water Concentration (mg/ℓ) C_{dw}	Concentration Sorbed to Bed Sediment (mg/kg) C_{sb}	Fish Concentration (mg/kg) C_{fish}
1,4-dioxane	123-91-1	Yes	9.96E-01	3.71E-03	21.31	1.95E-01	2.12E+01	5.50E-09	5.51E-09	5.51E-09		1.74E-08
2-butanone	78-93-3		9.96E-01	4.06E-03	34.63	1.95E-01	3.45E+01	2.63E-09	2.63E-09	2.63E-09		8.32E-09
2-ethyl 1,3-butadiene	3404-63-5		9.25E-01	7.51E-02	44.81	1.95E-01	4.15E+01	1.50E-10	1.39E-10	1.39E-10		6.42E-09
acetone	67-64-1		9.96E-01	3.71E-03	37.35	1.95E-01	3.72E+01	4.42E-08	4.43E-08	4.43E-08		1.40E-07
benzene	71-43-2	Yes	9.82E-01	1.81E-02	41.05	1.95E-01	4.03E+01	1.66E-08	1.64E-08	1.64E-08		1.36E-07
bis(2-ethylhexyl)-phthalate	117-81-7	Yes	3.91E-02	9.61E-01	0.24	1.95E-01	1.97E-01	8.93E-09	3.51E-10	3.24E-10		6.29E-08
chloromethane	74-87-3		9.95E-01	5.07E-03	30.39	1.95E-01	3.02E+01	1.81E-10	1.81E-10	1.81E-10		5.71E-10
dichlorodifluoromethane	75-71-8		9.82E-01	1.80E-02	40.55	1.95E-01	3.98E+01	1.89E-10	1.86E-10	1.86E-10		1.71E-09
di-n-butyl phthalate	84-74-2		7.25E-01	2.75E-01	4.72	1.95E-01	3.48E+00	3.96E-10	2.89E-10	2.88E-10		5.19E-07
di-n-octyl phthalate	117-84-0		9.96E-01	3.59E-03	11.58	1.95E-01	1.15E+01	3.94E-11	3.95E-11	3.95E-11		1.83E-08
ethane	74-84-0		9.89E-01	1.13E-02	70.48	1.95E-01	6.97E+01	2.35E-07	2.34E-07	2.34E-07		1.16E-06
HD	505-60-2	Yes	9.44E-01	5.64E-02	26.62	1.95E-01	2.51E+01	1.15E-10	1.10E-10	1.10E-10		1.57E-09
methane	74-82-8		9.94E-01	5.67E-03	93.20	1.95E-01	9.27E+01	9.98E-07	9.98E-07	9.98E-07		1.38E-06
naphthalene	91-20-3		7.76E-01	2.24E-01	32.82	1.95E-01	2.55E+01	4.32E-10	3.37E-10	3.37E-10		2.33E-08
propene	115-07-1		9.89E-01	1.07E-02	60.60	1.95E-01	6.00E+01	1.31E-08	1.30E-08	1.30E-08		5.98E-08
toluene	108-88-3		9.64E-01	3.59E-02	36.63	1.95E-01	3.53E+01	6.71E-09	6.51E-09	6.51E-09		1.56E-07
trichlorofluoromethane	75-69-4		9.70E-01	3.01E-02	39.75	1.95E-01	3.86E+01	8.64E-11	8.43E-11	8.43E-11		1.42E-09
xylenes	1330-20-7		9.13E-01	8.68E-02	39.99	1.95E-01	3.65E+01	1.07E-10	9.82E-11	9.82E-11		5.31E-09
1,2,3,4,6,7,8-HpCDD	35822-46-9		1.27E-03	9.99E-01	0.72	1.95E-01	1.96E-01	8.02E-14	1.03E-16	2.18E-18	1.34E-11	1.18E-13
1,2,3,4,6,7,8,9-OCDD	3268-87-9		3.16E-03	9.97E-01	0.45	1.95E-01	1.96E-01	3.79E-13	1.20E-15	1.62E-17	6.34E-11	1.11E-14
1,2,3,4,6,7,8-HpCDF	67562-39-4		3.38E-03	9.97E-01	2.61	1.95E-01	2.03E-01	3.18E-14	1.08E-16	8.57E-18	5.31E-12	4.65E-14
1,2,3,4,6,7,8,9-OCDF	39001-02-0		3.17E-03	9.97E-01	0.50	1.95E-01	1.96E-01	1.27E-13	4.05E-16	8.58E-18	2.12E-11	3.71E-15
Total PCDDs and PCDFs	NA	Yes										
ammonia	7664-41-7		9.96E-01	4.02E-03	59.52	1.95E-01	5.93E+01	7.54E-10	7.55E-10	7.55E-10		2.39E-09
aluminum	7429-90-5		9.41E-01	5.93E-02	73.82	1.95E-01	6.95E+01	3.61E-10	3.41E-10	3.41E-10		1.08E-09
antimony	7440-36-0		7.85E-01	2.15E-01	39.37	1.95E-01	3.10E+01	1.81E-11	1.43E-11	1.43E-11		5.72E-10
barium	7440-39-3		8.00E-01	2.00E-01	39.32	1.95E-01	3.15E+01	3.56E-12	2.87E-12	2.86E-12		1.81E-09
beryllium	7440-41-7		1.75E-01	8.25E-01	39.07	1.95E-01	7.01E+00	7.60E-12	1.34E-12	1.33E-12		8.25E-11
cadmium	7440-43-9		6.88E-01	3.12E-01	39.36	1.95E-01	2.71E+01	2.09E-11	1.45E-11	1.45E-11		1.31E-08
chlorine	7782-50-5		9.95E-01	5.07E-03	40.00	1.95E-01	3.98E+01	2.26E-09	2.26E-09	2.26E-09		7.15E-09
chromium (3+)	7440-47-3		8.95E-01	1.05E-01	51.05	1.95E-01	4.57E+01	2.20E-11	1.98E-11	1.98E-11		6.27E-11
chromium (6+)	18540-29-9	Yes	8.95E-01	1.05E-01	51.05	1.95E-01	4.57E+01	2.20E-11	1.98E-11	1.98E-11		6.27E-11
cobalt	7440-48-4		7.85E-01	2.15E-01	52.07	1.95E-01	4.09E+01	5.62E-12	4.44E-12	4.44E-12		1.40E-11
copper	7440-50-8		2.80E-01	7.20E-01	50.17	1.95E-01	1.42E+01	7.87E-10	2.22E-10	2.21E-10		6.98E-10
hydrogen chloride	7647-01-0		9.96E-01	4.35E-03	39.71	1.95E-01	3.95E+01	7.54E-09	7.55E-09	7.55E-09		2.39E-08
iron	7439-89-6		8.67E-01	1.33E-01	53.37	1.95E-01	4.63E+01	2.18E-08	1.90E-08	1.90E-08		6.02E-08
lead	7439-92-1	Yes	1.57E-01	8.43E-01	39.03	1.95E-01	6.31E+00	9.44E-11	1.49E-11	1.48E-11		1.33E-12
manganese	7439-96-5		7.18E-01	2.82E-01	53.72	1.95E-01	3.86E+01	1.33E-09	9.63E-10	9.62E-10		3.04E-09
total mercury	NA		6.62E-03	9.93E-01	0.02	1.95E-01	1.94E-01	4.08E-10	2.72E-12	0.00E+00		
mercuric chloride	7487-94-7		6.62E-03	9.93E-01	0.02	1.95E-01	1.94E-01	0.00E+00	0.00E+00	1.16E-12		0.00E+00
methyl mercury	22967-92-6		1.00E-01	9.00E-01	8.00	1.95E-01	9.75E-01	0.00E+00	0.00E+00	2.04E-13		1.39E-06
elemental mercury	7439-97-6		5.31E-02	9.47E-01	83.23	1.95E-01	4.61E+00	0.00E+00	0.00E+00	0.00E+00		0.00E+00
nickel	7440-02-0		7.18E-01	2.82E-01	39.36	1.95E-01	2.83E+01	1.39E-11	1.00E-11	1.00E-11		7.83E-10
selenium	7782-49-2		9.67E-01	3.25E-02	39.36	1.95E-01	3.81E+01	4.10E-11	3.99E-11	3.99E-11		5.15E-09
silver	7440-22-4		9.49E-01	5.07E-02	39.38	1.95E-01	3.74E+01	3.66E-12	3.49E-12	3.49E-12		3.06E-10
vanadium	7440-62-2		1.44E-01	8.56E-01	55.05	1.95E-01	8.09E+00	2.27E-10	3.29E-11	3.26E-11		1.03E-10
zinc	7440-66-6		7.27E-01	2.73E-01	39.36	1.95E-01	2.87E+01	8.66E-10	6.33E-10	6.33E-10		1.30E-06

CONCENTRATIONS OF COPCS IN SURFACE WATER AND FISH FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS (TEQ BASIS):
Adult Subsistence Farmer Exposure Scenario

		Concentration in Water				Concentration in Fish
		Total Waterbody Concentration Including Water Column and Bed Sediment	Total Concentration in Water Column	Dissolved Phase Water Concentration	Concentration Sorbed to Bed Sediment	Fish Concentration
		(mg TEQ/ℓ)[a]	(mg TEQ/ℓ)[a]	(mg TEQ/ℓ)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]
COPC	CAS Number	C_{wtot}	C_{wctot}	C_{dw}	C_{sb}	C_{fish}
1,4-dioxane	123-91-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-butanone	78-93-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-ethyl 1,3-butadiene	3404-63-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
acetone	67-64-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzene	71-43-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bis(2-ethylhexyl)-phthalate	117-81-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloromethane	74-87-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dichlorodifluoromethane	75-71-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
di-n-butyl phthalate	84-74-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
di-n-octyl phthalate	117-84-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ethane	74-84-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
HD	505-60-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methane	74-82-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
naphthalene	91-20-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
propene	115-07-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
toluene	108-88-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trichlorofluoromethane	75-69-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
xylenes	1330-20-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2,3,4,6,7,8-HpCDD	35822-46-9	8.02E-16	1.03E-18	2.18E-20	1.34E-13	1.18E-15
1,2,3,4,6,7,8,9-OCDD	3268-87-9	1.14E-16	3.61E-19	4.86E-21	1.90E-14	3.33E-18
1,2,3,4,6,7,8-HpCDF	67562-39-4	3.18E-16	1.08E-18	8.57E-20	5.31E-14	4.65E-16
1,2,3,4,6,7,8,9-OCDF	39001-02-0	3.80E-17	1.21E-19	2.57E-21	6.35E-15	1.11E-18
Total PCDDs and PCDFs	NA	1.27E-15	2.59E-18	1.15E-19	2.13E-13	1.64E-15
ammonia	7664-41-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
aluminum	7429-90-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
antimony	7440-36-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
barium	7440-39-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
beryllium	7440-41-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cadmium	7440-43-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chlorine	7782-50-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (3+)	7440-47-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (6+)	18540-29-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cobalt	7440-48-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
copper	7440-50-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
hydrogen chloride	7647-01-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
iron	7439-89-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
lead	7439-92-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
manganese	7439-96-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
total mercury	NA					
mercuric chloride	7487-94-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methyl mercury	22967-92-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
selenium	7782-49-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
silver	7440-22-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
vanadium	7440-62-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
zinc	7440-66-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

a. The concentration of individual PCDDs and PCDFs congeners and coplanar PCBs in water and fish are presented in units of mg COPC TEQ/kg. The concentration of total PCDDs and PCDFs as well as the concentration of total coplanar PCBs in water and fish are presented in units of mg TEQ/kg produce and are calculated as the sum of the concentrations of all individual PCDD and PCDF congeners in water or fish and the concentrations of all coplanar produce in water and fish, respectively.

CONCENTRATIONS OF COPCS IN SURFACE WATER AND FISH FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Child Exposure Scenarios												
		Diffusive Mass Transfer Coefficient			Erosion Loading Supporting Calculation		Contaminant Load To The Waterbody					
		Liquid Phase Transfer Coefficient	Gas Phase Transfer Coefficient	Overall Transfer Rate	Unit Soil Loss	Watershed Sediment Delivery Ratio	Due to Direct Deposition	Due to Impervious Runoff	Due to Pervious Runoff	Due to Erosion	Due to Diffusion	Due to All Processes
		(m/yr)	(m/yr)	(m/yr)	(kg/m^2-yr)	(dimensionless)	(g/yr)	(g/yr)	(g/yr)	(g/yr)	(g/yr)	(g/yr)
COPC	CAS Number	K_L	K_G	K_v	X_s	SD	L_{Dep}	L_{RI}	L_R	L_E	L_{Dif}	L_T
1,4-dioxane	123-91-1	181.91	996974.21	107.19	0.39	0.36	1.62E-03	2.00E-03	2.26E-04	7.40E-08	1.69E-02	2.07E-02
2-butanone	78-93-3	177.10	496089.19	174.20	0.39	0.36	3.11E-03	3.83E-03	9.90E-04	9.39E-06	4.51E-03	1.24E-02
2-ethyl 1,3-butadiene	3404-63-5	198.28	576088.85	225.43	0.39	0.36	3.06E-04	3.77E-04	2.61E-08	2.76E-09	1.31E-07	6.83E-04
acetone	67-64-1	195.98	660977.51	187.89	0.39	0.36	4.46E-02	5.49E-02	7.91E-03	2.25E-05	1.00E-01	2.08E-01
benzene	71-43-2	181.91	525288.08	206.51	0.39	0.36	3.45E-02	4.25E-02	7.29E-05	2.86E-07	5.93E-04	7.76E-02
bis(2-ethylhexyl)-phthalate	117-81-7	91.54	283759.18	1.30	0.39	0.36	4.53E-04	5.58E-04	1.31E-09	9.82E-05	0.00E+00	1.11E-03
chloromethane	74-87-3	134.51	668101.45	152.84	0.39	0.36	3.38E-04	4.16E-04	2.08E-07	4.07E-10	2.73E-06	7.57E-04
dichlorodifluoromethane	75-71-8	179.51	26157.37	203.99	0.39	0.36	3.92E-04	4.83E-04	2.07E-06	4.19E-08	1.09E-07	8.77E-04
di-n-butyl phthalate	84-74-2	152.77	329140.86	23.78	0.39	0.36	9.93E-05	1.22E-04	1.97E-07	3.35E-05	6.12E-04	8.68E-04
di-n-octyl phthalate	117-84-0	179.51	26157.37	58.24	0.39	0.36	5.74E-05	7.07E-05	1.19E-09	5.04E-18	0.00E+00	1.28E-04
ethane	74-84-0	311.82	898267.57	354.52	0.39	0.36	6.48E-01	7.99E-01	1.03E-05	1.08E-07	2.15E-04	1.45E+00
HD	505-60-2	147.91	428791.43	133.93	0.39	0.36	1.06E-04	1.31E-04	2.12E-07	1.62E-08	2.01E-04	4.38E-04
methane	74-82-8	412.36	1192048.29	468.82	0.39	0.36	3.28E+00	4.04E+00	1.45E-05	4.12E-08	1.09E-03	7.31E+00
naphthalene	91-20-3	148.04	401850.95	165.21	0.39	0.36	5.94E-04	7.32E-04	2.19E-05	2.15E-04	9.55E-05	1.66E-03
propene	115-07-1	268.13	774188.86	304.83	0.39	0.36	3.31E-02	4.08E-02	1.64E-06	1.61E-08	2.41E-05	7.40E-02
toluene	108-88-3	162.26	521281.19	184.27	0.39	0.36	1.30E-02	1.61E-02	3.65E-05	4.29E-07	1.70E-04	2.93E-02
trichlorofluoromethane	75-69-4	175.89	521281.19	199.95	0.39	0.36	1.76E-04	2.16E-04	2.94E-08	2.31E-10	1.69E-07	3.92E-04
xylenes	1330-20-7	177.22	513221.49	201.23	0.39	0.36	2.04E-04	2.51E-04	7.69E-07	9.58E-08	2.89E-06	4.59E-04
1,2,3,4,6,7,8-HpCDD	35822-46-9	154.58	11708808.08	171.15	0.39	0.36	1.29E-10	1.59E-10	3.67E-14	7.40E-10	0.00E+00	1.03E-09
1,2,3,4,6,7,8,9-OCDD	3268-87-9	154.58	11398943.85	167.52	0.39	0.36	7.92E-10	9.75E-10	1.43E-13	4.57E-09	0.00E+00	6.34E-09
1,2,3,4,6,7,8-HpCDF	67562-39-4	154.58	4304021.11	165.45	0.39	0.36	7.49E-11	9.23E-11	8.45E-14	4.28E-10	0.00E+00	5.95E-10
1,2,3,4,6,7,8,9-OCDF	39001-02-0	154.58	4185987.64	118.32	0.39	0.36	2.57E-10	3.16E-10	7.38E-14	1.49E-09	0.00E+00	2.06E-09
Total PCDDs and PCDFs	NA											
ammonia	7664-41-7	401.91	1159889.25	299.40	0.39	0.36	3.90E-04	4.81E-04	2.10E-05	1.17E-08	3.39E-03	4.28E-03
aluminum	7429-90-5	326.72	944096.93	371.33	0.39	0.36	9.69E-04	1.19E-03	4.07E-07	1.32E-07	6.86E-06	2.17E-03
antimony	7440-36-0	174.30	481169.11	198.10	0.39	0.36	2.97E-05	3.66E-05	2.18E-08	3.21E-08	0.00E+00	6.64E-05
barium	7440-39-3	174.30	102872.13	197.84	0.39	0.36	5.94E-06	7.32E-06	4.44E-08	5.95E-08	0.00E+00	1.34E-05
beryllium	7440-41-7	174.30	481169.11	198.05	0.39	0.36	2.80E-06	3.44E-06	3.42E-09	8.83E-08	0.00E+00	6.33E-06
cadmium	7440-43-9	174.30	482421.10	198.12	0.39	0.36	3.01E-05	3.71E-05	1.78E-08	4.36E-08	0.00E+00	6.73E-05
chlorine	7782-50-5	179.51	26157.37	201.21	0.39	0.36	4.68E-03	5.77E-03	5.74E-04	4.69E-06	3.76E-05	1.11E-02
chromium (3+)	7440-47-3	225.98	669876.60	256.84	0.39	0.36	4.64E-05	5.72E-05	2.11E-08	1.31E-08	0.00E+00	1.04E-04
chromium (6+)	18540-29-9	225.98	669876.60	256.84	0.39	0.36	4.64E-05	5.72E-05	2.11E-08	1.31E-08	0.00E+00	1.04E-04
cobalt	7440-48-4	230.55	666206.38	262.03	0.39	0.36	1.05E-05	1.29E-05	4.83E-09	7.10E-09	0.00E+00	2.34E-05
copper	7440-50-8	222.99	644347.48	253.43	0.39	0.36	5.16E-04	6.35E-04	2.50E-07	3.52E-06	0.00E+00	1.15E-03
hydrogen chloride	7647-01-0	179.51	26157.37	199.76	0.39	0.36	1.56E-02	1.92E-02	8.61E-04	9.03E-07	1.88E-04	3.59E-02
iron	7439-89-6	236.24	682646.38	268.50	0.39	0.36	4.55E-02	5.61E-02	2.02E-05	1.65E-05	0.00E+00	1.02E-01
lead	7439-92-1	174.30	481169.11	198.10	0.39	0.36	3.12E-05	3.85E-05	2.29E-08	6.74E-07	0.00E+00	7.04E-05
manganese	7439-96-5	237.88	687398.85	270.37	0.39	0.36	2.31E-03	2.84E-03	1.02E-06	2.16E-06	0.00E+00	5.16E-03
total mercury	NA	116.57	7366494.52	0.24	0.39	0.36	8.25E-07	1.02E-06			0.00E+00	6.87E-06
mercuric chloride	7487-94-7	116.57	7366494.52	0.24	0.39	0.36	0.00E+00	0.00E+00	2.60E-09	4.93E-06	0.00E+00	0.00E+00
methyl mercury	22967-92-6	129.05	8159012.80	80.49	0.39	0.36	0.00E+00	0.00E+00	4.26E-10	9.76E-08	0.00E+00	0.00E+00
elemental mercury	7439-97-6	375.61	129619.37	422.82	0.39	0.36	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	174.30	481169.11	198.10	0.39	0.36	2.09E-05	2.57E-05	1.53E-08	3.25E-08	0.00E+00	4.66E-05
selenium	7782-49-2	174.30	481169.11	197.99	0.39	0.36	8.29E-05	1.02E-04	1.53E-07	2.50E-08	0.00E+00	1.85E-04
silver	7440-22-4	174.30	481169.11	198.10	0.39	0.36	7.25E-06	8.93E-06	5.36E-09	1.45E-09	0.00E+00	1.62E-05
vanadium	7440-62-2	246.05	711005.14	279.65	0.39	0.36	8.07E-05	9.94E-05	3.38E-08	1.10E-06	0.00E+00	1.81E-04
zinc	7440-66-6	174.30	481169.11	198.10	0.39	0.36	1.32E-03	1.62E-03	9.65E-07	1.96E-06	0.00E+00	2.94E-03

CONCENTRATIONS OF COPCS IN SURFACE WATER AND FISH FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Child Exposure Scenarios												
			Waterbody Dissipation Rate Constant					Concentration in Water				Concentration in Fish
COPC	CAS Number	Oral Cancer Slope Factor?	Fraction in Water Column (dimensionless) f_{wc}	Fraction in Benthic Sediment (dimensionless) f_{bs}	Water Column Volatilization Rate Constant (yr^{-1}) k_v	Benthic Burial Rate Constant (yr^{-1}) k_b	Overall Total Waterbody Dissipation Rate Constant (yr^{-1}) k_{wt}	Total Waterbody Concentration Including Water Column and Bed Sediment (mg/ℓ) C_{wtot}	Total Concentration in Water Column (mg/ℓ) C_{wctot}	Dissolved Phase Water Concentration (mg/ℓ) C_{dw}	Concentration Sorbed to Bed Sediment (mg/kg) C_{sb}	Fish Concentration (mg/kg) C_{fish}
1,4-dioxane	123-91-1	Yes	9.96E-01	3.71E-03	21.31	1.95E-01	2.12E+01	5.55E-09	5.56E-09	5.56E-09		1.76E-08
2-butanone	78-93-3		9.96E-01	4.06E-03	34.63	1.95E-01	3.45E+01	2.83E-09	2.83E-09	2.83E-09		8.95E-09
2-ethyl 1,3-butadiene	3404-63-5		9.25E-01	7.51E-02	44.81	1.95E-01	4.15E+01	1.50E-10	1.39E-10	1.39E-10		6.42E-09
acetone	67-64-1		9.96E-01	3.71E-03	37.35	1.95E-01	3.72E+01	4.57E-08	4.58E-08	4.58E-08		1.45E-07
benzene	71-43-2	Yes	9.82E-01	1.81E-02	41.05	1.95E-01	4.03E+01	1.67E-08	1.65E-08	1.64E-08		1.36E-07
bis(2-ethylhexyl)-phthalate	117-81-7	Yes	3.91E-02	9.61E-01	0.24	1.95E-01	1.97E-01	9.67E-09	3.80E-10	3.51E-10		6.82E-08
chloromethane	74-87-3		9.95E-01	5.07E-03	30.39	1.95E-01	3.02E+01	1.81E-10	1.81E-10	1.81E-10		5.72E-10
dichlorodifluoromethane	75-71-8		9.82E-01	1.80E-02	40.55	1.95E-01	3.98E+01	1.89E-10	1.87E-10	1.87E-10		1.72E-09
di-n-butyl phthalate	84-74-2		7.25E-01	2.75E-01	4.72	1.95E-01	3.48E+00	4.10E-10	2.99E-10	2.98E-10		5.37E-07
di-n-octyl phthalate	117-84-0		9.96E-01	3.59E-03	11.58	1.95E-01	1.15E+01	3.94E-11	3.95E-11	3.95E-11		1.83E-08
ethane	74-84-0		9.89E-01	1.13E-02	70.48	1.95E-01	6.97E+01	2.35E-07	2.34E-07	2.34E-07		1.16E-06
HD	505-60-2	Yes	9.44E-01	5.64E-02	26.62	1.95E-01	2.51E+01	1.16E-10	1.10E-10	1.10E-10		1.57E-09
methane	74-82-8		9.94E-01	5.67E-03	93.20	1.95E-01	9.27E+01	9.98E-07	9.98E-07	9.98E-07		1.38E-06
naphthalene	91-20-3		7.76E-01	2.24E-01	32.82	1.95E-01	2.55E+01	4.94E-10	3.85E-10	3.85E-10		2.67E-08
propene	115-07-1		9.89E-01	1.07E-02	60.60	1.95E-01	6.00E+01	1.31E-08	1.30E-08	1.30E-08		5.98E-08
toluene	108-88-3		9.64E-01	3.59E-02	36.63	1.95E-01	3.53E+01	6.72E-09	6.52E-09	6.52E-09		1.56E-07
trichlorofluoromethane	75-69-4		9.70E-01	3.01E-02	39.75	1.95E-01	3.86E+01	8.64E-11	8.43E-11	8.43E-11		1.42E-09
xylenes	1330-20-7		9.13E-01	8.68E-02	39.99	1.95E-01	3.65E+01	1.07E-10	9.84E-11	9.84E-11		5.32E-09
1,2,3,4,6,7,8-HpCDD	35822-46-9		1.27E-03	9.99E-01	0.72	1.95E-01	1.96E-01	7.76E-14	9.94E-17	2.11E-18	1.30E-11	1.14E-13
1,2,3,4,6,7,8,9-OCDD	3268-87-9		3.16E-03	9.97E-01	0.45	1.95E-01	1.96E-01	3.46E-13	1.10E-15	1.48E-17	5.79E-11	1.01E-14
1,2,3,4,6,7,8-HpCDF	67562-39-4		3.38E-03	9.97E-01	2.61	1.95E-01	2.03E-01	3.09E-14	1.05E-16	8.33E-18	5.17E-12	4.52E-14
1,2,3,4,6,7,8,9-OCDF	39001-02-0		3.17E-03	9.97E-01	0.50	1.95E-01	1.96E-01	1.12E-13	3.59E-16	7.60E-18	1.88E-11	3.29E-15
Total PCDDs and PCDFs	NA	Yes										
ammonia	7664-41-7		9.96E-01	4.02E-03	59.52	1.95E-01	5.93E+01	7.57E-10	7.58E-10	7.58E-10		2.40E-09
aluminum	7429-90-5		9.41E-01	5.93E-02	73.82	1.95E-01	6.95E+01	3.61E-10	3.41E-10	3.41E-10		1.08E-09
antimony	7440-36-0		7.85E-01	2.15E-01	39.37	1.95E-01	3.10E+01	1.81E-11	1.43E-11	1.43E-11		5.72E-10
barium	7440-39-3		8.00E-01	2.00E-01	39.32	1.95E-01	3.15E+01	3.58E-12	2.89E-12	2.88E-12		1.83E-09
beryllium	7440-41-7		1.75E-01	8.25E-01	39.07	1.95E-01	7.01E+00	7.70E-12	1.36E-12	1.35E-12		8.35E-11
cadmium	7440-43-9		6.88E-01	3.12E-01	39.36	1.95E-01	2.71E+01	2.10E-11	1.45E-11	1.45E-11		1.32E-08
chlorine	7782-50-5		9.95E-01	5.07E-03	40.00	1.95E-01	3.98E+01	2.37E-09	2.37E-09	2.37E-09		7.49E-09
chromium (3+)	7440-47-3		8.95E-01	1.05E-01	51.05	1.95E-01	4.57E+01	2.21E-11	1.99E-11	1.98E-11		6.27E-11
chromium (6+)	18540-29-9	Yes	8.95E-01	1.05E-01	51.05	1.95E-01	4.57E+01	2.21E-11	1.99E-11	1.98E-11		6.27E-11
cobalt	7440-48-4		7.85E-01	2.15E-01	52.07	1.95E-01	4.09E+01	5.62E-12	4.44E-12	4.44E-12		1.40E-11
copper	7440-50-8		2.80E-01	7.20E-01	50.17	1.95E-01	1.42E+01	7.89E-10	2.22E-10	2.21E-10		7.00E-10
hydrogen chloride	7647-01-0		9.96E-01	4.35E-03	39.71	1.95E-01	3.95E+01	7.70E-09	7.71E-09	7.71E-09		2.44E-08
iron	7439-89-6		8.67E-01	1.33E-01	53.37	1.95E-01	4.63E+01	2.18E-08	1.90E-08	1.90E-08		6.02E-08
lead	7439-92-1	Yes	1.57E-01	8.43E-01	39.03	1.95E-01	6.31E+00	9.52E-11	1.51E-11	1.49E-11		1.34E-12
manganese	7439-96-5		7.18E-01	2.82E-01	53.72	1.95E-01	3.86E+01	1.33E-09	9.63E-10	9.62E-10		3.04E-09
total mercury	NA		6.62E-03	9.93E-01	0.02	1.95E-01	1.94E-01	2.50E-10	1.67E-12	0.00E+00		
mercuric chloride	7487-94-7		6.62E-03	9.93E-01	0.02	1.95E-01	1.94E-01	0.00E+00	0.00E+00	7.08E-13		0.00E+00
methyl mercury	22967-92-6		1.00E-01	9.00E-01	8.00	1.95E-01	9.75E-01	0.00E+00	0.00E+00	1.25E-13		8.49E-07
elemental mercury	7439-97-6		5.31E-02	9.47E-01	83.23	1.95E-01	4.61E+00	0.00E+00	0.00E+00	0.00E+00		0.00E+00
nickel	7440-02-0		7.18E-01	2.82E-01	39.36	1.95E-01	2.83E+01	1.39E-11	1.01E-11	1.00E-11		7.84E-10
selenium	7782-49-2		9.67E-01	3.25E-02	39.36	1.95E-01	3.81E+01	4.11E-11	4.00E-11	4.00E-11		5.16E-09
silver	7440-22-4		9.49E-01	5.07E-02	39.38	1.95E-01	3.74E+01	3.66E-12	3.49E-12	3.49E-12		3.06E-10
vanadium	7440-62-2		1.44E-01	8.56E-01	55.05	1.95E-01	8.09E+00	2.28E-10	3.31E-11	3.28E-11		1.04E-10
zinc	7440-66-6		7.27E-01	2.73E-01	39.36	1.95E-01	2.87E+01	8.67E-10	6.34E-10	6.33E-10		1.30E-06

CONCENTRATIONS OF COPCS IN SURFACE WATER AND FISH FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS (TEQ BASIS):
Child Exposure Scenarios

		Concentration in Water				Concentration in Fish
		Total Waterbody Concentration Including Water Column and Bed Sediment	Total Concentration in Water Column	Dissolved Phase Water Concentration	Concentration Sorbed to Bed Sediment	Fish Concentration
		(mg TEQ/ℓ)[a]	(mg TEQ/ℓ)[a]	(mg TEQ/ℓ)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]
COPC	CAS Number	C_{wtot}	C_{wctot}	C_{dw}	C_{sb}	C_{fish}
1,4-dioxane	123-91-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-butanone	78-93-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-ethyl 1,3-butadiene	3404-63-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
acetone	67-64-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzene	71-43-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bis(2-ethylhexyl)-phthalate	117-81-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloromethane	74-87-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dichlorodifluoromethane	75-71-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
di-n-butyl phthalate	84-74-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
di-n-octyl phthalate	117-84-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ethane	74-84-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
HD	505-60-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methane	74-82-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
naphthalene	91-20-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
propene	115-07-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
toluene	108-88-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trichlorofluoromethane	75-69-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
xylenes	1330-20-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2,3,4,6,7,8-HpCDD	35822-46-9	7.76E-16	9.94E-19	2.11E-20	1.30E-13	1.14E-15
1,2,3,4,6,7,8,9-OCDD	3268-87-9	1.04E-16	3.30E-19	4.44E-21	1.74E-14	3.04E-18
1,2,3,4,6,7,8-HpCDF	67562-39-4	3.09E-16	1.05E-18	8.33E-20	5.17E-14	4.52E-16
1,2,3,4,6,7,8,9-OCDF	39001-02-0	3.37E-17	1.08E-19	2.28E-21	5.63E-15	9.86E-19
Total PCDDs and PCDFs	NA	1.22E-15	2.48E-18	1.11E-19	2.05E-13	1.59E-15
ammonia	7664-41-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
aluminum	7429-90-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
antimony	7440-36-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
barium	7440-39-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
beryllium	7440-41-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cadmium	7440-43-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chlorine	7782-50-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (3+)	7440-47-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (6+)	18540-29-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cobalt	7440-48-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
copper	7440-50-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
hydrogen chloride	7647-01-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
iron	7439-89-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
lead	7439-92-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
manganese	7439-96-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
total mercury	NA					
mercuric chloride	7487-94-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methyl mercury	22967-92-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
selenium	7782-49-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
silver	7440-22-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
vanadium	7440-62-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
zinc	7440-66-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

a. The concentration of individual PCDDs and PCDFs congeners and coplanar PCBs in water and fish are presented in units of mg COPC TEQ/kg. The concentration of total PCDDs and PCDFs as well as the concentration of total coplanar PCBs in water and fish are presented in units of mg TEQ/kg produce and are calculated as the sum of the concentrations of all individual PCDD and PCDF congeners in water or fish and the concentrations of all coplanar produce in water and fish, respectively.

CONCENTRATIONS OF COPCS IN SURFACE WATER AND FISH FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Infant Exposure Scenarios												
		Diffusive Mass Transfer Coefficient			Erosion Loading Supporting Calculation		Contaminant Load To The Waterbody					
		Liquid Phase Transfer Coefficient	Gas Phase Transfer Coefficient	Overall Transfer Rate	Unit Soil Loss	Watershed Sediment Delivery Ratio	Due to Direct Deposition	Due to Impervious Runoff	Due to Pervious Runoff	Due to Erosion	Due to Diffusion	Due to All Processes
		(m/yr)	(m/yr)	(m/yr)	(kg/m^2-yr)	(dimensionless)	(g/yr)	(g/yr)	(g/yr)	(g/yr)	(g/yr)	(g/yr)
COPC	CAS Number	K_L	K_G	K_v	X_s	SD	L_{Dep}	L_{RI}	L_R	L_E	L_{Dif}	L_T
1,4-dioxane	123-91-1	181.91	996974.21	107.19	0.39	0.36	1.62E-03	2.00E-03	2.26E-04	7.40E-08	1.69E-02	2.07E-02
2-butanone	78-93-3	177.10	496089.19	174.20	0.39	0.36	3.11E-03	3.83E-03	9.90E-04	9.39E-06	4.51E-03	1.24E-02
2-ethyl 1,3-butadiene	3404-63-5	198.28	576088.85	225.43	0.39	0.36	3.06E-04	3.77E-04	2.61E-08	2.76E-09	1.31E-07	6.83E-04
acetone	67-64-1	195.98	660977.51	187.89	0.39	0.36	4.46E-02	5.49E-02	7.91E-03	2.25E-05	1.00E-01	2.08E-01
benzene	71-43-2	181.91	525288.08	206.51	0.39	0.36	3.45E-02	4.25E-02	7.29E-05	2.86E-07	5.93E-04	7.76E-02
bis(2-ethylhexyl)-phthalate	117-81-7	91.54	283759.18	1.30	0.39	0.36	4.53E-04	5.58E-04	1.31E-09	9.82E-05	0.00E+00	1.11E-03
chloromethane	74-87-3	134.51	668101.45	152.84	0.39	0.36	3.38E-04	4.16E-04	2.08E-07	4.07E-10	2.73E-06	7.57E-04
dichlorodifluoromethane	75-71-8	179.51	26157.37	203.99	0.39	0.36	3.92E-04	4.83E-04	2.07E-06	4.19E-08	1.09E-07	8.77E-04
di-n-butyl phthalate	84-74-2	152.77	329140.86	23.78	0.39	0.36	9.93E-05	1.22E-04	1.97E-07	3.35E-05	6.12E-04	8.68E-04
di-n-octyl phthalate	117-84-0	179.51	26157.37	58.24	0.39	0.36	5.74E-05	7.07E-05	1.19E-09	5.04E-18	0.00E+00	1.28E-04
ethane	74-84-0	311.82	898267.57	354.52	0.39	0.36	6.48E-01	7.99E-01	1.03E-05	1.08E-07	2.15E-04	1.45E+00
HD	505-60-2	147.91	428791.43	133.93	0.39	0.36	1.06E-04	1.31E-04	2.12E-07	1.62E-08	2.01E-04	4.38E-04
methane	74-82-8	412.36	1192048.29	468.82	0.39	0.36	3.28E+00	4.04E+00	1.45E-05	4.12E-08	1.09E-03	7.31E+00
naphthalene	91-20-3	148.04	401850.95	165.21	0.39	0.36	5.94E-04	7.32E-04	2.19E-05	2.15E-04	9.55E-05	1.66E-03
propene	115-07-1	268.13	774188.86	304.83	0.39	0.36	3.31E-02	4.08E-02	1.64E-06	1.61E-08	2.41E-05	7.40E-02
toluene	108-88-3	162.26	521281.19	184.27	0.39	0.36	1.30E-02	1.61E-02	3.65E-05	4.29E-07	1.70E-04	2.93E-02
trichlorofluoromethane	75-69-4	175.89	521281.19	199.95	0.39	0.36	1.76E-04	2.16E-04	2.94E-08	2.31E-10	1.69E-07	3.92E-04
xylenes	1330-20-7	177.22	513221.49	201.23	0.39	0.36	2.04E-04	2.51E-04	7.69E-07	9.58E-08	2.89E-06	4.59E-04
1,2,3,4,6,7,8-HpCDD	35822-46-9	154.58	11708808.08	171.15	0.39	0.36	1.29E-10	1.59E-10	3.67E-14	7.40E-10	0.00E+00	1.03E-09
1,2,3,4,6,7,8,9-OCDD	3268-87-9	154.58	11398943.85	167.52	0.39	0.36	7.92E-10	9.75E-10	1.43E-13	4.57E-09	0.00E+00	6.34E-09
1,2,3,4,6,7,8-HpCDF	67562-39-4	154.58	4304021.11	165.45	0.39	0.36	7.49E-11	9.23E-11	8.45E-14	4.28E-10	0.00E+00	5.95E-10
1,2,3,4,6,7,8,9-OCDF	39001-02-0	154.58	4185987.64	118.32	0.39	0.36	2.57E-10	3.16E-10	7.38E-14	1.49E-09	0.00E+00	2.06E-09
Total PCDDs and PCDFs	NA											
ammonia	7664-41-7	401.91	1159889.25	299.40	0.39	0.36	3.90E-04	4.81E-04	2.10E-05	1.17E-08	3.39E-03	4.28E-03
aluminum	7429-90-5	326.72	944096.93	371.33	0.39	0.36	9.69E-04	1.19E-03	4.07E-07	1.32E-07	6.86E-06	2.17E-03
antimony	7440-36-0	174.30	481169.11	198.10	0.39	0.36	2.97E-05	3.66E-05	2.18E-08	3.21E-08	0.00E+00	6.64E-05
barium	7440-39-3	174.30	102872.13	197.84	0.39	0.36	5.94E-06	7.32E-06	4.44E-08	5.95E-08	0.00E+00	1.34E-05
beryllium	7440-41-7	174.30	481169.11	198.05	0.39	0.36	2.80E-06	3.44E-06	3.42E-09	8.83E-08	0.00E+00	6.33E-06
cadmium	7440-43-9	174.30	482421.10	198.12	0.39	0.36	3.01E-05	3.71E-05	1.78E-08	4.36E-08	0.00E+00	6.73E-05
chlorine	7782-50-5	179.51	26157.37	201.21	0.39	0.36	4.68E-03	5.77E-03	5.74E-04	4.69E-06	3.76E-05	1.11E-02
chromium (3+)	7440-47-3	225.98	669876.60	256.84	0.39	0.36	4.64E-05	5.72E-05	2.11E-08	1.31E-08	0.00E+00	1.04E-04
chromium (6+)	18540-29-9	225.98	669876.60	256.84	0.39	0.36	4.64E-05	5.72E-05	2.11E-08	1.31E-08	0.00E+00	1.04E-04
cobalt	7440-48-4	230.55	666206.38	262.03	0.39	0.36	1.05E-05	1.29E-05	4.83E-09	7.10E-09	0.00E+00	2.34E-05
copper	7440-50-8	222.99	644347.48	253.43	0.39	0.36	5.16E-04	6.35E-04	2.50E-07	3.52E-06	0.00E+00	1.15E-03
hydrogen chloride	7647-01-0	179.51	26157.37	199.76	0.39	0.36	1.56E-02	1.92E-02	8.61E-04	9.03E-07	1.88E-04	3.59E-02
iron	7439-89-6	236.24	682646.38	268.50	0.39	0.36	4.55E-02	5.61E-02	2.02E-05	1.65E-05	0.00E+00	1.02E-01
lead	7439-92-1	174.30	481169.11	198.10	0.39	0.36	3.12E-05	3.85E-05	2.29E-08	6.74E-07	0.00E+00	7.04E-05
manganese	7439-96-5	237.88	687398.85	270.37	0.39	0.36	2.31E-03	2.84E-03	1.02E-06	2.16E-06	0.00E+00	5.16E-03
total mercury	NA	116.57	7366494.52	0.24	0.39	0.36	8.25E-07	1.02E-06			0.00E+00	6.87E-06
mercuric chloride	7487-94-7	116.57	7366494.52	0.24	0.39	0.36	0.00E+00	0.00E+00	2.60E-09	4.93E-06	0.00E+00	0.00E+00
methyl mercury	22967-92-6	129.05	8159012.80	80.49	0.39	0.36	0.00E+00	0.00E+00	4.26E-10	9.76E-08	0.00E+00	0.00E+00
elemental mercury	7439-97-6	375.61	129619.37	422.82	0.39	0.36	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	174.30	481169.11	198.10	0.39	0.36	2.09E-05	2.57E-05	1.53E-08	3.25E-08	0.00E+00	4.66E-05
selenium	7782-49-2	174.30	481169.11	197.99	0.39	0.36	8.29E-05	1.02E-04	1.53E-07	2.50E-08	0.00E+00	1.85E-04
silver	7440-22-4	174.30	481169.11	198.10	0.39	0.36	7.25E-06	8.93E-06	5.36E-09	1.45E-09	0.00E+00	1.62E-05
vanadium	7440-62-2	246.05	711005.14	279.65	0.39	0.36	8.07E-05	9.94E-05	3.38E-08	1.10E-06	0.00E+00	1.81E-04
zinc	7440-66-6	174.30	481169.11	198.10	0.39	0.36	1.32E-03	1.62E-03	9.65E-07	1.96E-06	0.00E+00	2.94E-03

CONCENTRATIONS OF COPCS IN SURFACE WATER AND FISH FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS:
Infant Exposure Scenarios

COPC	CAS Number	Oral Cancer Slope Factor?	Waterbody Dissipation Rate Constant: Fraction in Water Column (f_{wc}) (dimensionless)	Fraction in Benthic Sediment (f_{bs}) (dimensionless)	Water Column Volatilization Rate Constant (k_v) (yr^{-1})	Benthic Burial Rate Constant (k_b) (yr^{-1})	Overall Total Waterbody Dissipation Rate Constant (k_{wt}) (yr^{-1})	Concentration in Water: Total Waterbody Concentration Including Water Column and Bed Sediment (C_{wtot}) (mg/ℓ)	Total Concentration in Water Column (C_{wctot}) (mg/ℓ)	Dissolved Phase Water Concentration (C_{dw}) (mg/ℓ)	Concentration Sorbed to Bed Sediment (C_{sb}) (mg/kg)	Concentration in Fish: Fish Concentration (C_{fish}) (mg/kg)
1,4-dioxane	123-91-1	Yes	9.96E-01	3.71E-03	21.31	1.95E-01	2.12E+01	5.55E-09	5.56E-09	5.56E-09		1.76E-08
2-butanone	78-93-3		9.96E-01	4.06E-03	34.63	1.95E-01	3.45E+01	2.83E-09	2.83E-09	2.83E-09		8.95E-09
2-ethyl 1,3-butadiene	3404-63-5		9.25E-01	7.51E-02	44.81	1.95E-01	4.15E+01	1.50E-10	1.39E-10	1.39E-10		6.42E-09
acetone	67-64-1		9.96E-01	3.71E-03	37.35	1.95E-01	3.72E+01	4.57E-08	4.58E-08	4.58E-08		1.45E-07
benzene	71-43-2	Yes	9.82E-01	1.81E-02	41.05	1.95E-01	4.03E+01	1.67E-08	1.65E-08	1.64E-08		1.36E-07
bis(2-ethylhexyl)-phthalate	117-81-7	Yes	3.91E-02	9.61E-01	0.24	1.95E-01	1.97E-01	9.67E-09	3.80E-10	3.51E-10		6.82E-08
chloromethane	74-87-3		9.95E-01	5.07E-03	30.39	1.95E-01	3.02E+01	1.81E-10	1.81E-10	1.81E-10		5.72E-10
dichlorodifluoromethane	75-71-8		9.82E-01	1.80E-02	40.55	1.95E-01	3.98E+01	1.89E-10	1.87E-10	1.87E-10		1.72E-09
di-n-butyl phthalate	84-74-2		7.25E-01	2.75E-01	4.72	1.95E-01	3.48E+00	4.10E-10	2.99E-10	2.98E-10		5.37E-07
di-n-octyl phthalate	117-84-0		9.96E-01	3.59E-03	11.58	1.95E-01	1.15E+01	3.94E-11	3.95E-11	3.95E-11		1.83E-08
ethane	74-84-0		9.89E-01	1.13E-02	70.48	1.95E-01	6.97E+01	2.35E-07	2.34E-07	2.34E-07		1.16E-06
HD	505-60-2	Yes	9.44E-01	5.64E-02	26.62	1.95E-01	2.51E+01	1.16E-10	1.10E-10	1.10E-10		1.57E-09
methane	74-82-8		9.94E-01	5.67E-03	93.20	1.95E-01	9.27E+01	9.98E-07	9.98E-07	9.98E-07		1.38E-06
naphthalene	91-20-3		7.76E-01	2.24E-01	32.82	1.95E-01	2.55E+01	4.94E-10	3.85E-10	3.85E-10		2.67E-08
propene	115-07-1		9.89E-01	1.07E-02	60.60	1.95E-01	6.00E+01	1.31E-08	1.30E-08	1.30E-08		5.98E-08
toluene	108-88-3		9.64E-01	3.59E-02	36.63	1.95E-01	3.53E+01	6.72E-09	6.52E-09	6.52E-09		1.56E-07
trichlorofluoromethane	75-69-4		9.70E-01	3.01E-02	39.75	1.95E-01	3.86E+01	8.64E-11	8.43E-11	8.43E-11		1.42E-09
xylenes	1330-20-7		9.13E-01	8.68E-02	39.99	1.95E-01	3.65E+01	1.07E-10	9.84E-11	9.84E-11		5.32E-09
1,2,3,4,6,7,8-HpCDD	35822-46-9		1.27E-03	9.99E-01	0.72	1.95E-01	1.96E-01	7.76E-14	9.94E-17	2.11E-18	1.30E-11	1.14E-13
1,2,3,4,6,7,8,9-OCDD	3268-87-9		3.16E-03	9.97E-01	0.45	1.95E-01	1.96E-01	3.46E-13	1.10E-15	1.48E-17	5.79E-11	1.01E-14
1,2,3,4,6,7,8-HpCDF	67562-39-4		3.38E-03	9.97E-01	2.61	1.95E-01	2.03E-01	3.09E-14	1.05E-16	8.33E-18	5.17E-12	4.52E-14
1,2,3,4,6,7,8,9-OCDF	39001-02-0		3.17E-03	9.97E-01	0.50	1.95E-01	1.96E-01	1.12E-13	3.59E-16	7.60E-18	1.88E-11	3.29E-15
Total PCDDs and PCDFs	NA	Yes										
ammonia	7664-41-7		9.96E-01	4.02E-03	59.52	1.95E-01	5.93E+01	7.57E-10	7.58E-10	7.58E-10		2.40E-09
aluminum	7429-90-5		9.41E-01	5.93E-02	73.82	1.95E-01	6.95E+01	3.61E-10	3.41E-10	3.41E-10		1.08E-09
antimony	7440-36-0		7.85E-01	2.15E-01	39.37	1.95E-01	3.10E+01	1.81E-11	1.43E-11	1.43E-11		5.72E-10
barium	7440-39-3		8.00E-01	2.00E-01	39.32	1.95E-01	3.15E+01	3.58E-12	2.89E-12	2.88E-12		1.83E-09
beryllium	7440-41-7		1.75E-01	8.25E-01	39.07	1.95E-01	7.01E+00	7.70E-12	1.36E-12	1.35E-12		8.35E-11
cadmium	7440-43-9		6.88E-01	3.12E-01	39.36	1.95E-01	2.71E+01	2.10E-11	1.45E-11	1.45E-11		1.32E-08
chlorine	7782-50-5		9.95E-01	5.07E-03	40.00	1.95E-01	3.98E+01	2.37E-09	2.37E-09	2.37E-09		7.49E-09
chromium (3+)	7440-47-3		8.95E-01	1.05E-01	51.05	1.95E-01	4.57E+01	2.21E-11	1.99E-11	1.98E-11		6.27E-11
chromium (6+)	18540-29-9	Yes	8.95E-01	1.05E-01	51.05	1.95E-01	4.57E+01	2.21E-11	1.99E-11	1.98E-11		6.27E-11
cobalt	7440-48-4		7.85E-01	2.15E-01	52.07	1.95E-01	4.09E+01	5.62E-12	4.44E-12	4.44E-12		1.40E-11
copper	7440-50-8		2.80E-01	7.20E-01	50.17	1.95E-01	1.42E+01	7.89E-10	2.22E-10	2.21E-10		7.00E-10
hydrogen chloride	7647-01-0		9.96E-01	4.35E-03	39.71	1.95E-01	3.95E+01	7.70E-09	7.71E-09	7.71E-09		2.44E-08
iron	7439-89-6		8.67E-01	1.33E-01	53.37	1.95E-01	4.63E+01	2.18E-08	1.90E-08	1.90E-08		6.02E-08
lead	7439-92-1	Yes	1.57E-01	8.43E-01	39.03	1.95E-01	6.31E+00	9.52E-11	1.51E-11	1.49E-11		1.34E-12
manganese	7439-96-5		7.18E-01	2.82E-01	53.72	1.95E-01	3.86E+01	1.33E-09	9.63E-10	9.62E-10		3.04E-09
total mercury	NA		6.62E-03	9.93E-01	0.02	1.95E-01	1.94E-01	2.50E-10	1.67E-12	0.00E+00		
mercuric chloride	7487-94-7		6.62E-03	9.93E-01	0.02	1.95E-01	1.94E-01	0.00E+00	0.00E+00	7.08E-13		0.00E+00
methyl mercury	22967-92-6		1.00E-01	9.00E-01	8.00	1.95E-01	9.75E-01	0.00E+00	0.00E+00	1.25E-13		8.49E-07
elemental mercury	7439-97-6		5.31E-02	9.47E-01	83.23	1.95E-01	4.61E+00	0.00E+00	0.00E+00	0.00E+00		0.00E+00
nickel	7440-02-0		7.18E-01	2.82E-01	39.36	1.95E-01	2.83E+01	1.39E-11	1.01E-11	1.00E-11		7.84E-10
selenium	7782-49-2		9.67E-01	3.25E-02	39.36	1.95E-01	3.81E+01	4.11E-11	4.00E-11	4.00E-11		5.16E-09
silver	7440-22-4		9.49E-01	5.07E-02	39.38	1.95E-01	3.74E+01	3.66E-12	3.49E-12	3.49E-12		3.06E-10
vanadium	7440-62-2		1.44E-01	8.56E-01	55.05	1.95E-01	8.09E+00	2.28E-10	3.31E-11	3.28E-11		1.04E-10
zinc	7440-66-6		7.27E-01	2.73E-01	39.36	1.95E-01	2.87E+01	8.67E-10	6.34E-10	6.33E-10		1.30E-06

CONCENTRATIONS OF COPCS IN SURFACE WATER AND FISH FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS (TEQ BASIS):
Infant Exposure Scenarios

COPC	CAS Number	Concentration in Water				Concentration in Fish
		Total Waterbody Concentration Including Water Column and Bed Sediment	Total Concentration in Water Column	Dissolved Phase Water Concentration	Concentration Sorbed to Bed Sediment	Fish Concentration
		(mg TEQ/ℓ)[a]	(mg TEQ/ℓ)[a]	(mg TEQ/ℓ)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]
		C_{wtot}	C_{wctot}	C_{dw}	C_{sb}	C_{fish}
1,4-dioxane	123-91-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-butanone	78-93-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-ethyl 1,3-butadiene	3404-63-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
acetone	67-64-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzene	71-43-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bis(2-ethylhexyl)-phthalate	117-81-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloromethane	74-87-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dichlorodifluoromethane	75-71-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
di-n-butyl phthalate	84-74-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
di-n-octyl phthalate	117-84-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ethane	74-84-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
HD	505-60-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methane	74-82-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
naphthalene	91-20-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
propene	115-07-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
toluene	108-88-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trichlorofluoromethane	75-69-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
xylenes	1330-20-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2,3,4,6,7,8-HpCDD	35822-46-9	7.76E-16	9.94E-19	2.11E-20	1.30E-13	1.14E-15
1,2,3,4,6,7,8,9-OCDD	3268-87-9	1.04E-16	3.30E-19	4.44E-21	1.74E-14	3.04E-18
1,2,3,4,6,7,8-HpCDF	67562-39-4	3.09E-16	1.05E-18	8.33E-20	5.17E-14	4.52E-16
1,2,3,4,6,7,8,9-OCDF	39001-02-0	3.37E-17	1.08E-19	2.28E-21	5.63E-15	9.86E-19
Total PCDDs and PCDFs	NA	1.22E-15	2.48E-18	1.11E-19	2.05E-13	1.59E-15
ammonia	7664-41-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
aluminum	7429-90-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
antimony	7440-36-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
barium	7440-39-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
beryllium	7440-41-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cadmium	7440-43-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chlorine	7782-50-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (3+)	7440-47-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (6+)	18540-29-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cobalt	7440-48-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
copper	7440-50-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
hydrogen chloride	7647-01-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
iron	7439-89-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
lead	7439-92-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
manganese	7439-96-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
total mercury	NA					
mercuric chloride	7487-94-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methyl mercury	22967-92-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
selenium	7782-49-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
silver	7440-22-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
vanadium	7440-62-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
zinc	7440-66-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

a. The concentration of individual PCDDs and PCDFs congeners and coplanar PCBs in water and fish are presented in units of mg COPC TEQ/kg. The concentration of total PCDDs and PCDFs as well as the concentration of total coplanar PCBs in water and fish are presented in units of mg TEQ/kg produce and are calculated as the sum of the concentrations of all individual PCDD and PCDF congeners in water or fish and the concentrations of all coplanar produce in water and fish, respectively.

CONCENTRATIONS OF COPCS IN SURFACE WATER AND FISH FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS: All Exposure Scenarios												
		Diffusive Mass Transfer Coefficient			Erosion Loading Supporting Calculation		Contaminant Load To The Waterbody					
		Liquid Phase Transfer Coefficient	Gas Phase Transfer Coefficient	Overall Transfer Rate	Unit Soil Loss	Watershed Sediment Delivery Ratio	Due to Direct Deposition	Due to Impervious Runoff	Due to Pervious Runoff	Due to Erosion	Due to Diffusion	Due to All Processes
		(m/yr)	(m/yr)	(m/yr)	(kg/m^2-yr)	(dimensionless)	(g/yr)	(g/yr)	(g/yr)	(g/yr)	(g/yr)	(g/yr)
COPC	CAS Number	K_L	K_G	K_v	X_s	SD	L_{Dep}	L_{RI}	L_R	L_E	L_{Dif}	L_T
1,4-dioxane	123-91-1	181.91	996974.21	107.19	0.39	0.36	1.62E-03	2.00E-03	2.26E-04	7.40E-08	1.69E-02	2.07E-02
2-butanone	78-93-3	177.10	496089.19	174.20	0.39	0.36	3.11E-03	3.83E-03	9.90E-04	9.39E-06	4.51E-03	1.24E-02
2-ethyl 1,3-butadiene	3404-63-5	198.28	576088.85	225.43	0.39	0.36	3.06E-04	3.77E-04	2.61E-08	2.76E-09	1.31E-07	6.83E-04
acetone	67-64-1	195.98	660977.51	187.89	0.39	0.36	4.46E-02	5.49E-02	7.91E-03	2.25E-05	1.00E-01	2.08E-01
benzene	71-43-2	181.91	525288.08	206.51	0.39	0.36	3.45E-02	4.25E-02	7.29E-05	2.86E-07	5.93E-04	7.76E-02
bis(2-ethylhexyl)-phthalate	117-81-7	91.54	283759.18	1.30	0.39	0.36	4.53E-04	5.58E-04	1.33E-09	1.00E-04	0.00E+00	1.11E-03
chloromethane	74-87-3	134.51	668101.45	152.84	0.39	0.36	3.38E-04	4.16E-04	2.08E-07	4.07E-10	2.73E-06	7.57E-04
dichlorodifluoromethane	75-71-8	179.51	26157.37	203.99	0.39	0.36	3.92E-04	4.83E-04	2.07E-06	4.19E-08	1.09E-07	8.77E-04
di-n-butyl phthalate	84-74-2	152.77	329140.86	23.78	0.39	0.36	9.93E-05	1.22E-04	2.01E-07	3.41E-05	6.12E-04	8.69E-04
di-n-octyl phthalate	117-84-0	179.51	26157.37	58.24	0.39	0.36	5.74E-05	7.07E-05	1.19E-09	5.04E-18	0.00E+00	1.28E-04
ethane	74-84-0	311.82	898267.57	354.52	0.39	0.36	6.48E-01	7.99E-01	1.03E-05	1.08E-07	2.15E-04	1.45E+00
HD	505-60-2	147.91	428791.43	133.93	0.39	0.36	1.06E-04	1.31E-04	2.12E-07	1.62E-08	2.01E-04	4.38E-04
methane	74-82-8	412.36	1192048.29	468.82	0.39	0.36	3.28E+00	4.04E+00	1.45E-05	4.12E-08	1.09E-03	7.31E+00
naphthalene	91-20-3	148.04	401850.95	165.21	0.39	0.36	5.94E-04	7.32E-04	2.24E-05	2.20E-04	9.55E-05	1.66E-03
propene	115-07-1	268.13	774188.86	304.83	0.39	0.36	3.31E-02	4.08E-02	1.64E-06	1.61E-08	2.41E-05	7.40E-02
toluene	108-88-3	162.26	521281.19	184.27	0.39	0.36	1.30E-02	1.61E-02	3.65E-05	4.29E-07	1.70E-04	2.93E-02
trichlorofluoromethane	75-69-4	175.89	521281.19	199.95	0.39	0.36	1.76E-04	2.16E-04	2.94E-08	2.31E-10	1.69E-07	3.92E-04
xylenes	1330-20-7	177.22	513221.49	201.23	0.39	0.36	2.04E-04	2.51E-04	7.69E-07	9.58E-08	2.89E-06	4.59E-04
1,2,3,4,6,7,8-HpCDD	35822-46-9	154.58	11708808.08	171.15	0.39	0.36	1.29E-10	1.59E-10	7.10E-14	1.43E-09	0.00E+00	1.72E-09
1,2,3,4,6,7,8,9-OCDD	3268-87-9	154.58	11398943.85	167.52	0.39	0.36	7.92E-10	9.75E-10	2.78E-13	8.90E-09	0.00E+00	1.07E-08
1,2,3,4,6,7,8-HpCDF	67562-39-4	154.58	4304021.11	165.45	0.39	0.36	7.49E-11	9.23E-11	1.64E-13	8.29E-10	0.00E+00	9.96E-10
1,2,3,4,6,7,8,9-OCDF	39001-02-0	154.58	4185987.64	118.32	0.39	0.36	2.57E-10	3.16E-10	1.44E-13	2.91E-09	0.00E+00	3.48E-09
Total PCDDs and PCDFs	NA											
ammonia	7664-41-7	401.91	1159889.25	299.40	0.39	0.36	3.90E-04	4.81E-04	2.10E-05	1.17E-08	3.39E-03	4.28E-03
aluminum	7429-90-5	326.72	944096.93	371.33	0.39	0.36	9.69E-04	1.19E-03	4.07E-07	1.32E-07	6.86E-06	2.17E-03
antimony	7440-36-0	174.30	481169.11	198.10	0.39	0.36	2.97E-05	3.66E-05	2.18E-08	3.21E-08	0.00E+00	6.64E-05
barium	7440-39-3	174.30	102872.13	197.84	0.39	0.36	5.94E-06	7.32E-06	4.44E-08	5.96E-08	0.00E+00	1.34E-05
beryllium	7440-41-7	174.30	481169.11	198.05	0.39	0.36	2.80E-06	3.44E-06	3.43E-09	8.85E-08	0.00E+00	6.33E-06
cadmium	7440-43-9	174.30	482421.10	198.12	0.39	0.36	3.01E-05	3.71E-05	1.78E-08	4.36E-08	0.00E+00	6.73E-05
chlorine	7782-50-5	179.51	26157.37	201.21	0.39	0.36	4.68E-03	5.77E-03	5.74E-04	4.69E-06	3.76E-05	1.11E-02
chromium (3+)	7440-47-3	225.98	669876.60	256.84	0.39	0.36	4.64E-05	5.72E-05	2.11E-08	1.31E-08	0.00E+00	1.04E-04
chromium (6+)	18540-29-9	225.98	669876.60	256.84	0.39	0.36	4.64E-05	5.72E-05	2.11E-08	1.31E-08	0.00E+00	1.04E-04
cobalt	7440-48-4	230.55	666206.38	262.03	0.39	0.36	1.05E-05	1.29E-05	4.83E-09	7.10E-09	0.00E+00	2.34E-05
copper	7440-50-8	222.99	644347.48	253.43	0.39	0.36	5.16E-04	6.35E-04	2.50E-07	3.52E-06	0.00E+00	1.15E-03
hydrogen chloride	7647-01-0	179.51	26157.37	199.76	0.39	0.36	1.56E-02	1.92E-02	8.61E-04	9.03E-07	1.88E-04	3.59E-02
iron	7439-89-6	236.24	682646.38	268.50	0.39	0.36	4.55E-02	5.61E-02	2.02E-05	1.65E-05	0.00E+00	1.02E-01
lead	7439-92-1	174.30	481169.11	198.10	0.39	0.36	3.12E-05	3.85E-05	2.30E-08	6.76E-07	0.00E+00	7.04E-05
manganese	7439-96-5	237.88	687398.85	270.37	0.39	0.36	2.31E-03	2.84E-03	1.02E-06	2.16E-06	0.00E+00	5.16E-03
total mercury	NA	116.57	7366494.52	0.24	0.39	0.36	8.25E-07	1.02E-06			0.00E+00	1.19E-05
mercuric chloride	7487-94-7	116.57	7366494.52	0.24	0.39	0.36	0.00E+00	0.00E+00	5.20E-09	9.86E-06	0.00E+00	0.00E+00
methyl mercury	22967-92-6	129.05	8159012.80	80.49	0.39	0.36	0.00E+00	0.00E+00	8.40E-10	1.92E-07	0.00E+00	0.00E+00
elemental mercury	7439-97-6	375.61	129619.37	422.82	0.39	0.36	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	174.30	481169.11	198.10	0.39	0.36	2.09E-05	2.57E-05	1.53E-08	3.25E-08	0.00E+00	4.66E-05
selenium	7782-49-2	174.30	481169.11	197.99	0.39	0.36	8.29E-05	1.02E-04	1.53E-07	2.50E-08	0.00E+00	1.85E-04
silver	7440-22-4	174.30	481169.11	198.10	0.39	0.36	7.25E-06	8.93E-06	5.36E-09	1.45E-09	0.00E+00	1.62E-05
vanadium	7440-62-2	246.05	711005.14	279.65	0.39	0.36	8.07E-05	9.94E-05	3.38E-08	1.11E-06	0.00E+00	1.81E-04
zinc	7440-66-6	174.30	481169.11	198.10	0.39	0.36	1.32E-03	1.62E-03	9.65E-07	1.96E-06	0.00E+00	2.94E-03

CONCENTRATIONS OF COPCS IN SURFACE WATER AND FISH FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS:
All Exposure Scenarios

COPC	CAS Number	Oral Cancer Slope Factor?	Waterbody Dissipation Rate Constant: Fraction in Water Column (dimensionless) f_{wc}	Fraction in Benthic Sediment (dimensionless) f_{bs}	Water Column Volatilization Rate Constant (yr^{-1}) k_v	Benthic Burial Rate Constant (yr^{-1}) k_b	Overall Total Waterbody Dissipation Rate Constant (yr^{-1}) k_{wt}	Concentration in Water: Total Waterbody Concentration Including Water Column and Bed Sediment (mg/ℓ) C_{wtot}	Total Concentration in Water Column (mg/ℓ) C_{wctot}	Dissolved Phase Water Concentration (mg/ℓ) C_{dw}	Concentration Sorbed to Bed Sediment (mg/kg) C_{sb}	Concentration in Fish: Fish Concentration (mg/kg) C_{fish}
1,4-dioxane	123-91-1	Yes	9.96E-01	3.71E-03	21.31	1.95E-01	2.12E+01	5.55E-09	5.56E-09	5.56E-09		1.76E-08
2-butanone	78-93-3	Yes	9.96E-01	4.06E-03	34.63	1.95E-01	3.45E+01	2.83E-09	2.83E-09	2.83E-09		8.95E-09
2-ethyl 1,3-butadiene	3404-63-5		9.25E-01	7.51E-02	44.81	1.95E-01	4.15E+01	1.50E-10	1.39E-10	1.39E-10		6.42E-09
acetone	67-64-1	Yes	9.96E-01	3.71E-03	37.35	1.95E-01	3.72E+01	4.57E-08	4.58E-08	4.58E-08		1.45E-07
benzene	71-43-2	Yes	9.82E-01	1.81E-02	41.05	1.95E-01	4.03E+01	1.67E-08	1.65E-08	1.64E-08		1.36E-07
bis(2-ethylhexyl)-phthalate	117-81-7	Yes	3.91E-02	9.61E-01	0.24	1.95E-01	1.97E-01	9.69E-09	3.81E-10	3.52E-10		6.83E-08
chloromethane	74-87-3	Yes	9.95E-01	5.07E-03	30.39	1.95E-01	3.02E+01	1.81E-10	1.81E-10	1.81E-10		5.72E-10
dichlorodifluoromethane	75-71-8	Yes	9.82E-01	1.80E-02	40.55	1.95E-01	3.98E+01	1.89E-10	1.87E-10	1.87E-10		1.72E-09
di-n-butyl phthalate	84-74-2	Yes	7.25E-01	2.75E-01	4.72	1.95E-01	3.48E+00	4.10E-10	2.99E-10	2.99E-10		5.38E-07
di-n-octyl phthalate	117-84-0		9.96E-01	3.59E-03	11.58	1.95E-01	1.15E+01	3.94E-11	3.95E-11	3.95E-11		1.83E-08
ethane	74-84-0		9.89E-01	1.13E-02	70.48	1.95E-01	6.97E+01	2.35E-07	2.34E-07	2.34E-07		1.16E-06
HD	505-60-2	Yes	9.44E-01	5.64E-02	26.62	1.95E-01	2.51E+01	1.16E-10	1.10E-10	1.10E-10		1.57E-09
methane	74-82-8		9.94E-01	5.67E-03	93.20	1.95E-01	9.27E+01	9.98E-07	9.98E-07	9.98E-07		1.38E-06
naphthalene	91-20-3	Yes	7.76E-01	2.24E-01	32.82	1.95E-01	2.55E+01	4.95E-10	3.86E-10	3.86E-10		2.67E-08
propene	115-07-1		9.89E-01	1.07E-02	60.60	1.95E-01	6.00E+01	1.31E-08	1.30E-08	1.30E-08		5.98E-08
toluene	108-88-3	Yes	9.64E-01	3.59E-02	36.63	1.95E-01	3.53E+01	6.72E-09	6.52E-09	6.52E-09		1.56E-07
trichlorofluoromethane	75-69-4	Yes	9.70E-01	3.01E-02	39.75	1.95E-01	3.86E+01	8.64E-11	8.43E-11	8.43E-11		1.42E-09
xylenes	1330-20-7	Yes	9.13E-01	8.68E-02	39.99	1.95E-01	3.65E+01	1.07E-10	9.84E-11	9.84E-11		5.32E-09
1,2,3,4,6,7,8-HpCDD	35822-46-9		1.27E-03	9.99E-01	0.72	1.95E-01	1.96E-01	1.30E-13	1.66E-16	3.53E-18	2.18E-11	1.90E-13
1,2,3,4,6,7,8,9-OCDD	3268-87-9		3.16E-03	9.97E-01	0.45	1.95E-01	1.96E-01	5.83E-13	1.85E-15	2.49E-17	9.74E-11	1.70E-14
1,2,3,4,6,7,8-HpCDF	67562-39-4		3.38E-03	9.97E-01	2.61	1.95E-01	2.03E-01	5.17E-14	1.76E-16	1.39E-17	8.64E-12	7.56E-14
1,2,3,4,6,7,8,9-OCDF	39001-02-0		3.17E-03	9.97E-01	0.50	1.95E-01	1.96E-01	1.90E-13	6.05E-16	1.28E-17	3.17E-11	5.54E-15
Total PCDDs and PCDFs	NA	Yes										
ammonia	7664-41-7		9.96E-01	4.02E-03	59.52	1.95E-01	5.93E+01	7.57E-10	7.58E-10	7.58E-10		2.40E-09
aluminum	7429-90-5	Yes	9.41E-01	5.93E-02	73.82	1.95E-01	6.95E+01	3.61E-10	3.41E-10	3.41E-10		1.08E-09
antimony	7440-36-0	Yes	7.85E-01	2.15E-01	39.37	1.95E-01	3.10E+01	1.81E-11	1.43E-11	1.43E-11		5.72E-10
barium	7440-39-3	Yes	8.00E-01	2.00E-01	39.32	1.95E-01	3.15E+01	3.58E-12	2.89E-12	2.88E-12		1.83E-09
beryllium	7440-41-7	Yes	1.75E-01	8.25E-01	39.07	1.95E-01	7.01E+00	7.70E-12	1.36E-12	1.35E-12		8.35E-11
cadmium	7440-43-9	Yes	6.88E-01	3.12E-01	39.36	1.95E-01	2.71E+01	2.10E-11	1.45E-11	1.45E-11		1.32E-08
chlorine	7782-50-5	Yes	9.95E-01	5.07E-03	40.00	1.95E-01	3.98E+01	2.37E-09	2.37E-09	2.37E-09		7.49E-09
chromium (3+)	7440-47-3	Yes	8.95E-01	1.05E-01	51.05	1.95E-01	4.57E+01	2.21E-11	1.99E-11	1.98E-11		6.27E-11
chromium (6+)	18540-29-9	Yes	8.95E-01	1.05E-01	51.05	1.95E-01	4.57E+01	2.21E-11	1.99E-11	1.98E-11		6.27E-11
cobalt	7440-48-4	Yes	7.85E-01	2.15E-01	52.07	1.95E-01	4.09E+01	5.62E-12	4.44E-12	4.44E-12		1.40E-11
copper	7440-50-8	Yes	2.80E-01	7.20E-01	50.17	1.95E-01	1.42E+01	7.89E-10	2.22E-10	2.21E-10		7.00E-10
hydrogen chloride	7647-01-0		9.96E-01	4.35E-03	39.71	1.95E-01	3.95E+01	7.70E-09	7.71E-09	7.71E-09		2.44E-08
iron	7439-89-6	Yes	8.67E-01	1.33E-01	53.37	1.95E-01	4.63E+01	2.18E-08	1.90E-08	1.90E-08		6.02E-08
lead	7439-92-1		1.57E-01	8.43E-01	39.03	1.95E-01	6.31E+00	9.52E-11	1.51E-11	1.49E-11		1.34E-12
manganese	7439-96-5	Yes	7.18E-01	2.82E-01	53.72	1.95E-01	3.86E+01	1.33E-09	9.63E-10	9.62E-10		3.04E-09
total mercury	NA		6.62E-03	9.93E-01	0.02	1.95E-01	1.94E-01	4.33E-10	2.88E-12	0.00E+00		
mercuric chloride	7487-94-7	Yes	6.62E-03	9.93E-01	0.02	1.95E-01	1.94E-01	0.00E+00	0.00E+00	1.23E-12		0.00E+00
methyl mercury	22967-92-6	Yes	1.00E-01	9.00E-01	8.00	1.95E-01	9.75E-01	0.00E+00	0.00E+00	2.16E-13		1.47E-06
elemental mercury	7439-97-6		5.31E-02	9.47E-01	83.23	1.95E-01	4.61E+00	0.00E+00	0.00E+00	0.00E+00		0.00E+00
nickel	7440-02-0	Yes	7.18E-01	2.82E-01	39.36	1.95E-01	2.83E+01	1.39E-11	1.01E-11	1.00E-11		7.84E-10
selenium	7782-49-2	Yes	9.67E-01	3.25E-02	39.36	1.95E-01	3.81E+01	4.11E-11	4.00E-11	4.00E-11		5.16E-09
silver	7440-22-4	Yes	9.49E-01	5.07E-02	39.38	1.95E-01	3.74E+01	3.66E-12	3.49E-12	3.49E-12		3.06E-10
vanadium	7440-62-2	Yes	1.44E-01	8.56E-01	55.05	1.95E-01	8.09E+00	2.28E-10	3.31E-11	3.28E-11		1.04E-10
zinc	7440-66-6	Yes	7.27E-01	2.73E-01	39.36	1.95E-01	2.87E+01	8.67E-10	6.34E-10	6.33E-10		1.30E-06

CONCENTRATIONS OF COPCS IN SURFACE WATER AND FISH FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS (TEQ BASIS):
All Exposure Scenarios

		Concentration in Water				Concentration in Fish
		Total Waterbody Concentration Including Water Column and Bed Sediment	Total Concentration in Water Column	Dissolved Phase Water Concentration	Concentration Sorbed to Bed Sediment	Fish Concentration
		(mg TEQ/ℓ)[a]	(mg TEQ/ℓ)[a]	(mg TEQ/ℓ)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]
COPC	CAS Number	C_{wtot}	C_{wctot}	C_{dw}	C_{sb}	C_{fish}
1,4-dioxane	123-91-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-butanone	78-93-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-ethyl 1,3-butadiene	3404-63-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
acetone	67-64-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzene	71-43-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bis(2-ethylhexyl)-phthalate	117-81-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloromethane	74-87-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dichlorodifluoromethane	75-71-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
di-n-butyl phthalate	84-74-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
di-n-octyl phthalate	117-84-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ethane	74-84-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
HD	505-60-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methane	74-82-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
naphthalene	91-20-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
propene	115-07-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
toluene	108-88-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trichlorofluoromethane	75-69-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
xylenes	1330-20-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2,3,4,6,7,8-HpCDD	35822-46-9	1.30E-15	1.66E-18	3.53E-20	2.18E-13	1.90E-15
1,2,3,4,6,7,8,9-OCDD	3268-87-9	1.75E-16	5.55E-19	7.47E-21	2.92E-14	5.11E-18
1,2,3,4,6,7,8-HpCDF	67562-39-4	5.17E-16	1.76E-18	1.39E-19	8.64E-14	7.56E-16
1,2,3,4,6,7,8,9-OCDF	39001-02-0	5.69E-17	1.82E-19	3.85E-21	9.50E-15	1.66E-18
Total PCDDs and PCDFs	NA	2.05E-15	4.16E-18	1.86E-19	3.43E-13	2.67E-15
ammonia	7664-41-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
aluminum	7429-90-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
antimony	7440-36-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
barium	7440-39-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
beryllium	7440-41-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cadmium	7440-43-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chlorine	7782-50-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (3+)	7440-47-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (6+)	18540-29-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cobalt	7440-48-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
copper	7440-50-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
hydrogen chloride	7647-01-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
iron	7439-89-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
lead	7439-92-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
manganese	7439-96-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
total mercury	NA					
mercuric chloride	7487-94-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methyl mercury	22967-92-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
selenium	7782-49-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
silver	7440-22-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
vanadium	7440-62-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
zinc	7440-66-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

a. The concentration of individual PCDDs and PCDFs congeners and coplanar PCBs in water and fish are presented in units of mg COPC TEQ/kg. The concentration of total PCDDs and PCDFs as well as the concentration of total coplanar PCBs in water and fish are presented in units of mg TEQ/kg produce and are calculated as the sum of the concentrations of all individual PCDD and PCDF congeners in water or fish and the concentrations of all coplanar produce in water and fish, respectively.

CONCENTRATIONS OF COPCS IN BREAST MILK FOR INFANT EXPOSURE SCENARIOS

CARCINOGENIC EFFECTS: Infant Resident Exposure Scenario										
COPC	CAS Number	Fraction Stored in Maternal Fat (dimensionless) f_f	Biological Half-Life (days) h	Concentration in Milk Fat (mg/kg) $C_{milkfat}$	Fraction Stored in Whole Blood (dimensionless) f_{bl}	Red Blood Cells-Blood Plasma Partition Coefficient (dimensionless) Pc_{RBC}	Fraction Stored in Blood Plasma (dimensionless) f_{pl}	Blood Plasma-Breast Milk Partition Coefficient (dimensionless) Pc_{bm}	Concentration in Milk Aqueous Phase (mg/kg) $C_{aqueous}$	Concentration in Milk (mg/kg) C_{milk}
1,4-dioxane	123-91-1									
2-butanone	78-93-3									
2-ethyl 1,3-butadiene	3404-63-5									
acetone	67-64-1									
benzene	71-43-2	0.5000	5.0000	4.96E-07	0.5000	1	0.325	1	2.10E-06	2.04E-06
bis(2-ethylhexyl)-phthalate	117-81-7									
chloromethane	74-87-3									
dichlorodifluoromethane	75-71-8									
di-n-butyl phthalate	84-74-2									
di-n-octyl phthalate	117-84-0									
ethane	74-84-0									
HD	505-60-2									
methane	74-82-8									
naphthalene	91-20-3									
propene	115-07-1									
toluene	108-88-3									
trichlorofluoromethane	75-69-4									
xylenes	1330-20-7									
1,2,3,4,6,7,8-HpCDD	35822-46-9									
1,2,3,4,6,7,8,9-OCDD	3268-87-9									
1,2,3,4,6,7,8-HpCDF	67562-39-4									
1,2,3,4,6,7,8,9-OCDF	39001-02-0									
Total PCDDs and PCDFs	NA									
ammonia	7664-41-7									
aluminum	7429-90-5									
antimony	7440-36-0									
barium	7440-39-3									
beryllium	7440-41-7									
cadmium	7440-43-9									
chlorine	7782-50-5									
chromium (3+)	7440-47-3									
chromium (6+)	18540-29-9	0.5000	5.0000	9.48E-09	0.5000	1	0.325	1	4.02E-08	3.90E-08
cobalt	7440-48-4									
copper	7440-50-8									
hydrogen chloride	7647-01-0									
iron	7439-89-6									
lead	7439-92-1	0.5000	5.0000	4.96E-09	0.5000	1	0.325	1	2.10E-08	2.04E-08
manganese	7439-96-5									
total mercury	NA									
mercuric chloride	7487-94-7									
methyl mercury	22967-92-6									
elemental mercury	7439-97-6									
nickel	7440-02-0									
selenium	7782-49-2									
silver	7440-22-4									
vanadium	7440-62-2									
zinc	7440-66-6									

CONCENTRATIONS OF COPCS IN BREAST MILK FOR INFANT EXPOSURE SCENARIOS

CARCINOGENIC EFFECTS: Infant Subsistence Farmer Exposure Scenario										
COPC	CAS Number	Fraction Stored in Maternal Fat (dimensionless) f_f	Biological Half-Life (days) h	Concentration in Milk Fat (mg/kg) $C_{milkfat}$	Fraction Stored in Whole Blood (dimensionless) f_{bl}	Red Blood Cells-Blood Plasma Partition Coefficient (dimensionless) Pc_{RBC}	Fraction Stored in Blood Plasma (dimensionless) f_{pl}	Blood Plasma-Breast Milk Partition Coefficient (dimensionless) Pc_{bm}	Concentration in Milk Aqueous Phase (mg/kg) $C_{aqueous}$	Concentration in Milk (mg/kg) C_{milk}
1,4-dioxane	123-91-1									
2-butanone	78-93-3									
2-ethyl 1,3-butadiene	3404-63-5									
acetone	67-64-1									
benzene	71-43-2	0.5000	5.0000	5.03E-07	0.5000	1	0.325	1	2.13E-06	2.07E-06
bis(2-ethylhexyl)-phthalate	117-81-7									
chloromethane	74-87-3									
dichlorodifluoromethane	75-71-8									
di-n-butyl phthalate	84-74-2									
di-n-octyl phthalate	117-84-0									
ethane	74-84-0									
HD	505-60-2									
methane	74-82-8									
naphthalene	91-20-3									
propene	115-07-1									
toluene	108-88-3									
trichlorofluoromethane	75-69-4									
xylenes	1330-20-7									
1,2,3,4,6,7,8-HpCDD	35822-46-9									
1,2,3,4,6,7,8,9-OCDD	3268-87-9									
1,2,3,4,6,7,8-HpCDF	67562-39-4									
1,2,3,4,6,7,8,9-OCDF	39001-02-0									
Total PCDDs and PCDFs	NA									
ammonia	7664-41-7									
aluminum	7429-90-5									
antimony	7440-36-0									
barium	7440-39-3									
beryllium	7440-41-7									
cadmium	7440-43-9									
chlorine	7782-50-5									
chromium (3+)	7440-47-3									
chromium (6+)	18540-29-9	0.5000	5.0000	2.22E-08	0.5000	1	0.325	1	9.40E-08	9.11E-08
cobalt	7440-48-4									
copper	7440-50-8									
hydrogen chloride	7647-01-0									
iron	7439-89-6									
lead	7439-92-1	0.5000	5.0000	1.14E-08	0.5000	1	0.325	1	4.82E-08	4.67E-08
manganese	7439-96-5									
total mercury	NA									
mercuric chloride	7487-94-7									
methyl mercury	22967-92-6									
elemental mercury	7439-97-6									
nickel	7440-02-0									
selenium	7782-49-2									
silver	7440-22-4									
vanadium	7440-62-2									
zinc	7440-66-6									

CONCENTRATIONS OF COPCS IN BREAST MILK FOR INFANT EXPOSURE SCENARIOS

CARCINOGENIC EFFECTS: Infant Subsistence Fisher Exposure Scenario										
COPC	CAS Number	Fraction Stored in Maternal Fat (dimensionless) f_f	Biological Half-Life (days) h	Concentration in Milk Fat (mg/kg) $C_{milkfat}$	Fraction Stored in Whole Blood (dimensionless) f_{bl}	Red Blood Cells-Blood Plasma Partition Coefficient (dimensionless) Pc_{RBC}	Fraction Stored in Blood Plasma (dimensionless) f_{pl}	Blood Plasma-Breast Milk Partition Coefficient (dimensionless) Pc_{bm}	Concentration in Milk Aqueous Phase (mg/kg) $C_{aqueous}$	Concentration in Milk (mg/kg) C_{milk}
1,4-dioxane	123-91-1									
2-butanone	78-93-3									
2-ethyl 1,3-butadiene	3404-63-5									
acetone	67-64-1									
benzene	71-43-2	0.5000	5.0000	5.00E-07	0.5000	1	0.325	1	2.12E-06	2.05E-06
bis(2-ethylhexyl)-phthalate	117-81-7									
chloromethane	74-87-3									
dichlorodifluoromethane	75-71-8									
di-n-butyl phthalate	84-74-2									
di-n-octyl phthalate	117-84-0									
ethane	74-84-0									
HD	505-60-2									
methane	74-82-8									
naphthalene	91-20-3									
propene	115-07-1									
toluene	108-88-3									
trichlorofluoromethane	75-69-4									
xylenes	1330-20-7									
1,2,3,4,6,7,8-HpCDD	35822-46-9									
1,2,3,4,6,7,8,9-OCDD	3268-87-9									
1,2,3,4,6,7,8-HpCDF	67562-39-4									
1,2,3,4,6,7,8,9-OCDF	39001-02-0									
Total PCDDs and PCDFs	NA									
ammonia	7664-41-7									
aluminum	7429-90-5									
antimony	7440-36-0									
barium	7440-39-3									
beryllium	7440-41-7									
cadmium	7440-43-9									
chlorine	7782-50-5									
chromium (3+)	7440-47-3									
chromium (6+)	18540-29-9	0.5000	5.0000	9.48E-09	0.5000	1	0.325	1	4.02E-08	3.90E-08
cobalt	7440-48-4									
copper	7440-50-8									
hydrogen chloride	7647-01-0									
iron	7439-89-6									
lead	7439-92-1	0.5000	5.0000	4.96E-09	0.5000	1	0.325	1	2.10E-08	2.04E-08
manganese	7439-96-5									
total mercury	NA									
mercuric chloride	7487-94-7									
methyl mercury	22967-92-6									
elemental mercury	7439-97-6									
nickel	7440-02-0									
selenium	7782-49-2									
silver	7440-22-4									
vanadium	7440-62-2									
zinc	7440-66-6									

CONCENTRATIONS OF COPCS IN BREAST MILK FOR INFANT EXPOSURE SCENARIOS

CARCINOGENIC EFFECTS (TEQ BASIS): Infant Resident Exposure Scenario										
COPC	CAS Number	Fraction Stored in Maternal Fat (dimensionless) f_f	Biological Half-Life (days) h	Concentration in Milk Fat (mg/kg) $C_{milkfat}$	Fraction Stored in Whole Blood (dimensionless) f_{bl}	Red Blood Cells-Blood Plasma Partition Coefficient (dimensionless) Pc_{RBC}	Fraction Stored in Blood Plasma (dimensionless) f_{pl}	Blood Plasma-Breast Milk Partition Coefficient (dimensionless) Pc_{bm}	Concentration in Milk Aqueous Phase (mg/kg) $C_{aqueous}$	Concentration in Milk (mg TEQ/kg)[A] C_{milk}
1,4-dioxane	123-91-1									
2-butanone	78-93-3									
2-ethyl 1,3-butadiene	3404-63-5									
acetone	67-64-1									
benzene	71-43-2									
bis(2-ethylhexyl)-phthalate	117-81-7									
chloromethane	74-87-3									
dichlorodifluoromethane	75-71-8									
di-n-butyl phthalate	84-74-2									
di-n-octyl phthalate	117-84-0									
ethane	74-84-0									
HD	505-60-2									
methane	74-82-8									
naphthalene	91-20-3									
propene	115-07-1									
toluene	108-88-3									
trichlorofluoromethane	75-69-4									
xylenes	1330-20-7									
1,2,3,4,6,7,8-HpCDD	35822-46-9									
1,2,3,4,6,7,8,9-OCDD	3268-87-9									
1,2,3,4,6,7,8-HpCDF	67562-39-4									
1,2,3,4,6,7,8,9-OCDF	39001-02-0									
Total PCDDs and PCDFs	NA	0.9000	3650.0000	2.39E-10	0.1000	1	0.065	1	1.12E-10	1.18E-10
ammonia	7664-41-7									
aluminum	7429-90-5									
antimony	7440-36-0									
barium	7440-39-3									
beryllium	7440-41-7									
cadmium	7440-43-9									
chlorine	7782-50-5									
chromium (3+)	7440-47-3									
chromium (6+)	18540-29-9									
cobalt	7440-48-4									
copper	7440-50-8									
hydrogen chloride	7647-01-0									
iron	7439-89-6									
lead	7439-92-1									
manganese	7439-96-5									
total mercury	NA									
mercuric chloride	7487-94-7									
methyl mercury	22967-92-6									
elemental mercury	7439-97-6									
nickel	7440-02-0									
selenium	7782-49-2									
silver	7440-22-4									
vanadium	7440-62-2									
zinc	7440-66-6									

a. The concentration of individual PCDDs and PCDFs congeners and coplanar PCBs in breast milk are presented in units of mg COPC TEQ/kg. The concentration of total PCDDs and PCDFs as well as the concentration of total coplanar PCBs in breast milk are presented in units of mg TEQ/kg produce and are calculated as the sum of the concentrations of all individual PCDD and PCDF congeners in breast milk and the concentrations of all coplanar produce in breast milk, respectively.

CONCENTRATIONS OF COPCS IN BREAST MILK FOR INFANT EXPOSURE SCENARIOS

CARCINOGENIC EFFECTS (TEQ BASIS): Infant Subsistence Farmer Exposure Scenario										
COPC	CAS Number	Fraction Stored in Maternal Fat (dimensionless) f_f	Biological Half-Life (days) h	Concentration in Milk Fat (mg/kg) $C_{milkfat}$	Fraction Stored in Whole Blood (dimensionless) f_{bl}	Red Blood Cells-Blood Plasma Partition Coefficient (dimensionless) Pc_{RBC}	Fraction Stored in Blood Plasma (dimensionless) f_{pl}	Blood Plasma-Breast Milk Partition Coefficient (dimensionless) Pc_{bm}	Concentration in Milk Aqueous Phase (mg/kg) $C_{aqueous}$	Concentration in Milk (mg/kg) C_{milk}
1,4-dioxane	123-91-1									
2-butanone	78-93-3									
2-ethyl 1,3-butadiene	3404-63-5									
acetone	67-64-1									
benzene	71-43-2									
bis(2-ethylhexyl)-phthalate	117-81-7									
chloromethane	74-87-3									
dichlorodifluoromethane	75-71-8									
di-n-butyl phthalate	84-74-2									
di-n-octyl phthalate	117-84-0									
ethane	74-84-0									
HD	505-60-2									
methane	74-82-8									
naphthalene	91-20-3									
propene	115-07-1									
toluene	108-88-3									
trichlorofluoromethane	75-69-4									
xylenes	1330-20-7									
1,2,3,4,6,7,8-HpCDD	35822-46-9									
1,2,3,4,6,7,8,9-OCDD	3268-87-9									
1,2,3,4,6,7,8-HpCDF	67562-39-4									
1,2,3,4,6,7,8,9-OCDF	39001-02-0									
Total PCDDs and PCDFs	NA	0.9000	3650.0000	5.97E-10	0.1000	1	0.065	1	2.81E-10	2.94E-10
ammonia	7664-41-7									
aluminum	7429-90-5									
antimony	7440-36-0									
barium	7440-39-3									
beryllium	7440-41-7									
cadmium	7440-43-9									
chlorine	7782-50-5									
chromium (3+)	7440-47-3									
chromium (6+)	18540-29-9									
cobalt	7440-48-4									
copper	7440-50-8									
hydrogen chloride	7647-01-0									
iron	7439-89-6									
lead	7439-92-1									
manganese	7439-96-5									
total mercury	NA									
mercuric chloride	7487-94-7									
methyl mercury	22967-92-6									
elemental mercury	7439-97-6									
nickel	7440-02-0									
selenium	7782-49-2									
silver	7440-22-4									
vanadium	7440-62-2									
zinc	7440-66-6									

a. The concentration of individual PCDDs and PCDFs congeners and coplanar PCBs in breast milk are presented in units of mg COPC TEQ/kg. The concentration of total PCDDs and PCDFs as well as the concentration of total coplanar PCBs in breast milk are presented in units of mg TEQ/kg produce and are calculated as the sum of the concentrations of all individual PCDD and PCDF congeners in breast milk and the concentrations of all coplanar produce in breast milk, respectively.

CONCENTRATIONS OF COPCS IN BREAST MILK FOR INFANT EXPOSURE SCENARIOS

CARCINOGENIC EFFECTS (TEQ BASIS): Infant Subsistence Fisher Exposure Scenario										
COPC	CAS Number	Fraction Stored in Maternal Fat (dimensionless) f_f	Biological Half-Life (days) h	Concentration in Milk Fat (mg/kg) $C_{milkfat}$	Fraction Stored in Whole Blood (dimensionless) f_{bl}	Red Blood Cells-Blood Plasma Partition Coefficient (dimensionless) Pc_{RBC}	Fraction Stored in Blood Plasma (dimensionless) f_{pl}	Blood Plasma-Breast Milk Partition Coefficient (dimensionless) Pc_{bm}	Concentration in Milk Aqueous Phase (mg/kg) $C_{aqueous}$	Concentration in Milk (mg/kg) C_{milk}
1,4-dioxane	123-91-1									
2-butanone	78-93-3									
2-ethyl 1,3-butadiene	3404-63-5									
acetone	67-64-1									
benzene	71-43-2									
bis(2-ethylhexyl)-phthalate	117-81-7									
chloromethane	74-87-3									
dichlorodifluoromethane	75-71-8									
di-n-butyl phthalate	84-74-2									
di-n-octyl phthalate	117-84-0									
ethane	74-84-0									
HD	505-60-2									
methane	74-82-8									
naphthalene	91-20-3									
propene	115-07-1									
toluene	108-88-3									
trichlorofluoromethane	75-69-4									
xylenes	1330-20-7									
1,2,3,4,6,7,8-HpCDD	35822-46-9									
1,2,3,4,6,7,8,9-OCDD	3268-87-9									
1,2,3,4,6,7,8-HpCDF	67562-39-4									
1,2,3,4,6,7,8,9-OCDF	39001-02-0									
Total PCDDs and PCDFs	NA	0.9000	3650.0000	2.39E-10	0.1000	1	0.065	1	1.12E-10	1.18E-10
ammonia	7664-41-7									
aluminum	7429-90-5									
antimony	7440-36-0									
barium	7440-39-3									
beryllium	7440-41-7									
cadmium	7440-43-9									
chlorine	7782-50-5									
chromium (3+)	7440-47-3									
chromium (6+)	18540-29-9									
cobalt	7440-48-4									
copper	7440-50-8									
hydrogen chloride	7647-01-0									
iron	7439-89-6									
lead	7439-92-1									
manganese	7439-96-5									
total mercury	NA									
mercuric chloride	7487-94-7									
methyl mercury	22967-92-6									
elemental mercury	7439-97-6									
nickel	7440-02-0									
selenium	7782-49-2									
silver	7440-22-4									
vanadium	7440-62-2									
zinc	7440-66-6									

a. The concentration of individual PCDDs and PCDFs congeners and coplanar PCBs in breast milk are presented in units of mg COPC TEQ/kg. The concentration of total PCDDs and PCDFs as well as the concentration of total coplanar PCBs in breast milk are presented in units of mg TEQ/kg produce and are calculated as the sum of the concentrations of all individual PCDD and PCDF congeners in breast milk and the concentrations of all coplanar produce in breast milk, respectively.

CONCENTRATIONS OF COPCS IN BREAST MILK FOR INFANT EXPOSURE SCENARIOS

NONCARCINOGENIC EFFECTS: Infant Resident Exposure Scenario										
COPC	CAS Number	Fraction Stored in Maternal Fat (dimensionless) f_f	Biological Half-Life (days) h	Concentration in Milk Fat (mg/kg) $C_{milkfat}$	Fraction Stored in Whole Blood (dimensionless) f_{bl}	Red Blood Cells-Blood Plasma Partition Coefficient (dimensionless) Pc_{RBC}	Fraction Stored in Blood Plasma (dimensionless) f_{pl}	Blood Plasma-Breast Milk Partition Coefficient (dimensionless) Pc_{bm}	Concentration in Milk Aqueous Phase (mg/kg) $C_{aqueous}$	Concentration in Milk (mg/kg) C_{milk}
1,4-dioxane	123-91-1									
2-butanone	78-93-3	0.5000	5.0000	1.08E-07	0.5000	1	0.325	1	4.57E-07	4.43E-07
2-ethyl 1,3-butadiene	3404-63-5									
acetone	67-64-1	0.5000	5.0000	1.12E-06	0.5000	1	0.325	1	4.73E-06	4.59E-06
benzene	71-43-2	0.5000	5.0000	4.96E-07	0.5000	1	0.325	1	2.10E-06	2.04E-06
bis(2-ethylhexyl)-phthalate	117-81-7									
chloromethane	74-87-3	0.5000	5.0000	4.83E-09	0.5000	1	0.325	1	2.05E-08	1.98E-08
dichlorodifluoromethane	75-71-8	0.5000	5.0000	5.76E-09	0.5000	1	0.325	1	2.44E-08	2.37E-08
di-n-butyl phthalate	84-74-2									
di-n-octyl phthalate	117-84-0									
ethane	74-84-0									
HD	505-60-2									
methane	74-82-8									
naphthalene	91-20-3	0.5000	5.0000	5.26E-08	0.5000	1	0.325	1	2.23E-07	2.16E-07
propene	115-07-1									
toluene	108-88-3	0.5000	5.0000	1.92E-07	0.5000	1	0.325	1	8.12E-07	7.88E-07
trichlorofluoromethane	75-69-4	0.5000	5.0000	2.53E-09	0.5000	1	0.325	1	1.07E-08	1.04E-08
xylenes	1330-20-7	0.5000	5.0000	3.13E-09	0.5000	1	0.325	1	1.33E-08	1.29E-08
1,2,3,4,6,7,8-HpCDD	35822-46-9									
1,2,3,4,6,7,8,9-OCDD	3268-87-9									
1,2,3,4,6,7,8-HpCDF	67562-39-4									
1,2,3,4,6,7,8,9-OCDF	39001-02-0									
Total PCDDs and PCDFs	NA									
ammonia	7664-41-7									
aluminum	7429-90-5	0.5000	5.0000	1.38E-08	0.5000	1	0.325	1	5.85E-08	5.67E-08
antimony	7440-36-0	0.5000	5.0000	4.68E-09	0.5000	1	0.325	1	1.99E-08	1.92E-08
barium	7440-39-3	0.5000	5.0000	9.86E-10	0.5000	1	0.325	1	4.18E-09	4.05E-09
beryllium	7440-41-7	0.5000	5.0000	4.35E-10	0.5000	1	0.325	1	1.84E-09	1.79E-09
cadmium	7440-43-9	0.5000	5.0000	4.81E-09	0.5000	1	0.325	1	2.04E-08	1.98E-08
chlorine	7782-50-5	0.5000	5.0000	1.03E-07	0.5000	1	0.325	1	4.38E-07	4.25E-07
chromium (3+)	7440-47-3	0.5000	5.0000	9.48E-09	0.5000	1	0.325	1	4.02E-08	3.90E-08
chromium (6+)	18540-29-9	0.5000	5.0000	9.48E-09	0.5000	1	0.325	1	4.02E-08	3.90E-08
cobalt	7440-48-4	0.5000	5.0000	2.73E-09	0.5000	1	0.325	1	1.16E-08	1.12E-08
copper	7440-50-8	0.5000	5.0000	1.13E-07	0.5000	1	0.325	1	4.78E-07	4.64E-07
hydrogen chloride	7647-01-0									
iron	7439-89-6	0.5000	5.0000	9.97E-06	0.5000	1	0.325	1	4.22E-05	4.10E-05
lead	7439-92-1									
manganese	7439-96-5	0.5000	5.0000	3.73E-07	0.5000	1	0.325	1	1.58E-06	1.53E-06
total mercury	NA									
mercuric chloride	7487-94-7	0.5000	5.0000	2.29E-10	0.5000	1	0.325	1	9.69E-10	9.39E-10
methyl mercury	22967-92-6	0.5000	5.0000	2.48E-08	0.5000	1	0.325	1	1.05E-07	1.02E-07
elemental mercury	7439-97-6									
nickel	7440-02-0	0.5000	5.0000	4.06E-09	0.5000	1	0.325	1	1.72E-08	1.67E-08
selenium	7782-49-2	0.5000	5.0000	2.58E-08	0.5000	1	0.325	1	1.09E-07	1.06E-07
silver	7440-22-4	0.5000	5.0000	4.61E-09	0.5000	1	0.325	1	1.96E-08	1.90E-08
vanadium	7440-62-2	0.5000	5.0000	1.29E-08	0.5000	1	0.325	1	5.47E-08	5.30E-08
zinc	7440-66-6	0.5000	5.0000	2.23E-07	0.5000	1	0.325	1	9.47E-07	9.18E-07

CONCENTRATIONS OF COPCS IN BREAST MILK FOR INFANT EXPOSURE SCENARIOS

NONCARCINOGENIC EFFECTS: Infant Subsistence Farmer Exposure Scenario										
COPC	CAS Number	Fraction Stored in Maternal Fat (dimensionless) f_f	Biological Half-Life (days) h	Concentration in Milk Fat (mg/kg) $C_{milkfat}$	Fraction Stored in Whole Blood (dimensionless) f_{bl}	Red Blood Cells-Blood Plasma Partition Coefficient (dimensionless) Pc_{RBC}	Fraction Stored in Blood Plasma (dimensionless) f_{pl}	Blood Plasma-Breast Milk Partition Coefficient (dimensionless) Pc_{bm}	Concentration in Milk Aqueous Phase (mg/kg) $C_{aqueous}$	Concentration in Milk (mg/kg) C_{milk}
1,4-dioxane	123-91-1									
2-butanone	78-93-3	0.5000	5.0000	2.03E-07	0.5000	1	0.325	1	8.61E-07	8.35E-07
2-ethyl 1,3-butadiene	3404-63-5									
acetone	67-64-1	0.5000	5.0000	1.84E-06	0.5000	1	0.325	1	7.78E-06	7.54E-06
benzene	71-43-2	0.5000	5.0000	5.03E-07	0.5000	1	0.325	1	2.13E-06	2.07E-06
bis(2-ethylhexyl)-phthalate	117-81-7									
chloromethane	74-87-3	0.5000	5.0000	4.85E-09	0.5000	1	0.325	1	2.06E-08	1.99E-08
dichlorodifluoromethane	75-71-8	0.5000	5.0000	6.00E-09	0.5000	1	0.325	1	2.54E-08	2.46E-08
di-n-butyl phthalate	84-74-2									
di-n-octyl phthalate	117-84-0									
ethane	74-84-0									
HD	505-60-2									
methane	74-82-8									
naphthalene	91-20-3	0.5000	5.0000	1.18E-07	0.5000	1	0.325	1	5.01E-07	4.86E-07
propene	115-07-1									
toluene	108-88-3	0.5000	5.0000	1.97E-07	0.5000	1	0.325	1	8.36E-07	8.10E-07
trichlorofluoromethane	75-69-4	0.5000	5.0000	2.54E-09	0.5000	1	0.325	1	1.08E-08	1.04E-08
xylenes	1330-20-7	0.5000	5.0000	3.35E-09	0.5000	1	0.325	1	1.42E-08	1.38E-08
1,2,3,4,6,7,8-HpCDD	35822-46-9									
1,2,3,4,6,7,8,9-OCDD	3268-87-9									
1,2,3,4,6,7,8-HpCDF	67562-39-4									
1,2,3,4,6,7,8,9-OCDF	39001-02-0									
Total PCDDs and PCDFs	NA									
ammonia	7664-41-7									
aluminum	7429-90-5	0.5000	5.0000	1.38E-08	0.5000	1	0.325	1	5.85E-08	5.67E-08
antimony	7440-36-0	0.5000	5.0000	1.07E-08	0.5000	1	0.325	1	4.55E-08	4.41E-08
barium	7440-39-3	0.5000	5.0000	2.22E-09	0.5000	1	0.325	1	9.43E-09	9.14E-09
beryllium	7440-41-7	0.5000	5.0000	9.93E-10	0.5000	1	0.325	1	4.21E-09	4.08E-09
cadmium	7440-43-9	0.5000	5.0000	1.07E-08	0.5000	1	0.325	1	4.54E-08	4.41E-08
chlorine	7782-50-5	0.5000	5.0000	1.59E-07	0.5000	1	0.325	1	6.72E-07	6.51E-07
chromium (3+)	7440-47-3	0.5000	5.0000	2.22E-08	0.5000	1	0.325	1	9.40E-08	9.11E-08
chromium (6+)	18540-29-9	0.5000	5.0000	2.22E-08	0.5000	1	0.325	1	9.40E-08	9.11E-08
cobalt	7440-48-4	0.5000	5.0000	6.49E-09	0.5000	1	0.325	1	2.75E-08	2.67E-08
copper	7440-50-8	0.5000	5.0000	2.65E-07	0.5000	1	0.325	1	1.12E-06	1.09E-06
hydrogen chloride	7647-01-0									
iron	7439-89-6	0.5000	5.0000	2.34E-05	0.5000	1	0.325	1	9.93E-05	9.63E-05
lead	7439-92-1									
manganese	7439-96-5	0.5000	5.0000	8.56E-07	0.5000	1	0.325	1	3.63E-06	3.52E-06
total mercury	NA									
mercuric chloride	7487-94-7	0.5000	5.0000	5.44E-10	0.5000	1	0.325	1	2.30E-09	2.23E-09
methyl mercury	22967-92-6	0.5000	5.0000	2.49E-08	0.5000	1	0.325	1	1.05E-07	1.02E-07
elemental mercury	7439-97-6									
nickel	7440-02-0	0.5000	5.0000	9.45E-09	0.5000	1	0.325	1	4.00E-08	3.88E-08
selenium	7782-49-2	0.5000	5.0000	6.16E-08	0.5000	1	0.325	1	2.61E-07	2.53E-07
silver	7440-22-4	0.5000	5.0000	1.13E-08	0.5000	1	0.325	1	4.78E-08	4.64E-08
vanadium	7440-62-2	0.5000	5.0000	2.96E-08	0.5000	1	0.325	1	1.26E-07	1.22E-07
zinc	7440-66-6	0.5000	5.0000	4.82E-07	0.5000	1	0.325	1	2.04E-06	1.98E-06

CONCENTRATIONS OF COPCS IN BREAST MILK FOR INFANT EXPOSURE SCENARIOS

NONCARCINOGENIC EFFECTS: Infant Subsistence Fisher Exposure Scenario										
COPC	CAS Number	Fraction Stored in Maternal Fat (dimensionless) f_f	Biological Half-Life (days) h	Concentration in Milk Fat (mg/kg) $C_{milkfat}$	Fraction Stored in Whole Blood (dimensionless) f_{bl}	Red Blood Cells-Blood Plasma Partition Coefficient (dimensionless) Pc_{RBC}	Fraction Stored in Blood Plasma (dimensionless) f_{pl}	Blood Plasma-Breast Milk Partition Coefficient (dimensionless) Pc_{bm}	Concentration in Milk Aqueous Phase (mg/kg) $C_{aqueous}$	Concentration in Milk (mg/kg) C_{milk}
1,4-dioxane	123-91-1									
2-butanone	78-93-3	0.5000	5.0000	1.08E-07	0.5000	1	0.325	1	4.58E-07	4.44E-07
2-ethyl 1,3-butadiene	3404-63-5									
acetone	67-64-1	0.5000	5.0000	1.12E-06	0.5000	1	0.325	1	4.75E-06	4.60E-06
benzene	71-43-2	0.5000	5.0000	5.00E-07	0.5000	1	0.325	1	2.12E-06	2.05E-06
bis(2-ethylhexyl)-phthalate	117-81-7									
chloromethane	74-87-3	0.5000	5.0000	4.84E-09	0.5000	1	0.325	1	2.05E-08	1.99E-08
dichlorodifluoromethane	75-71-8	0.5000	5.0000	5.80E-09	0.5000	1	0.325	1	2.46E-08	2.38E-08
di-n-butyl phthalate	84-74-2									
di-n-octyl phthalate	117-84-0									
ethane	74-84-0									
HD	505-60-2									
methane	74-82-8									
naphthalene	91-20-3	0.5000	5.0000	5.33E-08	0.5000	1	0.325	1	2.26E-07	2.19E-07
propene	115-07-1									
toluene	108-88-3	0.5000	5.0000	1.96E-07	0.5000	1	0.325	1	8.29E-07	8.04E-07
trichlorofluoromethane	75-69-4	0.5000	5.0000	2.56E-09	0.5000	1	0.325	1	1.09E-08	1.05E-08
xylenes	1330-20-7	0.5000	5.0000	3.27E-09	0.5000	1	0.325	1	1.39E-08	1.34E-08
1,2,3,4,6,7,8-HpCDD	35822-46-9									
1,2,3,4,6,7,8,9-OCDD	3268-87-9									
1,2,3,4,6,7,8-HpCDF	67562-39-4									
1,2,3,4,6,7,8,9-OCDF	39001-02-0									
Total PCDDs and PCDFs	NA									
ammonia	7664-41-7									
aluminum	7429-90-5	0.5000	5.0000	1.38E-08	0.5000	1	0.325	1	5.86E-08	5.68E-08
antimony	7440-36-0	0.5000	5.0000	4.70E-09	0.5000	1	0.325	1	1.99E-08	1.93E-08
barium	7440-39-3	0.5000	5.0000	1.03E-09	0.5000	1	0.325	1	4.38E-09	4.24E-09
beryllium	7440-41-7	0.5000	5.0000	4.37E-10	0.5000	1	0.325	1	1.85E-09	1.80E-09
cadmium	7440-43-9	0.5000	5.0000	5.15E-09	0.5000	1	0.325	1	2.18E-08	2.12E-08
chlorine	7782-50-5	0.5000	5.0000	1.04E-07	0.5000	1	0.325	1	4.39E-07	4.26E-07
chromium (3+)	7440-47-3	0.5000	5.0000	9.48E-09	0.5000	1	0.325	1	4.02E-08	3.90E-08
chromium (6+)	18540-29-9	0.5000	5.0000	9.48E-09	0.5000	1	0.325	1	4.02E-08	3.90E-08
cobalt	7440-48-4	0.5000	5.0000	2.73E-09	0.5000	1	0.325	1	1.16E-08	1.12E-08
copper	7440-50-8	0.5000	5.0000	1.13E-07	0.5000	1	0.325	1	4.79E-07	4.64E-07
hydrogen chloride	7647-01-0									
iron	7439-89-6	0.5000	5.0000	9.97E-06	0.5000	1	0.325	1	4.23E-05	4.10E-05
lead	7439-92-1									
manganese	7439-96-5	0.5000	5.0000	3.73E-07	0.5000	1	0.325	1	1.58E-06	1.53E-06
total mercury	NA									
mercuric chloride	7487-94-7	0.5000	5.0000	2.29E-10	0.5000	1	0.325	1	9.69E-10	9.39E-10
methyl mercury	22967-92-6	0.5000	5.0000	6.20E-08	0.5000	1	0.325	1	2.63E-07	2.55E-07
elemental mercury	7439-97-6									
nickel	7440-02-0	0.5000	5.0000	4.08E-09	0.5000	1	0.325	1	1.73E-08	1.68E-08
selenium	7782-49-2	0.5000	5.0000	2.59E-08	0.5000	1	0.325	1	1.10E-07	1.06E-07
silver	7440-22-4	0.5000	5.0000	4.62E-09	0.5000	1	0.325	1	1.96E-08	1.90E-08
vanadium	7440-62-2	0.5000	5.0000	1.29E-08	0.5000	1	0.325	1	5.47E-08	5.31E-08
zinc	7440-66-6	0.5000	5.0000	2.56E-07	0.5000	1	0.325	1	1.09E-06	1.05E-06

CONCENTRATIONS OF COPCS IN BREAST MILK FOR INFANT EXPOSURE SCENARIOS

NONCARCINOGENIC EFFECTS (TEQ BASIS): Infant Resident Exposure Scenario										
COPC	CAS Number	Fraction Stored in Maternal Fat (dimensionless) f_1	Biological Half-Life (days) h	Concentration in Milk Fat (mg/kg) $C_{milkfat}$	Fraction Stored in Whole Blood (dimensionless) f_{bl}	Red Blood Cells-Blood Plasma Partition Coefficient (dimensionless) Pc_{RBC}	Fraction Stored in Blood Plasma (dimensionless) f_{pl}	Blood Plasma-Breast Milk Partition Coefficient (dimensionless) Pc_{bm}	Concentration in Milk Aqueous Phase (mg/kg) $C_{aqueous}$	Concentration in Milk (mg/kg) C_{milk}
1,4-dioxane	123-91-1									
2-butanone	78-93-3									
2-ethyl 1,3-butadiene	3404-63-5									
acetone	67-64-1									
benzene	71-43-2									
bis(2-ethylhexyl)-phthalate	117-81-7									
chloromethane	74-87-3									
dichlorodifluoromethane	75-71-8									
di-n-butyl phthalate	84-74-2									
di-n-octyl phthalate	117-84-0									
ethane	74-84-0									
HD	505-60-2									
methane	74-82-8									
naphthalene	91-20-3									
propene	115-07-1									
toluene	108-88-3									
trichlorofluoromethane	75-69-4									
xylenes	1330-20-7									
1,2,3,4,6,7,8-HpCDD	35822-46-9									
1,2,3,4,6,7,8,9-OCDD	3268-87-9									
1,2,3,4,6,7,8-HpCDF	67562-39-4									
1,2,3,4,6,7,8,9-OCDF	39001-02-0									
Total PCDDs and PCDFs	NA	0.9000	3650.0000	2.39E-10	0.1000	1	0.065	1	1.12E-10	1.18E-10
ammonia	7664-41-7									
aluminum	7429-90-5									
antimony	7440-36-0									
barium	7440-39-3									
beryllium	7440-41-7									
cadmium	7440-43-9									
chlorine	7782-50-5									
chromium (3+)	7440-47-3									
chromium (6+)	18540-29-9									
cobalt	7440-48-4									
copper	7440-50-8									
hydrogen chloride	7647-01-0									
iron	7439-89-6									
lead	7439-92-1									
manganese	7439-96-5									
total mercury	NA									
mercuric chloride	7487-94-7									
methyl mercury	22967-92-6									
elemental mercury	7439-97-6									
nickel	7440-02-0									
selenium	7782-49-2									
silver	7440-22-4									
vanadium	7440-62-2									
zinc	7440-66-6									

a. The concentration of individual PCDDs and PCDFs congeners and coplanar PCBs in breast milk are presented in units of mg COPC TEQ/kg. The concentration of total PCDDs and PCDFs as well as the concentration of total coplanar PCBs in breast milk are presented in units of mg TEQ/kg produce and are calculated as the sum of the concentrations of all individual PCDD and PCDF congeners in breast milk and the concentrations of all coplanar produce in breast milk, respectively.

CONCENTRATIONS OF COPCS IN BREAST MILK FOR INFANT EXPOSURE SCENARIOS

NONCARCINOGENIC EFFECTS (TEQ BASIS): Infant Subsistence Farmer Exposure Scenario										
COPC	CAS Number	Fraction Stored in Maternal Fat (dimensionless) f_1	Biological Half-Life (days) h	Concentration in Milk Fat (mg/kg) $C_{milkfat}$	Fraction Stored in Whole Blood (dimensionless) f_{bl}	Red Blood Cells-Blood Plasma Partition Coefficient (dimensionless) Pc_{RBC}	Fraction Stored in Blood Plasma (dimensionless) f_{pl}	Blood Plasma-Breast Milk Partition Coefficient (dimensionless) Pc_{bm}	Concentration in Milk Aqueous Phase (mg/kg) $C_{aqueous}$	Concentration in Milk (mg/kg) C_{milk}
1,4-dioxane	123-91-1									
2-butanone	78-93-3									
2-ethyl 1,3-butadiene	3404-63-5									
acetone	67-64-1									
benzene	71-43-2									
bis(2-ethylhexyl)-phthalate	117-81-7									
chloromethane	74-87-3									
dichlorodifluoromethane	75-71-8									
di-n-butyl phthalate	84-74-2									
di-n-octyl phthalate	117-84-0									
ethane	74-84-0									
HD	505-60-2									
methane	74-82-8									
naphthalene	91-20-3									
propene	115-07-1									
toluene	108-88-3									
trichlorofluoromethane	75-69-4									
xylenes	1330-20-7									
1,2,3,4,6,7,8-HpCDD	35822-46-9									
1,2,3,4,6,7,8,9-OCDD	3268-87-9									
1,2,3,4,6,7,8-HpCDF	67562-39-4									
1,2,3,4,6,7,8,9-OCDF	39001-02-0									
Total PCDDs and PCDFs	NA	0.9000	3650.0000	5.97E-10	0.1000	1	0.065	1	2.81E-10	2.94E-10
ammonia	7664-41-7									
aluminum	7429-90-5									
antimony	7440-36-0									
barium	7440-39-3									
beryllium	7440-41-7									
cadmium	7440-43-9									
chlorine	7782-50-5									
chromium (3+)	7440-47-3									
chromium (6+)	18540-29-9									
cobalt	7440-48-4									
copper	7440-50-8									
hydrogen chloride	7647-01-0									
iron	7439-89-6									
lead	7439-92-1									
manganese	7439-96-5									
total mercury	NA									
mercuric chloride	7487-94-7									
methyl mercury	22967-92-6									
elemental mercury	7439-97-6									
nickel	7440-02-0									
selenium	7782-49-2									
silver	7440-22-4									
vanadium	7440-62-2									
zinc	7440-66-6									

a. The concentration of individual PCDDs and PCDFs congeners and coplanar PCBs in breast milk are presented in units of mg COPC TEQ/kg. The concentration of total PCDDs and PCDFs as well as the concentration of total coplanar PCBs in breast milk are presented in units of mg TEQ/kg produce and are calculated as the sum of the concentrations of all individual PCDD and PCDF congeners in breast milk and the concentrations of all coplanar produce in breast milk, respectively.

CONCENTRATIONS OF COPCS IN BREAST MILK FOR INFANT EXPOSURE SCENARIOS

NONCARCINOGENIC EFFECTS (TEQ BASIS): Infant Subsistence Fisher Exposure Scenario										
COPC	CAS Number	Fraction Stored in Maternal Fat (dimensionless) f_1	Biological Half-Life (days) h	Concentration in Milk Fat (mg/kg) $C_{milkfat}$	Fraction Stored in Whole Blood (dimensionless) f_{bl}	Red Blood Cells-Blood Plasma Partition Coefficient (dimensionless) Pc_{RBC}	Fraction Stored in Blood Plasma (dimensionless) f_{pl}	Blood Plasma-Breast Milk Partition Coefficient (dimensionless) Pc_{bm}	Concentration in Milk Aqueous Phase (mg/kg) $C_{aqueous}$	Concentration in Milk (mg/kg) C_{milk}
1,4-dioxane	123-91-1									
2-butanone	78-93-3									
2-ethyl 1,3-butadiene	3404-63-5									
acetone	67-64-1									
benzene	71-43-2									
bis(2-ethylhexyl)-phthalate	117-81-7									
chloromethane	74-87-3									
dichlorodifluoromethane	75-71-8									
di-n-butyl phthalate	84-74-2									
di-n-octyl phthalate	117-84-0									
ethane	74-84-0									
HD	505-60-2									
methane	74-82-8									
naphthalene	91-20-3									
propene	115-07-1									
toluene	108-88-3									
trichlorofluoromethane	75-69-4									
xylenes	1330-20-7									
1,2,3,4,6,7,8-HpCDD	35822-46-9									
1,2,3,4,6,7,8,9-OCDD	3268-87-9									
1,2,3,4,6,7,8-HpCDF	67562-39-4									
1,2,3,4,6,7,8,9-OCDF	39001-02-0									
Total PCDDs and PCDFs	NA	0.9000	3650.0000	2.39E-10	0.1000	1	0.065	1	1.12E-10	1.18E-10
ammonia	7664-41-7									
aluminum	7429-90-5									
antimony	7440-36-0									
barium	7440-39-3									
beryllium	7440-41-7									
cadmium	7440-43-9									
chlorine	7782-50-5									
chromium (3+)	7440-47-3									
chromium (6+)	18540-29-9									
cobalt	7440-48-4									
copper	7440-50-8									
hydrogen chloride	7647-01-0									
iron	7439-89-6									
lead	7439-92-1									
manganese	7439-96-5									
total mercury	NA									
mercuric chloride	7487-94-7									
methyl mercury	22967-92-6									
elemental mercury	7439-97-6									
nickel	7440-02-0									
selenium	7782-49-2									
silver	7440-22-4									
vanadium	7440-62-2									
zinc	7440-66-6									

a. The concentration of individual PCDDs and PCDFs congeners and coplanar PCBs in breast milk are presented in units of mg COPC TEQ/kg. The concentration of total PCDDs and PCDFs as well as the concentration of total coplanar PCBs in breast milk are presented in units of mg TEQ/kg produce and are calculated as the sum of the concentrations of all individual PCDD and PCDF congeners in breast milk and the concentrations of all coplanar produce in breast milk, respectively.

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APPENDIX E

OUTPUT TABLES FROM THE CHRONIC RISK CALCULATOR SPREADSHEETS FOR DAVINCH

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OVERVIEW OF RECEPTOR-PATHWAY CARCINOGENIC RISK AND NONCARCINOGENIC HEALTH HAZARD

OVERVIEW OF RECEPTOR-PATHWAY CARCINOGENIC RISK AND NONCARCINOGENIC HEALTH HAZARDS

Carcinogenic Risks from Receptor-Pathway Combinations										
	Pathway									
Receptor	Inhalation	Dermal Contact with Surface Water	Dermal Contact with Soil	Incidental Ingestion of Soil	Incidental Ingestion of Surface Water	Ingestion of Produce	Ingestion of Terrestrial Animal Products	Ingestion of Fish	Ingestion of Breast Milk	All Pathways
Adult Resident	2.61E-10	2.28E-13	1.17E-16	1.98E-16	5.17E-14	3.99E-11	1.19E-10	1.23E-11	n/a	4.32E-10
Adult Subsistence Fisher	2.61E-10	2.28E-13	1.17E-16	1.98E-16	5.17E-14	3.99E-11	1.19E-10	3.06E-11	n/a	4.51E-10
Adult Subsistence Farmer	2.61E-10	3.04E-13	1.17E-16	1.98E-16	6.89E-14	1.31E-10	3.96E-10	1.63E-11	n/a	8.05E-10
Adult Worker	6.22E-11	n/a	1.38E-16	7.07E-17	n/a	n/a	n/a	n/a	n/a	6.22E-11
Child Resident	7.35E-10	7.36E-14	7.55E-16	1.83E-15	4.98E-14	2.69E-11	7.70E-11	5.25E-12	n/a	8.44E-10
Child Subsistence Fisher	7.35E-10	7.36E-14	7.55E-16	1.83E-15	4.98E-14	2.69E-11	7.70E-11	1.31E-11	n/a	8.52E-10
Child Subsistence Farmer	7.35E-10	7.36E-14	7.55E-16	1.83E-15	4.98E-14	6.71E-11	1.92E-10	5.25E-12	n/a	1.00E-09
Infant Resident	8.45E-11	n/a	2.13E-16	5.53E-16	n/a	6.91E-12	5.25E-11	1.87E-12	1.47E-10	2.93E-10
Infant Subsistence Fisher	8.45E-11	n/a	2.13E-16	5.53E-16	n/a	6.91E-12	5.25E-11	4.68E-12	1.79E-10	3.27E-10
Infant Subsistence Farmer	8.45E-11	n/a	2.13E-16	5.53E-16	n/a	1.73E-11	1.31E-10	1.87E-12	1.60E-10	3.95E-10
Resident Lifetime (I)[1]	6.69E-10	2.56E-13	1.06E-15	2.54E-15	9.12E-14	6.55E-11	2.25E-10	1.67E-11	1.47E-10	1.12E-09
Resident Lifetime (II)[2]	7.35E-10	2.64E-13	8.52E-16	2.00E-15	9.29E-14	6.01E-11	1.76E-10	1.55E-11	n/a	9.87E-10
Subsistence Fisher Lifetime (I)[1]	6.69E-10	2.56E-13	1.06E-15	2.54E-15	9.12E-14	6.55E-11	2.25E-10	4.17E-11	1.79E-10	1.18E-09
Subsistence Fisher Lifetime (II)[2]	7.35E-10	2.64E-13	8.52E-16	2.00E-15	9.29E-14	6.01E-11	1.76E-10	3.87E-11	n/a	1.01E-09
Subsistence Farmer Lifetime (I)[3]	6.69E-10	3.32E-13	1.07E-15	2.55E-15	1.08E-13	1.95E-10	6.60E-10	2.08E-11	1.60E-10	1.71E-09
Subsistence Farmer Lifetime (II)[4]	7.35E-10	3.40E-13	8.57E-16	2.00E-15	1.10E-13	1.82E-10	5.39E-10	1.95E-11	n/a	1.48E-09

1. Lifetime exposure consists of: 1 year of inhalation exposure as an infant and 4 years of inhalation exposure as a child (5 years of total inhalation exposure); 1 year of indirect exposure as an infant, 5 years of indirect exposure as a child, and 24 years of indirect exposure as an adult (30 years of total indirect exposure)

2. Lifetime exposure consists of: 5 years of inhalation exposure as a child (5 years of total inhalation exposure); 5 years of indirect exposure as a child and 25 years of indirect exposure as an adult (30 years of total indirect exposure)

3. Lifetime exposure consists of: 1 year of inhalation exposure as an infant and 4 years of inhalation exposure as a child (5 years of total inhalation exposure); 1 year of indirect exposure as an infant, 5 years of indirect exposure as a child, and 34 years of indirect exposure as an adult (40 years of total indirect exposure)

4. Lifetime exposure consists of: 5 years of inhalation exposure as a child (5 years of total inhalation exposure); 5 years of indirect exposure as a child and 35 years of indirect exposure as an adult (40 years of total indirect exposure)

OVERVIEW OF RECEPTOR-PATHWAY CARCINOGENIC RISK AND NONCARCINOGENIC HEALTH HAZARDS

Noncarcinogenic Hazards from Receptor-Pathway Combinations										
	Pathway									
Receptor	Inhalation	Dermal Contact with Surface Water	Dermal Contact with Soil	Incidental Ingestion of Soil	Incidental Ingestion of Surface Water	Ingestion of Produce	Ingestion of Terrestrial Animal Products	Ingestion of Fish	Ingestion of Breast Milk	All Pathways
Adult Resident	3.47E-04	4.72E-09	1.21E-11	2.63E-11	1.43E-09	1.33E-06	4.03E-06	4.12E-07	n/a	3.53E-04
Adult Subsistence Fisher	3.47E-04	4.72E-09	1.21E-11	2.63E-11	1.43E-09	1.33E-06	4.03E-06	1.03E-06	n/a	3.53E-04
Adult Subsistence Farmer	3.47E-04	4.72E-09	1.21E-11	2.63E-11	1.43E-09	3.32E-06	1.01E-05	4.12E-07	n/a	3.61E-04
Adult Worker	8.26E-05	n/a	1.71E-11	1.13E-11	n/a	n/a	n/a	n/a	n/a	8.26E-05
Child Resident	9.71E-04	8.08E-09	7.91E-11	2.45E-10	6.65E-09	3.95E-06	1.56E-05	1.01E-06	n/a	9.92E-04
Child Subsistence Fisher	9.71E-04	8.08E-09	7.91E-11	2.45E-10	6.65E-09	3.95E-06	1.56E-05	2.52E-06	n/a	9.93E-04
Child Subsistence Farmer	9.71E-04	8.08E-09	7.91E-11	2.45E-10	6.65E-09	9.88E-06	3.91E-05	1.01E-06	n/a	1.02E-03
Infant Resident	5.46E-04	n/a	1.11E-10	3.68E-10	n/a	4.81E-06	5.39E-05	1.51E-06	4.17E-05	6.48E-04
Infant Subsistence Fisher	5.46E-04	n/a	1.11E-10	3.68E-10	n/a	4.81E-06	5.39E-05	3.77E-06	4.21E-05	6.51E-04
Infant Subsistence Farmer	5.46E-04	n/a	1.11E-10	3.68E-10	n/a	1.20E-05	1.35E-04	1.51E-06	4.66E-05	7.41E-04
Resident Lifetime (I)[1]	1.32E-03	1.28E-08	2.02E-10	6.40E-10	8.08E-09	1.01E-05	7.35E-05	2.93E-06	4.17E-05	1.45E-03
Resident Lifetime (II)[2]	9.71E-04	1.28E-08	9.12E-11	2.72E-10	8.08E-09	5.28E-06	1.97E-05	1.42E-06	n/a	9.98E-04
Subsistence Fisher Lifetime (I)[1]	1.32E-03	1.28E-08	2.02E-10	6.40E-10	8.08E-09	1.01E-05	7.35E-05	7.32E-06	4.21E-05	1.46E-03
Subsistence Fisher Lifetime (II)[2]	9.71E-04	1.28E-08	9.12E-11	2.72E-10	8.08E-09	5.28E-06	1.97E-05	3.54E-06	n/a	1.00E-03
Subsistence Farmer Lifetime (I)[3]	1.32E-03	1.28E-08	2.02E-10	6.40E-10	8.08E-09	2.52E-05	1.84E-04	2.93E-06	4.66E-05	1.58E-03
Subsistence Farmer Lifetime (II)[4]	9.71E-04	1.28E-08	9.12E-11	2.72E-10	8.08E-09	1.32E-05	4.92E-05	1.42E-06	n/a	1.04E-03

1. Lifetime exposure consists of: 1 year of inhalation exposure as an infant and 4 years of inhalation exposure as a child (5 years of total inhalation exposure); 1 year of indirect exposure as an infant, 5 years of indirect exposure as a child, and 24 years of indirect exposure as an adult (30 years of total indirect exposure)

2. Lifetime exposure consists of: 5 years of inhalation exposure as a child (5 years of total inhalation exposure); 5 years of indirect exposure as a child and 25 years of indirect exposure as an adult (30 years of total indirect exposure)

3. Lifetime exposure consists of: 1 year of inhalation exposure as an infant and 4 years of inhalation exposure as a child (5 years of total inhalation exposure); 1 year of indirect exposure as an infant, 5 years of indirect exposure as a child, and 34 years of indirect exposure as an adult (40 years of total indirect exposure)

4. Lifetime exposure consists of: 5 years of inhalation exposure as a child (5 years of total inhalation exposure); 5 years of indirect exposure as a child and 35 years of indirect exposure as an adult (40 years of total indirect exposure)

PARAMETERS USED IN THE MULTIPLE PATHWAY HEALTH RISK ASSESSMENT

MODELED VALUES:

During Years of PCAPP Operation (0 to tD)																	
					Air Modeling Results						Watershed Modeling					
			Stack emissions	Fraction of air conc. that is in the vapor phase	Adjusted Vapor Phase Air Concentration	Adjusted Particle Phase Air Concentration	Adjusted Dry Deposition from Vapor Phase	Adjusted Wet Deposition from Vapor Phase	Adjusted Dry Deposition from Particle Phase	Adjusted Wet Deposition from Particle Phase	Adjusted Vapor Phase Air Concentration	Adjusted Particle Phase Air Concentration	Adjusted Dry Deposition from Vapor Phase	Adjusted Wet Deposition from Vapor Phase	Adjusted Dry Deposition from Particle Phase	Adjusted Wet Deposition from Particle Phase
			(g/sec)	(unitless)	($\mu g/m^3$)	($\mu g/m^3$)	(g/m^2)	(g/m^2)	(g/m^2)	(g/m^2)	($\mu g/m^3$)	($\mu g/m^3$)	(g/m^2)	(g/m^2)	(g/m^2)	(g/m^2)
COPC	CAS No.	Carcinogen?	Q	F_v	Cyv	Cyp	Dydv	Dywv	Dydp	Dywp	Cywv	Cywp	Dydv	Dywwv	Dywdp	Dywwp
2-butanone	78-93-3	Not a known carc.	1	1	2.29E-08	0.00E+00	2.46E-09	2.00E-11	0.00E+00	0.00E+00	8.64E-09	0.00E+00	6.09E-10	3.33E-12	0.00E+00	0.00E+00
2-ethyl 1,3-butadiene	3404-63-5	No toxicity data avail.	1	1	1.08E-06	0.00E+00	1.16E-07	9.43E-10	0.00E+00	0.00E+00	4.08E-07	0.00E+00	2.88E-08	1.57E-10	0.00E+00	0.00E+00
acetone	67-64-1	Not a known carc.	1	1	4.09E-08	0.00E+00	4.40E-09	3.57E-11	0.00E+00	0.00E+00	1.55E-08	0.00E+00	1.09E-09	5.95E-12	0.00E+00	0.00E+00
benzene	71-43-2	Yes	1	1	1.17E-04	0.00E+00	1.26E-05	1.02E-07	0.00E+00	0.00E+00	4.42E-05	0.00E+00	3.12E-06	1.70E-08	0.00E+00	0.00E+00
benzyl alcohol	100-51-6	No data	1	1	8.58E-08	0.00E+00	9.21E-09	7.48E-11	0.00E+00	0.00E+00	3.24E-08	0.00E+00	2.28E-09	1.25E-11	0.00E+00	0.00E+00
bis(2-ethylhexyl)-phthalate	117-81-7	Yes	1	0.131	0.00E+00	7.22E-07	0.00E+00	0.00E+00	3.42E-08	0.00E+00	0.00E+00	2.72E-07	0.00E+00	0.00E+00	1.26E-08	0.00E+00
bromodichloromethane	75-27-4	Yes	1	1	7.98E-09	0.00E+00	8.56E-10	6.95E-12	0.00E+00	0.00E+00	3.01E-09	0.00E+00	2.12E-10	1.16E-12	0.00E+00	0.00E+00
carbon disulfide	75-15-0	Not a known carc.	1	1	5.02E-08	0.00E+00	5.38E-09	4.37E-11	0.00E+00	0.00E+00	1.89E-08	0.00E+00	1.33E-09	7.29E-12	0.00E+00	0.00E+00
carbon tetrachloride	56-23-5	Yes	1	1	2.05E-09	0.00E+00	2.20E-10	1.79E-12	0.00E+00	0.00E+00	7.73E-10	0.00E+00	5.45E-11	2.98E-13	0.00E+00	0.00E+00
chlorobenzene	108-90-7	No data	1	1	1.80E-09	0.00E+00	1.93E-10	1.57E-12	0.00E+00	0.00E+00	6.80E-10	0.00E+00	4.79E-11	2.62E-13	0.00E+00	0.00E+00
chloroform	67-66-3	Yes	1	1	5.30E-09	0.00E+00	5.69E-10	4.62E-12	0.00E+00	0.00E+00	2.00E-09	0.00E+00	1.41E-10	7.70E-13	0.00E+00	0.00E+00
chloromethane	74-87-3	Not a known carc.	1	1	4.81E-08	0.00E+00	5.16E-09	4.19E-11	0.00E+00	0.00E+00	1.82E-08	0.00E+00	1.28E-09	6.99E-12	0.00E+00	0.00E+00
dibromochloromethane	124-48-1	Yes	1	1	9.84E-09	0.00E+00	1.06E-09	8.58E-12	0.00E+00	0.00E+00	3.71E-09	0.00E+00	2.62E-10	1.43E-12	0.00E+00	0.00E+00
dimethyl phthalate	131-11-3	No data	1	1	8.51E-08	0.00E+00	9.14E-09	7.42E-11	0.00E+00	0.00E+00	3.21E-08	0.00E+00	2.26E-09	1.24E-11	0.00E+00	0.00E+00
di-n-butyl phthalate	84-74-2	No data	1	1	1.98E-07	0.00E+00	2.13E-08	1.73E-10	0.00E+00	0.00E+00	7.49E-08	0.00E+00	5.27E-09	2.88E-11	0.00E+00	0.00E+00
ethane	74-84-0	No toxicity data avail.	1	1	4.78E-04	0.00E+00	5.13E-05	4.17E-07	0.00E+00	0.00E+00	1.80E-04	0.00E+00	1.27E-05	6.94E-08	0.00E+00	0.00E+00
ethylbenzene	100-41-4	Yes	1	1	1.59E-09	0.00E+00	1.70E-10	1.38E-12	0.00E+00	0.00E+00	5.99E-10	0.00E+00	4.22E-11	2.31E-13	0.00E+00	0.00E+00
HD	505-60-2	Yes	1	1	4.97E-07	0.00E+00	5.33E-08	4.33E-10	0.00E+00	0.00E+00	1.88E-07	0.00E+00	1.32E-08	7.22E-11	0.00E+00	0.00E+00
hexane	110-54-3	Not a known carc.	1	1	4.46E-09	0.00E+00	4.79E-10	3.89E-12	0.00E+00	0.00E+00	1.68E-09	0.00E+00	1.19E-10	6.48E-13	0.00E+00	0.00E+00
methane	74-82-8	No toxicity data avail.	1	1	1.08E-02	0.00E+00	1.16E-03	9.43E-06	0.00E+00	0.00E+00	4.08E-03	0.00E+00	2.88E-04	1.57E-06	0.00E+00	0.00E+00
methylene chloride	75-09-2	Yes	1	1	6.91E-09	0.00E+00	7.42E-10	6.02E-12	0.00E+00	0.00E+00	2.61E-09	0.00E+00	1.84E-10	1.00E-12	0.00E+00	0.00E+00
propene	115-07-1	Not a known carc.	1	1	1.17E-04	0.00E+00	1.26E-05	1.02E-07	0.00E+00	0.00E+00	4.42E-05	0.00E+00	3.12E-06	1.70E-08	0.00E+00	0.00E+00
styrene	100-42-5	No data	1	1	1.76E-08	0.00E+00	1.89E-09	1.53E-11	0.00E+00	0.00E+00	6.64E-09	0.00E+00	4.68E-10	2.56E-12	0.00E+00	0.00E+00
tetrachloroethene	127-18-4	Yes	1	1	1.87E-09	0.00E+00	2.00E-10	1.63E-12	0.00E+00	0.00E+00	7.04E-10	0.00E+00	4.96E-11	2.71E-13	0.00E+00	0.00E+00
toluene	108-88-3	Not a known carc.	1	1	1.98E-05	0.00E+00	2.13E-06	1.73E-08	0.00E+00	0.00E+00	7.49E-06	0.00E+00	5.27E-07	2.88E-09	0.00E+00	0.00E+00
trichloroethene	79-01-6	Yes	1	1	2.37E-09	0.00E+00	2.55E-10	2.07E-12	0.00E+00	0.00E+00	8.95E-10	0.00E+00	6.30E-11	3.44E-13	0.00E+00	0.00E+00
vinyl chloride	75-01-4	Yes	1	1	3.54E-07	0.00E+00	3.80E-08	3.08E-10	0.00E+00	0.00E+00	1.34E-07	0.00E+00	9.41E-09	5.14E-11	0.00E+00	0.00E+00
xylenes	1330-20-7	Not a known carc.	1	1	7.22E-07	0.00E+00	7.75E-08	6.29E-10	0.00E+00	0.00E+00	2.72E-07	0.00E+00	1.92E-08	1.05E-10	0.00E+00	0.00E+00
3,3',4,4'-TCB (PCB 77)	32598-13-3	Yes	1	0.97	0.00E+00	1.97E-15	0.00E+00	0.00E+00	9.31E-17	0.00E+00	0.00E+00	7.42E-16	0.00E+00	0.00E+00	3.43E-17	0.00E+00
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	Yes	1	0.95	0.00E+00	4.92E-15	0.00E+00	0.00E+00	2.33E-16	0.00E+00	0.00E+00	1.86E-15	0.00E+00	0.00E+00	8.57E-17	0.00E+00
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	Yes	1	0.94	0.00E+00	1.97E-15	0.00E+00	0.00E+00	9.31E-17	0.00E+00	0.00E+00	7.42E-16	0.00E+00	0.00E+00	3.43E-17	0.00E+00
total coplanar PCBs	NA	Yes	1	NA		0.00E+00			0.00E+00	0.00E+00		0.00E+00			0.00E+00	0.00E+00
ammonia	7664-41-7	Not a known carc.	1	1	9.02E-07	0.00E+00	9.68E-08	7.86E-10	0.00E+00	0.00E+00	3.40E-07	0.00E+00	2.40E-08	1.31E-10	0.00E+00	0.00E+00
aluminum	91728-14-2	No data	1	1	3.43E-06	0.00E+00	3.68E-07	2.99E-09	0.00E+00	0.00E+00	1.29E-06	0.00E+00	9.11E-08	4.98E-10	0.00E+00	0.00E+00
cadmium	7440-43-9	Yes	1	0.009	0.00E+00	2.62E-08	0.00E+00	0.00E+00	1.24E-09	0.00E+00	0.00E+00	9.87E-09	0.00E+00	0.00E+00	4.56E-10	0.00E+00
chlorine		No data	1	1	1.08E-05	0.00E+00	1.16E-06	9.43E-09	0.00E+00	0.00E+00	4.08E-06	0.00E+00	2.88E-07	1.57E-09	0.00E+00	0.00E+00
chromium (3+)	16065-83-1	No data	1	0.009	0.00E+00	7.22E-08	0.00E+00	0.00E+00	3.42E-09	0.00E+00	0.00E+00	2.72E-08	0.00E+00	0.00E+00	1.26E-09	0.00E+00
chromium (6+)	18540-29-9	Yes	1	0.009	0.00E+00	7.22E-08	0.00E+00	0.00E+00	3.42E-09	0.00E+00	0.00E+00	2.72E-08	0.00E+00	0.00E+00	1.26E-09	0.00E+00
copper	744-50-8	No data	1	0.009	0.00E+00	2.71E-06	0.00E+00	0.00E+00	1.28E-07	0.00E+00	0.00E+00	1.02E-06	0.00E+00	0.00E+00	4.72E-08	0.00E+00
hydrogen chloride	7647-01-0	No data	1	1	6.88E-05	0.00E+00	7.39E-06	6.00E-08	0.00E+00	0.00E+00	2.60E-05	0.00E+00	1.83E-06	1.00E-08	0.00E+00	0.00E+00
iron	7439-89-6	No data	1	0.009	0.00E+00	9.92E-06	0.00E+00	0.00E+00	4.70E-07	0.00E+00	0.00E+00	3.75E-06	0.00E+00	0.00E+00	1.73E-07	0.00E+00
lead	7439-92-1	Yes	1	0.007	0.00E+00	1.08E-07	0.00E+00	0.00E+00	5.13E-09	0.00E+00	0.00E+00	4.09E-08	0.00E+00	0.00E+00	1.89E-09	0.00E+00
manganese	7439-96-5	No data	1	0.009	0.00E+00	1.26E-05	0.00E+00	0.00E+00	5.98E-07	0.00E+00	0.00E+00	4.77E-06	0.00E+00	0.00E+00	2.20E-07	0.00E+00
total mercury	NA		1	0.85	0.00E+00	2.46E-11	0.00E+00	0.00E+00	1.16E-12	0.00E+00	0.00E+00	9.27E-12	0.00E+00	0.00E+00	4.28E-13	0.00E+00
mercuric chloride	7487-94-7	No data	1	0.85	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methyl mercury	22967-92-6	No data	1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
elemental mercury	7439-97-6	No data	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	Yes	1	0.009	0.00E+00	4.24E-08	0.00E+00	0.00E+00	2.01E-09	0.00E+00	0.00E+00	1.60E-08	0.00E+00	0.00E+00	7.39E-10	0.00E+00
vanadium	7440-62-2	No data	1	0.009	0.00E+00	1.35E-07	0.00E+00	0.00E+00	6.41E-09	0.00E+00	0.00E+00	5.11E-08	0.00E+00	0.00E+00	2.36E-09	0.00E+00
zinc	7440-66-6	No data	1	0.008	0.00E+00	4.51E-06	0.00E+00	0.00E+00	2.14E-07	0.00E+00	0.00E+00	1.70E-06	0.00E+00	0.00E+00	7.86E-08	0.00E+00

MODELED VALUES (TEQ BASIS):

During Years of PCAPP Operation (0 to tD)																	
					Air Modeling Results						Watershed Modeling					
			Stack emissions	Fraction of air conc. that is in the vapor phase	Adjusted Vapor Phase Air Concentration	Adjusted Particle Phase Air Concentration	Adjusted Dry Deposition from Vapor Phase	Adjusted Wet Deposition from Vapor Phase	Adjusted Dry Deposition from Particle Phase	Adjusted Wet Deposition from Particle Phase	Adjusted Vapor Phase Air Concentration	Adjusted Particle Phase Air Concentration	Adjusted Dry Deposition from Vapor Phase	Adjusted Wet Deposition from Vapor Phase	Adjusted Dry Deposition from Particle Phase	Adjusted Wet Deposition from Particle Phase
			(g/sec)	*(unitless)*	(µg TEQ/m^3)	(µg TEQ/m^3)	(g TEQ/m^2)	(g TEQ/m^2)	(g TEQ/m^2)	(g TEQ/m^2)	(µg TEQ/m^3)	(µg/m^3)	(g TEQ/m^2)	(g TEQ/m^2)	(g TEQ/m^2)	(g TEQ/m^2)
COPC	**CAS No.**	**Carcinogen?**	Q	F_v	Cyv	Cyp	Dydv	Dywv	Dydp	Dywp	Cywv	Cywp	Dydv	Dywwv	Dywdp	Dywwp
2-butanone	78-93-3	Not a known carc.	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-ethyl 1,3-butadiene	3404-63-5	No toxicity data avail.	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
acetone	67-64-1	Not a known carc.	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzene	71-43-2	Yes	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzyl alcohol	100-51-6	No data	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bis(2-ethylhexyl)-phthalate	117-81-7	Yes	1	0.131	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bromodichloromethane	75-27-4	Yes	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
carbon disulfide	75-15-0	Not a known carc.	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
carbon tetrachloride	56-23-5	Yes	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chlorobenzene	108-90-7	No data	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloroform	67-66-3	Yes	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloromethane	74-87-3	Not a known carc.	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dibromochloromethane	124-48-1	Yes	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dimethyl phthalate	131-11-3	No data	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
di-n-butyl phthalate	84-74-2	No data	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ethane	74-84-0	No toxicity data avail.	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ethylbenzene	100-41-4	Yes	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
HD	505-60-2	Yes	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
hexane	110-54-3	Not a known carc.	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methane	74-82-8	No toxicity data avail.	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methylene chloride	75-09-2	Yes	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
propene	115-07-1	Not a known carc.	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
styrene	100-42-5	No data	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
tetrachloroethene	127-18-4	Yes	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
toluene	108-88-3	Not a known carc.	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trichloroethene	79-01-6	Yes	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
vinyl chloride	75-01-4	Yes	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
xylenes	1330-20-7	Not a known carc.	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3,3',4,4'-TCB (PCB 77)	32598-13-3	Yes	1	0.97	0.00E+00	1.97E-19	0.00E+00	0.00E+00	9.31E-21	0.00E+00	0.00E+00	7.42E-20	0.00E+00	0.00E+00	3.43E-21	0.00E+00
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	Yes	1	0.95	0.00E+00	1.48E-19	0.00E+00	0.00E+00	6.98E-21	0.00E+00	0.00E+00	5.57E-20	0.00E+00	0.00E+00	2.57E-21	0.00E+00
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	Yes	1	0.94	0.00E+00	5.90E-20	0.00E+00	0.00E+00	2.79E-21	0.00E+00	0.00E+00	2.23E-20	0.00E+00	0.00E+00	1.03E-21	0.00E+00
total coplanar PCBs	NA	Yes	1		0.00E+00	4.03E-19	0.00E+00	0.00E+00	1.91E-20	0.00E+00	0.00E+00	1.52E-19	0.00E+00	0.00E+00	7.03E-21	0.00E+00
ammonia	7664-41-7	Not a known carc.	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
aluminum	91728-14-2	No data	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cadmium	7440-43-9	Yes	1	0.009	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chlorine	0	No data	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (3+)	16065-83-1	No data	1	0.009	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (6+)	18540-29-9	Yes	1	0.009	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
copper	744-50-8	No data	1	0.009	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
hydrogen chloride	7647-01-0	No data	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
iron	7439-89-6	No data	1	0.009	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
lead	7439-92-1	Yes	1	0.007	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
manganese	7439-96-5	No data	1	0.009	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
total mercury	NA		1	0.85	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
mercuric chloride	7487-94-7	No data	1	0.85	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methyl mercury	22967-92-6	No data	1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
elemental mercury	7439-97-6	No data	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	Yes	1	0.009	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
vanadium	7440-62-2	No data	1	0.009	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
zinc	7440-66-6	No data	1	0.008	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

a. With the exception of stack emission rates, all units for individual PCDDs and PCDFs congeners and coplanar PCBs are presented in terms of toxic equivalent (TEQ). The units for total PCDDs and PCDFs as well as the units for total coplanar PCBs are also presented in terms of TEQ and are calculated as the sum of the values of all individual PCDD and PCDF congeners and the values of all coplanar PCBs for the parameter of interest, respectively.

DEFAULT AND SITE-SPECIFIC VALUES

Parameter	Variable	Value	Units	Type	References
Average annual precipitation	P	31.5	cm/yr	Site-specific	NOAA, 2004
Average annual irrigation	I	0	cm/yr	Site-specific	na
Average annual runoff	RO	1.27	cm/yr	Site-specific	Miller, 1963
Average annual evapo-transpiration	E_v	121.9	cm/yr	Site-specific	Miller, 1963
Soil volumetric water content	θ_{sw}	0.2	mℓ water/cm^3 soil	Default	USEPA, 2005
Soil mixing depth	Z_s	2	cm	Default	USEPA, 2005
Soil bulk density	BD	1.5	g soil/cm^3 soil	Default	USEPA, 2005
Loss constant due to erosion	kse	0	yr^{-1}	Default	USEPA, 2005
Universal gas constant	R	8.205E-05	atm m^3/mol K	Default	USEPA, 2005
Ambient air temperature	T_a	298	K	Default	USEPA, 2005
Solids particulate density	ρ_{soil}	2.7	g/cm^3	Default	USEPA, 2005
Time period over which deposition occurs	tD	5	yr	Site-specific	na
Density of air	ρ_a	0.0012	g/cm^3	Default	USEPA, 2005
Fraction of chemical wet deposition that adheres to plant surfaces	Fw	0.6	dimensionless	Default	USEPA, 2005
Interception fraction of the edible portion of plant	Rp	0.39	dimensionless	Default	USEPA, 2005
Plant surface loss coefficient	kp	18	yr^{-1}	Default	USEPA, 2005
Length of plant exposure to deposition per harvest of edible portion of plant	Tp	0.16	yr	Default	USEPA, 2005
Yield or standing crop biomass of edible portion of plant	Yp	2.24	kg dry weight/m^2	Default	USEPA, 2005
Interception fraction of the edible portion of plant for forage	Rp_{forage}	0.5	dimensionless	Default	USEPA, 2005
Interception fraction of the edible portio nof plant for silage	Rp_{silage}	0.46	dimensionless	Default	USEPA, 2005
Length of plant exposure to deposition per harvest of edible portion of plant for forage	Tp_{forage}	0.12	yr	Default	USEPA, 2005
Length of plant exposure to deposition per harvest of edible portion of plant for silage	Tp_{silage}	0.16	yr	Default	USEPA, 2005
Yield or standing crop biomass of edible portion of plant for forage	Yp_{forage}	0.24	kg dry weight/m^2	Default	USEPA, 2005
Yield or standing crop biomass of edible portion of plant for silage	Yp_{silage}	0.8	kg dry weight/m^2	Default	USEPA, 2005
Empirical correction factor for forage	VG_{forage}	1	dimensionless	Default	USEPA, 2005
Empirical correction factor for silage	VG_{silage}	0.5	dimensionless	Default	USEPA, 2005
Beef cattle consumption rate of forage	$Qp_{forage(beef)}$	8.8	kg/day	Default	USEPA, 2005
Beef cattle consumption rate of silage	$Qp_{silage(beef)}$	2.5	kg/day	Default	USEPA, 2005
Beef cattle consumption rate of grain	$Qp_{grain(beef)}$	0.47	kg/day	Default	USEPA, 2005
Beef cattle consumption rate of soil	Qs_{beef}	0.5	kg/day	Default	USEPA, 2005
Dairy cattle consumption rate of forage	$Qp_{forage(dairy)}$	13.2	kg/day	Default	USEPA, 2005
Dairy cattle consumption rate of silage	$Qp_{silage(dairy)}$	4.1	kg/day	Default	USEPA, 2005
Dairy cattle consumption rate of grain	$Qp_{grain(dairy)}$	3	kg/day	Default	USEPA, 2005
Dairy cattle consumption rate of soil	Qs_{dairy}	0.4	kg/day	Default	USEPA, 2005
Swine consumption rate of forage	$Qp_{forage(pork)}$	0	kg/day	Default	USEPA, 2005
Swine consumption rate of silage	$Qp_{silage(pork)}$	1.4	kg/day	Default	USEPA, 2005
Swine consumption rate of grain	$Qp_{grain(pork)}$	3.3	kg/day	Default	USEPA, 2005
Swine consumption rate of soil	Qs_{pork}	0.37	kg/day	Default	USEPA, 2005
Poultry consumption rate of forage	$Qp_{forage(poultry)}$	0	kg/day	Default	USEPA, 2005
Poultry consumption rate of silage	$Qp_{silage(poultry)}$	0	kg/day	Default	USEPA, 2005
Poultry consumption rate of grain	$Qp_{grain(poultry)}$	0.2	kg/day	Default	USEPA, 2005
Poultry consumption rate of soil	$Qs_{poultry}$	0.022	kg/day	Default	USEPA, 2005
Fraction of plant that is grown on contaminated soil	F	1	dimensionless	Default	USEPA, 2005
Soil bioavailability factor	Bs	1	dimensionless	Default	USEPA, 2005
Total waterbody depth	d_z	5.03	m	Site-specific	na
Depth of water column	d_{wc}	5	m	Site-specific	na
Depth of upper benthic layer	d_{bs}	0.03	m	Default	USEPA, 2005
Drag coefficient	C_d	0.0011	dimensionless	Default	USEPA, 2005
Wind speed	W	3.9	m/s	Default	USEPA, 2005
Density of water	ρ_w	1	g/cm^3	Default	USEPA, 2005
von Karman's constant	k	0.4	dimensionless	Default	USEPA, 2005
Dimensionless viscous sublayer thickness	λ_z	4	dimensionless	Default	USEPA, 2005
Viscosity of water corresponding to water temperature	μ_w	0.0169	g/cm-s	Default	USEPA, 2005
Viscosity of air corresponding to air temperature	μ_a	0.000181	g/cm-s	Default	USEPA, 2005
Water body temperature	T_{wk}	298	K	Default	USEPA, 2005
Temperature correction factor	θ	1.026	dimensionless	Default	USEPA, 2005
Water body surface area	A_w	10,000	m^2	Site-specific	USGS
Impervious watershed area receiving chemical deposition	A_i	12,320	m^2	Site-specific	USGS
Total watershed area receiving chemical deposition	A_L	616,000	m^2	Site-specific	USGS
USLE rainfall factor	RF	31	yr^{-1}	Site-specific	NRCS, 2006
USLE erodibility factor	K	0.37	ton/acre	Site-specific	NRCS, 2006
USLE length-slope factor	LS	1.5	dimensionless	Default	USEPA, 2005
USLE cover management factor	C	0.1	dimensionless	Default	USEPA, 2005
USLE supporting practice factor	PF	1	dimensionless	Default	USEPA, 2005
Empirical intercept coefficient	a	1.9	dimensionless	Default	USEPA, 2005
Empirical slope coefficient	b	0.125	dimensionless	Default	USEPA, 2005
Soil enrichment ratio	ER	3	dimensionless	Default	USEPA, 2005
Total suspended solids	TSS	10	mg/ℓ	Default	USEPA, 2005
Bed sediment porosity	θ_{bs}	0.6	ℓwater/ℓsediment	Default	USEPA, 2005
Bed sediment concentration	C_{BS}	1	g/cm^3	Default	USEPA, 2005
Average volumetric flow rate through water body	Vf_x	2,680,560	m^3/yr	Calculated	USEPA, 2005
Fish lipid content	f_{lipid}	0.07	dimensionless	Default	USEPA, 2005
Fraction of organic content in bottom sediment	OC_{sed}	0.04	dimensionless	Default	USEPA, 2005
Thickness of stratum corneum	l_{sc}	0.001	cm	Default	USEPA, 2004
Duration of swimming event	t_{event}	3	hr	Site-specific	na

na Not available. These site-specific values are further discussed in Section F.2 of Appendix F.

EXPOSURE SCENARIO-SPECIFIC VALUES

Parameter	Variable	Adult Exposure Scenarios				Child Exposure Scenarios			Infant Exposure Scenarios		
		Resident	Subsistence Fisher	Subsistence Farmer	Worker	Resident	Subsistence Fisher	Subsistence Farmer	Resident	Subsistence Fisher	Subsistence Farmer
Body weight (kg)	BW	70	70	70	70	15	15	15	10	10	10
Body surface area exposed during swimming (cm^2)	SA	18,000	18,000	18,000	18,000	6,600	6,600	6,600			
Body surface area exposed to soil (cm^2)	SA	5,700	5,700	5,700	3,300	2,800	2,800	2,800	2,625	2,625	2,625
Soil adherence factor (mg/cm^2-event)	AF	0.07	0.07	0.07	0.20	0.20	0.20	0.20	0.20	0.20	0.20
Exposure duration for indirect pathways (yr)	Ed_{ind} (T_2)	30	30	40	25	5	5	5	1	1	1
Exposure duration for direct pathways (yr)	ED_{dir}	5	5	5	5	5	5	5	1	1	1
Exposure frequency (day/yr)	EF	350	350	350	250	350	350	350	350	350	350
Exposure frequency - dermal (day/yr)	EF_{dermal}	12	12	12	0	12	12	12	0	0	0
Event Frequency - dermal (events/day)	EV_{dermal}	1	1	1	1	1	1	1	1	1	1
Duration of swimming event (hrs/day)	t_{event}	3	3	3	3	3	3	3	3	3	3
Exposure time (hr/day)	ET	24	24	24	8	24	24	24	24	24	24
Averaging time for carcinogenic effects (yr)	AT_{carc}	70	70	70	70	70	70	70	70	70	70
Averaging time for noncarcinogenic direct pathways (yr)	$AT_{non\ carc,\ direct}$	5	5	5	5	5	5	5	1	1	1
Averaging time for noncarcinogenic indirect pathways (yr)	$AT_{noncarc,\ indirect}$	30	30	40	25	5	5	5	1	1	1
Consumption rate:											
soil (kg/day)	CR_{soil}	0.0001	0.0001	0.0001	0.00005	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
exposed fruit (kg/day)	$CR_{exposed\ fruit}$	0.425	0.425	0.425	n/a	0.434	0.434	0.434	0.388	0.388	0.388
protected fruit (kg/day)	$CR_{protected\ fruit}$	0.47	0.47	0.47	n/a	0.299	0.299	0.299	0.083	0.083	0.083
exposed vegetables (kg/day)	$CR_{exposed\ veg}$	0.316	0.316	0.316	n/a	0.109	0.109	0.109	0.074	0.074	0.074
protected vegetables (kg/day)	$CR_{protect\ veg}$	0.115	0.115	0.115	n/a	0.091	0.091	0.091	0.078	0.078	0.078
below-ground vegetables (kg/day)	CR_{bg}	0.282	0.282	0.282	n/a	0.114	0.114	0.114	0.096	0.096	0.096
beef (kg/day)	CR_{beef}	0.163	0.163	0.163	n/a	0.054	0.054	0.054	0.032	0.032	0.032
milk (kg/day)	CR_{milk}	0.836	0.836	0.836	n/a	0.728	0.728	0.728	1.709	1.709	1.709
eggs (kg/day)	CR_{egg}	0.1	0.1	0.1	n/a	0.061	0.061	0.061	0.033	0.033	0.033
poultry (kg/day)	$Cr_{poultry}$	0.142	0.142	0.142	n/a	0.057	0.057	0.057	0.035	0.035	0.035
pork (kg/day)	CR_{pork}	0.08	0.08	0.08	n/a	0.037	0.037	0.037	0.017	0.017	0.017
fish (kg/day)	CR_{fish}	0.256	0.256	0.256	n/a	0.134	0.134	0.134	0.134	0.134	0.134
breast milk (kg/day)	IR_{milk}	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.98	0.98	0.98
incidental surface water (mℓ/hr)	CR_{sw}	50	50	50	n/a	50	50	50	n/a	n/a	n/a
Inhalation Rate (m3/hr)	IR	0.83	0.83	0.83	0.83	0.5	0.5	0.5	0.1875	0.1875	0.1875
Soil Fraction Contaminated	F_{soil}	1	1	1	1	1	1	1	1	1	1
Produce Fraction Contaminated	F_p	0.4	0.4	1	n/a	0.4	0.4	1	0.4	0.4	1
Beef Fraction Contaminated	F_{beef}	0.4	0.4	1	n/a	0.4	0.4	1	0.4	0.4	1
Poultry Fraction Contaminated	$F_{poultry}$	0.4	0.4	1	n/a	0.4	0.4	1	0.4	0.4	1
Egg Fraction Contaminated	F_{egg}	0.4	0.4	1	n/a	0.4	0.4	1	0.4	0.4	1
Milk Fraction Contaminated	F_{milk}	0.4	0.4	1	n/a	0.4	0.4	1	0.4	0.4	1
Pork Fraction Contaminated	F_{pork}	0.4	0.4	1	n/a	0.4	0.4	1	0.4	0.4	1
Fish Fraction Contaminated	F_{fish}	0.4	1	0.4	n/a	0.4	1	0.4	0.4	1	0.4

n/a not applicable. The value is not applicable to this exposure scenario.

CHEMICAL-SPECIFIC VALUES

COPC	CAS Number	Chemical/Physical Properties								
		Molecular Weight	Loss Constant Due To Degradation	Soil-Water Partition Coefficient	Bed Sediment/ Sediment Pore Water Partition Coefficient	Suspended Sediment/ Surface Water Partition Coefficient	Log Octanol-Water Partition Coefficient	Henry's Law Constant	Diffusivity of Chemical in Air	Diffusivity of Chemical in Water
		(g/mol)	(yr^{-1})	(cm^3 water/g soil)	(cm^3/g/kg)	(ℓ/kg)	(dimensionless)	(atm-m^3/mol)	(cm^2/s)	(cm^2/s)
		MW	ksg	Kd_s	Kd_{bs}	Kd_{sw}	log K_{ow}	H	D_a	D_w
2-butanone	78-93-3	72.1066	36.14 [c]	0.29 [c]	0.08 [c]	0.14 [c]	0.3 [c]	0.00006 [c]	0.0808 [c]	0.0000098 [c]
2-ethyl 1,3-butadiene	3404-63-5	82.14	0 [b]	3.23 [e]	12.93 [e]	24.24 [e]	3.1 [k]	0.24500 [k]	0.101 [e]	0.0000116 [e]
acetone	67-64-1	58.0798	36.14 [c]	0.087 [c]	0.02 [c]	0.04 [c]	-0.2 [c]	0.00004 [c]	0.124 [c]	0.0000114 [c]
benzene	71-43-2	78.1134	15.81 [c]	0.12 [c]	2.47 [c]	4.63 [c]	2.1 [c]	0.00560 [c]	0.088 [c]	0.0000102 [c]
benzyl alcohol	100-51-6	108.14	0 [c]	0.12 [c]	0.48 [c]	0.90 [c]	1.1 [c]	0.00000 [c]	0.001 [c]	0.0000100 [c]
bis(2-ethylhexyl)-phthalate	117-81-7	390.56	11.04 [c]	2300000 [c]	4440 [c]	8330.00 [c]	5.1 [c]	0.00000 [c]	0.0351 [c]	0.0000037 [c]
bromodichloromethane	75-27-4	163.83	0 [c]	0.11 [c]	2.21 [c]	4.13 [c]	2.1 [c]	0.00160 [c]	0.001 [c]	0.0000100 [c]
carbon disulfide	75-15-0	76.1	0 [c]	0.091 [c]	2.65 [c]	4.96 [c]	2.2 [c]	0.03000 [c]	0.104 [c]	0.0000100 [c]
carbon tetrachloride	56-23-5	153.82	0.7 [c]	0.35 [c]	6.08 [c]	11.40 [c]	2.8 [c]	0.03000 [c]	0.078 [c]	0.0000088 [c]
chlorobenzene	108-90-7	112.56	1.69 [c]	0.44 [c]	8.96 [c]	16.80 [c]	2.8 [c]	0.00370 [c]	0.073 [c]	0.0000087 [c]
chloroform	67-66-3	119.3779	1.41 [c]	0.08 [c]	2.1 [c]	3.94 [c]	2.0 [c]	0.00370 [c]	0.104 [c]	0.0000100 [c]
chloromethane	74-87-3	50.4877	9.03 [c]	0.06 [c]	0.25 [c]	0.47 [c]	0.9 [c]	0.00882 [c]	0.126 [c]	0.0000065 [c]
dibromochloromethane	124-48-1	208.29	1.41 [c]	0.7 [c]	2.8 [c]	5.24 [c]	2.2 [c]	0.00078 [c]	0.001 [c]	0.0000100 [c]
dimethyl phthalate	131-11-3	194.19	36.14 [c]	0.34 [c]	1.37 [c]	2.56 [c]	1.6 [c]	0.00000 [c]	0.0568 [c]	0.0000063 [c]
di-n-butyl phthalate	84-74-2	278.35	11 [c]	5200 [c]	62.8 [c]	117.75 [c]	4.7 [c]	0.00000 [c]	0.0438 [c]	0.0000079 [c]
ethane	74-84-0	30.0694	0 [b]	0.32 [e]	1.3 [e]	2.44 [e]	1.8 [f]	0.50000 [f]	0.196 [e]	0.0000228 [e]
ethylbenzene	100-41-4	106.2	25.29 [c]	0.73 [c]	8.16 [c]	15.30 [c]	3.1 [c]	0.00790 [c]	0.075 [c]	0.0000078 [c]
HD	505-60-2	159.0732	23349 [a, e]	2.34 [e]	9.36 [e]	17.55 [e]	2.4 [f]	0.00003 [h]	0.065 [e]	0.0000075 [e]
hexane	110-54-3	86.2	0 [b]	14.68 [e]	58.73 [e]	110.12 [e]	3.9 [f]	1.80000 [f]	0.097 [e]	0.0000113 [e]
methane	74-82-8	16.0426	0 [b]	0.087 [e]	0.35 [e]	0.66 [e]	1.1 [f]	0.65800 [f]	0.299 [e]	0.0000346 [e]
methylene chloride	75-09-2	84.9328	9.03 [c]	0.024 [c]	0.4 [c]	0.75 [c]	1.3 [c]	0.00220 [c]	0.101 [c]	0.0000117 [c]
propene	115-07-1	42.1	9.03 [a, e]	0.3 [e]	1.21 [e]	2.27 [e]	1.8 [f]	0.19600 [f]	0.157 [e]	0.0000182 [e]
styrene	100-42-5	104.16	9.03 [c]	120 [c]	36.48 [c]	68.40 [c]	3.0 [c]	0.00270 [c]	0.071 [c]	0.0000080 [c]
tetrachloroethene	127-18-4	165.834	0.7 [c]	0.31 [c]	10.6 [c]	19.88 [c]	3.4 [c]	0.01800 [c]	0.072 [c]	0.0000082 [c]
toluene	108-88-3	92.1402	11.5 [c]	0.36 [c]	5.6 [c]	10.50 [c]	2.7 [c]	0.00660 [c]	0.087 [c]	0.0000086 [c]
trichloroethene	79-01-6	131.3889	0.7 [c]	0.33 [c]	3.77 [c]	7.07 [c]	2.4 [c]	0.01000 [c]	0.079 [c]	0.0000091 [c]
vinyl chloride	75-01-4	62.4987	1.41 [c]	0.037 [c]	0.62 [c]	1.15 [c]	1.4 [c]	0.02700 [c]	0.106 [c]	0.0000123 [c]
xylenes	1330-20-7	106.16	9.03 [a, e]	3.81 [e]	15.24 [e]	28.57 [e]	3.2 [f]	0.00663 [f]	0.085 [e]	0.0000098 [e]
3,3',4,4'-TCB (PCB 77)	32598-13-3	291.99	0.03 [c,d]	24500 [c,d]	98100 [c,d]	184000.00 [c,d]	6.5 [c,d]	0.00028 [c,d]	0.001 [c,d]	0.0000100 [c,d]
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	326.44	0.03 [c,d]	24500 [c,d]	98100 [c,d]	184000.00 [c,d]	6.5 [c,d]	0.00028 [c,d]	0.001 [c,d]	0.0000100 [c,d]
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	326.44	0.03 [c,d]	24500 [c,d]	98100 [c,d]	184000.00 [c,d]	6.5 [c,d]	0.00028 [c,d]	0.001 [c,d]	0.0000100 [c,d]
total coplanar PCBs	NA	326.44	0.03 [c,d]	24500 [c,d]	98100 [c,d]	184000.00 [c,d]	6.5 [c,d]	0.00028 [c,d]	0.001 [c,d]	0.0000100 [c,d]
ammonia	7664-41-7	17	0 [b]	0.017 [e]	0.07287809 [e]	0.13 [e]	0.2 [f]	0.00002 [f]	0.287041 [e]	0.0000333 [e]
aluminum	7429-90-5	27	0 [b]	9.9 [e]	9.9 [e]	9.9 [e]	0.3 [k]	0.02450 [k]	0.211111 [e]	0.0000244 [e]
cadmium	7440-43-9	112.4	0 [c]	75 [c]	75 [c]	75.00 [c]	-0.1 [c]	0.03100 [c]	0.0775 [c]	0.0000096 [c]
chlorine	7782-50-5	70.91	0 [c]	0.25 [e, p]	0.25 [e, p]	0.25 [e, p]	0.9 [c]	0.01170 [c]	0.001 [c]	0.0000100 [c]
chromium (3+)	7440-47-3	52	0 [c]	19 [c]	19 [c]	19.00 [c]	0.2 [c]	0.02450 [k]	0.1265 [c]	0.0000141 [c]
chromium (6+)	18540-29-9	52	0 [c]	19 [c]	19 [c]	19.00 [c]	0.2 [c]	0.02450 [k]	0.1265 [c]	0.0000141 [c]
copper	7440-50-8	63.5	0 [b]	430 [e]	430 [e]	430.00 [e]	-0.6 [k]	0.02450 [k]	0.119373 [e]	0.0000138 [e]
hydrogen chloride	7647-01-0	36.5	0 [c]	0.032064613 [e]	0.12825845 [e]	1.22 [e]	0.5 [k]	0.00773 [k]	0.001 [c]	0.0000100 [c]
iron	7439-89-6	55.8	0 [b]	25 [e]	25 [e]	25.00 [e]	-0.8 [k]	0.02450 [k]	0.130116 [e]	0.0000151 [e]
lead	7439-92-1	207.2	0 [c]	900 [c]	900 [c]	900.00 [c]	0.7 [c]	0.02500 [c]	0.0772 [c]	0.0000096 [c]
manganese	7439-96-5	54.94	0 [b]	65 [e]	65 [e]	65 [e]	0.2 [k]	0.02450 [k]	0.13147 [e]	0.0000152 [e]
total mercury	NA	200.59	0 [c]	58000 [c]	50000 [c]	100000.00 [c]	0.2 [c]	0.00000 [c]	4.53126 [c]	0.0000053 [c]
mercuric chloride	7487-94-7	271.5	0 [c]	58000 [c]	50000 [c]	100000.00 [c]	0.2 [c]	0.00000 [c]	4.53126 [c]	0.0000053 [c]
methyl mercury	22967-92-6	215.63	0 [c]	7000 [c]	3000 [c]	100000.00 [c]	0.1 [k]	0.00000 [c]	5.2778 [c]	0.0000061 [c]
elemental mercury	7439-97-6	200.59	0 [c]	1000 [c]	3000 [c]	1000.00 [c]	0.6 [c]	0.00710 [c]	0.0109 [c]	0.0000301 [c]
nickel	7440-02-0	58.7	0 [c]	65 [c]	65 [c]	65.00 [c]	-0.6 [c]	0.02500 [c]	0.0772 [c]	0.0000096 [c]
vanadium	7440-62-2	50.94	0 [b]	1000 [e]	1000 [e]	1000.00 [e]	0.2 [k]	0.02450 [k]	0.138266 [e]	0.0000160 [e]
zinc	7440-66-6	65.4	0 [c]	62 [c]	62 [c]	62.00 [c]	-0.5 [c]	0.02500 [c]	0.0772 [c]	0.0000096 [c]

NA No data available

a. Howard, P.H. et al., 1991. *Handbook of Environmental Degradation Rates* . Lewis Publishers. Chelsea, Michigan.

b. No data available, ksg set to 0 as a conservative assumption.

c. Human Health Risk Assessment Protocol for Hazardous Waste Combustion Facilities, Companion Database. USEPA, 2005.

d. Human Health Risk Assessment Protocol for Hazardous Waste Combustion Facilities. USEPA, 2005.

e. Calculated using guidance from Human Health Risk Assessment Protocol for Hazardous Waste Combustion Facilities, Appendix A-2. USEPA, 2005.

f. PHYSPROP Database. Syracuse Research Corporation.

g. Air Emission Models for Waste and Wastewater. USEPA, 1994.

h. CHEMFATE Database. Syracuse Research Corporation.

i. http://www.inchem.org/documents/icsc/icsc/eics0163.htm

j. CRC Handbook of Chemistry and Physics

k. EPI Software Program. Syracuse Research Corporation.

l. Measured value from RAGS Part E. USEPA, 2004.

m. Estimated value from RAGS Part E. USEPA, 2004.

n. Calculated using guidance provided in RAGS Part E. USEPA, 2004.

o. http://www.atsdr.cdc.gov/toxprofiles/tp11-c4.pdf

p. Baes, C.F. et al. 1984. "Review and Analysis of Parameters and Assessing Transport of Environmentally Released Radionuclides through Agriculture." Oak Ridge National Laboratory. Oak Ridge, Tennessee

q. No data. Value set equal to zero

CHEMICAL-SPECIFIC VALUES

COPC	CAS Number	Biotransfer Factors				
		Air-to-Plant Biotransfer Factor	Plant-to-Soil Bioconcentration Factor for Aboveground Produce	Root Concentration Factor	Biotransfer Factor for Beef	Biotransfer Factor for Milk
		(mg/kg)/(µg/g)	(mg/kg)/(µg/g)	(dimensionless)	(day/kg)	(day/kg)
		Bv_{ag}	Br_{ag}	RCF	Ba_{beef}	Ba_{milk}
2-butanone	78-93-3	0.00203 [c]	8.38 [c]	6.7 [c]	0.00011 [c]	0.00002 [c]
2-ethyl 1,3-butadiene	3404-63-5	0.000425 [e]	0.65 [e]	53.7 [e]	0.01180 [e]	0.00248 [e]
acetone	67-64-1	0.000796 [c]	8.38 [c]	6.46 [c]	0.00003 [c]	0.00001 [c]
benzene	71-43-2	0.00172 [c]	2.37 [c]	9.62 [c]	0.00338 [c]	0.00071 [c]
benzyl alcohol	100-51-6	2.46 [c]	8.38 [c]	7.94 [c]	0.00060 [c]	0.00013 [c]
bis(2-ethylhexyl)-phthalate	117-81-7	151000 [c]	0.0437 [c]	1960 [c]	3.98810 [c]	8.39600 [c]
bromodichloromethane	75-27-4	0.00602 [c]	2.37 [c]	9.62 [c]	3.38190 [c]	0.00071 [c]
carbon disulfide	75-15-0	0.00041 [c]	2.07 [c]	11.5 [c]	0.00392 [c]	0.00083 [c]
carbon tetrachloride	56-23-5	0.00179 [c]	0.932 [c]	33.3 [c]	8.68150 [c]	1.82770 [c]
chlorobenzene	108-90-7	0.0145 [c]	0.932 [c]	33.3 [c]	8.68150 [c]	1.82770 [c]
chloroform	67-66-3	0.00204 [c]	2.7 [c]	8.05 [c]	0.00290 [c]	0.00061 [c]
chloromethane	74-87-3	0.000059 [c]	8.38 [c]	7.47 [c]	0.00041 [c]	0.00009 [c]
dibromochloromethane	124-48-1	0.0169 [c]	1.99 [c]	12.1 [c]	4.09770 [c]	0.00086 [c]
dimethyl phthalate	131-11-3	24.4 [c]	4.86 [c]	10 [c]	1.40290 [c]	0.00030 [c]
di-n-butyl phthalate	84-74-2	3150 [c]	0.074 [c]	966 [c]	3.63780 [c]	7.65860 [c]
ethane	74-84-0	0.00000946 [e]	3.48 [e]	12.06 [e]	0.00214 [e]	0.00045 [e]
ethylbenzene	100-41-4	0.0142 [c]	0.625 [c]	56.6 [c]	0.01210 [c]	0.00256 [c]
HD	505-60-2	0.624 [e]	1.57 [e]	16.66 [e]	0.00528 [e]	0.00111 [e]
hexane	110-54-3	0.000 [e]	0.22 [e]	233.91 [e]	0.02430 [e]	0.00512 [e]
methane	74-82-8	0.000 [e]	9.08 [e]	7.91 [e]	0.00059 [e]	0.00000 [e]
methylene chloride	75-09-2	0.001 [c]	6.86 [c]	8.64 [c]	0.00088 [c]	0.00018 [c]
propene	115-07-1	0.0000219 [e]	3.67 [e]	11.67 [e]	0.00201 [e]	0.00042 [e]
styrene	100-42-5	0.0324 [c]	0.714 [c]	47.4 [c]	1.09080 [c]	2.29650 [c]
tetrachloroethene	127-18-4	0.013 [c]	0.42 [c]	96.4 [c]	0.01630 [c]	0.00343 [c]
toluene	108-88-3	0.00636 [c]	1.07 [c]	27.9 [c]	0.00769 [c]	0.00162 [c]
trichloroethene	79-01-6	0.00201 [c]	1.59 [c]	16.4 [c]	0.00521 [c]	0.00110 [c]
vinyl chloride	75-01-4	0.0000641 [c]	6.01 [c]	9.09 [c]	0.00105 [c]	0.00022 [c]
xylenes	1330-20-7	0.0195 [e]	0.578 [e]	62.99 [e]	0.01290 [e]	0.00272 [e]
3,3',4,4'-TCB (PCB 77)	32598-13-3	1650 [c,d]	0.00678 [c,d]	23499 [c,d]	0.03097 [c,d]	0.00652 [c,d]
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	1650 [c,d]	0.00678 [c,d]	23499 [c,d]	0.03097 [c,d]	0.00652 [c,d]
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	1650 [c,d]	0.00678 [c,d]	23499 [c,d]	0.03097 [c,d]	0.00652 [c,d]
total coplanar PCBs	NA					
ammonia	7664-41-7	0 [d, q]	28.51412177 [e]	6.66 [e]	0.00009 [e]	0.00002 [e]
aluminum	7429-90-5	0 [d, q]	1.08E-03 [e, p]	0.006435 [e, p]	0.00150 [e, p]	0.00020 [e, p]
cadmium	7440-43-9	0 [d, q]	0.125 [c]	11.25 [e, p]	0.00012 [c]	0.00001 [c]
chlorine	7782-50-5	0 [d, q]	8.38 [c]	7.36 [c]	0.00036 [c]	0.00008 [c]
chromium (3+)	7440-47-3	0 [d, q]	0.00488 [c]	0.0855 [e, p]	0.00550 [c]	0.00150 [c]
chromium (6+)	18540-29-9	0 [d, q]	0.00488 [c]	0.0855 [e, p]	0.00550 [c]	0.00150 [c]
copper	7440-50-8	0 [d, q]	2.69E-01 [e, p]	107.5 [e, p]	0.01000 [e, p]	0.00150 [e, p]
hydrogen chloride	7647-01-0	0 [d, q]	18.8746975 [e]	6.912833404 [e]	0.00005 [c]	0.00001 [c]
iron	7439-89-6	0 [d, q]	1.38E-03 [e, p]	6.367006231 [e]	0.02000 [e, p]	0.0003 [e, p]
lead	7439-92-1	0 [d, q]	0.0136 [c]	8.1 [e, p]	0.00030 [c]	0.0003 [c]
manganese	7439-96-5	0 [d, q]	7.54E-02 [e, p]	3.25 [e, p]	0.00040 [e, p]	0.0004 [e, p]
total mercury	NA					
mercuric chloride	7487-94-7	1800 [c]	0.0145 [c]	2088 [c, e]	0.00522 [c]	0.0023 [c]
methyl mercury	22967-92-6	0 [c]	0.0294 [c]	693 [c, e]	0.00078 [c]	0.0003 [c]
elemental mercury	7439-97-6	0 [c]	0 [c, q]	0 [c, q]	0.00000 [c]	0.0000 [c]
nickel	7440-02-0	0 [d, q]	0.00931 [c]	3.9 [e, p]	0.00600 [c]	0.0010 [c]
vanadium	7440-62-2	0 [d, q]	3.32E-03 [e, p]	3 [e, p]	0.00250 [e, p]	0.0000 [e, p]
zinc	7440-66-6	0 [d, q]	0.097 [c]	55.8 [e, p]	0.00009 [c]	0.0000 [c]

NA No data available

a. Howard, P.H. et al., 1991. Handbook of Environmental Degradation Rates. Lewis Publishers. Chelsea, Michigan.

b. No data available, ksg set to 0 as a conservative assumption.

c. Human Health Risk Assessment Protocol for Hazardous Waste Combustion Facilities, Companion Database. USEPA, 2005.

d. Human Health Risk Assessment Protocol for Hazardous Waste Combustion Facilities. USEPA, 2005.

e. Calculated using guidance from Human Health Risk Assessment Protocol for Hazardous Waste Combustion Facilities, Appendix A-2. USEPA, 2005.

f. PHYSPROP Database. Syracuse Research Corporation.

g. Air Emission Models for Waste and Wastewater. USEPA, 1994.

h. CHEMFATE Database. Syracuse Research Corporation.

i. http://www.inchem.org/documents/icsc/icsc/eics0163.htm

j. CRC Handbook of Chemistry and Physics

k. EPI Software Program. Syracuse Research Corporation.

l. Measured value from RAGS Part E. USEPA, 2004.

m. Estimated value from RAGS Part E. USEPA, 2004.

n. Calculated using guidance provided in RAGS Part E. USEPA, 2004.

o. http://www.atsdr.cdc.gov/toxprofiles/tp11-c4.pdf

p. Baes, C.F. et al. 1984. "Review and Analysis of Parameters and Assessing Transport of Environmentally Released Radionuclides through Agriculture." Oak Ridge National Laboratory. Oak Ridge, Tennessee

q. No data. Value set equal to zero

CHEMICAL-SPECIFIC VALUES

COPC	CAS Number	Biotransfer Factors (continued)						
		Biotransfer Factor for Eggs (day/kg)	Biotransfer Factor for Pork (day/kg)	Biotransfer Factor for Chicken (day/kg)	Metabolism Factor (dimensionless)	Bio-Concentration Factor (ℓ/kg)	Bio-Accumulation Factor (ℓ/kg)	Biota-to Sediment Accumulation Factor (ℓ/kg)
		Ba_{egg}	Ba_{pork}	$Ba_{poultry}$	MF	BCF_{fish}	BAF_{fish}	$BSAF_{fish}$
2-butanone	78-93-3	0.00004 [c]	0.0001 [c]	0.00008 [c]	1 [d]	3.16 [c]	NA	NA
2-ethyl 1,3-butadiene	3404-63-5	0.00495 [e]	0.0142 [e]	0.00867 [e]	1 [d]	46.12 [e]	NA	NA
acetone	67-64-1	0.00001 [c]	0.0000 [c]	0.00002 [c]	1 [d]	3.16 [c]	NA	NA
benzene	71-43-2	0.00142 [c]	0.0041 [c]	0.00249 [c]	1 [d]	8.26 [c]	NA	NA
benzyl alcohol	100-51-6	0.00025 [c]	0.0007 [c]	0.00044 [c]	1 [d]	0.314 [c]	NA	NA
bis(2-ethylhexyl)-phthalate	117-81-7	1.67920 [c]	4.8277 [c]	2.93860 [c]	0.01 [d]	53.3 [c]	194.3	NA
bromodichloromethane	75-27-4	1.42397 [c]	4.0939 [c]	2.49194 [c]	1 [d]	8.26 [c]	NA	NA
carbon disulfide	75-15-0	0.00165 [c]	0.0048 [c]	0.00289 [c]	1 [d]	9.86 [c]	NA	NA
carbon tetrachloride	56-23-5	3.65540 [c]	1.0509 [c]	6.39690 [c]	1 [d]	28.6 [c]	NA	NA
chlorobenzene	108-90-7	3.65540 [c]	1.0509 [c]	6.39690 [c]	1 [d]	28.6 [c]	NA	NA
chloroform	67-66-3	0.00122 [c]	0.0035 [c]	0.00214 [c]	1 [d]	6.92 [c]	NA	NA
chloromethane	74-87-3	0.00017 [c]	0.0005 [c]	0.00030 [c]	1 [d]	3.16 [c]	NA	NA
dibromochloromethane	124-48-1	1.72533 [c]	4.9603 [c]	3.01930 [c]	1 [d]	10.4 [c]	NA	NA
dimethyl phthalate	131-11-3	0.00059 [c]	1.6982 [c]	1.03370 [c]	1 [d]	3.17 [c]	NA	NA
di-n-butyl phthalate	84-74-2	1.53170 [c]	4.4037 [c]	0.02681 [c]	1 [d]	830 [c]	1800	NA
ethane	74-84-0	0.00090 [e]	0.0026 [e]	0.00158 [e]	1 [d]	4.94 [e]	NA	NA
ethylbenzene	100-41-4	0.00511 [c]	0.0147 [c]	0.00895 [c]	1 [d]	48.6 [c]	NA	NA
HD	505-60-2	0.00222 [e]	0.0064 [e]	0.00389 [e]	1 [d]	14.31 [e]	NA	NA
hexane	110-54-3	0.01020 [e]	0.0294 [e]	0.01790 [e]	1 [d]	200.91 [e]	NA	NA
methane	74-82-8	0.00001 [e]	0.0000 [e]	0.00002 [e]	1 [d]	1.38 [e]	NA	NA
methylene chloride	75-09-2	0.00037 [c]	0.0011 [c]	0.00065 [c]	1 [d]	2 [c]	NA	NA
propene	115-07-1	0.00085 [e]	0.0024 [e]	0.00148 [e]	1 [d]	4.6 [e]	NA	NA
styrene	100-42-5	4.59290 [c]	1.3205 [c]	8.03760 [c]	1 [d]	40.7 [c]	NA	NA
tetrachloroethene	127-18-4	0.00686 [c]	0.0197 [c]	0.01200 [c]	1 [d]	82.8 [c]	NA	NA
toluene	108-88-3	0.00324 [c]	0.0093 [c]	0.00567 [c]	1 [d]	23.9 [c]	NA	NA
trichloroethene	79-01-6	0.00219 [c]	0.0063 [c]	0.00384 [c]	1 [d]	14.1 [c]	NA	NA
vinyl chloride	75-01-4	0.00044 [c]	0.0013 [c]	0.00078 [c]	1 [d]	2.39 [c]	NA	NA
xylenes	1330-20-7	0.00544 [e]	0.0156 [e]	0.00952 [e]	1 [d]	54.1 [e]	NA	NA
3,3',4,4'-TCB (PCB 77)	32598-13-3	0.01304 [c,d]	0.0375 [c,d]	0.02282 [c,d]	1 [d]	84100 [c,d]	NA	2
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	0.01304 [c,d]	0.0375 [c,d]	0.02282 [c,d]	1 [d]	84100 [c,d]	NA	2
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	0.01304 [c,d]	0.0375 [c,d]	0.02282 [c,d]	1 [d]	84100 [c,d]	NA	2
total coplanar PCBs	NA				1 [d]			
ammonia	7664-41-7	0.00004 [e]	0.0001 [e]	0.00007 [e]	1 [d]	3.16227766 [e]	NA	NA
aluminum	7429-90-5	0 [d, q]	0 [d, q]	0 [d, q]	1 [d]	3.16227766 [e]	NA	NA
cadmium	7440-43-9	0.00250 [c]	0.0002 [c]	0.10625 [c]	1 [d]	907 [c]	NA	NA
chlorine	7782-50-5	0.00015 [c]	0.0004 [c]	0.00027 [c]	1 [d]	3.16 [c]	NA	NA
chromium (3+)	7440-47-3	0 [d, q]	0 [d, q]	0 [d, q]	1 [d]	3.16 [c]	NA	NA
chromium (6+)	18540-29-9	0 [d, q]	0 [d, q]	0 [d, q]	1 [d]	3.16 [c]	NA	NA
copper	7440-50-8	0 [d, q]	0 [d, q]	0 [d, q]	1 [d]	3.16 [e]	NA	NA
hydrogen chloride	7647-01-0	0.00002 [c]	0.0001 [c]	0.00004 [c]	1 [d]	3.16 [e]	NA	NA
iron	7439-89-6	0 [d, q]	0 [d, q]	0 [d, q]	1 [d]	3.16 [e]	NA	NA
lead	7439-92-1	0 [d, q]	0 [d, q]	0 [d, q]	1 [d]	0.09 [c]	NA	NA
manganese	7439-96-5	0 [d, q]	0 [d, q]	0 [d, q]	1 [d]	3.16 [e]	NA	NA
total mercury	NA				1 [d]			
mercuric chloride	7487-94-7	0.02393 [c]	0.0000 [c]	0.02393 [c]	1 [d]	3.16 [e]	0	NA
methyl mercury	22967-92-6	0.00358 [c]	0.0000 [c]	0.00358 [c]	1 [d]	3.16 [e]	6.80E+06	NA
elemental mercury	7439-97-6	0.00000 [c]	0.0000 [c]	0.00000 [c]	1 [d]	3.16 [e]	NA	NA
nickel	7440-02-0	0 [d, q]	0 [d, q]	0 [d, q]	1 [d]	78 [c]	NA	NA
vanadium	7440-62-2	0 [d, q]	0 [d, q]	0 [d, q]	1 [d]	3.16 [e]	NA	NA
zinc	7440-66-6	0.00875 [c]	0.0001 [c]	0.00875 [c]	1 [d]	2060 [c]	NA	NA

NA No data available

a. Howard, P.H. et al., 1991. Handbook of Environmental Degradation Rates. Lewis Publishers. Chelsea, Michigan.

b. No data available, ksg set to 0 as a conservative assumption.

c. Human Health Risk Assessment Protocol for Hazardous Waste Combustion Facilities, Companion Database. USEPA, 2005.

d. Human Health Risk Assessment Protocol for Hazardous Waste Combustion Facilities. USEPA, 2005.

e. Calculated using guidance from Human Health Risk Assessment Protocol for Hazardous Waste Combustion Facilities, Appendix A-2 USEPA, 2005.

f. PHYSPROP Database. Syracuse Research Corporation.

g. Air Emission Models for Waste and Wastewater. USEPA, 1994.

h. CHEMFATE Database. Syracuse Research Corporation.

i. http://www.inchem.org/documents/icsc/icsc/eics0163.htm

j. CRC Handbook of Chemistry and Physics

k. EPI Software Program. Syracuse Research Corporation.

l. Measured value from RAGS Part E. USEPA, 2004.

m. Estimated value from RAGS Part E. USEPA, 2004.

n. Calculated using guidance provided in RAGS Part E. USEPA, 2004.

o. http://www.atsdr.cdc.gov/toxprofiles/tp11-c4.pdf

p. Baes, C.F. et al. 1984. "Review and Analysis of Parameters and Assessing Transport of Environmentally Released Radionuclides through Agriculture." Oak Ridge National Laboratory. Oak Ridge, Tennessee

q. No data. Value set equal to zero

CHEMICAL-SPECIFIC VALUES

COPC	CAS Number	Dermal		Breast Milk Pathway Data			
		Dermal Permeability Coefficient from Water	Dermal Absorption Fraction	Fraction Stored in Maternal Fat	Biological Half-Life	Red Blood Cells-Blood Plasma Partition Coefficient	Blood Plasma-Breast Milk Partition Coefficient
		(cm/hr)	(dimensionless)	(dimensionless)	(days)	(dimensionless)	(dimensionless)
		K_p	ABS_d	f_f	h	Pc_{RBC}	Pc_{bm}
2-butanone	78-93-3	0.00096 [m]	0.1	0.5 [o]	5 [o]	1 [o]	1 [o]
2-ethyl 1,3-butadiene	3404-63-5	0.058373536 [n]	0.1	0.5 [o]	5 [o]	1 [o]	1 [o]
acetone	67-64-1	0.000520419 [n]	0.1	0.5 [o]	5 [o]	1 [o]	1 [o]
benzene	71-43-2	0.015 [m]	0.1	0.5 [o]	5 [o]	1 [o]	1 [o]
benzyl alcohol	100-51-6	0.002091298 [n]	0.0	0.5 [o]	5 [o]	1 [o]	1 [o]
bis(2-ethylhexyl)-phthalate	117-81-7	0.023925664 [n]	0.2	0.5 [o]	5 [o]	1 [o]	1 [o]
bromodichloromethane	75-27-4	0.0046 [l]	0.0	0.5 [o]	5 [o]	1 [o]	1 [o]
carbon disulfide	75-15-0	0.017 [m]	0.1	0.5 [o]	5 [o]	1 [o]	1 [o]
carbon tetrachloride	56-23-5	0.016 [m]	0.1	0.5 [o]	5 [o]	1 [o]	1 [o]
chlorobenzene	108-90-7	0.028 [m]	0.1	0.5 [o]	5 [o]	1 [o]	1 [o]
chloroform	67-66-3	0.0068 [m]	0.1	0.5 [o]	5 [o]	1 [o]	1 [o]
chloromethane	74-87-3	0.0033 [m]	0.1	0.5 [o]	5 [o]	1 [o]	1 [o]
dibromochloromethane	124-48-1	0.0032 [m]	0.0	0.5 [o]	5 [o]	1 [o]	1 [o]
dimethyl phthalate	131-11-3	0.0014 [m]	0.0	0.5 [o]	5 [o]	1 [o]	1 [o]
di-n-butyl phthalate	84-74-2	0.055365599 [n]	0.4	0.5 [o]	5 [o]	1 [o]	1 [o]
ethane	74-84-0	0.016834932 [n]	0.1	0.5 [o]	5 [o]	1 [o]	1 [o]
ethylbenzene	100-41-4	0.049 [m]	0.1	0.5 [o]	5 [o]	1 [o]	1 [o]
HD	505-60-2	0.0045 [m]	0.1	0.5 [o]	5 [o]	1 [o]	1 [o]
hexane	110-54-3	0.195559987 [n]	0.1	0.5 [o]	5 [o]	1 [o]	1 [o]
methane	74-82-8	0.00675 [o]	0.1	0.5 [o]	5 [o]	1 [o]	1 [o]
methylene chloride	75-09-2	0.0035 [m]	0.1	0.5 [o]	5 [o]	1 [o]	1 [o]
propene	115-07-1	0.013565631 [n]	0.1	0.5 [o]	5 [o]	1 [o]	1 [o]
styrene	100-42-5	0.037 [m]	0.1	0.5 [o]	5 [o]	1 [o]	1 [o]
tetrachloroethene	127-18-4	0.033 [m]	0.1	0.5 [o]	5 [o]	1 [o]	1 [o]
toluene	108-88-3	0.031 [m]	0.1	0.5 [o]	5 [o]	1 [o]	1 [o]
trichloroethene	79-01-6	0.012 [m]	0.1	0.5 [o]	5 [o]	1 [o]	1 [o]
vinyl chloride	75-01-4	0.0056 [m]	0.1	0.5 [o]	5 [o]	1 [o]	1 [o]
xylenes	1330-20-7	0.053 [m]	0.1	0.5 [o]	5 [o]	1 [o]	1 [o]
3,3',4,4'-TCB (PCB 77)	32598-13-3	0.715905996 [n]	0.1	0.9 [o]	1752 [o]	1 [o]	1 [o]
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	0.459130348 [n]	0.1	0.9 [o]	1752 [o]	1 [o]	1 [o]
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	0.459130348 [n]	0.1	0.9 [o]	1752 [o]	1 [o]	1 [o]
total coplanar PCBs	NA	0.715905996	0.1	0.9 [o]	1752 [o]	1 [o]	1 [o]
ammonia	7664-41-7	0.00180551 [n]	0.1	0.5 [o]	5 [o]	1 [o]	1 [o]
aluminum	7429-90-5	0.001847566 [n]	0.0037	0.5 [o]	5 [o]	1 [o]	1 [o]
cadmium	7440-43-9	0.001 [m]	0.0010	0.5 [o]	5 [o]	1 [o]	1 [o]
chlorine	7782-50-5	0.002311554 [n]	0.0075	0.5 [o]	5 [o]	1 [o]	1 [o]
chromium (3+)	7440-47-3	0.002 [m]	0.0055	0.5 [o]	5 [o]	1 [o]	1 [o]
chromium (6+)	18540-29-9	0.002 [m]	0.0055	0.5 [o]	5 [o]	1 [o]	1 [o]
copper	7440-50-8	0.001 [m]	0.0031	0.5 [o]	5 [o]	1 [o]	1 [o]
hydrogen chloride	7647-01-0	0.002249055 [n]	0.0052	0.5 [o]	5 [o]	1 [o]	1 [o]
iron	7439-89-6	0.000239508 [n]	0.0007	0.5 [o]	5 [o]	1 [o]	1 [o]
lead	7439-92-1	0.000332261 [n]	0.0018	0.5 [o]	5 [o]	1 [o]	1 [o]
manganese	7439-96-5	0.001 [m]	0.0029	0.5 [o]	5 [o]	1 [o]	1 [o]
total mercury	NA			0.5 [o]	5 [o]	1 [o]	1 [o]
mercuric chloride	7487-94-7	0.001 [l]	0.0063	0.5 [o]	5 [o]	1 [o]	1 [o]
methyl mercury	22967-92-6	0.000110987 [n]	0.0006	0.5 [o]	5 [o]	1 [o]	1 [o]
elemental mercury	7439-97-6	0.001 [l]	0.0054	0.5 [o]	5 [o]	1 [o]	1 [o]
nickel	7440-02-0	0.002 [l]	0.0059	0.5 [o]	5 [o]	1 [o]	1 [o]
vanadium	7440-62-2	0.001 [m]	0.0027	0.5 [o]	5 [o]	1 [o]	1 [o]
zinc	7440-66-6	0.0006 [l]	0.0019	0.5 [o]	5 [o]	1 [o]	1 [o]

CHEMICAL-SPECIFIC VALUES

COPC	CAS Number	Toxicity Data								
		Early-Life Sensitivity	Cancer Slope Factor				Reference Dose			
			Inhalation		Oral		Inhalation		Oral	
			(mg/kg/day)$^{-1}$	Reference	(mg/kg/day)$^{-1}$	Reference	(mg/kg/day)	Reference	(mg/kg/day)	Reference
2-butanone	78-93-3	n/a	not a known carc.		not a known carc.		1.4	IRIS	0.6	IRIS
2-ethyl 1,3-butadiene	3404-63-5	n/a	no toxicity data available							
acetone	67-64-1	n/a	not a known carc.		not a known carc.		9.00E-01	Reg. 9 PRG	9.00E-01	IRIS
benzene	71-43-2	n/a	2.70E-02	IRIS	5.50E-02	IRIS	8.60E-03	IRIS	4.00E-03	IRIS
benzyl alcohol	100-51-6	n/a	No data	No data	No data	No data	No data	No data	0.1	RSL
bis(2-ethylhexyl)-phthalate	117-81-7	n/a	8.40E-03	RSL	1.40E-02	IRIS	No data	No data	2.00E-02	IRIS
bromodichloromethane	75-27-4	n/a	1.30E-01	RSL	6.20E-02	IRIS	No data	No data	2.00E-02	IRIS
carbon disulfide	75-15-0	n/a	not a known carc.		not a known carc.		2.00E-01	IRIS	1.00E-01	IRIS
carbon tetrachloride	56-23-5	n/a	2.10E-02	IRIS	7.00E-02	IRIS	2.86E-02	IRIS	4.00E-03	IRIS
chlorobenzene	108-90-7	n/a	No data	No data	No data	No data	0.014285714	RSL	0.02	IRIS
chloroform	67-66-3	n/a	8.10E-02	IRIS	3.10E-02	Cal/EPA	1.40E-02	Reg. 9 PRG	1.00E-02	IRIS
chloromethane	74-87-3	n/a	not a known carc.		not a known carc.		2.60E-02	IRIS	2.60E-02	Reg. 9 PRG
dibromochloromethane	124-48-1	n/a	9.40E-02	Cal EPA	8.40E-02	IRIS	No data	No data	2.00E-02	IRIS
dimethyl phthalate	131-11-3	n/a	No data	No data	No data	No data	No data	No data	No data	No data
di-n-butyl phthalate	84-74-2	n/a	No data	No data	No data	No data	No data	No data	1.00E-01	IRIS
ethane	74-84-0	n/a	no toxicity data available							
ethylbenzene	100-41-4	n/a	8.87E-02	Cal/EPA	1.10E-02	Cal/EPA	2.90E-01	IRIS	1.00E-01	IRIS
HD	505-60-2	n/a	1.40E+01	CHPPM	7.70E+00	CHPPM	6.00E-06	CHPPM	7.00E-06	CHPPM
hexane	110-54-3	n/a	not a known carc.		not a known carc.		2.00E-01	IRIS	1.10E+01	Reg. 9 PRG
methane	74-82-8	n/a	no toxicity data available							
methylene chloride	75-09-2	n/a	1.60E-03	IRIS	7.50E-03	IRIS	1.10E-01	Cal/EPA	6.00E-02	IRIS
propene	115-07-1	n/a	not a known carc.		not a known carc.		8.60E-01	Cal/EPA	no data	0.00E+00
styrene	100-42-5	n/a	No data	No data	No data	No data	2.86E-01	IRIS	2.00E-01	IRIS
tetrachloroethene	127-18-4	n/a	2.10E-02	Reg. 9 PRG	5.40E-01	Reg. 9 PRG	1.00E-02	Reg. 9 PRG	1.00E-02	IRIS
toluene	108-88-3	n/a	not a known carc.		not a known carc.		1.40E+00	IRIS	8.00E-02	IRIS
trichloroethene	79-01-6	n/a	4.00E-01	Reg. 9 PRG	4.00E-01	Reg. 9 PRG	1.00E-02	Reg. 9 PRG	3.00E-04	Reg. 9 PRG
vinyl chloride	75-01-4	Yes	1.50E-02	IRIS	7.20E-01	IRIS	2.90E-02	IRIS	3.00E-03	IRIS
xylenes	1330-20-7	n/a	not a known carc.		not a known carc.		2.90E-02	IRIS	2.00E-01	IRIS
3,3',4,4'-TCB (PCB 77)	32598-13-3	n/a	TEQ Basis	TEQ Basis	TEQ Basis	TEQ Basis	1.14E-04	RSL	1.00E-05	RSL
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	n/a	TEQ Basis	TEQ Basis	TEQ Basis	TEQ Basis	3.71E-04	RSL	3.30E-05	RSL
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	n/a	TEQ Basis	TEQ Basis	TEQ Basis	TEQ Basis	3.71E-04	RSL	3.30E-05	RSL
total coplanar PCBs	NA	n/a	1.33E+05	RSL	1.30E+05	RSL	No data	No data	No data	No data
ammonia	7664-41-7	n/a	not a known carc.		not a known carc.		2.86E-02	IRIS	no data	0.00E+00
aluminum	7429-90-5	n/a	No data	No data	No data	No data	1.43E-03	RSL	1.00E+00	ASTDR
cadmium	7440-43-9	n/a	6.30E+00	IRIS	No data	No data	2.86E-06	ASTDR	5.00E-04	IRIS
chlorine	7782-50-5	n/a	No data	No data	No data	No data	4.13E-05	ASTDR	1.00E-01	IRIS
chromium (3+)	7440-47-3	n/a	No data	No data	No data	No data	No data	No data	1.50E+00	IRIS
chromium (6+)	18540-29-9	n/a	4.20E+01	IRIS	5.00E-01	RSL	2.86E-05	IRIS	3.00E-03	IRIS
copper	7440-50-8	n/a	No data	No data	No data	No data	No data	No data	4.00E-02	RSL
hydrogen chloride	7647-01-0	n/a	No data	No data	No data	No data	5.71E-03	IRIS	No data	No data
iron	7439-89-6	n/a	No data	No data	No data	No data	No data	No data	7.00E-01	RSL
lead	7439-92-1	n/a	4.20E-02	Cal EPA	8.50E-03	Cal EPA	No data	No data	No data	No data
manganese	7439-96-5	n/a	No data	No data	No data	No data	1.43E-05	IRIS	1.40E-01	IRIS
total mercury	NA	n/a								
mercuric chloride	7487-94-7	n/a	No data	No data	No data	No data	8.57E-06	RSL	3.00E-04	IRIS
methyl mercury	22967-92-6	n/a	No data	No data	No data	No data	No data	No data	1.00E-04	IRIS
elemental mercury	7439-97-6	n/a	No data	No data	No data	No data	8.57E-06	IRIS	No data	No data
nickel	7440-02-0	n/a	8.40E-01	IRIS	No data	No data	2.57E-05	ASTDR	2.00E-02	IRIS
vanadium	7440-62-2	n/a	No data	No data	No data	No data	2.97E-05	ASTDR	5.00E-03	RSL
zinc	7440-66-6	n/a	No data	No data	No data	No data	No data	No data	3.00E-01	IRIS

a. From the EPA Region 9 Preliminary Remediation Goals (PRG) table, http://www.epa.gov/region09/waste/sfund/prg/files/04prgtable.pdf.

b. From the on-line EPA Integrated Risk Information System (IRIS) Database, http://www.epa.gov/iris.

c. From the US EPA document entitled "Upper-Bound Quantitative Cancer Risk Estimate for Populations Adjacent to Sulfur Mustard Incineration Facilities", 1991.

CHEMICAL-SPECIFIC VALUES

COPC	CAS Number	Chemical Types and Breast Milk Pathway Identifiers							
		Inorganic Compound Identifier (Y/N)	PCDD and PCDF Group Identifier (Y/N)	PCDD and PCDF Compound Identifier (Y/N)	Coplanar PCB Group Identifier (Y/N)	Coplanar PCB Compound Identifier (Y/N)	Non-coplanar PCB Compound Identifier (Y/N)	Evaluate Compound in Breast Milk Pathway for Infant ?	
								Carcinogenic (Y/N)	Noncarcinogenic (Y/N)
2-butanone	78-93-3	N	N	N	N	N	N	N	Y
2-ethyl 1,3-butadiene	3404-63-5	N	N	N	N	N	N	N	N
acetone	67-64-1	N	N	N	N	N	N	N	Y
benzene	71-43-2	N	N	N	N	N	N	Y	Y
benzyl alcohol	100-51-6	N	N	N	N	N	N	N	N
bis(2-ethylhexyl)-phthalate	117-81-7	N	N	N	N	N	N	N	N
bromodichloromethane	75-27-4	N	N	N	N	N	N	N	N
carbon disulfide	75-15-0	N	N	N	N	N	N	N	Y
carbon tetrachloride	56-23-5	N	N	N	N	N	N	N	N
chlorobenzene	108-90-7	N	N	N	N	N	N	N	N
chloroform	67-66-3	N	N	N	N	N	N	Y	Y
chloromethane	74-87-3	N	N	N	N	N	N	N	Y
dibromochloromethane	124-48-1	N	N	N	N	N	N	N	N
dimethyl phthalate	131-11-3	N	N	N	N	N	N	N	N
di-n-butyl phthalate	84-74-2	N	N	N	N	N	N	N	N
ethane	74-84-0	N	N	N	N	N	N	N	N
ethylbenzene	100-41-4	N	N	N	N	N	N	Y	Y
HD	505-60-2	N	N	N	N	N	N	N	N
hexane	110-54-3	N	N	N	N	N	N	N	Y
methane	74-82-8	N	N	N	N	N	N	N	N
methylene chloride	75-09-2	N	N	N	N	N	N	Y	Y
propene	115-07-1	N	N	N	N	N	N	N	N
styrene	100-42-5	N	N	N	N	N	N	N	Y
tetrachloroethene	127-18-4	N	N	N	N	N	N	Y	Y
toluene	108-88-3	N	N	N	N	N	N	N	Y
trichloroethene	79-01-6	N	N	N	N	N	N	Y	Y
vinyl chloride	75-01-4	N	N	N	N	N	N	N	N
xylenes	1330-20-7	N	N	N	N	N	N	N	Y
3,3',4,4'-TCB (PCB 77)	32598-13-3	N	N	N	N	Y	N	Y	Y
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	N	N	N	N	Y	N	Y	Y
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	N	N	N	N	Y	N	Y	Y
total coplanar PCBs	NA	N	N	N	Y	N	N	Y	N
ammonia	7664-41-7	Y	N	N	N	N	N	N	N
aluminum	7429-90-5	Y	N	N	N	N	N	N	Y
cadmium	7440-43-9	Y	N	N	N	N	N	N	Y
chlorine	7782-50-5	Y	N	N	N	N	N	N	Y
chromium (3+)	7440-47-3	Y	N	N	N	N	N	N	Y
chromium (6+)	18540-29-9	Y	N	N	N	N	N	Y	Y
copper	7440-50-8	Y	N	N	N	N	N	N	Y
hydrogen chloride	7647-01-0	Y	N	N	N	N	N	N	N
iron	7439-89-6	Y	N	N	N	N	N	N	Y
lead	7439-92-1	Y	N	N	N	N	N	Y	N
manganese	7439-96-5	Y	N	N	N	N	N	N	Y
total mercury	NA	Y	N	N	N	N	N	N	N
mercuric chloride	7487-94-7	Y	N	N	N	N	N	N	Y
methyl mercury	22967-92-6	Y	N	N	N	N	N	N	Y
elemental mercury	7439-97-6	Y	N	N	N	N	N	N	N
nickel	7440-02-0	Y	N	N	N	N	N	N	Y
vanadium	7440-62-2	Y	N	N	N	N	N	N	Y
zinc	7440-66-6	Y	N	N	N	N	N	N	Y

TOXICITY EQUIVALENCY FACTORS

COPC				
Name	Alternative Name	CAS Number	Chemical Type	Toxicity Equivalency Factor (dimensionless)
3,3',4,4'-tetrachlorobiphenyl	3,3',4,4'-TCB (PCB 77)	32598-13-3	Coplanar PCB	0.0001 [a]
3,4,4',5-tetrachlorobiphenyl	3,4,4,5'-TCB (PCB 81)	70362-50-4	Coplanar PCB	0.0003 [a]
2,3,3',4,4'-pentachlorobiphenyl	2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	Coplanar PCB	0.00003 [a]
2,3,4,4',5-pentachlorobiphenyl	2,3,4,4',5-PeCB (PCB 114)	74472-37-0	Coplanar PCB	0.00003 [a]
2,3',4,4',5-pentachlorobiphenyl	2,3',4,4',5-PeCB (PCB 118)	31508-00-6	Coplanar PCB	0.00003 [a]
2',3,4,4',5-pentachlorobiphenyl	2',3,4,4',5-PeCB (PCB 123)	65510-44-3	Coplanar PCB	0.00003 [a]
3,3',4,4',5-pentachlorobiphenyl	3,3',4,4',5-PeCB (PCB 126)	57465-28-8	Coplanar PCB	0.1 [a]
2,3,3',4,4',5-hexachlorobiphenyl	2,3,3',4,4',5-HxCB (PCB 156)	38380-08-4	Coplanar PCB	0.00003 [a]
2,3,3',4,4',5'-hexachlorobiphenyl	2,3,3',4,4',5'-HxCB (PCB 157)	69782-90-7	Coplanar PCB	0.00003 [a]
2,3',4,4',5,5'-hexachlorobiphenyl	2,3',4,4',5,5'-HxCB (PCB 167)	52663-72-6	Coplanar PCB	0.00003 [a]
3,3',4,4',5,5'-hexachlorobiphenyl	3,3',4,4',5,5'-HxCB (PCB 169)	32774-16-6	Coplanar PCB	0.03 [a]
2,3,3',4,4',5,5'-heptachlorobiphenyl	2,3,3',4,4',5,5'-HpCB (PCB 189)	39635-31-9	Coplanar PCB	0.00003 [a]
2,3,7,8-tetrachlorodibenzo(p)dioxin	2,3,7,8-TCDD	1746-01-6	PCDD	1 [a]
1,2,3,7,8-pentachlorodibenzo(p)dioxin	1,2,3,7,8-PeCDD	40321-76-4	PCDD	1 [a]
1,2,3,4,7,8-hexachlorodibenzo(p)dioxin	1,2,3,4,7,8-HxCDD	39227-28-6	PCDD	0.1 [a]
1,2,3,6,7,8-hexachlorodibenzo(p)dioxin	1,2,3,6,7,8-HxCDD	57653-85-7	PCDD	0.1 [a]
1,2,3,7,8,9-hexachlorodibenzo(p)dioxin	1,2,3,7,8,9-HxCDD	19408-74-3	PCDD	0.1 [a]
1,2,3,4,6,7,8-heptachlorodibenzo(p)dioxin	1,2,3,4,6,7,8-HpCDD	35822-46-9	PCDD	0.01 [a]
1,2,3,4,6,7,8,9-octachlorodibenzo(p)dioxin	1,2,3,4,6,7,8,9-OCDD	3268-87-9	PCDD	0.0003 [a]
2,3,7,8-tetrachlorodibenzofuran	2,3,7,8-TCDF	51207-31-9	PCDF	0.1 [a]
1,2,3,7,8-pentachlorodibenzofuran	1,2,3,7,8-PeCDF	57117-31-4	PCDF	0.03 [a]
2,3,4,7,8-pentachlorodibenzofuran	2,3,4,7,8-PeCDF	57117-31-4	PCDF	0.3 [a]
1,2,3,4,7,8-hexachlorodibenzofuran	1,2,3,4,7,8-HxCDF	70648-26-9	PCDF	0.1 [a]
1,2,3,6,7,8-hexachlorodibenzofuran	1,2,3,6,7,8-HxCDF	57117-44-9	PCDF	0.1 [a]
1,2,3,7,8,9-hexachlorodibenzofuran	1,2,3,7,8,9-HxCDF	72918-21-9	PCDF	0.1 [a]
2,3,4,6,7,8-hexachlorodibenzofuran	2,3,4,6,7,8-HxCDF	60851-34-5	PCDF	0.1 [a]
1,2,3,4,6,7,8-heptachlorodibenzofuran	1,2,3,4,6,7,8-HpCDF	67562-39-4	PCDF	0.01 [a]
1,2,3,4,7,8,9-heptachlorodibenzofuran	1,2,3,4,7,8,9-HpCDF	55673-89-7	PCDF	0.01 [a]
1,2,3,4,6,7,8,9-octachlorodibenzofuran	1,2,3,4,6,7,8,9-OCDF	39001-02-0	PCDF	0.0003 [a]

a. Recommended Toxicity Equivalence Factors (TEFs) for Human Health Risk Assessments of 2,3,7,8-Tetrachlorodinezo-p-dioxin and Dioxin-Like Compounds. EPA/100/R 10/005. USEPA, 2010.

RISK AND HAZARD FROM DIRECT AND INDIRECT COPC EXPOSURE

OVERVIEW OF DIRECT AND INDIRECT CARCINOGENIC RISK AND NONCARCINOGENIC HEALTH HAZARD FOR RESIDENT EXPOSURE SCENARIOS

Resident Exposure Scenarios - Carcinogenic Effects							
		Adult		Child		Infant	
COPC	CAS Number	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)
2-butanone	78-93-3						
2-ethyl 1,3-butadiene	3404-63-5						
acetone	67-64-1						
benzene	71-43-2	6.19E-11	5.36E-12	1.73E-10	3.97E-12	1.95E-11	1.20E-10
benzyl alcohol	100-51-6						
bis(2-ethylhexyl)-phthalate	117-81-7	1.03E-13	1.14E-10	2.89E-13	7.42E-11	3.25E-14	4.96E-11
bromodichloromethane	75-27-4	2.03E-14	4.37E-14	5.68E-14	8.21E-14	6.39E-15	1.78E-14
carbon disulfide	75-15-0						
carbon tetrachloride	56-23-5	8.42E-16	3.93E-16	2.36E-15	2.60E-16	2.65E-16	1.05E-16
chlorobenzene	108-90-7						
chloroform	67-66-3	8.40E-15	1.20E-16	2.35E-14	9.71E-17	2.65E-15	3.05E-15
chloromethane	74-87-3						
dibromochloromethane	124-48-1	1.81E-14	5.33E-13	5.07E-14	9.89E-13	5.70E-15	1.88E-13
dimethyl phthalate	131-11-3						
di-n-butyl phthalate	84-74-2						
ethane	74-84-0						
ethylbenzene	100-41-4	2.76E-15	8.48E-17	7.72E-15	5.46E-17	8.68E-16	3.56E-16
HD	505-60-2	1.36E-10	1.26E-11	3.81E-10	7.82E-12	4.29E-11	2.07E-12
hexane	110-54-3						
methane	74-82-8						
methylene chloride	75-09-2	2.16E-16	2.49E-17	6.06E-16	3.67E-17	6.82E-17	9.68E-16
propene	115-07-1						
styrene	100-42-5						
tetrachloroethene	127-18-4	7.67E-16	7.42E-15	2.15E-15	3.87E-15	2.42E-16	2.10E-14
toluene	108-88-3						
trichloroethene	79-01-6	1.86E-14	1.25E-15	5.20E-14	7.96E-16	5.85E-15	1.78E-14
vinyl chloride	75-01-4	1.04E-13	5.37E-14	2.91E-13	3.30E-14	3.27E-14	8.75E-15
xylenes	1330-20-7						
3,3',4,4'-TCB (PCB 77)	32598-13-3						
2,3',4,4',5-PeCB (PCB 118)	31508-00-6						
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4						
total coplanar PCBs	NA	4.38E-20	5.53E-17	1.23E-19	1.95E-17	1.38E-20	2.20E-11
ammonia	7664-41-7						
aluminum	7429-90-5						
cadmium	7440-43-9	3.20E-12		8.95E-12		1.01E-12	
chlorine	7782-50-5						
chromium (3+)	7440-47-3						
chromium (6+)	18540-29-9	5.88E-11	3.77E-11	1.65E-10	2.12E-11	1.85E-11	1.41E-11
copper	7440-50-8						
hydrogen chloride	7647-01-0						
iron	7439-89-6						
lead	7439-92-1	8.84E-14	7.24E-13	2.47E-13	4.15E-13	2.78E-14	2.44E-13
manganese	7439-96-5						
total mercury	NA						
mercuric chloride	7487-94-7						
methyl mercury	22967-92-6						
elemental mercury	7439-97-6						
nickel	7440-02-0	6.91E-13		1.93E-12		2.18E-13	
vanadium	7440-62-2						
zinc	7440-66-6						
Total Cancer Risk - Pathway (dimensionless)		2.61E-10	1.71E-10	7.31E-10	1.09E-10	8.23E-11	2.08E-10
Overall excess lifetime cancer risk via all routes of exposure (dimensionless)		**4.32E-10**		**8.40E-10**		**2.90E-10**	

OVERVIEW OF DIRECT AND INDIRECT CARCINOGENIC RISK AND NONCARCINOGENIC HEALTH HAZARD FOR RESIDENT EXPOSURE SCENARIOS

Resident Exposure Scenarios - Noncarcinogenic Effects							
		Adult		Child		Infant	
COPC	CAS Number	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)
2-butanone	78-93-3	4.48E-12	1.56E-11	1.25E-11	4.31E-11	7.06E-12	1.67E-10
2-ethyl 1,3-butadiene	3404-63-5						
acetone	67-64-1	1.25E-11	9.79E-12	3.49E-11	2.32E-11	1.96E-11	1.30E-10
benzene	71-43-2	3.74E-06	1.15E-07	1.05E-05	2.53E-07	5.88E-06	3.81E-05
benzyl alcohol	100-51-6		2.78E-07		6.70E-07		7.58E-07
bis(2-ethylhexyl)-phthalate	117-81-7		9.56E-07		3.71E-06		1.24E-05
bromodichloromethane	75-27-4		4.90E-10		9.27E-10		1.00E-09
carbon disulfide	75-15-0	6.87E-11	1.13E-12	1.92E-10	2.65E-12	1.08E-10	6.47E-10
carbon tetrachloride	56-23-5	1.96E-11	5.06E-12	5.50E-11	1.30E-11	3.09E-11	2.62E-11
chlorobenzene	108-90-7	3.46E-11	4.53E-12	9.68E-11	1.24E-11	5.44E-11	3.15E-11
chloroform	67-66-3	1.04E-10	2.01E-12	2.90E-10	4.39E-12	1.63E-10	6.89E-10
chloromethane	74-87-3	5.07E-10	2.95E-12	1.42E-09	6.85E-12	7.98E-10	2.38E-09
dibromochloromethane	124-48-1		4.43E-09		8.27E-09		7.84E-09
dimethyl phthalate	131-11-3						
di-n-butyl phthalate	84-74-2		3.01E-06		1.18E-05		4.08E-05
ethane	74-84-0						
ethylbenzene	100-41-4	1.50E-12	3.19E-13	4.20E-12	6.95E-13	2.36E-12	2.26E-11
HD	505-60-2	2.27E-05	7.53E-07	6.35E-05	2.03E-06	3.57E-05	2.69E-06
hexane	110-54-3	6.11E-12	1.43E-14	1.71E-11	3.47E-14	9.63E-12	6.34E-13
methane	74-82-8						
methylene chloride	75-09-2	1.72E-11	5.60E-13	4.82E-11	1.14E-12	2.71E-11	1.51E-10
propene	115-07-1	3.74E-08		1.05E-07		5.88E-08	
styrene	100-42-5	1.69E-11	5.98E-10	4.72E-11	2.31E-09	2.65E-11	1.07E-08
tetrachloroethene	127-18-4	5.11E-11	4.44E-12	1.43E-10	1.00E-11	8.05E-11	2.72E-10
toluene	108-88-3	3.88E-09	2.51E-09	1.09E-08	5.48E-09	6.12E-09	3.35E-07
trichloroethene	79-01-6	6.50E-11	4.11E-11	1.82E-10	9.29E-11	1.02E-10	1.04E-08
vinyl chloride	75-01-4	3.34E-09	9.49E-11	9.36E-09	2.14E-10	5.27E-09	2.83E-10
xylenes	1330-20-7	6.82E-09	8.64E-11	1.91E-08	1.93E-10	1.07E-08	5.25E-09
3,3',4,4'-TCB (PCB 77)	32598-13-3	1.41E-16	4.69E-13	3.96E-16	1.17E-12	2.23E-16	1.67E-10
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	1.81E-16	5.92E-13	5.08E-16	1.48E-12	2.86E-16	2.11E-10
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	8.70E-17	2.84E-13	2.44E-16	7.10E-13	1.37E-16	1.01E-10
total coplanar PCBs	NA						
ammonia	7664-41-7	8.65E-09		2.42E-08		1.36E-08	
aluminum	7429-90-5	6.57E-07	1.47E-12	1.84E-06	3.64E-12	1.04E-06	4.37E-09
cadmium	7440-43-9	2.48E-06	9.70E-08	6.95E-06	3.26E-07	3.91E-06	9.36E-07
chlorine	7782-50-5	7.18E-05	1.70E-08	2.01E-04	4.56E-08	1.13E-04	2.66E-07
chromium (3+)	7440-47-3		1.17E-10		3.96E-10		1.31E-09
chromium (6+)	18540-29-9	6.85E-07	5.87E-08	1.92E-06	1.98E-07	1.08E-06	6.57E-07
copper	7440-50-8		1.78E-07		5.78E-07		1.93E-06
hydrogen chloride	7647-01-0	3.30E-06		9.24E-06		5.20E-06	
iron	7439-89-6		3.74E-08		1.07E-07		3.31E-07
lead	7439-92-1						
manganese	7439-96-5	2.40E-04	1.68E-07	6.71E-04	5.80E-07	3.78E-04	1.73E-06
total mercury	NA						
mercuric chloride	7487-94-7	5.65E-11	2.03E-11	1.58E-10	6.54E-11	8.90E-11	2.14E-10
methyl mercury	22967-92-6		7.26E-09		1.77E-08		6.03E-08
elemental mercury	7439-97-6	0.00E+00		0.00E+00		0.00E+00	
nickel	7440-02-0	4.48E-07	4.90E-09	1.25E-06	1.62E-08	7.06E-07	5.19E-08
vanadium	7440-62-2	1.24E-06	5.00E-08	3.46E-06	1.66E-07	1.95E-06	4.78E-07
zinc	7440-66-6		3.00E-08		9.91E-08		2.88E-07
Total Hazard Quotient - Pathway (dimensionless)		3.47E-04	5.77E-06	9.71E-04	2.06E-05	5.46E-04	1.02E-04
Total Hazard Index (dimensionless)		**3.53E-04**		**9.92E-04**		**6.48E-04**	

OVERVIEW OF DIRECT AND INDIRECT CARCINOGENIC RISK AND NONCARCINOGENIC HEALTH HAZARD FOR SUBSISTENCE FISHER EXPOSURE SCENARIOS

Subsistence Fisher Exposure Scenarios - Carcinogenic Effects							
		Adult		Child		Infant	
COPC	CAS Number	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)
2-butanone	78-93-3						
2-ethyl 1,3-butadiene	3404-63-5						
acetone	67-64-1						
benzene	71-43-2	6.19E-11	1.15E-11	1.73E-10	6.46E-12	1.95E-11	1.22E-10
benzyl alcohol	100-51-6						
bis(2-ethylhexyl)-phthalate	117-81-7	1.03E-13	1.14E-10	2.89E-13	7.43E-11	3.25E-14	4.97E-11
bromodichloromethane	75-27-4	2.03E-14	4.42E-14	5.68E-14	8.23E-14	6.39E-15	1.78E-14
carbon disulfide	75-15-0						
carbon tetrachloride	56-23-5	8.42E-16	8.81E-16	2.36E-15	4.59E-16	2.65E-16	1.65E-16
chlorobenzene	108-90-7						
chloroform	67-66-3	8.40E-15	2.52E-16	2.35E-14	1.51E-16	2.65E-15	3.09E-15
chloromethane	74-87-3						
dibromochloromethane	124-48-1	1.81E-14	5.34E-13	5.07E-14	9.90E-13	5.70E-15	1.88E-13
dimethyl phthalate	131-11-3						
di-n-butyl phthalate	84-74-2						
ethane	74-84-0						
ethylbenzene	100-41-4	2.76E-15	1.89E-16	7.72E-15	9.72E-17	8.68E-16	3.85E-16
HD	505-60-2	1.36E-10	2.46E-11	3.81E-10	1.27E-11	4.29E-11	3.54E-12
hexane	110-54-3						
methane	74-82-8						
methylene chloride	75-09-2	2.16E-16	3.64E-17	6.06E-16	4.14E-17	6.82E-17	9.71E-16
propene	115-07-1						
styrene	100-42-5						
tetrachloroethene	127-18-4	7.67E-16	1.75E-14	2.15E-15	7.99E-15	2.42E-16	2.38E-14
toluene	108-88-3						
trichloroethene	79-01-6	1.86E-14	2.83E-15	5.20E-14	1.44E-15	5.85E-15	1.82E-14
vinyl chloride	75-01-4	1.04E-13	1.19E-13	2.91E-13	5.98E-14	3.27E-14	1.68E-14
xylenes	1330-20-7						
3,3',4,4'-TCB (PCB 77)	32598-13-3						
2,3',4,4',5-PeCB (PCB 118)	31508-00-6						
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4						
total coplanar PCBs	NA	4.38E-20	1.30E-16	1.23E-19	4.47E-17	1.38E-20	5.23E-11
ammonia	7664-41-7						
aluminum	7429-90-5						
cadmium	7440-43-9	3.20E-12		8.95E-12		1.01E-12	
chlorine	7782-50-5						
chromium (3+)	7440-47-3						
chromium (6+)	18540-29-9	5.88E-11	3.77E-11	1.65E-10	2.12E-11	1.85E-11	1.41E-11
copper	7440-50-8						
hydrogen chloride	7647-01-0						
iron	7439-89-6						
lead	7439-92-1	8.84E-14	7.24E-13	2.47E-13	4.15E-13	2.78E-14	2.44E-13
manganese	7439-96-5						
total mercury	NA						
mercuric chloride	7487-94-7						
methyl mercury	22967-92-6						
elemental mercury	7439-97-6						
nickel	7440-02-0	6.91E-13		1.93E-12		2.18E-13	
vanadium	7440-62-2						
zinc	7440-66-6						
Total Cancer Risk - Pathway (dimensionless)		2.61E-10	1.90E-10	7.31E-10	1.16E-10	8.23E-11	2.42E-10
Overall excess lifetime cancer risk via all routes of exposure (dimensionless)		**4.51E-10**		**8.47E-10**		**3.24E-10**	

OVERVIEW OF DIRECT AND INDIRECT CARCINOGENIC RISK AND NONCARCINOGENIC HEALTH HAZARD FOR SUBSISTENCE FISHER EXPOSURE SCENARIOS

Subsistence Fisher Exposure Scenarios - Noncarcinogenic Effects							
		Adult		Child		Infant	
COPC	CAS Number	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)
2-butanone	78-93-3	4.48E-12	1.56E-11	1.25E-11	4.32E-11	7.06E-12	1.67E-10
2-ethyl 1,3-butadiene	3404-63-5						
acetone	67-64-1	1.25E-11	9.86E-12	3.49E-11	2.34E-11	1.96E-11	1.30E-10
benzene	71-43-2	3.74E-06	1.79E-07	1.05E-05	4.11E-07	5.88E-06	3.87E-05
benzyl alcohol	100-51-6		2.78E-07		6.70E-07		7.58E-07
bis(2-ethylhexyl)-phthalate	117-81-7		9.58E-07		3.72E-06		1.24E-05
bromodichloromethane	75-27-4		4.91E-10		9.30E-10		1.01E-09
carbon disulfide	75-15-0	6.87E-11	2.45E-12	1.92E-10	5.89E-12	1.08E-10	6.58E-10
carbon tetrachloride	56-23-5	1.96E-11	9.13E-12	5.50E-11	2.29E-11	3.09E-11	4.11E-11
chlorobenzene	108-90-7	3.46E-11	5.26E-12	9.68E-11	1.42E-11	5.44E-11	3.42E-11
chloroform	67-66-3	1.04E-10	3.00E-12	2.90E-10	6.81E-12	1.63E-10	6.97E-10
chloromethane	74-87-3	5.07E-10	4.71E-12	1.42E-09	1.11E-11	7.98E-10	2.39E-09
dibromochloromethane	124-48-1		4.43E-09		8.28E-09		7.85E-09
dimethyl phthalate	131-11-3						
di-n-butyl phthalate	84-74-2		3.02E-06		1.18E-05		4.08E-05
ethane	74-84-0						
ethylbenzene	100-41-4	1.50E-12	5.42E-13	4.20E-12	1.24E-12	2.36E-12	2.45E-11
HD	505-60-2	2.27E-05	1.27E-06	6.35E-05	3.30E-06	3.57E-05	4.60E-06
hexane	110-54-3	6.11E-12	3.53E-14	1.71E-11	8.60E-14	9.63E-12	8.08E-13
methane	74-82-8						
methylene chloride	75-09-2	1.72E-11	6.20E-13	4.82E-11	1.29E-12	2.71E-11	1.51E-10
propene	115-07-1	3.74E-08		1.05E-07		5.88E-08	
styrene	100-42-5	1.69E-11	5.99E-10	4.72E-11	2.31E-09	2.65E-11	1.07E-08
tetrachloroethene	127-18-4	5.11E-11	8.82E-12	1.43E-10	2.07E-11	8.05E-11	3.09E-10
toluene	108-88-3	3.88E-09	4.17E-09	1.09E-08	9.55E-09	6.12E-09	3.48E-07
trichloroethene	79-01-6	6.50E-11	7.19E-11	1.82E-10	1.68E-10	1.02E-10	1.06E-08
vinyl chloride	75-01-4	3.34E-09	1.66E-10	9.36E-09	3.87E-10	5.27E-09	5.43E-10
xylenes	1330-20-7	6.82E-09	1.39E-10	1.91E-08	3.22E-10	1.07E-08	5.69E-09
3,3',4,4'-TCB (PCB 77)	32598-13-3	1.41E-16	1.12E-12	3.96E-16	2.76E-12	2.23E-16	3.97E-10
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	1.81E-16	1.41E-12	5.08E-16	3.49E-12	2.86E-16	5.02E-10
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	8.70E-17	6.79E-13	2.44E-16	1.67E-12	1.37E-16	2.41E-10
total coplanar PCBs	NA						
ammonia	7664-41-7	8.65E-09		2.42E-08		1.36E-08	
aluminum	7429-90-5	6.57E-07	3.62E-12	1.84E-06	8.88E-12	1.04E-06	4.39E-09
cadmium	7440-43-9	2.48E-06	1.05E-07	6.95E-06	3.46E-07	3.91E-06	1.00E-06
chlorine	7782-50-5	7.18E-05	1.71E-08	2.01E-04	4.58E-08	1.13E-04	2.67E-07
chromium (3+)	7440-47-3		1.17E-10		3.96E-10		1.31E-09
chromium (6+)	18540-29-9	6.85E-07	5.87E-08	1.92E-06	1.98E-07	1.08E-06	6.57E-07
copper	7440-50-8		1.78E-07		5.78E-07		1.93E-06
hydrogen chloride	7647-01-0	3.30E-06		9.24E-06		5.20E-06	
iron	7439-89-6		3.74E-08		1.07E-07		3.31E-07
lead	7439-92-1						
manganese	7439-96-5	2.40E-04	1.68E-07	6.71E-04	5.80E-07	3.78E-04	1.73E-06
total mercury	NA						
mercuric chloride	7487-94-7	5.65E-11	2.03E-11	1.58E-10	6.54E-11	8.90E-11	2.14E-10
methyl mercury	22967-92-6		1.81E-08		4.43E-08		1.51E-07
elemental mercury	7439-97-6	0.00E+00		0.00E+00		0.00E+00	
nickel	7440-02-0	4.48E-07	4.93E-09	1.25E-06	1.63E-08	7.06E-07	5.22E-08
vanadium	7440-62-2	1.24E-06	5.00E-08	3.46E-06	1.66E-07	1.95E-06	4.78E-07
zinc	7440-66-6		3.55E-08		1.12E-07		3.33E-07
Total Hazard Quotient - Pathway (dimensionless)		3.47E-04	6.39E-06	9.71E-04	2.21E-05	5.46E-04	1.05E-04
Total Hazard Index (dimensionless)		**3.53E-04**		**9.93E-04**		**6.51E-04**	

OVERVIEW OF DIRECT AND INDIRECT CARCINOGENIC RISK AND NONCARCINOGENIC HEALTH HAZARD FOR SUBSISTENCE FARMER EXPOSURE SCENARIOS

Subsistence Farmer Exposure Scenarios - Carcinogenic Effects							
		Adult		Child		Infant	
COPC	CAS Number	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)
2-butanone	78-93-3						
2-ethyl 1,3-butadiene	3404-63-5						
acetone	67-64-1						
benzene	71-43-2	6.19E-11	8.44E-12	1.73E-10	7.35E-12	1.95E-11	1.22E-10
benzyl alcohol	100-51-6						
bis(2-ethylhexyl)-phthalate	117-81-7	1.03E-13	3.81E-10	2.89E-13	1.85E-10	3.25E-14	1.24E-10
bromodichloromethane	75-27-4	2.03E-14	1.09E-13	5.68E-14	2.05E-13	6.39E-15	4.43E-14
carbon disulfide	75-15-0						
carbon tetrachloride	56-23-5	8.42E-16	6.12E-16	2.36E-15	4.49E-16	2.65E-16	2.03E-16
chlorobenzene	108-90-7						
chloroform	67-66-3	8.40E-15	1.96E-16	2.35E-14	1.88E-16	2.65E-15	3.12E-15
chloromethane	74-87-3						
dibromochloromethane	124-48-1	1.81E-14	1.33E-12	5.07E-14	2.47E-12	5.70E-15	4.69E-13
dimethyl phthalate	131-11-3						
di-n-butyl phthalate	84-74-2						
ethane	74-84-0						
ethylbenzene	100-41-4	2.76E-15	1.29E-16	7.72E-15	9.32E-17	8.68E-16	3.84E-16
HD	505-60-2	1.36E-10	2.51E-11	3.81E-10	1.46E-11	4.29E-11	3.72E-12
hexane	110-54-3						
methane	74-82-8						
methylene chloride	75-09-2	2.16E-16	5.27E-17	6.06E-16	8.67E-17	6.82E-17	1.00E-15
propene	115-07-1						
styrene	100-42-5						
tetrachloroethene	127-18-4	7.67E-16	1.06E-14	2.15E-15	5.51E-15	2.42E-16	2.22E-14
toluene	108-88-3						
trichloroethene	79-01-6	1.86E-14	1.88E-15	5.20E-14	1.33E-15	5.85E-15	1.81E-14
vinyl chloride	75-01-4	1.04E-13	7.96E-14	2.91E-13	5.39E-14	3.27E-14	1.38E-14
xylenes	1330-20-7						
3,3',4,4'-TCB (PCB 77)	32598-13-3						
2,3',4,4',5-PeCB (PCB 118)	31508-00-6						
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4						
total coplanar PCBs	NA	4.38E-20	7.91E-17	1.23E-19	2.37E-17	1.38E-20	2.44E-11
ammonia	7664-41-7						
aluminum	7429-90-5						
cadmium	7440-43-9	3.20E-12		8.95E-12		1.01E-12	
chlorine	7782-50-5						
chromium (3+)	7440-47-3						
chromium (6+)	18540-29-9	5.88E-11	1.26E-10	1.65E-10	5.30E-11	1.85E-11	3.42E-11
copper	7440-50-8						
hydrogen chloride	7647-01-0						
iron	7439-89-6						
lead	7439-92-1	8.84E-14	2.41E-12	2.47E-13	1.04E-12	2.78E-14	5.85E-13
manganese	7439-96-5						
total mercury	NA						
mercuric chloride	7487-94-7						
methyl mercury	22967-92-6						
elemental mercury	7439-97-6						
nickel	7440-02-0	6.91E-13		1.93E-12		2.18E-13	
vanadium	7440-62-2						
zinc	7440-66-6						
Total Cancer Risk - Pathway (dimensionless)		2.61E-10	5.44E-10	7.31E-10	2.64E-10	8.23E-11	3.10E-10
Overall excess lifetime cancer risk via all routes of exposure (dimensionless)		**8.05E-10**		**9.95E-10**		**3.92E-10**	

OVERVIEW OF DIRECT AND INDIRECT CARCINOGENIC RISK AND NONCARCINOGENIC HEALTH HAZARD FOR SUBSISTENCE FARMER EXPOSURE SCENARIOS

Subsistence Farmer Exposure Scenarios - Noncarcinogenic Effects							
		Adult		Child		Infant	
COPC	CAS Number	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)
2-butanone	78-93-3	4.48E-12	3.88E-11	1.25E-11	1.07E-10	7.06E-12	3.44E-10
2-ethyl 1,3-butadiene	3404-63-5						
acetone	67-64-1	1.25E-11	2.44E-11	3.49E-11	5.79E-11	1.96E-11	2.37E-10
benzene	71-43-2	3.74E-06	2.19E-07	1.05E-05	4.68E-07	5.88E-06	3.89E-05
benzyl alcohol	100-51-6		6.95E-07		1.67E-06		1.90E-06
bis(2-ethylhexyl)-phthalate	117-81-7		2.39E-06		9.28E-06		3.10E-05
bromodichloromethane	75-27-4		1.22E-09		2.31E-09		2.50E-09
carbon disulfide	75-15-0	6.87E-11	1.45E-12	1.92E-10	3.29E-12	1.08E-10	6.49E-10
carbon tetrachloride	56-23-5	1.96E-11	8.52E-12	5.50E-11	2.25E-11	3.09E-11	5.07E-11
chlorobenzene	108-90-7	3.46E-11	1.06E-11	9.68E-11	2.93E-11	5.44E-11	7.62E-11
chloroform	67-66-3	1.04E-10	4.01E-12	2.90E-10	8.47E-12	1.63E-10	7.03E-10
chloromethane	74-87-3	5.07E-10	5.56E-12	1.42E-09	1.26E-11	7.98E-10	2.39E-09
dibromochloromethane	124-48-1		1.11E-08		2.07E-08		1.96E-08
dimethyl phthalate	131-11-3						
di-n-butyl phthalate	84-74-2		7.53E-06		2.95E-05		1.02E-04
ethane	74-84-0						
ethylbenzene	100-41-4	1.50E-12	5.71E-13	4.20E-12	1.19E-12	2.36E-12	2.44E-11
HD	505-60-2	2.27E-05	1.36E-06	6.35E-05	3.79E-06	3.57E-05	4.83E-06
hexane	110-54-3	6.11E-12	1.44E-14	1.71E-11	3.49E-14	9.63E-12	6.35E-13
methane	74-82-8						
methylene chloride	75-09-2	1.72E-11	1.34E-12	4.82E-11	2.70E-12	2.71E-11	1.56E-10
propene	115-07-1	3.74E-08		1.05E-07		5.88E-08	
styrene	100-42-5	1.69E-11	1.49E-09	4.72E-11	5.77E-09	2.65E-11	2.65E-08
tetrachloroethene	127-18-4	5.11E-11	6.68E-12	1.43E-10	1.43E-11	8.05E-11	2.88E-10
toluene	108-88-3	3.88E-09	4.57E-09	1.09E-08	9.55E-09	6.12E-09	3.49E-07
trichloroethene	79-01-6	6.50E-11	7.13E-11	1.82E-10	1.56E-10	1.02E-10	1.06E-08
vinyl chloride	75-01-4	3.34E-09	1.61E-10	9.36E-09	3.49E-10	5.27E-09	4.49E-10
xylenes	1330-20-7	6.82E-09	1.62E-10	1.91E-08	3.52E-10	1.07E-08	5.80E-09
3,3',4,4'-TCB (PCB 77)	32598-13-3	1.41E-16	5.21E-13	3.96E-16	1.34E-12	2.23E-16	1.86E-10
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	1.81E-16	6.58E-13	5.08E-16	1.69E-12	2.86E-16	2.34E-10
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	8.70E-17	3.16E-13	2.44E-16	8.10E-13	1.37E-16	1.12E-10
total coplanar PCBs	NA						
ammonia	7664-41-7	8.65E-09		2.42E-08		1.36E-08	
aluminum	7429-90-5	6.57E-07	1.48E-12	1.84E-06	3.66E-12	1.04E-06	4.37E-09
cadmium	7440-43-9	2.48E-06	2.34E-07	6.95E-06	7.94E-07	3.91E-06	2.17E-06
chlorine	7782-50-5	7.18E-05	4.23E-08	2.01E-04	1.14E-07	1.13E-04	4.57E-07
chromium (3+)	7440-47-3		2.93E-10		9.90E-10		3.19E-09
chromium (6+)	18540-29-9	6.85E-07	1.47E-07	1.92E-06	4.95E-07	1.08E-06	1.60E-06
copper	7440-50-8		4.46E-07		1.45E-06		4.69E-06
hydrogen chloride	7647-01-0	3.30E-06		9.24E-06		5.20E-06	
iron	7439-89-6		9.35E-08		2.67E-07		8.01E-07
lead	7439-92-1						
manganese	7439-96-5	2.40E-04	4.21E-07	6.71E-04	1.45E-06	3.78E-04	4.14E-06
total mercury	NA						
mercuric chloride	7487-94-7	5.65E-11	5.06E-11	1.58E-10	1.63E-10	8.90E-11	5.21E-10
methyl mercury	22967-92-6		7.27E-09		1.78E-08		6.04E-08
elemental mercury	7439-97-6	0.00E+00		0.00E+00		0.00E+00	
nickel	7440-02-0	4.48E-07	1.22E-08	1.25E-06	4.04E-08	7.06E-07	1.26E-07
vanadium	7440-62-2	1.24E-06	1.25E-07	3.46E-06	4.15E-07	1.95E-06	1.14E-06
zinc	7440-66-6		6.97E-08		2.35E-07		6.47E-07
Total Hazard Quotient - Pathway (dimensionless)		3.47E-04	1.38E-05	9.71E-04	5.00E-05	5.46E-04	1.95E-04
Total Hazard Index (dimensionless)		**3.61E-04**		**1.02E-03**		**7.41E-04**	

OVERVIEW OF DIRECT AND INDIRECT CARCINOGENIC RISK AND NONCARCINOGENIC HEALTH HAZARD FOR THE ADULT WORKER EXPOSURE SCENARIO

Adult Worker Exposure Scenario					
		Carcinogenic Effects		Noncarcinogenic Effects	
COPC	CAS Number	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)
2-butanone	78-93-3			1.07E-12	1.73E-16
2-ethyl 1,3-butadiene	3404-63-5				
acetone	67-64-1			2.97E-12	5.96E-17
benzene	71-43-2	1.47E-11	8.74E-18	8.89E-07	5.26E-13
benzyl alcohol	100-51-6				8.21E-13
bis(2-ethylhexyl)-phthalate	117-81-7	2.45E-14	1.49E-16		7.18E-12
bromodichloromethane	75-27-4	4.83E-15	1.06E-19		1.08E-15
carbon disulfide	75-15-0			1.64E-11	1.08E-18
carbon tetrachloride	56-23-5	2.00E-16	1.03E-22	4.67E-12	4.84E-18
chlorobenzene	108-90-7			8.23E-12	1.17E-17
chloroform	67-66-3	2.00E-15	1.90E-22	2.47E-11	8.12E-18
chloromethane	74-87-3			1.21E-10	7.36E-18
dibromochloromethane	124-48-1	4.31E-15	2.12E-18		1.59E-14
dimethyl phthalate	131-11-3				
di-n-butyl phthalate	84-74-2				1.77E-12
ethane	74-84-0				
ethylbenzene	100-41-4	6.56E-16	1.20E-22	3.57E-13	1.44E-18
HD	505-60-2	3.24E-11	4.78E-17	5.40E-06	1.18E-11
hexane	110-54-3			1.46E-12	2.51E-21
methane	74-82-8				
methylene chloride	75-09-2	5.15E-17	3.12E-23	4.10E-12	9.17E-19
propene	115-07-1			8.89E-09	
styrene	100-42-5			4.01E-12	4.66E-15
tetrachloroethene	127-18-4	1.83E-16	1.34E-21	1.22E-11	3.29E-18
toluene	108-88-3			9.25E-10	1.15E-14
trichloroethene	79-01-6	4.42E-15	2.20E-21	1.55E-11	2.43E-16
vinyl chloride	75-01-4	2.47E-14	1.83E-20	7.96E-10	1.12E-16
xylenes	1330-20-7			1.62E-09	1.80E-15
3,3',4,4'-TCB (PCB 77)	32598-13-3			3.37E-17	5.75E-17
2,3',4,4',5-PeCB (PCB 118)	31508-00-6			4.32E-17	7.26E-17
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4			2.07E-17	3.49E-17
total coplanar PCBs	NA	1.04E-20	5.58E-21		
ammonia	7664-41-7			2.06E-09	
aluminum	7429-90-5			1.56E-07	2.04E-16
cadmium	7440-43-9	7.61E-13		5.91E-07	2.11E-14
chlorine	7782-50-5			1.71E-05	7.56E-14
chromium (3+)	7440-47-3				4.07E-18
chromium (6+)	18540-29-9	1.40E-11	2.47E-19	1.63E-07	2.04E-15
copper	7440-50-8				1.33E-13
hydrogen chloride	7647-01-0			7.85E-07	
iron	7439-89-6				1.43E-15
lead	7439-92-1	2.10E-14	4.58E-19		
manganese	7439-96-5			5.71E-05	2.42E-14
total mercury	NA				
mercuric chloride	7487-94-7			1.35E-11	2.14E-14
methyl mercury	22967-92-6				1.15E-15
elemental mercury	7439-97-6			0.00E+00	
nickel	7440-02-0	1.64E-13		1.07E-07	9.91E-16
vanadium	7440-62-2			2.95E-07	1.06E-13
zinc	7440-66-6				6.33E-15
Total Cancer Risk - Pathway (dimensionless)		6.22E-11	2.09E-16		
Overall excess lifetime cancer risk via all routes of exposure (dimensionless)		**6.22E-11**			
Total Hazard Quotient - Pathway (dimensionless)				8.26E-05	2.25E-11
Total Hazard Index (dimensionless)				**8.26E-05**	

RISK AND HAZARD BY PATHWAY FOR RESIDENT EXPOSURE SCENARIOS

CARCINOGENIC EFFECTS: Adult Resident Exposure Scenario											
COPC	CAS Number	Risk from Inhalation	Risk from Dermal Water Contact	Risk from Dermal Soil Contact	Risk from Incidental Soil Ingestion	Risk from Incidental Surface Water Ingestion	Risk from Ingestion of Produce	Risk from Ingestion of Terrestrial Animal Products	Risk from Ingestion of Fish	Risk from Ingestion of Breast Milk	Total Risk from Individual Chemical
2-butanone	78-93-3									n/a	**0.00E+00**
2-ethyl 1,3-butadiene	3404-63-5									n/a	**0.00E+00**
acetone	67-64-1									n/a	**0.00E+00**
benzene	71-43-2	6.19E-11	1.54E-13	4.21E-18	1.05E-17	2.37E-14	1.10E-12	2.37E-15	4.07E-12	n/a	**6.73E-11**
benzyl alcohol	100-51-6									n/a	**0.00E+00**
bis(2-ethylhexyl)-phthalate	117-81-7	1.03E-13	1.83E-15	8.91E-17	1.23E-16	3.44E-17	6.63E-12	1.07E-10	1.28E-13	n/a	**1.14E-10**
bromodichloromethane	75-27-4	2.03E-14	5.46E-18	2.06E-20	2.28E-19	2.01E-18	2.54E-14	1.80E-14	3.45E-16	n/a	**6.40E-14**
carbon disulfide	75-15-0									n/a	**0.00E+00**
carbon tetrachloride	56-23-5	8.42E-16	4.86E-18	4.39E-23	1.44E-22	5.48E-19	1.66E-17	4.56E-17	3.25E-16	n/a	**1.23E-15**
chlorobenzene	108-90-7									n/a	**0.00E+00**
chloroform	67-66-3	8.40E-15	2.04E-18	9.15E-23	2.29E-22	6.10E-19	2.98E-17	5.18E-20	8.77E-17	n/a	**8.52E-15**
chloromethane	74-87-3									n/a	**0.00E+00**
dibromochloromethane	124-48-1	1.81E-14	9.33E-18	3.41E-19	4.81E-18	3.92E-18	1.45E-13	3.87E-13	8.46E-16	n/a	**5.51E-13**
dimethyl phthalate	131-11-3									n/a	**0.00E+00**
di-n-butyl phthalate	84-74-2									n/a	**0.00E+00**
ethane	74-84-0									n/a	**0.00E+00**
ethylbenzene	100-41-4	2.76E-15	1.48E-18	5.76E-23	1.44E-22	6.91E-20	1.35E-17	5.34E-20	6.97E-17	n/a	**2.84E-15**
HD	505-60-2	1.36E-10	6.98E-14	2.30E-17	5.77E-17	2.69E-14	4.41E-12	1.20E-13	8.00E-12	n/a	**1.49E-10**
hexane	110-54-3									n/a	**0.00E+00**
methane	74-82-8									n/a	**0.00E+00**
methylene chloride	75-09-2	2.16E-16	2.92E-19	1.50E-23	3.76E-23	1.85E-19	1.67E-17	5.66E-21	7.69E-18	n/a	**2.41E-16**
propene	115-07-1									n/a	**0.00E+00**
styrene	100-42-5									n/a	**0.00E+00**
tetrachloroethene	127-18-4	7.67E-16	7.54E-17	6.46E-22	1.62E-21	3.93E-18	5.91E-16	2.12E-18	6.75E-15	n/a	**8.19E-15**
toluene	108-88-3									n/a	**0.00E+00**
trichloroethene	79-01-6	1.86E-14	2.19E-17	1.06E-21	2.66E-21	3.60E-18	1.74E-16	6.24E-19	1.05E-15	n/a	**1.98E-14**
vinyl chloride	75-01-4	1.04E-13	2.12E-15	8.83E-21	2.21E-20	8.82E-16	6.86E-15	3.51E-18	4.38E-14	n/a	**1.58E-13**
xylenes	1330-20-7									n/a	**0.00E+00**
3,3',4,4'-TCB (PCB 77)	32598-13-3									n/a	
2,3',4,4',5-PeCB (PCB 118)	31508-00-6									n/a	
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4									n/a	
total coplanar PCBs	NA	4.38E-20	8.00E-21	3.50E-21	6.27E-21	1.99E-23	1.94E-18	3.36E-18	5.00E-17	n/a	**5.54E-17**
ammonia	7664-41-7									n/a	**0.00E+00**
aluminum	7429-90-5									n/a	**0.00E+00**
cadmium	7440-43-9	3.20E-12								n/a	**3.20E-12**
chlorine	7782-50-5									n/a	**0.00E+00**
chromium (3+)	7440-47-3									n/a	**0.00E+00**
chromium (6+)	18540-29-9	5.88E-11	5.79E-17	1.43E-20	6.44E-19	7.72E-17	2.69E-11	1.08E-11	5.06E-15	n/a	**9.65E-11**
copper	7440-50-8									n/a	**0.00E+00**
hydrogen chloride	7647-01-0									n/a	**0.00E+00**
iron	7439-89-6									n/a	**0.00E+00**
lead	7439-92-1	8.84E-14	2.73E-19	9.19E-21	1.25E-18	2.21E-18	6.87E-13	3.62E-14	4.09E-18	n/a	**8.12E-13**
manganese	7439-96-5									n/a	**0.00E+00**
total mercury	NA									n/a	**0.00E+00**
mercuric chloride	7487-94-7									n/a	**0.00E+00**
methyl mercury	22967-92-6									n/a	**0.00E+00**
elemental mercury	7439-97-6									n/a	**0.00E+00**
nickel	7440-02-0	6.91E-13								n/a	**6.91E-13**
vanadium	7440-62-2									n/a	**0.00E+00**
zinc	7440-66-6									n/a	**0.00E+00**
Total Pathway Risk	**All Chemicals**	**2.61E-10**	**2.28E-13**	**1.17E-16**	**1.98E-16**	**5.17E-14**	**3.99E-11**	**1.19E-10**	**1.23E-11**	**0.00E+00**	**4.32E-10**

RISK AND HAZARD BY PATHWAY FOR RESIDENT EXPOSURE SCENARIOS

NONCARCINOGENIC EFFECTS: Adult Resident Exposure Scenario											
COPC	CAS Number	Hazard from Inhalation	Hazard from Dermal Water Contact	Hazard from Dermal Soil Contact	Hazard from Incidental Soil Ingestion	Hazard from Incidental Surface Water Ingestion	Hazard from Ingestion of Produce	Hazard from Ingestion of Terrestrial Animal Products	Hazard from Ingestion of Fish	Hazard from Ingestion of Breast Milk	Total Hazard from Individual Chemical
2-butanone	78-93-3	4.48E-12	2.39E-16	8.78E-17	2.20E-16	5.63E-16	1.55E-11	4.65E-15	3.70E-14	n/a	**2.00E-11**
2-ethyl 1,3-butadiene	3404-63-5									n/a	**0.00E+00**
acetone	67-64-1	1.25E-11	1.65E-16	3.03E-17	7.60E-17	7.35E-16	9.74E-12	4.37E-16	4.82E-14	n/a	**2.23E-11**
benzene	71-43-2	3.74E-06	1.64E-09	2.68E-13	6.71E-13	2.52E-10	6.93E-08	1.34E-10	4.32E-08	n/a	**3.85E-06**
benzyl alcohol	100-51-6		1.33E-12	7.78E-14	2.33E-12	1.32E-12	2.78E-07	2.80E-10	8.64E-12	n/a	**2.78E-07**
bis(2-ethylhexyl)-phthalate	117-81-7		1.64E-11	4.46E-12	6.14E-12	3.09E-13	5.65E-08	8.98E-07	1.15E-09	n/a	**9.56E-07**
bromodichloromethane	75-27-4		1.23E-14	2.33E-16	2.57E-15	4.53E-15	2.86E-10	2.03E-10	7.76E-13	n/a	**4.90E-10**
carbon disulfide	75-15-0	6.87E-11	3.15E-14	5.49E-19	1.38E-18	4.31E-15	2.12E-13	2.87E-16	8.83E-13	n/a	**6.98E-11**
carbon tetrachloride	56-23-5	1.96E-11	4.05E-14	2.19E-18	7.21E-18	4.57E-15	8.12E-13	1.50E-12	2.71E-12	n/a	**2.47E-11**
chlorobenzene	108-90-7	3.46E-11	1.05E-14	6.29E-18	1.38E-17	8.14E-16	1.25E-12	2.79E-12	4.83E-13	n/a	**3.91E-11**
chloroform	67-66-3	1.04E-10	1.54E-14	4.13E-18	1.04E-17	4.60E-15	1.33E-12	2.03E-15	6.61E-13	n/a	**1.06E-10**
chloromethane	74-87-3	5.07E-10	2.49E-14	3.75E-18	9.39E-18	1.79E-14	1.74E-12	7.71E-16	1.17E-12	n/a	**5.10E-10**
dibromochloromethane	124-48-1		2.15E-14	2.84E-15	4.01E-14	9.02E-15	1.20E-09	3.22E-09	1.95E-12	n/a	**4.43E-09**
dimethyl phthalate	131-11-3									n/a	**0.00E+00**
di-n-butyl phthalate	84-74-2		5.66E-12	1.26E-12	8.91E-13	8.76E-14	5.63E-10	3.01E-06	3.27E-09	n/a	**3.01E-06**
ethane	74-84-0									n/a	**0.00E+00**
ethylbenzene	100-41-4	1.50E-12	3.15E-15	7.34E-19	1.84E-18	1.47E-16	1.68E-13	4.05E-16	1.48E-13	n/a	**1.82E-12**
HD	505-60-2	2.27E-05	3.02E-09	5.98E-12	1.50E-11	1.17E-09	3.95E-07	7.71E-09	3.46E-07	n/a	**2.34E-05**
hexane	110-54-3	6.11E-12	2.28E-16	1.28E-21	3.21E-21	3.36E-18	6.20E-17	5.57E-19	1.40E-14	n/a	**6.13E-12**
methane	74-82-8									n/a	**0.00E+00**
methylene chloride	75-09-2	1.72E-11	1.52E-15	4.67E-19	1.17E-18	9.61E-16	5.18E-13	1.70E-16	3.99E-14	n/a	**1.78E-11**
propene	115-07-1	3.74E-08								n/a	**3.74E-08**
styrene	100-42-5	1.69E-11	1.36E-14	2.71E-15	4.68E-15	8.29E-16	1.98E-11	5.77E-10	7.00E-13	n/a	**6.14E-10**
tetrachloroethene	127-18-4	5.11E-11	3.26E-14	1.68E-18	4.20E-18	1.70E-15	1.49E-12	1.53E-15	2.92E-12	n/a	**5.56E-11**
toluene	108-88-3	3.88E-09	3.00E-11	5.83E-15	1.46E-14	2.24E-12	1.37E-09	3.21E-12	1.11E-09	n/a	**6.39E-09**
trichloroethene	79-01-6	6.50E-11	4.26E-13	1.24E-16	3.10E-16	7.00E-14	2.01E-11	6.45E-14	2.05E-11	n/a	**1.06E-10**
vinyl chloride	75-01-4	3.34E-09	2.29E-12	5.72E-17	1.43E-16	9.53E-13	4.43E-11	2.20E-14	4.73E-11	n/a	**3.44E-09**
xylenes	1330-20-7	6.82E-09	7.23E-13	9.14E-16	2.29E-15	3.14E-14	5.00E-11	4.49E-13	3.52E-11	n/a	**6.90E-09**
3,3',4,4'-TCB (PCB 77)	32598-13-3	1.41E-16	5.56E-17	3.30E-17	5.91E-17	1.73E-19	1.31E-14	2.17E-14	4.34E-13	n/a	**4.69E-13**
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	1.81E-16	5.62E-17	4.17E-17	7.47E-17	2.18E-19	1.66E-14	2.75E-14	5.48E-13	n/a	**5.92E-13**
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	8.70E-17	2.70E-17	2.00E-17	3.58E-17	1.05E-19	7.95E-15	1.32E-14	2.63E-13	n/a	**2.84E-13**
total coplanar PCBs	NA									n/a	
ammonia	7664-41-7	8.65E-09								n/a	**8.65E-09**
aluminum	7429-90-5	6.57E-07	1.51E-14	9.09E-18	6.17E-16	2.18E-14	3.99E-15	4.83E-16	1.43E-12	n/a	**6.57E-07**
cadmium	7440-43-9	2.48E-06	1.10E-13	2.66E-16	6.66E-14	2.94E-13	9.11E-08	3.74E-10	5.53E-09	n/a	**2.58E-06**
chlorine	7782-50-5	7.18E-05	8.54E-13	6.49E-15	2.17E-13	9.84E-13	1.69E-08	1.58E-11	6.46E-11	n/a	**7.18E-05**
chromium (3+)	7440-47-3		1.80E-16	2.66E-19	1.20E-17	2.40E-16	8.37E-11	3.37E-11	1.58E-14	n/a	**1.17E-10**
chromium (6+)	18540-29-9	6.85E-07	9.02E-14	1.33E-16	6.01E-15	1.20E-13	4.18E-08	1.69E-08	7.88E-12	n/a	**7.44E-07**
copper	7440-50-8		1.27E-13	4.96E-15	4.06E-13	3.40E-13	1.18E-07	5.99E-08	2.22E-11	n/a	**1.78E-07**
hydrogen chloride	7647-01-0	3.30E-06								n/a	**3.30E-06**
iron	7439-89-6		6.22E-15	1.24E-17	4.53E-15	6.92E-14	2.47E-08	1.27E-08	4.54E-12	n/a	**3.74E-08**
lead	7439-92-1									n/a	**0.00E+00**
manganese	7439-96-5	2.40E-04	1.65E-13	8.44E-16	7.42E-14	4.39E-13	1.57E-07	1.15E-08	2.88E-11	n/a	**2.40E-04**
total mercury	NA									n/a	**0.00E+00**
mercuric chloride	7487-94-7	5.65E-11	3.64E-17	1.58E-15	6.24E-14	0.00E+00	1.54E-11	4.82E-12	0.00E+00	n/a	**7.68E-11**
methyl mercury	22967-92-6		2.14E-18	9.13E-18	3.65E-15	0.00E+00	7.80E-12	5.52E-13	7.25E-09	n/a	**7.26E-09**
elemental mercury	7439-97-6	0.00E+00								n/a	**0.00E+00**
nickel	7440-02-0	4.48E-07	8.94E-15	6.85E-17	2.91E-15	1.19E-14	3.69E-09	1.19E-09	1.93E-11	n/a	**4.53E-07**
vanadium	7440-62-2	1.24E-06	4.81E-14	3.57E-15	3.26E-13	1.29E-13	4.71E-08	2.94E-09	8.42E-12	n/a	**1.29E-06**
zinc	7440-66-6		1.90E-14	1.47E-16	1.97E-14	8.46E-14	2.62E-08	2.12E-10	3.62E-09	n/a	**3.00E-08**
Total Pathway Hazard	**All Chemicals**	**3.47E-04**	**4.72E-09**	**1.21E-11**	**2.63E-11**	**1.43E-09**	**1.33E-06**	**4.03E-06**	**4.12E-07**	**0.00E+00**	**3.53E-04**

RISK AND HAZARD BY PATHWAY FOR RESIDENT EXPOSURE SCENARIOS

CARCINOGENIC EFFECTS: Child Resident Exposure Scenario											
COPC	CAS Number	Risk from Inhalation	Risk from Dermal Water Contact	Risk from Dermal Soil Contact	Risk from Incidental Soil Ingestion	Risk from Incidental Surface Water Ingestion	Risk from Ingestion of Produce	Risk from Ingestion of Terrestrial Animal Products	Risk from Ingestion of Fish	Risk from Ingestion of Breast Milk	Total Risk from Individual Chemical
2-butanone	78-93-3									n/a	**0.00E+00**
2-ethyl 1,3-butadiene	3404-63-5									n/a	**0.00E+00**
acetone	67-64-1									n/a	**0.00E+00**
benzene	71-43-2	1.73E-10	4.40E-14	2.76E-17	9.84E-17	1.85E-14	2.24E-12	6.50E-15	1.66E-12	n/a	**1.77E-10**
benzyl alcohol	100-51-6									n/a	**0.00E+00**
bis(2-ethylhexyl)-phthalate	117-81-7	2.89E-13	5.61E-16	5.73E-16	1.13E-15	2.88E-17	3.86E-12	7.03E-11	5.61E-14	n/a	**7.45E-11**
bromodichloromethane	75-27-4	5.68E-14	1.86E-18	1.35E-19	2.13E-18	1.87E-18	5.18E-14	3.01E-14	1.68E-16	n/a	**1.39E-13**
carbon disulfide	75-15-0									n/a	**0.00E+00**
carbon tetrachloride	56-23-5	2.36E-15	1.39E-18	2.87E-22	1.34E-21	4.26E-19	3.17E-17	9.42E-17	1.32E-16	n/a	**2.62E-15**
chlorobenzene	108-90-7									n/a	**0.00E+00**
chloroform	67-66-3	2.35E-14	5.82E-19	6.00E-22	2.14E-21	4.75E-19	6.02E-17	1.39E-19	3.57E-17	n/a	**2.36E-14**
chloromethane	74-87-3									n/a	**0.00E+00**
dibromochloromethane	124-48-1	5.07E-14	4.40E-18	2.22E-18	4.47E-17	5.04E-18	3.42E-13	6.46E-13	5.70E-16	n/a	**1.04E-12**
dimethyl phthalate	131-11-3									n/a	**0.00E+00**
di-n-butyl phthalate	84-74-2									n/a	**0.00E+00**
ethane	74-84-0									n/a	**0.00E+00**
ethylbenzene	100-41-4	7.72E-15	4.23E-19	3.77E-22	1.35E-21	5.38E-20	2.56E-17	9.81E-20	2.84E-17	n/a	**7.77E-15**
HD	505-60-2	3.81E-10	1.99E-14	1.51E-16	5.39E-16	2.09E-14	4.43E-12	9.18E-14	3.26E-12	n/a	**3.89E-10**
hexane	110-54-3									n/a	**0.00E+00**
methane	74-82-8									n/a	**0.00E+00**
methylene chloride	75-09-2	6.06E-16	8.33E-20	9.83E-23	3.51E-22	1.44E-19	3.33E-17	1.69E-20	3.13E-18	n/a	**6.43E-16**
propene	115-07-1									n/a	**0.00E+00**
styrene	100-42-5									n/a	**0.00E+00**
tetrachloroethene	127-18-4	2.15E-15	2.15E-17	4.23E-21	1.51E-20	3.06E-18	1.09E-15	1.82E-18	2.75E-15	n/a	**6.02E-15**
toluene	108-88-3									n/a	**0.00E+00**
trichloroethene	79-01-6	5.20E-14	6.25E-18	6.95E-21	2.48E-20	2.80E-18	3.57E-16	1.71E-18	4.29E-16	n/a	**5.28E-14**
vinyl chloride	75-01-4	2.91E-13	6.05E-16	5.78E-20	2.07E-19	6.86E-16	1.39E-14	1.05E-17	1.78E-14	n/a	**3.24E-13**
xylenes	1330-20-7									n/a	**0.00E+00**
3,3',4,4'-TCB (PCB 77)	32598-13-3									n/a	
2,3',4,4',5-PeCB (PCB 118)	31508-00-6									n/a	
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4									n/a	
total coplanar PCBs	NA	1.23E-19	1.88E-21	2.94E-21	7.49E-21	1.28E-23	1.05E-18	1.71E-18	1.68E-17	n/a	**1.97E-17**
ammonia	7664-41-7									n/a	**0.00E+00**
aluminum	7429-90-5									n/a	**0.00E+00**
cadmium	7440-43-9	8.95E-12								n/a	**8.95E-12**
chlorine	7782-50-5									n/a	**0.00E+00**
chromium (3+)	7440-47-3									n/a	**0.00E+00**
chromium (6+)	18540-29-9	1.65E-10	1.65E-17	9.34E-20	6.01E-18	6.00E-17	1.53E-11	5.88E-12	2.06E-15	n/a	**1.86E-10**
copper	7440-50-8									n/a	**0.00E+00**
hydrogen chloride	7647-01-0									n/a	**0.00E+00**
iron	7439-89-6									n/a	**0.00E+00**
lead	7439-92-1	2.47E-13	7.84E-20	6.01E-20	1.17E-17	1.73E-18	3.92E-13	2.25E-14	1.68E-18	n/a	**6.62E-13**
manganese	7439-96-5									n/a	**0.00E+00**
total mercury	NA									n/a	**0.00E+00**
mercuric chloride	7487-94-7									n/a	**0.00E+00**
methyl mercury	22967-92-6									n/a	**0.00E+00**
elemental mercury	7439-97-6									n/a	**0.00E+00**
nickel	7440-02-0	1.93E-12								n/a	**1.93E-12**
vanadium	7440-62-2									n/a	**0.00E+00**
zinc	7440-66-6									n/a	**0.00E+00**
Total Pathway Risk	**All Chemicals**	**7.31E-10**	**6.52E-14**	**7.54E-16**	**1.83E-15**	**4.02E-14**	**2.67E-11**	**7.70E-11**	**5.00E-12**	**0.00E+00**	**8.40E-10**

RISK AND HAZARD BY PATHWAY FOR RESIDENT EXPOSURE SCENARIOS

NONCARCINOGENIC EFFECTS: Child Resident Exposure Scenario											
COPC	CAS Number	Hazard from Inhalation	Hazard from Dermal Water Contact	Hazard from Dermal Soil Contact	Hazard from Incidental Soil Ingestion	Hazard from Incidental Surface Water Ingestion	Hazard from Ingestion of Produce	Hazard from Ingestion of Terrestrial Animal Products	Hazard from Ingestion of Fish	Hazard from Ingestion of Breast Milk	Total Hazard from Individual Chemical
2-butanone	78-93-3	1.25E-11	4.08E-16	5.75E-16	2.05E-15	2.63E-15	4.29E-11	1.44E-14	9.03E-14	n/a	**5.56E-11**
2-ethyl 1,3-butadiene	3404-63-5									n/a	**0.00E+00**
acetone	67-64-1	3.49E-11	2.82E-16	1.99E-16	7.09E-16	3.43E-15	2.31E-11	1.35E-15	1.18E-13	n/a	**5.81E-11**
benzene	71-43-2	1.05E-05	2.80E-09	1.75E-12	6.26E-12	1.18E-09	1.43E-07	4.14E-10	1.06E-07	n/a	**1.07E-05**
benzyl alcohol	100-51-6		2.27E-12	5.10E-13	2.18E-11	6.18E-12	6.69E-07	8.69E-10	2.11E-11	n/a	**6.70E-07**
bis(2-ethylhexyl)-phthalate	117-81-7		2.81E-11	2.92E-11	5.73E-11	1.44E-12	1.93E-07	3.52E-06	2.81E-09	n/a	**3.71E-06**
bromodichloromethane	75-27-4		2.10E-14	1.52E-15	2.40E-14	2.11E-14	5.85E-10	3.40E-10	1.90E-12	n/a	**9.27E-10**
carbon disulfide	75-15-0	1.92E-10	5.39E-14	3.59E-18	1.28E-17	2.01E-14	4.22E-13	8.89E-16	2.16E-12	n/a	**1.95E-10**
carbon tetrachloride	56-23-5	5.50E-11	6.93E-14	1.44E-17	6.72E-17	2.13E-14	1.59E-12	4.71E-12	6.62E-12	n/a	**6.80E-11**
chlorobenzene	108-90-7	9.68E-11	1.80E-14	4.12E-17	1.29E-16	3.80E-15	2.46E-12	8.79E-12	1.18E-12	n/a	**1.09E-10**
chloroform	67-66-3	2.90E-10	2.63E-14	2.71E-17	9.67E-17	2.15E-14	2.72E-12	6.27E-15	1.61E-12	n/a	**2.95E-10**
chloromethane	74-87-3	1.42E-09	4.27E-14	2.45E-17	8.77E-17	8.34E-14	3.86E-12	2.39E-15	2.86E-12	n/a	**1.43E-09**
dibromochloromethane	124-48-1		3.67E-14	1.86E-14	3.74E-13	4.21E-14	2.86E-09	5.40E-09	4.76E-12	n/a	**8.27E-09**
dimethyl phthalate	131-11-3									n/a	**0.00E+00**
di-n-butyl phthalate	84-74-2		9.69E-12	8.28E-12	8.32E-12	4.09E-13	1.88E-09	1.18E-05	7.99E-09	n/a	**1.18E-05**
ethane	74-84-0									n/a	**0.00E+00**
ethylbenzene	100-41-4	4.20E-12	5.38E-15	4.80E-18	1.72E-17	6.85E-16	3.26E-13	1.25E-15	3.62E-13	n/a	**4.89E-12**
HD	505-60-2	6.35E-05	5.18E-09	3.92E-11	1.40E-10	5.44E-09	1.15E-06	2.39E-08	8.46E-07	n/a	**6.56E-05**
hexane	110-54-3	1.71E-11	3.90E-16	8.38E-21	2.99E-20	1.57E-17	1.23E-16	1.70E-18	3.42E-14	n/a	**1.72E-11**
methane	74-82-8									n/a	**0.00E+00**
methylene chloride	75-09-2	4.82E-11	2.59E-15	3.06E-18	1.09E-17	4.48E-15	1.04E-12	5.26E-16	9.75E-14	n/a	**4.93E-11**
propene	115-07-1	1.05E-07								n/a	**1.05E-07**
styrene	100-42-5	4.72E-11	2.32E-14	1.77E-14	4.36E-14	3.87E-15	6.21E-11	2.25E-09	1.71E-12	n/a	**2.36E-09**
tetrachloroethene	127-18-4	1.43E-10	5.58E-14	1.10E-17	3.92E-17	7.92E-15	2.84E-12	4.72E-15	7.13E-12	n/a	**1.53E-10**
toluene	108-88-3	1.09E-08	5.13E-11	3.82E-14	1.36E-13	1.04E-11	2.70E-09	9.90E-12	2.71E-09	n/a	**1.64E-08**
trichloroethene	79-01-6	1.82E-10	7.29E-13	8.11E-16	2.90E-15	3.27E-13	4.16E-11	1.99E-13	5.01E-11	n/a	**2.75E-10**
vinyl chloride	75-01-4	9.36E-09	3.92E-12	3.75E-16	1.34E-15	4.45E-12	9.01E-11	6.81E-14	1.16E-10	n/a	**9.58E-09**
xylenes	1330-20-7	1.91E-08	1.24E-12	5.99E-15	2.14E-14	1.46E-13	1.04E-10	1.38E-12	8.60E-11	n/a	**1.93E-08**
3,3',4,4'-TCB (PCB 77)	32598-13-3	3.96E-16	9.52E-17	2.16E-16	5.52E-16	8.07E-19	4.36E-14	6.67E-14	1.06E-12	n/a	**1.17E-12**
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	5.08E-16	9.62E-17	2.73E-16	6.97E-16	1.02E-18	5.51E-14	8.42E-14	1.34E-12	n/a	**1.48E-12**
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	2.44E-16	4.62E-17	1.31E-16	3.34E-16	4.89E-19	2.64E-14	4.04E-14	6.42E-13	n/a	**7.10E-13**
total coplanar PCBs	NA									n/a	
ammonia	7664-41-7	2.42E-08								n/a	**2.42E-08**
aluminum	7429-90-5	1.84E-06	2.59E-14	5.95E-17	5.76E-15	1.02E-13	1.25E-14	1.19E-15	3.49E-12	n/a	**1.84E-06**
cadmium	7440-43-9	6.95E-06	1.89E-13	1.74E-15	6.22E-13	1.37E-12	3.11E-07	8.55E-10	1.35E-08	n/a	**7.28E-06**
chlorine	7782-50-5	2.01E-04	1.46E-12	4.25E-14	2.03E-12	4.59E-12	4.53E-08	4.88E-11	1.58E-10	n/a	**2.01E-04**
chromium (3+)	7440-47-3		3.09E-16	1.74E-18	1.12E-16	1.12E-15	2.86E-10	1.10E-10	3.85E-14	n/a	**3.96E-10**
chromium (6+)	18540-29-9	1.92E-06	1.54E-13	8.72E-16	5.61E-14	5.60E-13	1.43E-07	5.49E-08	1.92E-11	n/a	**2.12E-06**
copper	7440-50-8		2.17E-13	3.25E-14	3.79E-12	1.59E-12	4.05E-07	1.74E-07	5.43E-11	n/a	**5.78E-07**
hydrogen chloride	7647-01-0	9.24E-06								n/a	**9.24E-06**
iron	7439-89-6		1.06E-14	8.15E-17	4.23E-14	3.23E-13	8.43E-08	2.25E-08	1.11E-11	n/a	**1.07E-07**
lead	7439-92-1									n/a	**0.00E+00**
manganese	7439-96-5	6.71E-04	2.82E-13	5.53E-15	6.93E-13	2.05E-12	5.37E-07	4.30E-08	7.04E-11	n/a	**6.72E-04**
total mercury	NA									n/a	**0.00E+00**
mercuric chloride	7487-94-7	1.58E-10	6.23E-17	1.03E-14	5.83E-13	0.00E+00	4.81E-11	1.67E-11	0.00E+00	n/a	**2.24E-10**
methyl mercury	22967-92-6		3.66E-18	5.98E-17	3.41E-14	0.00E+00	2.60E-11	1.92E-12	1.77E-08	n/a	**1.77E-08**
elemental mercury	7439-97-6	0.00E+00								n/a	**0.00E+00**
nickel	7440-02-0	1.25E-06	1.53E-14	4.48E-16	2.72E-14	5.56E-14	1.26E-08	3.54E-09	4.71E-11	n/a	**1.27E-06**
vanadium	7440-62-2	3.46E-06	8.24E-14	2.34E-14	3.04E-12	6.04E-13	1.61E-07	4.98E-09	2.06E-11	n/a	**3.63E-06**
zinc	7440-66-6		3.26E-14	9.61E-16	1.84E-13	3.95E-13	8.96E-08	7.20E-10	8.84E-09	n/a	**9.91E-08**
Total Pathway Hazard	**All Chemicals**	**9.71E-04**	**8.08E-09**	**7.91E-11**	**2.45E-10**	**6.65E-09**	**3.95E-06**	**1.56E-05**	**1.01E-06**	**0.00E+00**	**9.92E-04**

RISK AND HAZARD BY PATHWAY FOR RESIDENT EXPOSURE SCENARIOS

CARCINOGENIC EFFECTS: Infant Resident Exposure Scenario											
COPC	CAS Number	Risk from Inhalation	Risk from Dermal Water Contact	Risk from Dermal Soil Contact	Risk from Incidental Soil Ingestion	Risk from Incidental Surface Water Ingestion	Risk from Ingestion of Produce	Risk from Ingestion of Terrestrial Animal Products	Risk from Ingestion of Fish	Risk from Ingestion of Breast Milk	Total Risk from Individual Chemical
2-butanone	78-93-3		n/a			n/a					**0.00E+00**
2-ethyl 1,3-butadiene	3404-63-5		n/a			n/a					**0.00E+00**
acetone	67-64-1		n/a			n/a					**0.00E+00**
benzene	71-43-2	1.95E-11	n/a	7.75E-18	2.95E-17	n/a	5.44E-13	3.82E-15	4.98E-13	1.19E-10	**1.39E-10**
benzyl alcohol	100-51-6		n/a			n/a					**0.00E+00**
bis(2-ethylhexyl)-phthalate	117-81-7	3.25E-14	n/a	1.61E-16	3.38E-16	n/a	9.79E-13	4.86E-11	1.68E-14		**4.97E-11**
bromodichloromethane	75-27-4	6.39E-15	n/a	3.79E-20	6.38E-19	n/a	1.26E-14	5.11E-15	5.04E-17		**2.41E-14**
carbon disulfide	75-15-0		n/a			n/a					**0.00E+00**
carbon tetrachloride	56-23-5	2.65E-16	n/a	8.08E-23	4.03E-22	n/a	7.89E-18	5.73E-17	3.97E-17		**3.70E-16**
chlorobenzene	108-90-7		n/a			n/a					**0.00E+00**
chloroform	67-66-3	2.65E-15	n/a	1.69E-22	6.42E-22	n/a	1.46E-17	8.16E-20	1.07E-17	3.03E-15	**5.70E-15**
chloromethane	74-87-3		n/a			n/a					**0.00E+00**
dibromochloromethane	124-48-1	5.70E-15	n/a	6.26E-19	1.34E-17	n/a	7.78E-14	1.10E-13	1.71E-16		**1.93E-13**
dimethyl phthalate	131-11-3		n/a			n/a					**0.00E+00**
di-n-butyl phthalate	84-74-2		n/a			n/a					**0.00E+00**
ethane	74-84-0		n/a			n/a					**0.00E+00**
ethylbenzene	100-41-4	8.68E-16	n/a	1.06E-22	4.04E-22	n/a	6.39E-18	5.75E-20	8.53E-18	3.41E-16	**1.22E-15**
HD	505-60-2	4.29E-11	n/a	4.24E-17	1.62E-16	n/a	1.04E-12	5.46E-14	9.77E-13		**4.50E-11**
hexane	110-54-3		n/a			n/a					**0.00E+00**
methane	74-82-8		n/a			n/a					**0.00E+00**
methylene chloride	75-09-2	6.82E-17	n/a	2.76E-23	1.05E-22	n/a	8.18E-18	9.94E-21	9.40E-19	9.59E-16	**1.04E-15**
propene	115-07-1		n/a			n/a					**0.00E+00**
styrene	100-42-5		n/a			n/a					**0.00E+00**
tetrachloroethene	127-18-4	2.42E-16	n/a	1.19E-21	4.53E-21	n/a	2.76E-16	1.08E-18	8.25E-16	1.99E-14	**2.13E-14**
toluene	108-88-3		n/a			n/a					**0.00E+00**
trichloroethene	79-01-6	5.85E-15	n/a	1.96E-21	7.45E-21	n/a	8.63E-17	1.00E-18	1.29E-16	1.76E-14	**2.36E-14**
vinyl chloride	75-01-4	3.27E-14	n/a	1.63E-20	6.20E-20	n/a	3.39E-15	6.18E-18	5.35E-15		**4.15E-14**
xylenes	1330-20-7		n/a			n/a					**0.00E+00**
3,3',4,4'-TCB (PCB 77)	32598-13-3		n/a			n/a					**0.00E+00**
2,3',4,4',5-PeCB (PCB 118)	31508-00-6		n/a			n/a					**0.00E+00**
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4		n/a			n/a					**0.00E+00**
total coplanar PCBs	NA	1.38E-20	n/a	8.26E-22	2.25E-21	n/a	2.62E-19	1.02E-18	5.03E-18	2.20E-11	**2.20E-11**
ammonia	7664-41-7		n/a			n/a					**0.00E+00**
aluminum	7429-90-5		n/a			n/a					**0.00E+00**
cadmium	7440-43-9	1.01E-12	n/a			n/a					**1.01E-12**
chlorine	7782-50-5		n/a			n/a					**0.00E+00**
chromium (3+)	7440-47-3		n/a			n/a					**0.00E+00**
chromium (6+)	18540-29-9	1.85E-11	n/a	2.63E-20	1.80E-18	n/a	3.91E-12	3.67E-12	6.19E-16	6.49E-12	**3.26E-11**
copper	7440-50-8		n/a			n/a					**0.00E+00**
hydrogen chloride	7647-01-0		n/a			n/a					**0.00E+00**
iron	7439-89-6		n/a			n/a					**0.00E+00**
lead	7439-92-1	2.78E-14	n/a	1.69E-20	3.50E-18	n/a	1.00E-13	1.52E-14	5.03E-19	1.29E-13	**2.72E-13**
manganese	7439-96-5		n/a			n/a					**0.00E+00**
total mercury	NA		n/a			n/a					**0.00E+00**
mercuric chloride	7487-94-7		n/a			n/a					**0.00E+00**
methyl mercury	22967-92-6		n/a			n/a					**0.00E+00**
elemental mercury	7439-97-6		n/a			n/a					**0.00E+00**
nickel	7440-02-0	2.18E-13	n/a			n/a					**2.18E-13**
vanadium	7440-62-2		n/a			n/a					**0.00E+00**
zinc	7440-66-6		n/a			n/a					**0.00E+00**
Total Pathway Risk	**All Chemicals**	**8.23E-11**	**0.00E+00**	**2.12E-16**	**5.48E-16**	**0.00E+00**	**6.67E-12**	**5.25E-11**	**1.50E-12**	**1.47E-10**	**2.90E-10**

RISK AND HAZARD BY PATHWAY FOR RESIDENT EXPOSURE SCENARIOS

NONCARCINOGENIC EFFECTS: Infant Resident Exposure Scenario											
COPC	CAS Number	Hazard from Inhalation	Hazard from Dermal Water Contact	Hazard from Dermal Soil Contact	Hazard from Incidental Soil Ingestion	Hazard from Incidental Surface Water Ingestion	Hazard from Ingestion of Produce	Hazard from Ingestion of Terrestrial Animal Products	Hazard from Ingestion of Fish	Hazard from Ingestion of Breast Milk	Total Hazard from Individual Chemical
2-butanone	78-93-3	7.06E-12	n/a	8.09E-16	3.08E-15	n/a	4.58E-11	4.23E-14	1.35E-13	1.21E-10	**1.74E-10**
2-ethyl 1,3-butadiene	3404-63-5		n/a			n/a					**0.00E+00**
acetone	67-64-1	1.96E-11	n/a	2.79E-16	1.06E-15	n/a	2.63E-11	3.98E-15	1.77E-13	1.03E-10	**1.49E-10**
benzene	71-43-2	5.88E-06	n/a	2.47E-12	9.40E-12	n/a	1.73E-07	1.22E-09	1.58E-07	3.78E-05	**4.40E-05**
benzyl alcohol	100-51-6		n/a	7.17E-13	3.26E-11	n/a	7.56E-07	2.56E-09	3.16E-11		**7.58E-07**
bis(2-ethylhexyl)-phthalate	117-81-7		n/a	4.10E-11	8.60E-11	n/a	2.45E-07	1.22E-05	4.21E-09		**1.24E-05**
bromodichloromethane	75-27-4		n/a	2.14E-15	3.60E-14	n/a	7.11E-10	2.88E-10	2.85E-12		**1.00E-09**
carbon disulfide	75-15-0	1.08E-10	n/a	5.06E-18	1.93E-17	n/a	5.20E-13	2.61E-15	3.23E-12	6.43E-10	**7.55E-10**
carbon tetrachloride	56-23-5	3.09E-11	n/a	2.02E-17	1.01E-16	n/a	1.97E-12	1.43E-11	9.94E-12		**5.71E-11**
chlorobenzene	108-90-7	5.44E-11	n/a	5.80E-17	1.93E-16	n/a	3.05E-12	2.67E-11	1.77E-12		**8.60E-11**
chloroform	67-66-3	1.63E-10	n/a	3.81E-17	1.45E-16	n/a	3.31E-12	1.84E-14	2.42E-12	6.83E-10	**8.53E-10**
chloromethane	74-87-3	7.98E-10	n/a	3.45E-17	1.31E-16	n/a	4.52E-12	7.02E-15	4.30E-12	2.37E-09	**3.17E-09**
dibromochloromethane	124-48-1		n/a	2.62E-14	5.61E-13	n/a	3.25E-09	4.58E-09	7.13E-12		**7.84E-09**
dimethyl phthalate	131-11-3		n/a			n/a					**0.00E+00**
di-n-butyl phthalate	84-74-2		n/a	1.16E-11	1.25E-11	n/a	2.08E-09	4.07E-05	1.20E-08		**4.08E-05**
ethane	74-84-0		n/a			n/a					**0.00E+00**
ethylbenzene	100-41-4	2.36E-12	n/a	6.76E-18	2.57E-17	n/a	4.07E-13	3.66E-15	5.43E-13	2.17E-11	**2.50E-11**
HD	505-60-2	3.57E-05	n/a	5.51E-11	2.10E-10	n/a	1.35E-06	7.09E-08	1.27E-06		**3.84E-05**
hexane	110-54-3	9.63E-12	n/a	1.18E-20	4.49E-20	n/a	1.52E-16	4.92E-18	5.13E-14	5.82E-13	**1.03E-11**
methane	74-82-8		n/a			n/a					**0.00E+00**
methylene chloride	75-09-2	2.71E-11	n/a	4.30E-18	1.64E-17	n/a	1.27E-12	1.55E-15	1.46E-13	1.49E-10	**1.78E-10**
propene	115-07-1	5.88E-08	n/a			n/a					**5.88E-08**
styrene	100-42-5	2.65E-11	n/a	2.50E-14	6.55E-14	n/a	6.32E-11	7.72E-09	2.57E-12	2.89E-09	**1.07E-08**
tetrachloroethene	127-18-4	8.05E-11	n/a	1.54E-17	5.88E-17	n/a	3.58E-12	1.39E-14	1.07E-11	2.58E-10	**3.53E-10**
toluene	108-88-3	6.12E-09	n/a	5.37E-14	2.05E-13	n/a	3.34E-09	2.90E-11	4.06E-09	3.27E-07	**3.41E-07**
trichloroethene	79-01-6	1.02E-10	n/a	1.14E-15	4.35E-15	n/a	5.03E-11	5.85E-13	7.51E-11	1.02E-08	**1.05E-08**
vinyl chloride	75-01-4	5.27E-09	n/a	5.27E-16	2.01E-15	n/a	1.10E-10	2.00E-13	1.73E-10		**5.55E-09**
xylenes	1330-20-7	1.07E-08	n/a	8.42E-15	3.21E-14	n/a	1.26E-10	4.04E-12	1.29E-10	4.99E-09	**1.60E-08**
3,3',4,4'-TCB (PCB 77)	32598-13-3	2.23E-16	n/a	3.04E-16	8.28E-16	n/a	5.37E-14	1.98E-13	1.59E-12	1.65E-10	**1.67E-10**
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	2.86E-16	n/a	3.84E-16	1.05E-15	n/a	6.78E-14	2.50E-13	2.01E-12	2.08E-10	**2.11E-10**
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	1.37E-16	n/a	1.84E-16	5.02E-16	n/a	3.26E-14	1.20E-13	9.63E-13	1.00E-10	**1.01E-10**
total coplanar PCBs	NA		n/a			n/a					
ammonia	7664-41-7	1.36E-08	n/a			n/a					**1.36E-08**
aluminum	7429-90-5	1.04E-06	n/a	8.37E-17	8.64E-15	n/a	1.27E-14	2.92E-15	5.24E-12	4.37E-09	**1.04E-06**
cadmium	7440-43-9	3.91E-06	n/a	2.45E-15	9.32E-13	n/a	3.97E-07	1.91E-09	2.03E-08	5.16E-07	**4.85E-06**
chlorine	7782-50-5	1.13E-04	n/a	5.98E-14	3.04E-12	n/a	4.90E-08	1.44E-10	2.37E-10	2.16E-07	**1.13E-04**
chromium (3+)	7440-47-3		n/a	2.45E-18	1.68E-16	n/a	3.65E-10	3.42E-10	5.77E-14	6.06E-10	**1.31E-09**
chromium (6+)	18540-29-9	1.08E-06	n/a	1.23E-15	8.42E-14	n/a	1.83E-07	1.71E-07	2.89E-11	3.03E-07	**1.74E-06**
copper	7440-50-8		n/a	4.57E-14	5.68E-12	n/a	5.16E-07	4.99E-07	8.15E-11	9.13E-07	**1.93E-06**
hydrogen chloride	7647-01-0	5.20E-06	n/a			n/a					**5.20E-06**
iron	7439-89-6		n/a	1.15E-16	6.35E-14	n/a	1.08E-07	3.20E-08	1.67E-11	1.91E-07	**3.31E-07**
lead	7439-92-1		n/a			n/a					**0.00E+00**
manganese	7439-96-5	3.78E-04	n/a	7.78E-15	1.04E-12	n/a	6.85E-07	1.45E-07	1.06E-10	8.96E-07	**3.79E-04**
total mercury	NA		n/a			n/a					**0.00E+00**
mercuric chloride	7487-94-7	8.90E-11	n/a	1.45E-14	8.74E-13	n/a	5.70E-11	5.39E-11	0.00E+00	1.02E-10	**3.03E-10**
methyl mercury	22967-92-6		n/a	8.41E-17	5.11E-14	n/a	3.26E-11	6.25E-12	2.66E-08	3.37E-08	**6.03E-08**
elemental mercury	7439-97-6	0.00E+00	n/a			n/a					**0.00E+00**
nickel	7440-02-0	7.06E-07	n/a	6.30E-16	4.08E-14	n/a	1.61E-08	1.03E-08	7.07E-11	2.54E-08	**7.57E-07**
vanadium	7440-62-2	1.95E-06	n/a	3.29E-14	4.56E-12	n/a	2.05E-07	6.26E-09	3.08E-11	2.66E-07	**2.43E-06**
zinc	7440-66-6		n/a	1.35E-15	2.76E-13	n/a	1.14E-07	2.30E-09	1.33E-08	1.58E-07	**2.88E-07**
Total Pathway Hazard	**All Chemicals**	**5.46E-04**	**0.00E+00**	**1.11E-10**	**3.68E-10**	**0.00E+00**	**4.81E-06**	**5.39E-05**	**1.51E-06**	**4.17E-05**	**6.48E-04**

RISK AND HAZARD BY PATHWAY FOR RESIDENT EXPOSURE SCENARIOS

CARCINOGENIC EFFECTS: Early Life Exposure - Infant											
COPC	CAS Number	Risk from Inhalation	Risk from Dermal Water Contact	Risk from Dermal Soil Contact	Risk from Incidental Soil Ingestion	Risk from Incidental Surface Water Ingestion	Risk from Ingestion of Produce	Risk from Ingestion of Terrestrial Animal Products	Risk from Ingestion of Fish	Risk from Ingestion of Breast Milk	Total Risk from Individual Chemical
vinyl chloride	75-01-4	2.29E-12	n/a	1.14E-18	4.34E-18	n/a	2.37E-13	4.33E-16	3.74E-13	n/a	**2.90E-12**

CARCINOGENIC EFFECTS: Early Life Exposure - Child											
COPC	CAS Number	Risk from Inhalation	Risk from Dermal Water Contact	Risk from Dermal Soil Contact	Risk from Incidental Soil Ingestion	Risk from Incidental Surface Water Ingestion	Risk from Ingestion of Produce	Risk from Ingestion of Terrestrial Animal Products	Risk from Ingestion of Fish	Risk from Ingestion of Breast Milk	Total Risk from Individual Chemical
vinyl chloride	75-01-4	4.07E-12	8.47E-15	8.10E-19	2.89E-18	9.61E-15	1.95E-13	1.47E-16	2.50E-13	n/a	**4.53E-12**

RISK AND HAZARD BY PATHWAY FOR SUBSISTENCE FISHER EXPOSURE SCENARIOS

CARCINOGENIC EFFECTS: Adult Subsistence Fisher Exposure Scenario											
COPC	CAS Number	Risk from Inhalation	Risk from Dermal Water Contact	Risk from Dermal Soil Contact	Risk from Incidental Soil Ingestion	Risk from Incidental Surface Water Ingestion	Risk from Ingestion of Produce	Risk from Ingestion of Terrestrial Animal Products	Risk from Ingestion of Fish	Risk from Ingestion of Breast Milk	Total Risk from Individual Chemical
2-butanone	78-93-3									n/a	**0.00E+00**
2-ethyl 1,3-butadiene	3404-63-5									n/a	**0.00E+00**
acetone	67-64-1									n/a	**0.00E+00**
benzene	71-43-2	6.19E-11	1.54E-13	4.21E-18	1.05E-17	2.37E-14	1.10E-12	2.37E-15	1.02E-11	n/a	**7.34E-11**
benzyl alcohol	100-51-6									n/a	**0.00E+00**
bis(2-ethylhexyl)-phthalate	117-81-7	1.03E-13	1.83E-15	8.91E-17	1.23E-16	3.44E-17	6.63E-12	1.07E-10	3.21E-13	n/a	**1.15E-10**
bromodichloromethane	75-27-4	2.03E-14	5.46E-18	2.06E-20	2.28E-19	2.01E-18	2.54E-14	1.80E-14	8.62E-16	n/a	**6.45E-14**
carbon disulfide	75-15-0									n/a	**0.00E+00**
carbon tetrachloride	56-23-5	8.42E-16	4.86E-18	4.39E-23	1.44E-22	5.48E-19	1.66E-17	4.56E-17	8.13E-16	n/a	**1.72E-15**
chlorobenzene	108-90-7									n/a	**0.00E+00**
chloroform	67-66-3	8.40E-15	2.04E-18	9.15E-23	2.29E-22	6.10E-19	2.98E-17	5.18E-20	2.19E-16	n/a	**8.65E-15**
chloromethane	74-87-3									n/a	**0.00E+00**
dibromochloromethane	124-48-1	1.81E-14	9.33E-18	3.41E-19	4.81E-18	3.92E-18	1.45E-13	3.87E-13	2.12E-15	n/a	**5.52E-13**
dimethyl phthalate	131-11-3									n/a	**0.00E+00**
di-n-butyl phthalate	84-74-2									n/a	**0.00E+00**
ethane	74-84-0									n/a	**0.00E+00**
ethylbenzene	100-41-4	2.76E-15	1.48E-18	5.76E-23	1.44E-22	6.91E-20	1.35E-17	5.34E-20	1.74E-16	n/a	**2.95E-15**
HD	505-60-2	1.36E-10	6.98E-14	2.30E-17	5.77E-17	2.69E-14	4.41E-12	1.20E-13	2.00E-11	n/a	**1.61E-10**
hexane	110-54-3									n/a	**0.00E+00**
methane	74-82-8									n/a	**0.00E+00**
methylene chloride	75-09-2	2.16E-16	2.92E-19	1.50E-23	3.76E-23	1.85E-19	1.67E-17	5.66E-21	1.92E-17	n/a	**2.53E-16**
propene	115-07-1									n/a	**0.00E+00**
styrene	100-42-5									n/a	**0.00E+00**
tetrachloroethene	127-18-4	7.67E-16	7.54E-17	6.46E-22	1.62E-21	3.93E-18	5.91E-16	2.12E-18	1.69E-14	n/a	**1.83E-14**
toluene	108-88-3									n/a	**0.00E+00**
trichloroethene	79-01-6	1.86E-14	2.19E-17	1.06E-21	2.66E-21	3.60E-18	1.74E-16	6.24E-19	2.63E-15	n/a	**2.14E-14**
vinyl chloride	75-01-4	1.04E-13	2.12E-15	8.83E-21	2.21E-20	8.82E-16	6.86E-15	3.51E-18	1.09E-13	n/a	**2.23E-13**
xylenes	1330-20-7									n/a	**0.00E+00**
3,3',4,4'-TCB (PCB 77)	32598-13-3									n/a	
2,3',4,4',5-PeCB (PCB 118)	31508-00-6									n/a	
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4									n/a	
total coplanar PCBs	NA	4.38E-20	8.00E-21	3.50E-21	6.27E-21	1.99E-23	1.94E-18	3.36E-18	1.25E-16	n/a	**1.30E-16**
ammonia	7664-41-7									n/a	**0.00E+00**
aluminum	7429-90-5									n/a	**0.00E+00**
cadmium	7440-43-9	3.20E-12								n/a	**3.20E-12**
chlorine	7782-50-5									n/a	**0.00E+00**
chromium (3+)	7440-47-3									n/a	**0.00E+00**
chromium (6+)	18540-29-9	5.88E-11	5.79E-17	1.43E-20	6.44E-19	7.72E-17	2.69E-11	1.08E-11	1.27E-14	n/a	**9.65E-11**
copper	7440-50-8									n/a	**0.00E+00**
hydrogen chloride	7647-01-0									n/a	**0.00E+00**
iron	7439-89-6									n/a	**0.00E+00**
lead	7439-92-1	8.84E-14	2.73E-19	9.19E-21	1.25E-18	2.21E-18	6.87E-13	3.62E-14	1.02E-17	n/a	**8.12E-13**
manganese	7439-96-5									n/a	**0.00E+00**
total mercury	NA									n/a	**0.00E+00**
mercuric chloride	7487-94-7									n/a	**0.00E+00**
methyl mercury	22967-92-6									n/a	**0.00E+00**
elemental mercury	7439-97-6									n/a	**0.00E+00**
nickel	7440-02-0	6.91E-13								n/a	**6.91E-13**
vanadium	7440-62-2									n/a	**0.00E+00**
zinc	7440-66-6									n/a	**0.00E+00**
Total Pathway Risk	**All Chemicals**	**2.61E-10**	**2.28E-13**	**1.17E-16**	**1.98E-16**	**5.17E-14**	**3.99E-11**	**1.19E-10**	**3.06E-11**	**0.00E+00**	**4.51E-10**

RISK AND HAZARD BY PATHWAY FOR SUBSISTENCE FISHER EXPOSURE SCENARIOS

NONCARCINOGENIC EFFECTS: Adult Subsistence Fisher Exposure Scenario											
COPC	CAS Number	Hazard from Inhalation	Hazard from Dermal Water Contact	Hazard from Dermal Soil Contact	Hazard from Incidental Soil Ingestion	Hazard from Incidental Surface Water Ingestion	Hazard from Ingestion of Produce	Hazard from Ingestion of Terrestrial Animal Products	Hazard from Ingestion of Fish	Hazard from Ingestion of Breast Milk	Total Hazard from Individual Chemical
2-butanone	78-93-3	4.48E-12	2.39E-16	8.78E-17	2.20E-16	5.63E-16	1.55E-11	4.65E-15	9.24E-14	n/a	**2.01E-11**
2-ethyl 1,3-butadiene	3404-63-5									n/a	**0.00E+00**
acetone	67-64-1	1.25E-11	1.65E-16	3.03E-17	7.60E-17	7.35E-16	9.74E-12	4.37E-16	1.21E-13	n/a	**2.23E-11**
benzene	71-43-2	3.74E-06	1.64E-09	2.68E-13	6.71E-13	2.52E-10	6.93E-08	1.34E-10	1.08E-07	n/a	**3.91E-06**
benzyl alcohol	100-51-6		1.33E-12	7.78E-14	2.33E-12	1.32E-12	2.78E-07	2.80E-10	2.16E-11	n/a	**2.78E-07**
bis(2-ethylhexyl)-phthalate	117-81-7		1.64E-11	4.46E-12	6.14E-12	3.09E-13	5.65E-08	8.98E-07	2.87E-09	n/a	**9.58E-07**
bromodichloromethane	75-27-4		1.23E-14	2.33E-16	2.57E-15	4.53E-15	2.86E-10	2.03E-10	1.94E-12	n/a	**4.91E-10**
carbon disulfide	75-15-0	6.87E-11	3.15E-14	5.49E-19	1.38E-18	4.31E-15	2.12E-13	2.87E-16	2.21E-12	n/a	**7.12E-11**
carbon tetrachloride	56-23-5	1.96E-11	4.05E-14	2.19E-18	7.21E-18	4.57E-15	8.12E-13	1.50E-12	6.78E-12	n/a	**2.88E-11**
chlorobenzene	108-90-7	3.46E-11	1.05E-14	6.29E-18	1.38E-17	8.14E-16	1.25E-12	2.79E-12	1.21E-12	n/a	**3.98E-11**
chloroform	67-66-3	1.04E-10	1.54E-14	4.13E-18	1.04E-17	4.60E-15	1.33E-12	2.03E-15	1.65E-12	n/a	**1.07E-10**
chloromethane	74-87-3	5.07E-10	2.49E-14	3.75E-18	9.39E-18	1.79E-14	1.74E-12	7.71E-16	2.93E-12	n/a	**5.12E-10**
dibromochloromethane	124-48-1		2.15E-14	2.84E-15	4.01E-14	9.02E-15	1.20E-09	3.22E-09	4.87E-12	n/a	**4.43E-09**
dimethyl phthalate	131-11-3									n/a	**0.00E+00**
di-n-butyl phthalate	84-74-2		5.66E-12	1.26E-12	8.91E-13	8.76E-14	5.63E-10	3.01E-06	8.18E-09	n/a	**3.02E-06**
ethane	74-84-0									n/a	**0.00E+00**
ethylbenzene	100-41-4	1.50E-12	3.15E-15	7.34E-19	1.84E-18	1.47E-16	1.68E-13	4.05E-16	3.70E-13	n/a	**2.04E-12**
HD	505-60-2	2.27E-05	3.02E-09	5.98E-12	1.50E-11	1.17E-09	3.95E-07	7.71E-09	8.66E-07	n/a	**2.40E-05**
hexane	110-54-3	6.11E-12	2.28E-16	1.28E-21	3.21E-21	3.36E-18	6.20E-17	5.57E-19	3.50E-14	n/a	**6.15E-12**
methane	74-82-8									n/a	**0.00E+00**
methylene chloride	75-09-2	1.72E-11	1.52E-15	4.67E-19	1.17E-18	9.61E-16	5.18E-13	1.70E-16	9.98E-14	n/a	**1.78E-11**
propene	115-07-1	3.74E-08								n/a	**3.74E-08**
styrene	100-42-5	1.69E-11	1.36E-14	2.71E-15	4.68E-15	8.29E-16	1.98E-11	5.77E-10	1.75E-12	n/a	**6.15E-10**
tetrachloroethene	127-18-4	5.11E-11	3.26E-14	1.68E-18	4.20E-18	1.70E-15	1.49E-12	1.53E-15	7.30E-12	n/a	**6.00E-11**
toluene	108-88-3	3.88E-09	3.00E-11	5.83E-15	1.46E-14	2.24E-12	1.37E-09	3.21E-12	2.77E-09	n/a	**8.06E-09**
trichloroethene	79-01-6	6.50E-11	4.26E-13	1.24E-16	3.10E-16	7.00E-14	2.01E-11	6.45E-14	5.12E-11	n/a	**1.37E-10**
vinyl chloride	75-01-4	3.34E-09	2.29E-12	5.72E-17	1.43E-16	9.53E-13	4.43E-11	2.20E-14	1.18E-10	n/a	**3.51E-09**
xylenes	1330-20-7	6.82E-09	7.23E-13	9.14E-16	2.29E-15	3.14E-14	5.00E-11	4.49E-13	8.81E-11	n/a	**6.96E-09**
3,3',4,4'-TCB (PCB 77)	32598-13-3	1.41E-16	5.56E-17	3.30E-17	5.91E-17	1.73E-19	1.31E-14	2.17E-14	1.08E-12	n/a	**1.12E-12**
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	1.81E-16	5.62E-17	4.17E-17	7.47E-17	2.18E-19	1.66E-14	2.75E-14	1.37E-12	n/a	**1.41E-12**
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	8.70E-17	2.70E-17	2.00E-17	3.58E-17	1.05E-19	7.95E-15	1.32E-14	6.57E-13	n/a	**6.79E-13**
total coplanar PCBs	NA									n/a	
ammonia	7664-41-7	8.65E-09								n/a	**8.65E-09**
aluminum	7429-90-5	6.57E-07	1.51E-14	9.09E-18	6.17E-16	2.18E-14	3.99E-15	4.83E-16	3.58E-12	n/a	**6.57E-07**
cadmium	7440-43-9	2.48E-06	1.10E-13	2.66E-16	6.66E-14	2.94E-13	9.11E-08	3.74E-10	1.38E-08	n/a	**2.59E-06**
chlorine	7782-50-5	7.18E-05	8.54E-13	6.49E-15	2.17E-13	9.84E-13	1.69E-08	1.58E-11	1.61E-10	n/a	**7.18E-05**
chromium (3+)	7440-47-3		1.80E-16	2.66E-19	1.20E-17	2.40E-16	8.37E-11	3.37E-11	3.94E-14	n/a	**1.17E-10**
chromium (6+)	18540-29-9	6.85E-07	9.02E-14	1.33E-16	6.01E-15	1.20E-13	4.18E-08	1.69E-08	1.97E-11	n/a	**7.44E-07**
copper	7440-50-8		1.27E-13	4.96E-15	4.06E-13	3.40E-13	1.18E-07	5.99E-08	5.56E-11	n/a	**1.78E-07**
hydrogen chloride	7647-01-0	3.30E-06								n/a	**3.30E-06**
iron	7439-89-6		6.22E-15	1.24E-17	4.53E-15	6.92E-14	2.47E-08	1.27E-08	1.14E-11	n/a	**3.74E-08**
lead	7439-92-1									n/a	**0.00E+00**
manganese	7439-96-5	2.40E-04	1.65E-13	8.44E-16	7.42E-14	4.39E-13	1.57E-07	1.15E-08	7.20E-11	n/a	**2.40E-04**
total mercury	NA									n/a	**0.00E+00**
mercuric chloride	7487-94-7	5.65E-11	3.64E-17	1.58E-15	6.24E-14	0.00E+00	1.54E-11	4.82E-12	0.00E+00	n/a	**7.68E-11**
methyl mercury	22967-92-6		2.14E-18	9.13E-18	3.65E-15	0.00E+00	7.80E-12	5.52E-13	1.81E-08	n/a	**1.81E-08**
elemental mercury	7439-97-6	0.00E+00								n/a	**0.00E+00**
nickel	7440-02-0	4.48E-07	8.94E-15	6.85E-17	2.91E-15	1.19E-14	3.69E-09	1.19E-09	4.82E-11	n/a	**4.53E-07**
vanadium	7440-62-2	1.24E-06	4.81E-14	3.57E-15	3.26E-13	1.29E-13	4.71E-08	2.94E-09	2.10E-11	n/a	**1.29E-06**
zinc	7440-66-6		1.90E-14	1.47E-16	1.97E-14	8.46E-14	2.62E-08	2.12E-10	9.04E-09	n/a	**3.55E-08**
Total Pathway Hazard	**All Chemicals**	**3.47E-04**	**4.72E-09**	**1.21E-11**	**2.63E-11**	**1.43E-09**	**1.33E-06**	**4.03E-06**	**1.03E-06**	**0.00E+00**	**3.53E-04**

RISK AND HAZARD BY PATHWAY FOR SUBSISTENCE FISHER EXPOSURE SCENARIOS

CARCINOGENIC EFFECTS: Child Subsistence Fisher Exposure Scenario											
COPC	CAS Number	Risk from Inhalation	Risk from Dermal Water Contact	Risk from Dermal Soil Contact	Risk from Incidental Soil Ingestion	Risk from Incidental Surface Water Ingestion	Risk from Ingestion of Produce	Risk from Ingestion of Terrestrial Animal Products	Risk from Ingestion of Fish	Risk from Ingestion of Breast Milk	Total Risk from Individual Chemical
2-butanone	78-93-3									n/a	**0.00E+00**
2-ethyl 1,3-butadiene	3404-63-5									n/a	**0.00E+00**
acetone	67-64-1									n/a	**0.00E+00**
benzene	71-43-2	1.73E-10	4.40E-14	2.76E-17	9.84E-17	1.85E-14	2.24E-12	6.50E-15	4.15E-12	n/a	**1.80E-10**
benzyl alcohol	100-51-6									n/a	**0.00E+00**
bis(2-ethylhexyl)-phthalate	117-81-7	2.89E-13	5.61E-16	5.73E-16	1.13E-15	2.88E-17	3.86E-12	7.03E-11	1.40E-13	n/a	**7.46E-11**
bromodichloromethane	75-27-4	5.68E-14	1.86E-18	1.35E-19	2.13E-18	1.87E-18	5.18E-14	3.01E-14	4.20E-16	n/a	**1.39E-13**
carbon disulfide	75-15-0									n/a	**0.00E+00**
carbon tetrachloride	56-23-5	2.36E-15	1.39E-18	2.87E-22	1.34E-21	4.26E-19	3.17E-17	9.42E-17	3.31E-16	n/a	**2.82E-15**
chlorobenzene	108-90-7									n/a	**0.00E+00**
chloroform	67-66-3	2.35E-14	5.82E-19	6.00E-22	2.14E-21	4.75E-19	6.02E-17	1.39E-19	8.93E-17	n/a	**2.37E-14**
chloromethane	74-87-3									n/a	**0.00E+00**
dibromochloromethane	124-48-1	5.07E-14	4.40E-18	2.22E-18	4.47E-17	5.04E-18	3.42E-13	6.46E-13	1.42E-15	n/a	**1.04E-12**
dimethyl phthalate	131-11-3									n/a	**0.00E+00**
di-n-butyl phthalate	84-74-2									n/a	**0.00E+00**
ethane	74-84-0									n/a	**0.00E+00**
ethylbenzene	100-41-4	7.72E-15	4.23E-19	3.77E-22	1.35E-21	5.38E-20	2.56E-17	9.81E-20	7.10E-17	n/a	**7.81E-15**
HD	505-60-2	3.81E-10	1.99E-14	1.51E-16	5.39E-16	2.09E-14	4.43E-12	9.18E-14	8.14E-12	n/a	**3.94E-10**
hexane	110-54-3									n/a	**0.00E+00**
methane	74-82-8									n/a	**0.00E+00**
methylene chloride	75-09-2	6.06E-16	8.33E-20	9.83E-23	3.51E-22	1.44E-19	3.33E-17	1.69E-20	7.83E-18	n/a	**6.47E-16**
propene	115-07-1									n/a	**0.00E+00**
styrene	100-42-5									n/a	**0.00E+00**
tetrachloroethene	127-18-4	2.15E-15	2.15E-17	4.23E-21	1.51E-20	3.06E-18	1.09E-15	1.82E-18	6.87E-15	n/a	**1.01E-14**
toluene	108-88-3									n/a	**0.00E+00**
trichloroethene	79-01-6	5.20E-14	6.25E-18	6.95E-21	2.48E-20	2.80E-18	3.57E-16	1.71E-18	1.07E-15	n/a	**5.34E-14**
vinyl chloride	75-01-4	2.91E-13	6.05E-16	5.78E-20	2.07E-19	6.86E-16	1.39E-14	1.05E-17	4.46E-14	n/a	**3.51E-13**
xylenes	1330-20-7									n/a	**0.00E+00**
3,3',4,4'-TCB (PCB 77)	32598-13-3									n/a	
2,3',4,4',5-PeCB (PCB 118)	31508-00-6									n/a	
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4									n/a	
total coplanar PCBs	NA	1.23E-19	1.88E-21	2.94E-21	7.49E-21	1.28E-23	1.05E-18	1.71E-18	4.19E-17	n/a	**4.48E-17**
ammonia	7664-41-7									n/a	**0.00E+00**
aluminum	7429-90-5									n/a	**0.00E+00**
cadmium	7440-43-9	8.95E-12								n/a	**8.95E-12**
chlorine	7782-50-5									n/a	**0.00E+00**
chromium (3+)	7440-47-3									n/a	**0.00E+00**
chromium (6+)	18540-29-9	1.65E-10	1.65E-17	9.34E-20	6.01E-18	6.00E-17	1.53E-11	5.88E-12	5.15E-15	n/a	**1.86E-10**
copper	7440-50-8									n/a	**0.00E+00**
hydrogen chloride	7647-01-0									n/a	**0.00E+00**
iron	7439-89-6									n/a	**0.00E+00**
lead	7439-92-1	2.47E-13	7.84E-20	6.01E-20	1.17E-17	1.73E-18	3.92E-13	2.25E-14	4.19E-18	n/a	**6.62E-13**
manganese	7439-96-5									n/a	**0.00E+00**
total mercury	NA									n/a	**0.00E+00**
mercuric chloride	7487-94-7									n/a	**0.00E+00**
methyl mercury	22967-92-6									n/a	**0.00E+00**
elemental mercury	7439-97-6									n/a	**0.00E+00**
nickel	7440-02-0	1.93E-12								n/a	**1.93E-12**
vanadium	7440-62-2									n/a	**0.00E+00**
zinc	7440-66-6									n/a	**0.00E+00**
Total Pathway Risk	**All Chemicals**	**7.31E-10**	**6.52E-14**	**7.54E-16**	**1.83E-15**	**4.02E-14**	**2.67E-11**	**7.70E-11**	**1.25E-11**	**0.00E+00**	**8.47E-10**

RISK AND HAZARD BY PATHWAY FOR SUBSISTENCE FISHER EXPOSURE SCENARIOS

NONCARCINOGENIC EFFECTS: Child Subsistence Fisher Exposure Scenario											
COPC	CAS Number	Hazard from Inhalation	Hazard from Dermal Water Contact	Hazard from Dermal Soil Contact	Hazard from Incidental Soil Ingestion	Hazard from Incidental Surface Water Ingestion	Hazard from Ingestion of Produce	Hazard from Ingestion of Terrestrial Animal Products	Hazard from Ingestion of Fish	Hazard from Ingestion of Breast Milk	Total Hazard from Individual Chemical
2-butanone	78-93-3	1.25E-11	4.08E-16	5.75E-16	2.05E-15	2.63E-15	4.29E-11	1.44E-14	2.26E-13	n/a	**5.57E-11**
2-ethyl 1,3-butadiene	3404-63-5									n/a	**0.00E+00**
acetone	67-64-1	3.49E-11	2.82E-16	1.99E-16	7.09E-16	3.43E-15	2.31E-11	1.35E-15	2.94E-13	n/a	**5.83E-11**
benzene	71-43-2	1.05E-05	2.80E-09	1.75E-12	6.26E-12	1.18E-09	1.43E-07	4.14E-10	2.64E-07	n/a	**1.09E-05**
benzyl alcohol	100-51-6		2.27E-12	5.10E-13	2.18E-11	6.18E-12	6.69E-07	8.69E-10	5.27E-11	n/a	**6.70E-07**
bis(2-ethylhexyl)-phthalate	117-81-7		2.81E-11	2.92E-11	5.73E-11	1.44E-12	1.93E-07	3.52E-06	7.02E-09	n/a	**3.72E-06**
bromodichloromethane	75-27-4		2.10E-14	1.52E-15	2.40E-14	2.11E-14	5.85E-10	3.40E-10	4.74E-12	n/a	**9.30E-10**
carbon disulfide	75-15-0	1.92E-10	5.39E-14	3.59E-18	1.28E-17	2.01E-14	4.22E-13	8.89E-16	5.39E-12	n/a	**1.98E-10**
carbon tetrachloride	56-23-5	5.50E-11	6.93E-14	1.44E-17	6.72E-17	2.13E-14	1.59E-12	4.71E-12	1.66E-11	n/a	**7.79E-11**
chlorobenzene	108-90-7	9.68E-11	1.80E-14	4.12E-17	1.29E-16	3.80E-15	2.46E-12	8.79E-12	2.95E-12	n/a	**1.11E-10**
chloroform	67-66-3	2.90E-10	2.63E-14	2.71E-17	9.67E-17	2.15E-14	2.72E-12	6.27E-15	4.03E-12	n/a	**2.97E-10**
chloromethane	74-87-3	1.42E-09	4.27E-14	2.45E-17	8.77E-17	8.34E-14	3.86E-12	2.39E-15	7.16E-12	n/a	**1.43E-09**
dibromochloromethane	124-48-1		3.67E-14	1.86E-14	3.74E-13	4.21E-14	2.86E-09	5.40E-09	1.19E-11	n/a	**8.28E-09**
dimethyl phthalate	131-11-3									n/a	**0.00E+00**
di-n-butyl phthalate	84-74-2		9.69E-12	8.28E-12	8.32E-12	4.09E-13	1.88E-09	1.18E-05	2.00E-08	n/a	**1.18E-05**
ethane	74-84-0									n/a	**0.00E+00**
ethylbenzene	100-41-4	4.20E-12	5.38E-15	4.80E-18	1.72E-17	6.85E-16	3.26E-13	1.25E-15	9.04E-13	n/a	**5.44E-12**
HD	505-60-2	6.35E-05	5.18E-09	3.92E-11	1.40E-10	5.44E-09	1.15E-06	2.39E-08	2.12E-06	n/a	**6.68E-05**
hexane	110-54-3	1.71E-11	3.90E-16	8.38E-21	2.99E-20	1.57E-17	1.23E-16	1.70E-18	8.55E-14	n/a	**1.72E-11**
methane	74-82-8									n/a	**0.00E+00**
methylene chloride	75-09-2	4.82E-11	2.59E-15	3.06E-18	1.09E-17	4.48E-15	1.04E-12	5.26E-16	2.44E-13	n/a	**4.95E-11**
propene	115-07-1	1.05E-07								n/a	**1.05E-07**
styrene	100-42-5	4.72E-11	2.32E-14	1.77E-14	4.36E-14	3.87E-15	6.21E-11	2.25E-09	4.28E-12	n/a	**2.36E-09**
tetrachloroethene	127-18-4	1.43E-10	5.58E-14	1.10E-17	3.92E-17	7.92E-15	2.84E-12	4.72E-15	1.78E-11	n/a	**1.64E-10**
toluene	108-88-3	1.09E-08	5.13E-11	3.82E-14	1.36E-13	1.04E-11	2.70E-09	9.90E-12	6.77E-09	n/a	**2.04E-08**
trichloroethene	79-01-6	1.82E-10	7.29E-13	8.11E-16	2.90E-15	3.27E-13	4.16E-11	1.99E-13	1.25E-10	n/a	**3.50E-10**
vinyl chloride	75-01-4	9.36E-09	3.92E-12	3.75E-16	1.34E-15	4.45E-12	9.01E-11	6.81E-14	2.89E-10	n/a	**9.75E-09**
xylenes	1330-20-7	1.91E-08	1.24E-12	5.99E-15	2.14E-14	1.46E-13	1.04E-10	1.38E-12	2.15E-10	n/a	**1.94E-08**
3,3',4,4'-TCB (PCB 77)	32598-13-3	3.96E-16	9.52E-17	2.16E-16	5.52E-16	8.07E-19	4.36E-14	6.67E-14	2.65E-12	n/a	**2.76E-12**
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	5.08E-16	9.62E-17	2.73E-16	6.97E-16	1.02E-18	5.51E-14	8.42E-14	3.35E-12	n/a	**3.49E-12**
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	2.44E-16	4.62E-17	1.31E-16	3.34E-16	4.89E-19	2.64E-14	4.04E-14	1.61E-12	n/a	**1.67E-12**
total coplanar PCBs	NA									n/a	
ammonia	7664-41-7	2.42E-08								n/a	**2.42E-08**
aluminum	7429-90-5	1.84E-06	2.59E-14	5.95E-17	5.76E-15	1.02E-13	1.25E-14	1.19E-15	8.74E-12	n/a	**1.84E-06**
cadmium	7440-43-9	6.95E-06	1.89E-13	1.74E-15	6.22E-13	1.37E-12	3.11E-07	8.55E-10	3.38E-08	n/a	**7.30E-06**
chlorine	7782-50-5	2.01E-04	1.46E-12	4.25E-14	2.03E-12	4.59E-12	4.53E-08	4.88E-11	3.94E-10	n/a	**2.01E-04**
chromium (3+)	7440-47-3		3.09E-16	1.74E-18	1.12E-16	1.12E-15	2.86E-10	1.10E-10	9.62E-14	n/a	**3.96E-10**
chromium (6+)	18540-29-9	1.92E-06	1.54E-13	8.72E-16	5.61E-14	5.60E-13	1.43E-07	5.49E-08	4.81E-11	n/a	**2.12E-06**
copper	7440-50-8		2.17E-13	3.25E-14	3.79E-12	1.59E-12	4.05E-07	1.74E-07	1.36E-10	n/a	**5.78E-07**
hydrogen chloride	7647-01-0	9.24E-06								n/a	**9.24E-06**
iron	7439-89-6		1.06E-14	8.15E-17	4.23E-14	3.23E-13	8.43E-08	2.25E-08	2.78E-11	n/a	**1.07E-07**
lead	7439-92-1									n/a	**0.00E+00**
manganese	7439-96-5	6.71E-04	2.82E-13	5.53E-15	6.93E-13	2.05E-12	5.37E-07	4.30E-08	1.76E-10	n/a	**6.72E-04**
total mercury	NA									n/a	**0.00E+00**
mercuric chloride	7487-94-7	1.58E-10	6.23E-17	1.03E-14	5.83E-13	0.00E+00	4.81E-11	1.67E-11	0.00E+00	n/a	**2.24E-10**
methyl mercury	22967-92-6		3.66E-18	5.98E-17	3.41E-14	0.00E+00	2.60E-11	1.92E-12	4.43E-08	n/a	**4.43E-08**
elemental mercury	7439-97-6	0.00E+00								n/a	**0.00E+00**
nickel	7440-02-0	1.25E-06	1.53E-14	4.48E-16	2.72E-14	5.56E-14	1.26E-08	3.54E-09	1.18E-10	n/a	**1.27E-06**
vanadium	7440-62-2	3.46E-06	8.24E-14	2.34E-14	3.04E-12	6.04E-13	1.61E-07	4.98E-09	5.14E-11	n/a	**3.63E-06**
zinc	7440-66-6		3.26E-14	9.61E-16	1.84E-13	3.95E-13	8.96E-08	7.20E-10	2.21E-08	n/a	**1.12E-07**
Total Pathway Hazard	**All Chemicals**	**9.71E-04**	**8.08E-09**	**7.91E-11**	**2.45E-10**	**6.65E-09**	**3.95E-06**	**1.56E-05**	**2.52E-06**	**0.00E+00**	**9.93E-04**

RISK AND HAZARD BY PATHWAY FOR SUBSISTENCE FISHER EXPOSURE SCENARIOS

CARCINOGENIC EFFECTS: Infant Subsistence Fisher Exposure Scenario											
COPC	CAS Number	Risk from Inhalation	Risk from Dermal Water Contact	Risk from Dermal Soil Contact	Risk from Incidental Soil Ingestion	Risk from Incidental Surface Water Ingestion	Risk from Ingestion of Produce	Risk from Ingestion of Terrestrial Animal Products	Risk from Ingestion of Fish	Risk from Ingestion of Breast Milk	Total Risk from Individual Chemical
2-butanone	78-93-3		n/a			n/a					**0.00E+00**
2-ethyl 1,3-butadiene	3404-63-5		n/a			n/a					**0.00E+00**
acetone	67-64-1		n/a			n/a					**0.00E+00**
benzene	71-43-2	1.95E-11	n/a	7.75E-18	2.95E-17	n/a	5.44E-13	3.82E-15	1.24E-12	1.20E-10	**1.41E-10**
benzyl alcohol	100-51-6		n/a			n/a					**0.00E+00**
bis(2-ethylhexyl)-phthalate	117-81-7	3.25E-14	n/a	1.61E-16	3.38E-16	n/a	9.79E-13	4.86E-11	4.20E-14		**4.97E-11**
bromodichloromethane	75-27-4	6.39E-15	n/a	3.79E-20	6.38E-19	n/a	1.26E-14	5.11E-15	1.26E-16		**2.42E-14**
carbon disulfide	75-15-0		n/a			n/a					**0.00E+00**
carbon tetrachloride	56-23-5	2.65E-16	n/a	8.08E-23	4.03E-22	n/a	7.89E-18	5.73E-17	9.94E-17		**4.30E-16**
chlorobenzene	108-90-7		n/a			n/a					**0.00E+00**
chloroform	67-66-3	2.65E-15	n/a	1.69E-22	6.42E-22	n/a	1.46E-17	8.16E-20	2.68E-17	3.05E-15	**5.73E-15**
chloromethane	74-87-3		n/a			n/a					**0.00E+00**
dibromochloromethane	124-48-1	5.70E-15	n/a	6.26E-19	1.34E-17	n/a	7.78E-14	1.10E-13	4.27E-16		**1.94E-13**
dimethyl phthalate	131-11-3		n/a			n/a					**0.00E+00**
di-n-butyl phthalate	84-74-2		n/a			n/a					**0.00E+00**
ethane	74-84-0		n/a			n/a					**0.00E+00**
ethylbenzene	100-41-4	8.68E-16	n/a	1.06E-22	4.04E-22	n/a	6.39E-18	5.75E-20	2.13E-17	3.57E-16	**1.25E-15**
HD	505-60-2	4.29E-11	n/a	4.24E-17	1.62E-16	n/a	1.04E-12	5.46E-14	2.44E-12		**4.64E-11**
hexane	110-54-3		n/a			n/a					**0.00E+00**
methane	74-82-8		n/a			n/a					**0.00E+00**
methylene chloride	75-09-2	6.82E-17	n/a	2.76E-23	1.05E-22	n/a	8.18E-18	9.94E-21	2.35E-18	9.60E-16	**1.04E-15**
propene	115-07-1		n/a			n/a					**0.00E+00**
styrene	100-42-5		n/a			n/a					**0.00E+00**
tetrachloroethene	127-18-4	2.42E-16	n/a	1.19E-21	4.53E-21	n/a	2.76E-16	1.08E-18	2.06E-15	2.15E-14	**2.41E-14**
toluene	108-88-3		n/a			n/a					**0.00E+00**
trichloroethene	79-01-6	5.85E-15	n/a	1.96E-21	7.45E-21	n/a	8.63E-17	1.00E-18	3.22E-16	1.78E-14	**2.41E-14**
vinyl chloride	75-01-4	3.27E-14	n/a	1.63E-20	6.20E-20	n/a	3.39E-15	6.18E-18	1.34E-14		**4.95E-14**
xylenes	1330-20-7		n/a			n/a					**0.00E+00**
3,3',4,4'-TCB (PCB 77)	32598-13-3		n/a			n/a					
2,3',4,4',5-PeCB (PCB 118)	31508-00-6		n/a			n/a					
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4		n/a			n/a					
total coplanar PCBs	NA	1.38E-20	n/a	8.26E-22	2.25E-21	n/a	2.62E-19	1.02E-18	1.26E-17	5.23E-11	**5.23E-11**
ammonia	7664-41-7		n/a			n/a					**0.00E+00**
aluminum	7429-90-5		n/a			n/a					**0.00E+00**
cadmium	7440-43-9	1.01E-12	n/a			n/a					**1.01E-12**
chlorine	7782-50-5		n/a			n/a					**0.00E+00**
chromium (3+)	7440-47-3		n/a			n/a					**0.00E+00**
chromium (6+)	18540-29-9	1.85E-11	n/a	2.63E-20	1.80E-18	n/a	3.91E-12	3.67E-12	1.55E-15	6.49E-12	**3.26E-11**
copper	7440-50-8		n/a			n/a					**0.00E+00**
hydrogen chloride	7647-01-0		n/a			n/a					**0.00E+00**
iron	7439-89-6		n/a			n/a					**0.00E+00**
lead	7439-92-1	2.78E-14	n/a	1.69E-20	3.50E-18	n/a	1.00E-13	1.52E-14	1.26E-18	1.29E-13	**2.72E-13**
manganese	7439-96-5		n/a			n/a					**0.00E+00**
total mercury	NA		n/a			n/a					**0.00E+00**
mercuric chloride	7487-94-7		n/a			n/a					**0.00E+00**
methyl mercury	22967-92-6		n/a			n/a					**0.00E+00**
elemental mercury	7439-97-6		n/a			n/a					**0.00E+00**
nickel	7440-02-0	2.18E-13	n/a			n/a					**2.18E-13**
vanadium	7440-62-2		n/a			n/a					**0.00E+00**
zinc	7440-66-6		n/a			n/a					**0.00E+00**
Total Pathway Risk	**All Chemicals**	**8.23E-11**	**0.00E+00**	**2.12E-16**	**5.48E-16**	**0.00E+00**	**6.67E-12**	**5.25E-11**	**3.75E-12**	**1.79E-10**	**3.24E-10**

RISK AND HAZARD BY PATHWAY FOR SUBSISTENCE FISHER EXPOSURE SCENARIOS

NONCARCINOGENIC EFFECTS: Infant Subsistence Fisher Exposure Scenario											
COPC	CAS Number	Hazard from Inhalation	Hazard from Dermal Water Contact	Hazard from Dermal Soil Contact	Hazard from Incidental Soil Ingestion	Hazard from Incidental Surface Water Ingestion	Hazard from Ingestion of Produce	Hazard from Ingestion of Terrestrial Animal Products	Hazard from Ingestion of Fish	Hazard from Ingestion of Breast Milk	Total Hazard from Individual Chemical
2-butanone	78-93-3	7.06E-12	n/a	8.09E-16	3.08E-15	n/a	4.58E-11	4.23E-14	3.39E-13	1.21E-10	**1.74E-10**
2-ethyl 1,3-butadiene	3404-63-5		n/a			n/a					**0.00E+00**
acetone	67-64-1	1.96E-11	n/a	2.79E-16	1.06E-15	n/a	2.63E-11	3.98E-15	4.42E-13	1.04E-10	**1.50E-10**
benzene	71-43-2	5.88E-06	n/a	2.47E-12	9.40E-12	n/a	1.73E-07	1.22E-09	3.96E-07	3.81E-05	**4.46E-05**
benzyl alcohol	100-51-6		n/a	7.17E-13	3.26E-11	n/a	7.56E-07	2.56E-09	7.91E-11		**7.58E-07**
bis(2-ethylhexyl)-phthalate	117-81-7		n/a	4.10E-11	8.60E-11	n/a	2.45E-07	1.22E-05	1.05E-08		**1.24E-05**
bromodichloromethane	75-27-4		n/a	2.14E-15	3.60E-14	n/a	7.11E-10	2.88E-10	7.11E-12		**1.01E-09**
carbon disulfide	75-15-0	1.08E-10	n/a	5.06E-18	1.93E-17	n/a	5.20E-13	2.61E-15	8.09E-12	6.49E-10	**7.66E-10**
carbon tetrachloride	56-23-5	3.09E-11	n/a	2.02E-17	1.01E-16	n/a	1.97E-12	1.43E-11	2.48E-11		**7.21E-11**
chlorobenzene	108-90-7	5.44E-11	n/a	5.80E-17	1.93E-16	n/a	3.05E-12	2.67E-11	4.43E-12		**8.86E-11**
chloroform	67-66-3	1.63E-10	n/a	3.81E-17	1.45E-16	n/a	3.31E-12	1.84E-14	6.05E-12	6.88E-10	**8.61E-10**
chloromethane	74-87-3	7.98E-10	n/a	3.45E-17	1.31E-16	n/a	4.52E-12	7.02E-15	1.07E-11	2.37E-09	**3.19E-09**
dibromochloromethane	124-48-1		n/a	2.62E-14	5.61E-13	n/a	3.25E-09	4.58E-09	1.78E-11		**7.85E-09**
dimethyl phthalate	131-11-3		n/a			n/a					**0.00E+00**
di-n-butyl phthalate	84-74-2		n/a	1.16E-11	1.25E-11	n/a	2.08E-09	4.07E-05	3.00E-08		**4.08E-05**
ethane	74-84-0		n/a			n/a					**0.00E+00**
ethylbenzene	100-41-4	2.36E-12	n/a	6.76E-18	2.57E-17	n/a	4.07E-13	3.66E-15	1.36E-12	2.27E-11	**2.68E-11**
HD	505-60-2	3.57E-05	n/a	5.51E-11	2.10E-10	n/a	1.35E-06	7.09E-08	3.17E-06		**4.03E-05**
hexane	110-54-3	9.63E-12	n/a	1.18E-20	4.49E-20	n/a	1.52E-16	4.92E-18	1.28E-13	6.80E-13	**1.04E-11**
methane	74-82-8		n/a			n/a					**0.00E+00**
methylene chloride	75-09-2	2.71E-11	n/a	4.30E-18	1.64E-17	n/a	1.27E-12	1.55E-15	3.66E-13	1.49E-10	**1.78E-10**
propene	115-07-1	5.88E-08	n/a			n/a					**5.88E-08**
styrene	100-42-5	2.65E-11	n/a	2.50E-14	6.55E-14	n/a	6.32E-11	7.72E-09	6.41E-12	2.89E-09	**1.07E-08**
tetrachloroethene	127-18-4	8.05E-11	n/a	1.54E-17	5.88E-17	n/a	3.58E-12	1.39E-14	2.67E-11	2.78E-10	**3.89E-10**
toluene	108-88-3	6.12E-09	n/a	5.37E-14	2.05E-13	n/a	3.34E-09	2.90E-11	1.02E-08	3.35E-07	**3.55E-07**
trichloroethene	79-01-6	1.02E-10	n/a	1.14E-15	4.35E-15	n/a	5.03E-11	5.85E-13	1.88E-10	1.04E-08	**1.07E-08**
vinyl chloride	75-01-4	5.27E-09	n/a	5.27E-16	2.01E-15	n/a	1.10E-10	2.00E-13	4.33E-10		**5.81E-09**
xylenes	1330-20-7	1.07E-08	n/a	8.42E-15	3.21E-14	n/a	1.26E-10	4.04E-12	3.23E-10	5.24E-09	**1.64E-08**
3,3',4,4'-TCB (PCB 77)	32598-13-3	2.23E-16	n/a	3.04E-16	8.28E-16	n/a	5.37E-14	1.98E-13	3.97E-12	3.93E-10	**3.97E-10**
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	2.86E-16	n/a	3.84E-16	1.05E-15	n/a	6.78E-14	2.50E-13	5.02E-12	4.97E-10	**5.02E-10**
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	1.37E-16	n/a	1.84E-16	5.02E-16	n/a	3.26E-14	1.20E-13	2.41E-12	2.38E-10	**2.41E-10**
total coplanar PCBs	NA		n/a			n/a					
ammonia	7664-41-7	1.36E-08	n/a			n/a					**1.36E-08**
aluminum	7429-90-5	1.04E-06	n/a	8.37E-17	8.64E-15	n/a	1.27E-14	2.92E-15	1.31E-11	4.38E-09	**1.04E-06**
cadmium	7440-43-9	3.91E-06	n/a	2.45E-15	9.32E-13	n/a	3.97E-07	1.91E-09	5.07E-08	5.55E-07	**4.92E-06**
chlorine	7782-50-5	1.13E-04	n/a	5.98E-14	3.04E-12	n/a	4.90E-08	1.44E-10	5.91E-10	2.17E-07	**1.13E-04**
chromium (3+)	7440-47-3		n/a	2.45E-18	1.68E-16	n/a	3.65E-10	3.42E-10	1.44E-13	6.06E-10	**1.31E-09**
chromium (6+)	18540-29-9	1.08E-06	n/a	1.23E-15	8.42E-14	n/a	1.83E-07	1.71E-07	7.22E-11	3.03E-07	**1.74E-06**
copper	7440-50-8		n/a	4.57E-14	5.68E-12	n/a	5.16E-07	4.99E-07	2.04E-10	9.13E-07	**1.93E-06**
hydrogen chloride	7647-01-0	5.20E-06	n/a			n/a					**5.20E-06**
iron	7439-89-6		n/a	1.15E-16	6.35E-14	n/a	1.08E-07	3.20E-08	4.16E-11	1.91E-07	**3.31E-07**
lead	7439-92-1		n/a			n/a					**0.00E+00**
manganese	7439-96-5	3.78E-04	n/a	7.78E-15	1.04E-12	n/a	6.85E-07	1.45E-07	2.64E-10	8.96E-07	**3.79E-04**
total mercury	NA		n/a			n/a					**0.00E+00**
mercuric chloride	7487-94-7	8.90E-11	n/a	1.45E-14	8.74E-13	n/a	5.70E-11	5.39E-11	0.00E+00	1.02E-10	**3.03E-10**
methyl mercury	22967-92-6		n/a	8.41E-17	5.11E-14	n/a	3.26E-11	6.25E-12	6.64E-08	8.42E-08	**1.51E-07**
elemental mercury	7439-97-6	0.00E+00	n/a			n/a					**0.00E+00**
nickel	7440-02-0	7.06E-07	n/a	6.30E-16	4.08E-14	n/a	1.61E-08	1.03E-08	1.77E-10	2.56E-08	**7.58E-07**
vanadium	7440-62-2	1.95E-06	n/a	3.29E-14	4.56E-12	n/a	2.05E-07	6.26E-09	7.71E-11	2.66E-07	**2.43E-06**
zinc	7440-66-6		n/a	1.35E-15	2.76E-13	n/a	1.14E-07	2.30E-09	3.31E-08	1.84E-07	**3.33E-07**
Total Pathway Hazard	**All Chemicals**	**5.46E-04**	**0.00E+00**	**1.11E-10**	**3.68E-10**	**0.00E+00**	**4.81E-06**	**5.39E-05**	**3.77E-06**	**4.21E-05**	**6.51E-04**

RISK AND HAZARD BY PATHWAY FOR SUBSISTENCE FISHER EXPOSURE SCENARIOS

CARCINOGENIC EFFECTS: Early Life Exposure - Infant											
COPC	CAS Number	Risk from Inhalation	Risk from Dermal Water Contact	Risk from Dermal Soil Contact	Risk from Incidental Soil Ingestion	Risk from Incidental Surface Water Ingestion	Risk from Ingestion of Produce	Risk from Ingestion of Terrestrial Animal Products	Risk from Ingestion of Fish	Risk from Ingestion of Breast Milk	Total Risk from Individual Chemical
vinyl chloride	75-01-4	2.29E-12	n/a	1.14E-18	4.34E-18	n/a	2.37E-13	4.33E-16	9.36E-13	n/a	**3.46E-12**

CARCINOGENIC EFFECTS: Early Life Exposure - Child											
COPC	CAS Number	Risk from Inhalation	Risk from Dermal Water Contact	Risk from Dermal Soil Contact	Risk from Incidental Soil Ingestion	Risk from Incidental Surface Water Ingestion	Risk from Ingestion of Produce	Risk from Ingestion of Terrestrial Animal Products	Risk from Ingestion of Fish	Risk from Ingestion of Breast Milk	Total Risk from Individual Chemical
vinyl chloride	75-01-4	4.07E-12	8.47E-15	8.10E-19	2.89E-18	9.61E-15	1.95E-13	1.47E-16	6.24E-13	n/a	**4.91E-12**

RISK AND HAZARD BY PATHWAY FOR SUBSISTENCE FARMER EXPOSURE SCENARIOS

CARCINOGENIC EFFECTS: Adult Subsistence Farmer Exposure Scenario											
COPC	CAS Number	Risk from Inhalation	Risk from Dermal Water Contact	Risk from Dermal Soil Contact	Risk from Incidental Soil Ingestion	Risk from Incidental Surface Water Ingestion	Risk from Ingestion of Produce	Risk from Ingestion of Terrestrial Animal Products	Risk from Ingestion of Fish	Risk from Ingestion of Breast Milk	Total Risk from Individual Chemical
2-butanone	78-93-3									n/a	**0.00E+00**
2-ethyl 1,3-butadiene	3404-63-5									n/a	**0.00E+00**
acetone	67-64-1									n/a	**0.00E+00**
benzene	71-43-2	6.19E-11	2.06E-13	4.21E-18	1.05E-17	3.17E-14	2.77E-12	6.19E-15	5.43E-12	n/a	**7.04E-11**
benzyl alcohol	100-51-6									n/a	**0.00E+00**
bis(2-ethylhexyl)-phthalate	117-81-7	1.03E-13	2.43E-15	8.91E-17	1.23E-16	4.57E-17	2.21E-11	3.58E-10	1.70E-13	n/a	**3.81E-10**
bromodichloromethane	75-27-4	2.03E-14	7.20E-18	2.06E-20	2.28E-19	2.66E-18	6.34E-14	4.50E-14	4.55E-16	n/a	**1.29E-13**
carbon disulfide	75-15-0									n/a	**0.00E+00**
carbon tetrachloride	56-23-5	8.42E-16	6.48E-18	4.39E-23	1.44E-22	7.30E-19	4.17E-17	1.30E-16	4.34E-16	n/a	**1.45E-15**
chlorobenzene	108-90-7									n/a	**0.00E+00**
chloroform	67-66-3	8.40E-15	2.72E-18	9.15E-23	2.29E-22	8.14E-19	7.49E-17	1.37E-19	1.17E-16	n/a	**8.60E-15**
chloromethane	74-87-3									n/a	**0.00E+00**
dibromochloromethane	124-48-1	1.81E-14	1.20E-17	3.41E-19	4.81E-18	5.05E-18	3.61E-13	9.68E-13	1.09E-15	n/a	**1.35E-12**
dimethyl phthalate	131-11-3									n/a	**0.00E+00**
di-n-butyl phthalate	84-74-2									n/a	**0.00E+00**
ethane	74-84-0									n/a	**0.00E+00**
ethylbenzene	100-41-4	2.76E-15	1.97E-18	5.76E-23	1.44E-22	9.21E-20	3.40E-17	1.55E-19	9.30E-17	n/a	**2.89E-15**
HD	505-60-2	1.36E-10	9.31E-14	2.30E-17	5.77E-17	3.59E-14	1.39E-11	3.90E-13	1.07E-11	n/a	**1.61E-10**
hexane	110-54-3									n/a	**0.00E+00**
methane	74-82-8									n/a	**0.00E+00**
methylene chloride	75-09-2	2.16E-16	3.89E-19	1.50E-23	3.76E-23	2.47E-19	4.17E-17	1.43E-20	1.03E-17	n/a	**2.69E-16**
propene	115-07-1									n/a	**0.00E+00**
styrene	100-42-5									n/a	**0.00E+00**
tetrachloroethene	127-18-4	7.67E-16	1.01E-16	6.46E-22	1.62E-21	5.24E-18	1.49E-15	6.83E-18	9.00E-15	n/a	**1.14E-14**
toluene	108-88-3									n/a	**0.00E+00**
trichloroethene	79-01-6	1.86E-14	2.92E-17	1.06E-21	2.66E-21	4.80E-18	4.38E-16	1.63E-18	1.40E-15	n/a	**2.04E-14**
vinyl chloride	75-01-4	1.04E-13	2.83E-15	8.83E-21	2.21E-20	1.18E-15	1.72E-14	8.91E-18	5.84E-14	n/a	**1.83E-13**
xylenes	1330-20-7									n/a	**0.00E+00**
3,3',4,4'-TCB (PCB 77)	32598-13-3									n/a	
2,3',4,4',5-PeCB (PCB 118)	31508-00-6									n/a	
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4									n/a	
total coplanar PCBs	NA	4.38E-20	9.86E-21	4.20E-21	7.52E-21	2.45E-23	6.36E-18	1.12E-17	6.16E-17	n/a	**7.92E-17**
ammonia	7664-41-7									n/a	**0.00E+00**
aluminum	7429-90-5									n/a	**0.00E+00**
cadmium	7440-43-9	3.20E-12								n/a	**3.20E-12**
chlorine	7782-50-5									n/a	**0.00E+00**
chromium (3+)	7440-47-3									n/a	**0.00E+00**
chromium (6+)	18540-29-9	5.88E-11	7.73E-17	1.43E-20	6.44E-19	1.03E-16	8.97E-11	3.61E-11	6.75E-15	n/a	**1.85E-10**
copper	7440-50-8									n/a	**0.00E+00**
hydrogen chloride	7647-01-0									n/a	**0.00E+00**
iron	7439-89-6									n/a	**0.00E+00**
lead	7439-92-1	8.84E-14	3.64E-19	9.19E-21	1.25E-18	2.94E-18	2.29E-12	1.21E-13	5.45E-18	n/a	**2.50E-12**
manganese	7439-96-5									n/a	**0.00E+00**
total mercury	NA									n/a	**0.00E+00**
mercuric chloride	7487-94-7									n/a	**0.00E+00**
methyl mercury	22967-92-6									n/a	**0.00E+00**
elemental mercury	7439-97-6									n/a	**0.00E+00**
nickel	7440-02-0	6.91E-13								n/a	**6.91E-13**
vanadium	7440-62-2									n/a	**0.00E+00**
zinc	7440-66-6									n/a	**0.00E+00**
Total Pathway Risk	**All Chemicals**	**2.61E-10**	**3.04E-13**	**1.17E-16**	**1.98E-16**	**6.89E-14**	**1.31E-10**	**3.96E-10**	**1.63E-11**	**0.00E+00**	**8.05E-10**

RISK AND HAZARD BY PATHWAY FOR SUBSISTENCE FARMER EXPOSURE SCENARIOS

NONCARCINOGENIC EFFECTS: Adult Subsistence Farmer Exposure Scenario											
COPC	CAS Number	Hazard from Inhalation	Hazard from Dermal Water Contact	Hazard from Dermal Soil Contact	Hazard from Incidental Soil Ingestion	Hazard from Incidental Surface Water Ingestion	Hazard from Ingestion of Produce	Hazard from Ingestion of Terrestrial Animal Products	Hazard from Ingestion of Fish	Hazard from Ingestion of Breast Milk	Total Hazard from Individual Chemical
2-butanone	78-93-3	4.48E-12	2.39E-16	8.78E-17	2.20E-16	5.63E-16	3.88E-11	1.16E-14	3.70E-14	n/a	**4.33E-11**
2-ethyl 1,3-butadiene	3404-63-5									n/a	**0.00E+00**
acetone	67-64-1	1.25E-11	1.65E-16	3.03E-17	7.60E-17	7.35E-16	2.44E-11	1.09E-15	4.82E-14	n/a	**3.69E-11**
benzene	71-43-2	3.74E-06	1.64E-09	2.68E-13	6.71E-13	2.52E-10	1.73E-07	3.34E-10	4.32E-08	n/a	**3.95E-06**
benzyl alcohol	100-51-6		1.33E-12	7.78E-14	2.33E-12	1.32E-12	6.94E-07	7.01E-10	8.64E-12	n/a	**6.95E-07**
bis(2-ethylhexyl)-phthalate	117-81-7		1.64E-11	4.46E-12	6.14E-12	3.09E-13	1.41E-07	2.25E-06	1.15E-09	n/a	**2.39E-06**
bromodichloromethane	75-27-4		1.23E-14	2.33E-16	2.57E-15	4.53E-15	7.16E-10	5.07E-10	7.76E-13	n/a	**1.22E-09**
carbon disulfide	75-15-0	6.87E-11	3.15E-14	5.49E-19	1.38E-18	4.31E-15	5.30E-13	7.18E-16	8.83E-13	n/a	**7.01E-11**
carbon tetrachloride	56-23-5	1.96E-11	4.05E-14	2.19E-18	7.21E-18	4.57E-15	2.03E-12	3.74E-12	2.71E-12	n/a	**2.82E-11**
chlorobenzene	108-90-7	3.46E-11	1.05E-14	6.29E-18	1.38E-17	8.14E-16	3.13E-12	6.97E-12	4.83E-13	n/a	**4.52E-11**
chloroform	67-66-3	1.04E-10	1.54E-14	4.13E-18	1.04E-17	4.60E-15	3.32E-12	5.06E-15	6.61E-13	n/a	**1.08E-10**
chloromethane	74-87-3	5.07E-10	2.49E-14	3.75E-18	9.39E-18	1.79E-14	4.34E-12	1.93E-15	1.17E-12	n/a	**5.12E-10**
dibromochloromethane	124-48-1		2.15E-14	2.84E-15	4.01E-14	9.02E-15	3.01E-09	8.06E-09	1.95E-12	n/a	**1.11E-08**
dimethyl phthalate	131-11-3									n/a	**0.00E+00**
di-n-butyl phthalate	84-74-2		5.66E-12	1.26E-12	8.91E-13	8.76E-14	1.41E-09	7.53E-06	3.27E-09	n/a	**7.53E-06**
ethane	74-84-0									n/a	**0.00E+00**
ethylbenzene	100-41-4	1.50E-12	3.15E-15	7.34E-19	1.84E-18	1.47E-16	4.19E-13	1.01E-15	1.48E-13	n/a	**2.07E-12**
HD	505-60-2	2.27E-05	3.02E-09	5.98E-12	1.50E-11	1.17E-09	9.88E-07	1.93E-08	3.46E-07	n/a	**2.40E-05**
hexane	110-54-3	6.11E-12	2.28E-16	1.28E-21	3.21E-21	3.36E-18	1.55E-16	1.39E-18	1.40E-14	n/a	**6.13E-12**
methane	74-82-8									n/a	**0.00E+00**
methylene chloride	75-09-2	1.72E-11	1.52E-15	4.67E-19	1.17E-18	9.61E-16	1.29E-12	4.25E-16	3.99E-14	n/a	**1.85E-11**
propene	115-07-1	3.74E-08								n/a	**3.74E-08**
styrene	100-42-5	1.69E-11	1.36E-14	2.71E-15	4.68E-15	8.29E-16	4.95E-11	1.44E-09	7.00E-13	n/a	**1.51E-09**
tetrachloroethene	127-18-4	5.11E-11	3.26E-14	1.68E-18	4.20E-18	1.70E-15	3.73E-12	3.83E-15	2.92E-12	n/a	**5.78E-11**
toluene	108-88-3	3.88E-09	3.00E-11	5.83E-15	1.46E-14	2.24E-12	3.42E-09	8.02E-12	1.11E-09	n/a	**8.45E-09**
trichloroethene	79-01-6	6.50E-11	4.26E-13	1.24E-16	3.10E-16	7.00E-14	5.02E-11	1.61E-13	2.05E-11	n/a	**1.36E-10**
vinyl chloride	75-01-4	3.34E-09	2.29E-12	5.72E-17	1.43E-16	9.53E-13	1.11E-10	5.49E-14	4.73E-11	n/a	**3.51E-09**
xylenes	1330-20-7	6.82E-09	7.23E-13	9.14E-16	2.29E-15	3.14E-14	1.25E-10	1.12E-12	3.52E-11	n/a	**6.98E-09**
3,3',4,4'-TCB (PCB 77)	32598-13-3	1.41E-16	5.56E-17	3.30E-17	5.91E-17	1.73E-19	3.28E-14	5.44E-14	4.34E-13	n/a	**5.21E-13**
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	1.81E-16	5.62E-17	4.17E-17	7.47E-17	2.18E-19	4.14E-14	6.86E-14	5.48E-13	n/a	**6.58E-13**
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	8.70E-17	2.70E-17	2.00E-17	3.58E-17	1.05E-19	1.99E-14	3.29E-14	2.63E-13	n/a	**3.16E-13**
total coplanar PCBs	NA									n/a	
ammonia	7664-41-7	8.65E-09								n/a	**8.65E-09**
aluminum	7429-90-5	6.57E-07	1.51E-14	9.09E-18	6.17E-16	2.18E-14	9.97E-15	1.21E-15	1.43E-12	n/a	**6.57E-07**
cadmium	7440-43-9	2.48E-06	1.10E-13	2.66E-16	6.66E-14	2.94E-13	2.28E-07	9.34E-10	5.53E-09	n/a	**2.72E-06**
chlorine	7782-50-5	7.18E-05	8.54E-13	6.49E-15	2.17E-13	9.84E-13	4.22E-08	3.94E-11	6.46E-11	n/a	**7.18E-05**
chromium (3+)	7440-47-3		1.80E-16	2.66E-19	1.20E-17	2.40E-16	2.09E-10	8.43E-11	1.58E-14	n/a	**2.93E-10**
chromium (6+)	18540-29-9	6.85E-07	9.02E-14	1.33E-16	6.01E-15	1.20E-13	1.05E-07	4.21E-08	7.88E-12	n/a	**8.32E-07**
copper	7440-50-8		1.27E-13	4.96E-15	4.06E-13	3.40E-13	2.96E-07	1.50E-07	2.22E-11	n/a	**4.46E-07**
hydrogen chloride	7647-01-0	3.30E-06								n/a	**3.30E-06**
iron	7439-89-6		6.22E-15	1.24E-17	4.53E-15	6.92E-14	6.16E-08	3.18E-08	4.54E-12	n/a	**9.35E-08**
lead	7439-92-1									n/a	**0.00E+00**
manganese	7439-96-5	2.40E-04	1.65E-13	8.44E-16	7.42E-14	4.39E-13	3.92E-07	2.87E-08	2.88E-11	n/a	**2.40E-04**
total mercury	NA									n/a	**0.00E+00**
mercuric chloride	7487-94-7	5.65E-11	3.64E-17	1.58E-15	6.24E-14	0.00E+00	3.85E-11	1.21E-11	0.00E+00	n/a	**1.07E-10**
methyl mercury	22967-92-6		2.14E-18	9.13E-18	3.65E-15	0.00E+00	1.95E-11	1.38E-12	7.25E-09	n/a	**7.27E-09**
elemental mercury	7439-97-6	0.00E+00								n/a	**0.00E+00**
nickel	7440-02-0	4.48E-07	8.94E-15	6.85E-17	2.91E-15	1.19E-14	9.22E-09	2.98E-09	1.93E-11	n/a	**4.60E-07**
vanadium	7440-62-2	1.24E-06	4.81E-14	3.57E-15	3.26E-13	1.29E-13	1.18E-07	7.35E-09	8.42E-12	n/a	**1.36E-06**
zinc	7440-66-6		1.90E-14	1.47E-16	1.97E-14	8.46E-14	6.55E-08	5.30E-10	3.62E-09	n/a	**6.97E-08**
Total Pathway Hazard	**All Chemicals**	**3.47E-04**	**4.72E-09**	**1.21E-11**	**2.63E-11**	**1.43E-09**	**3.32E-06**	**1.01E-05**	**4.12E-07**	**0.00E+00**	**3.61E-04**

RISK AND HAZARD BY PATHWAY FOR SUBSISTENCE FARMER EXPOSURE SCENARIOS

CARCINOGENIC EFFECTS: Child Subsistence Farmer Exposure Scenario											
COPC	CAS Number	Risk from Inhalation	Risk from Dermal Water Contact	Risk from Dermal Soil Contact	Risk from Incidental Soil Ingestion	Risk from Incidental Surface Water Ingestion	Risk from Ingestion of Produce	Risk from Ingestion of Terrestrial Animal Products	Risk from Ingestion of Fish	Risk from Ingestion of Breast Milk	Total Risk from Individual Chemical
2-butanone	78-93-3									n/a	**0.00E+00**
2-ethyl 1,3-butadiene	3404-63-5									n/a	**0.00E+00**
acetone	67-64-1									n/a	**0.00E+00**
benzene	71-43-2	1.73E-10	4.40E-14	2.76E-17	9.84E-17	1.85E-14	5.61E-12	1.63E-14	1.66E-12	n/a	**1.81E-10**
benzyl alcohol	100-51-6									n/a	**0.00E+00**
bis(2-ethylhexyl)-phthalate	117-81-7	2.89E-13	5.61E-16	5.73E-16	1.13E-15	2.88E-17	9.64E-12	1.76E-10	5.61E-14	n/a	**1.86E-10**
bromodichloromethane	75-27-4	5.68E-14	1.86E-18	1.35E-19	2.13E-18	1.87E-18	1.30E-13	7.52E-14	1.68E-16	n/a	**2.62E-13**
carbon disulfide	75-15-0									n/a	**0.00E+00**
carbon tetrachloride	56-23-5	2.36E-15	1.39E-18	2.87E-22	1.34E-21	4.26E-19	7.93E-17	2.36E-16	1.32E-16	n/a	**2.81E-15**
chlorobenzene	108-90-7									n/a	**0.00E+00**
chloroform	67-66-3	2.35E-14	5.82E-19	6.00E-22	2.14E-21	4.75E-19	1.50E-16	3.47E-19	3.57E-17	n/a	**2.37E-14**
chloromethane	74-87-3									n/a	**0.00E+00**
dibromochloromethane	124-48-1	5.07E-14	4.40E-18	2.22E-18	4.47E-17	5.04E-18	8.56E-13	1.61E-12	5.70E-16	n/a	**2.52E-12**
dimethyl phthalate	131-11-3									n/a	**0.00E+00**
di-n-butyl phthalate	84-74-2									n/a	**0.00E+00**
ethane	74-84-0									n/a	**0.00E+00**
ethylbenzene	100-41-4	7.72E-15	4.23E-19	3.77E-22	1.35E-21	5.38E-20	6.40E-17	2.45E-19	2.84E-17	n/a	**7.81E-15**
HD	505-60-2	3.81E-10	1.99E-14	1.51E-16	5.39E-16	2.09E-14	1.11E-11	2.30E-13	3.26E-12	n/a	**3.96E-10**
hexane	110-54-3									n/a	**0.00E+00**
methane	74-82-8									n/a	**0.00E+00**
methylene chloride	75-09-2	6.06E-16	8.33E-20	9.83E-23	3.51E-22	1.44E-19	8.33E-17	4.23E-20	3.13E-18	n/a	**6.93E-16**
propene	115-07-1									n/a	**0.00E+00**
styrene	100-42-5									n/a	**0.00E+00**
tetrachloroethene	127-18-4	2.15E-15	2.15E-17	4.23E-21	1.51E-20	3.06E-18	2.74E-15	4.55E-18	2.75E-15	n/a	**7.66E-15**
toluene	108-88-3									n/a	**0.00E+00**
trichloroethene	79-01-6	5.20E-14	6.25E-18	6.95E-21	2.48E-20	2.80E-18	8.92E-16	4.27E-18	4.29E-16	n/a	**5.33E-14**
vinyl chloride	75-01-4	2.91E-13	6.05E-16	5.78E-20	2.07E-19	6.86E-16	3.47E-14	2.63E-17	1.78E-14	n/a	**3.45E-13**
xylenes	1330-20-7									n/a	**0.00E+00**
3,3',4,4'-TCB (PCB 77)	32598-13-3									n/a	
2,3',4,4',5-PeCB (PCB 118)	31508-00-6									n/a	
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4									n/a	
total coplanar PCBs	NA	1.23E-19	1.88E-21	2.94E-21	7.49E-21	1.28E-23	2.62E-18	4.26E-18	1.68E-17	n/a	**2.38E-17**
ammonia	7664-41-7									n/a	**0.00E+00**
aluminum	7429-90-5									n/a	**0.00E+00**
cadmium	7440-43-9	8.95E-12								n/a	**8.95E-12**
chlorine	7782-50-5									n/a	**0.00E+00**
chromium (3+)	7440-47-3									n/a	**0.00E+00**
chromium (6+)	18540-29-9	1.65E-10	1.65E-17	9.34E-20	6.01E-18	6.00E-17	3.83E-11	1.47E-11	2.06E-15	n/a	**2.18E-10**
copper	7440-50-8									n/a	**0.00E+00**
hydrogen chloride	7647-01-0									n/a	**0.00E+00**
iron	7439-89-6									n/a	**0.00E+00**
lead	7439-92-1	2.47E-13	7.84E-20	6.01E-20	1.17E-17	1.73E-18	9.80E-13	5.62E-14	1.68E-18	n/a	**1.28E-12**
manganese	7439-96-5									n/a	**0.00E+00**
total mercury	NA									n/a	**0.00E+00**
mercuric chloride	7487-94-7									n/a	**0.00E+00**
methyl mercury	22967-92-6									n/a	**0.00E+00**
elemental mercury	7439-97-6									n/a	**0.00E+00**
nickel	7440-02-0	1.93E-12								n/a	**1.93E-12**
vanadium	7440-62-2									n/a	**0.00E+00**
zinc	7440-66-6									n/a	**0.00E+00**
Total Pathway Risk	**All Chemicals**	**7.31E-10**	**6.52E-14**	**7.54E-16**	**1.83E-15**	**4.02E-14**	**6.66E-11**	**1.92E-10**	**5.00E-12**	**0.00E+00**	**9.95E-10**

RISK AND HAZARD BY PATHWAY FOR SUBSISTENCE FARMER EXPOSURE SCENARIOS

NONCARCINOGENIC EFFECTS: Child Subsistence Farmer Exposure Scenario											
COPC	CAS Number	Hazard from Inhalation	Hazard from Dermal Water Contact	Hazard from Dermal Soil Contact	Hazard from Incidental Soil Ingestion	Hazard from Incidental Surface Water Ingestion	Hazard from Ingestion of Produce	Hazard from Ingestion of Terrestrial Animal Products	Hazard from Ingestion of Fish	Hazard from Ingestion of Breast Milk	Total Hazard from Individual Chemical
2-butanone	78-93-3	1.25E-11	4.08E-16	5.75E-16	2.05E-15	2.63E-15	1.07E-10	3.60E-14	9.03E-14	n/a	**1.20E-10**
2-ethyl 1,3-butadiene	3404-63-5									n/a	**0.00E+00**
acetone	67-64-1	3.49E-11	2.82E-16	1.99E-16	7.09E-16	3.43E-15	5.77E-11	3.38E-15	1.18E-13	n/a	**9.28E-11**
benzene	71-43-2	1.05E-05	2.80E-09	1.75E-12	6.26E-12	1.18E-09	3.57E-07	1.03E-09	1.06E-07	n/a	**1.09E-05**
benzyl alcohol	100-51-6		2.27E-12	5.10E-13	2.18E-11	6.18E-12	1.67E-06	2.17E-09	2.11E-11	n/a	**1.67E-06**
bis(2-ethylhexyl)-phthalate	117-81-7		2.81E-11	2.92E-11	5.73E-11	1.44E-12	4.82E-07	8.79E-06	2.81E-09	n/a	**9.28E-06**
bromodichloromethane	75-27-4		2.10E-14	1.52E-15	2.40E-14	2.11E-14	1.46E-09	8.49E-10	1.90E-12	n/a	**2.31E-09**
carbon disulfide	75-15-0	1.92E-10	5.39E-14	3.59E-18	1.28E-17	2.01E-14	1.05E-12	2.22E-15	2.16E-12	n/a	**1.96E-10**
carbon tetrachloride	56-23-5	5.50E-11	6.93E-14	1.44E-17	6.72E-17	2.13E-14	3.97E-12	1.18E-11	6.62E-12	n/a	**7.74E-11**
chlorobenzene	108-90-7	9.68E-11	1.80E-14	4.12E-17	1.29E-16	3.80E-15	6.16E-12	2.20E-11	1.18E-12	n/a	**1.26E-10**
chloroform	67-66-3	2.90E-10	2.63E-14	2.71E-17	9.67E-17	2.15E-14	6.80E-12	1.57E-14	1.61E-12	n/a	**2.99E-10**
chloromethane	74-87-3	1.42E-09	4.27E-14	2.45E-17	8.77E-17	8.34E-14	9.65E-12	5.97E-15	2.86E-12	n/a	**1.43E-09**
dibromochloromethane	124-48-1		3.67E-14	1.86E-14	3.74E-13	4.21E-14	7.16E-09	1.35E-08	4.76E-12	n/a	**2.07E-08**
dimethyl phthalate	131-11-3									n/a	**0.00E+00**
di-n-butyl phthalate	84-74-2		9.69E-12	8.28E-12	8.32E-12	4.09E-13	4.69E-09	2.95E-05	7.99E-09	n/a	**2.95E-05**
ethane	74-84-0									n/a	**0.00E+00**
ethylbenzene	100-41-4	4.20E-12	5.38E-15	4.80E-18	1.72E-17	6.85E-16	8.15E-13	3.12E-15	3.62E-13	n/a	**5.39E-12**
HD	505-60-2	6.35E-05	5.18E-09	3.92E-11	1.40E-10	5.44E-09	2.87E-06	5.96E-08	8.46E-07	n/a	**6.73E-05**
hexane	110-54-3	1.71E-11	3.90E-16	8.38E-21	2.99E-20	1.57E-17	3.08E-16	4.24E-18	3.42E-14	n/a	**1.72E-11**
methane	74-82-8									n/a	**0.00E+00**
methylene chloride	75-09-2	4.82E-11	2.59E-15	3.06E-18	1.09E-17	4.48E-15	2.59E-12	1.32E-15	9.75E-14	n/a	**5.09E-11**
propene	115-07-1	1.05E-07								n/a	**1.05E-07**
styrene	100-42-5	4.72E-11	2.32E-14	1.77E-14	4.36E-14	3.87E-15	1.55E-10	5.62E-09	1.71E-12	n/a	**5.82E-09**
tetrachloroethene	127-18-4	1.43E-10	5.58E-14	1.10E-17	3.92E-17	7.92E-15	7.09E-12	1.18E-14	7.13E-12	n/a	**1.57E-10**
toluene	108-88-3	1.09E-08	5.13E-11	3.82E-14	1.36E-13	1.04E-11	6.76E-09	2.47E-11	2.71E-09	n/a	**2.04E-08**
trichloroethene	79-01-6	1.82E-10	7.29E-13	8.11E-16	2.90E-15	3.27E-13	1.04E-10	4.98E-13	5.01E-11	n/a	**3.38E-10**
vinyl chloride	75-01-4	9.36E-09	3.92E-12	3.75E-16	1.34E-15	4.45E-12	2.25E-10	1.70E-13	1.16E-10	n/a	**9.71E-09**
xylenes	1330-20-7	1.91E-08	1.24E-12	5.99E-15	2.14E-14	1.46E-13	2.61E-10	3.46E-12	8.60E-11	n/a	**1.94E-08**
3,3',4,4'-TCB (PCB 77)	32598-13-3	3.96E-16	9.52E-17	2.16E-16	5.52E-16	8.07E-19	1.09E-13	1.67E-13	1.06E-12	n/a	**1.34E-12**
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	5.08E-16	9.62E-17	2.73E-16	6.97E-16	1.02E-18	1.38E-13	2.10E-13	1.34E-12	n/a	**1.69E-12**
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	2.44E-16	4.62E-17	1.31E-16	3.34E-16	4.89E-19	6.61E-14	1.01E-13	6.42E-13	n/a	**8.10E-13**
total coplanar PCBs	NA									n/a	
ammonia	7664-41-7	2.42E-08								n/a	**2.42E-08**
aluminum	7429-90-5	1.84E-06	2.59E-14	5.95E-17	5.76E-15	1.02E-13	3.11E-14	2.96E-15	3.49E-12	n/a	**1.84E-06**
cadmium	7440-43-9	6.95E-06	1.89E-13	1.74E-15	6.22E-13	1.37E-12	7.78E-07	2.14E-09	1.35E-08	n/a	**7.75E-06**
chlorine	7782-50-5	2.01E-04	1.46E-12	4.25E-14	2.03E-12	4.59E-12	1.13E-07	1.22E-10	1.58E-10	n/a	**2.01E-04**
chromium (3+)	7440-47-3		3.09E-16	1.74E-18	1.12E-16	1.12E-15	7.15E-10	2.74E-10	3.85E-14	n/a	**9.90E-10**
chromium (6+)	18540-29-9	1.92E-06	1.54E-13	8.72E-16	5.61E-14	5.60E-13	3.58E-07	1.37E-07	1.92E-11	n/a	**2.41E-06**
copper	7440-50-8		2.17E-13	3.25E-14	3.79E-12	1.59E-12	1.01E-06	4.34E-07	5.43E-11	n/a	**1.45E-06**
hydrogen chloride	7647-01-0	9.24E-06								n/a	**9.24E-06**
iron	7439-89-6		1.06E-14	8.15E-17	4.23E-14	3.23E-13	2.11E-07	5.63E-08	1.11E-11	n/a	**2.67E-07**
lead	7439-92-1									n/a	**0.00E+00**
manganese	7439-96-5	6.71E-04	2.82E-13	5.53E-15	6.93E-13	2.05E-12	1.34E-06	1.07E-07	7.04E-11	n/a	**6.73E-04**
total mercury	NA									n/a	**0.00E+00**
mercuric chloride	7487-94-7	1.58E-10	6.23E-17	1.03E-14	5.83E-13	0.00E+00	1.20E-10	4.17E-11	0.00E+00	n/a	**3.21E-10**
methyl mercury	22967-92-6		3.66E-18	5.98E-17	3.41E-14	0.00E+00	6.49E-11	4.81E-12	1.77E-08	n/a	**1.78E-08**
elemental mercury	7439-97-6	0.00E+00								n/a	**0.00E+00**
nickel	7440-02-0	1.25E-06	1.53E-14	4.48E-16	2.72E-14	5.56E-14	3.15E-08	8.84E-09	4.71E-11	n/a	**1.29E-06**
vanadium	7440-62-2	3.46E-06	8.24E-14	2.34E-14	3.04E-12	6.04E-13	4.02E-07	1.24E-08	2.06E-11	n/a	**3.88E-06**
zinc	7440-66-6		3.26E-14	9.61E-16	1.84E-13	3.95E-13	2.24E-07	1.80E-09	8.84E-09	n/a	**2.35E-07**
Total Pathway Hazard	**All Chemicals**	**9.71E-04**	**8.08E-09**	**7.91E-11**	**2.45E-10**	**6.65E-09**	**9.88E-06**	**3.91E-05**	**1.01E-06**	**0.00E+00**	**1.02E-03**

RISK AND HAZARD BY PATHWAY FOR SUBSISTENCE FARMER EXPOSURE SCENARIOS

CARCINOGENIC EFFECTS: Infant Subsistence Farmer Exposure Scenario											
COPC	CAS Number	Risk from Inhalation	Risk from Dermal Water Contact	Risk from Dermal Soil Contact	Risk from Incidental Soil Ingestion	Risk from Incidental Surface Water Ingestion	Risk from Ingestion of Produce	Risk from Ingestion of Terrestrial Animal Products	Risk from Ingestion of Fish	Risk from Ingestion of Breast Milk	Total Risk from Individual Chemical
2-butanone	78-93-3		n/a			n/a					**0.00E+00**
2-ethyl 1,3-butadiene	3404-63-5		n/a			n/a					**0.00E+00**
acetone	67-64-1		n/a			n/a					**0.00E+00**
benzene	71-43-2	1.95E-11	n/a	7.75E-18	2.95E-17	n/a	1.36E-12	9.55E-15	4.98E-13	1.20E-10	**1.42E-10**
benzyl alcohol	100-51-6		n/a			n/a					**0.00E+00**
bis(2-ethylhexyl)-phthalate	117-81-7	3.25E-14	n/a	1.61E-16	3.38E-16	n/a	2.45E-12	1.22E-10	1.68E-14		**1.24E-10**
bromodichloromethane	75-27-4	6.39E-15	n/a	3.79E-20	6.38E-19	n/a	3.15E-14	1.28E-14	5.04E-17		**5.07E-14**
carbon disulfide	75-15-0		n/a			n/a					**0.00E+00**
carbon tetrachloride	56-23-5	2.65E-16	n/a	8.08E-23	4.03E-22	n/a	1.97E-17	1.43E-16	3.97E-17		**4.68E-16**
chlorobenzene	108-90-7		n/a			n/a					**0.00E+00**
chloroform	67-66-3	2.65E-15	n/a	1.69E-22	6.42E-22	n/a	3.66E-17	2.04E-19	1.07E-17	3.07E-15	**5.76E-15**
chloromethane	74-87-3		n/a			n/a					**0.00E+00**
dibromochloromethane	124-48-1	5.70E-15	n/a	6.26E-19	1.34E-17	n/a	1.95E-13	2.74E-13	1.71E-16		**4.75E-13**
dimethyl phthalate	131-11-3		n/a			n/a					**0.00E+00**
di-n-butyl phthalate	84-74-2		n/a			n/a					**0.00E+00**
ethane	74-84-0		n/a			n/a					**0.00E+00**
ethylbenzene	100-41-4	8.68E-16	n/a	1.06E-22	4.04E-22	n/a	1.60E-17	1.44E-19	8.53E-18	3.59E-16	**1.25E-15**
HD	505-60-2	4.29E-11	n/a	4.24E-17	1.62E-16	n/a	2.60E-12	1.36E-13	9.77E-13		**4.66E-11**
hexane	110-54-3		n/a			n/a					**0.00E+00**
methane	74-82-8		n/a			n/a					**0.00E+00**
methylene chloride	75-09-2	6.82E-17	n/a	2.76E-23	1.05E-22	n/a	2.05E-17	2.48E-20	9.40E-19	9.82E-16	**1.07E-15**
propene	115-07-1		n/a			n/a					**0.00E+00**
styrene	100-42-5		n/a			n/a					**0.00E+00**
tetrachloroethene	127-18-4	2.42E-16	n/a	1.19E-21	4.53E-21	n/a	6.90E-16	2.69E-18	8.25E-16	2.07E-14	**2.25E-14**
toluene	108-88-3		n/a			n/a					**0.00E+00**
trichloroethene	79-01-6	5.85E-15	n/a	1.96E-21	7.45E-21	n/a	2.16E-16	2.51E-18	1.29E-16	1.78E-14	**2.40E-14**
vinyl chloride	75-01-4	3.27E-14	n/a	1.63E-20	6.20E-20	n/a	8.48E-15	1.55E-17	5.35E-15		**4.66E-14**
xylenes	1330-20-7		n/a			n/a					**0.00E+00**
3,3',4,4'-TCB (PCB 77)	32598-13-3		n/a			n/a					
2,3',4,4',5-PeCB (PCB 118)	31508-00-6		n/a			n/a					
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4		n/a			n/a					
total coplanar PCBs	NA	1.38E-20	n/a	8.26E-22	2.25E-21	n/a	6.56E-19	2.55E-18	5.03E-18	2.44E-11	**2.44E-11**
ammonia	7664-41-7		n/a			n/a					**0.00E+00**
aluminum	7429-90-5		n/a			n/a					**0.00E+00**
cadmium	7440-43-9	1.01E-12	n/a			n/a					**1.01E-12**
chlorine	7782-50-5		n/a			n/a					**0.00E+00**
chromium (3+)	7440-47-3		n/a			n/a					**0.00E+00**
chromium (6+)	18540-29-9	1.85E-11	n/a	2.63E-20	1.80E-18	n/a	9.78E-12	9.17E-12	6.19E-16	1.52E-11	**5.27E-11**
copper	7440-50-8		n/a			n/a					**0.00E+00**
hydrogen chloride	7647-01-0		n/a			n/a					**0.00E+00**
iron	7439-89-6		n/a			n/a					**0.00E+00**
lead	7439-92-1	2.78E-14	n/a	1.69E-20	3.50E-18	n/a	2.50E-13	3.79E-14	5.03E-19	2.97E-13	**6.13E-13**
manganese	7439-96-5		n/a			n/a					**0.00E+00**
total mercury	NA		n/a			n/a					**0.00E+00**
mercuric chloride	7487-94-7		n/a			n/a					**0.00E+00**
methyl mercury	22967-92-6		n/a			n/a					**0.00E+00**
elemental mercury	7439-97-6		n/a			n/a					**0.00E+00**
nickel	7440-02-0	2.18E-13	n/a			n/a					**2.18E-13**
vanadium	7440-62-2		n/a			n/a					**0.00E+00**
zinc	7440-66-6		n/a			n/a					**0.00E+00**
Total Pathway Risk	**All Chemicals**	**8.23E-11**	**0.00E+00**	**2.12E-16**	**5.48E-16**	**0.00E+00**	**1.67E-11**	**1.31E-10**	**1.50E-12**	**1.60E-10**	**3.92E-10**

RISK AND HAZARD BY PATHWAY FOR SUBSISTENCE FARMER EXPOSURE SCENARIOS

NONCARCINOGENIC EFFECTS: Infant Subsistence Farmer Exposure Scenario											
COPC	CAS Number	Hazard from Inhalation	Hazard from Dermal Water Contact	Hazard from Dermal Soil Contact	Hazard from Incidental Soil Ingestion	Hazard from Incidental Surface Water Ingestion	Hazard from Ingestion of Produce	Hazard from Ingestion of Terrestrial Animal Products	Hazard from Ingestion of Fish	Hazard from Ingestion of Breast Milk	Total Hazard from Individual Chemical
2-butanone	78-93-3	7.06E-12	n/a	8.09E-16	3.08E-15	n/a	1.15E-10	1.06E-13	1.35E-13	2.29E-10	**3.51E-10**
2-ethyl 1,3-butadiene	3404-63-5		n/a			n/a					**0.00E+00**
acetone	67-64-1	1.96E-11	n/a	2.79E-16	1.06E-15	n/a	6.57E-11	9.95E-15	1.77E-13	1.71E-10	**2.57E-10**
benzene	71-43-2	5.88E-06	n/a	2.47E-12	9.40E-12	n/a	4.33E-07	3.04E-09	1.58E-07	3.83E-05	**4.48E-05**
benzyl alcohol	100-51-6		n/a	7.17E-13	3.26E-11	n/a	1.89E-06	6.39E-09	3.16E-11		**1.90E-06**
bis(2-ethylhexyl)-phthalate	117-81-7		n/a	4.10E-11	8.60E-11	n/a	6.12E-07	3.04E-05	4.21E-09		**3.10E-05**
bromodichloromethane	75-27-4		n/a	2.14E-15	3.60E-14	n/a	1.78E-09	7.21E-10	2.85E-12		**2.50E-09**
carbon disulfide	75-15-0	1.08E-10	n/a	5.06E-18	1.93E-17	n/a	1.30E-12	6.53E-15	3.23E-12	6.45E-10	**7.57E-10**
carbon tetrachloride	56-23-5	3.09E-11	n/a	2.02E-17	1.01E-16	n/a	4.93E-12	3.58E-11	9.94E-12		**8.16E-11**
chlorobenzene	108-90-7	5.44E-11	n/a	5.80E-17	1.93E-16	n/a	7.63E-12	6.68E-11	1.77E-12		**1.31E-10**
chloroform	67-66-3	1.63E-10	n/a	3.81E-17	1.45E-16	n/a	8.27E-12	4.61E-14	2.42E-12	6.93E-10	**8.67E-10**
chloromethane	74-87-3	7.98E-10	n/a	3.45E-17	1.31E-16	n/a	1.13E-11	1.75E-14	4.30E-12	2.38E-09	**3.19E-09**
dibromochloromethane	124-48-1		n/a	2.62E-14	5.61E-13	n/a	8.13E-09	1.15E-08	7.13E-12		**1.96E-08**
dimethyl phthalate	131-11-3		n/a			n/a					**0.00E+00**
di-n-butyl phthalate	84-74-2		n/a	1.16E-11	1.25E-11	n/a	5.19E-09	1.02E-04	1.20E-08		**1.02E-04**
ethane	74-84-0		n/a			n/a					**0.00E+00**
ethylbenzene	100-41-4	2.36E-12	n/a	6.76E-18	2.57E-17	n/a	1.02E-12	9.15E-15	5.43E-13	2.28E-11	**2.68E-11**
HD	505-60-2	3.57E-05	n/a	5.51E-11	2.10E-10	n/a	3.38E-06	1.77E-07	1.27E-06		**4.06E-05**
hexane	110-54-3	9.63E-12	n/a	1.18E-20	4.49E-20	n/a	3.81E-16	1.23E-17	5.13E-14	5.83E-13	**1.03E-11**
methane	74-82-8		n/a			n/a					**0.00E+00**
methylene chloride	75-09-2	2.71E-11	n/a	4.30E-18	1.64E-17	n/a	3.18E-12	3.86E-15	1.46E-13	1.53E-10	**1.83E-10**
propene	115-07-1	5.88E-08	n/a			n/a					**5.88E-08**
styrene	100-42-5	2.65E-11	n/a	2.50E-14	6.55E-14	n/a	1.58E-10	1.93E-08	2.57E-12	7.04E-09	**2.65E-08**
tetrachloroethene	127-18-4	8.05E-11	n/a	1.54E-17	5.88E-17	n/a	8.94E-12	3.49E-14	1.07E-11	2.68E-10	**3.69E-10**
toluene	108-88-3	6.12E-09	n/a	5.37E-14	2.05E-13	n/a	8.36E-09	7.26E-11	4.06E-09	3.37E-07	**3.55E-07**
trichloroethene	79-01-6	1.02E-10	n/a	1.14E-15	4.35E-15	n/a	1.26E-10	1.46E-12	7.51E-11	1.04E-08	**1.07E-08**
vinyl chloride	75-01-4	5.27E-09	n/a	5.27E-16	2.01E-15	n/a	2.75E-10	5.01E-13	1.73E-10		**5.71E-09**
xylenes	1330-20-7	1.07E-08	n/a	8.42E-15	3.21E-14	n/a	3.15E-10	1.01E-11	1.29E-10	5.34E-09	**1.65E-08**
3,3',4,4'-TCB (PCB 77)	32598-13-3	2.23E-16	n/a	3.04E-16	8.28E-16	n/a	1.34E-13	4.95E-13	1.59E-12	1.83E-10	**1.86E-10**
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	2.86E-16	n/a	3.84E-16	1.05E-15	n/a	1.70E-13	6.25E-13	2.01E-12	2.31E-10	**2.34E-10**
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	1.37E-16	n/a	1.84E-16	5.02E-16	n/a	8.14E-14	3.00E-13	9.63E-13	1.11E-10	**1.12E-10**
total coplanar PCBs	NA		n/a			n/a					
ammonia	7664-41-7	1.36E-08	n/a			n/a					**1.36E-08**
aluminum	7429-90-5	1.04E-06	n/a	8.37E-17	8.64E-15	n/a	3.18E-14	7.29E-15	5.24E-12	4.37E-09	**1.04E-06**
cadmium	7440-43-9	3.91E-06	n/a	2.45E-15	9.32E-13	n/a	9.93E-07	4.77E-09	2.03E-08	1.15E-06	**6.08E-06**
chlorine	7782-50-5	1.13E-04	n/a	5.98E-14	3.04E-12	n/a	1.22E-07	3.59E-10	2.37E-10	3.34E-07	**1.14E-04**
chromium (3+)	7440-47-3		n/a	2.45E-18	1.68E-16	n/a	9.13E-10	8.56E-10	5.77E-14	1.42E-09	**3.19E-09**
chromium (6+)	18540-29-9	1.08E-06	n/a	1.23E-15	8.42E-14	n/a	4.57E-07	4.28E-07	2.89E-11	7.12E-07	**2.68E-06**
copper	7440-50-8		n/a	4.57E-14	5.68E-12	n/a	1.29E-06	1.25E-06	8.15E-11	2.15E-06	**4.69E-06**
hydrogen chloride	7647-01-0	5.20E-06	n/a			n/a					**5.20E-06**
iron	7439-89-6		n/a	1.15E-16	6.35E-14	n/a	2.69E-07	8.01E-08	1.67E-11	4.52E-07	**8.01E-07**
lead	7439-92-1		n/a			n/a					**0.00E+00**
manganese	7439-96-5	3.78E-04	n/a	7.78E-15	1.04E-12	n/a	1.71E-06	3.63E-07	1.06E-10	2.07E-06	**3.82E-04**
total mercury	NA		n/a			n/a					**0.00E+00**
mercuric chloride	7487-94-7	8.90E-11	n/a	1.45E-14	8.74E-13	n/a	1.43E-10	1.35E-10	0.00E+00	2.43E-10	**6.10E-10**
methyl mercury	22967-92-6		n/a	8.41E-17	5.11E-14	n/a	8.16E-11	1.56E-11	2.66E-08	3.38E-08	**6.04E-08**
elemental mercury	7439-97-6	0.00E+00	n/a			n/a					**0.00E+00**
nickel	7440-02-0	7.06E-07	n/a	6.30E-16	4.08E-14	n/a	4.02E-08	2.58E-08	7.07E-11	5.94E-08	**8.31E-07**
vanadium	7440-62-2	1.95E-06	n/a	3.29E-14	4.56E-12	n/a	5.14E-07	1.57E-08	3.08E-11	6.15E-07	**3.09E-06**
zinc	7440-66-6		n/a	1.35E-15	2.76E-13	n/a	2.86E-07	5.74E-09	1.33E-08	3.42E-07	**6.47E-07**
Total Pathway Hazard	**All Chemicals**	**5.46E-04**	**0.00E+00**	**1.11E-10**	**3.68E-10**	**0.00E+00**	**1.20E-05**	**1.35E-04**	**1.51E-06**	**4.66E-05**	**7.41E-04**

RISK AND HAZARD BY PATHWAY FOR SUBSISTENCE FARMER EXPOSURE SCENARIOS

CARCINOGENIC EFFECTS: Early Life Exposure - Infant											
COPC	CAS Number	Risk from Inhalation	Risk from Dermal Water Contact	Risk from Dermal Soil Contact	Risk from Incidental Soil Ingestion	Risk from Incidental Surface Water Ingestion	Risk from Ingestion of Produce	Risk from Ingestion of Terrestrial Animal Products	Risk from Ingestion of Fish	Risk from Ingestion of Breast Milk	Total Risk from Individual Chemical
vinyl chloride	75-01-4	2.29E-12	n/a	1.14E-18	4.34E-18	n/a	5.93E-13	1.08E-15	3.74E-13	n/a	**3.26E-12**

CARCINOGENIC EFFECTS: Early Life Exposure - Child											
COPC	CAS Number	Risk from Inhalation	Risk from Dermal Water Contact	Risk from Dermal Soil Contact	Risk from Incidental Soil Ingestion	Risk from Incidental Surface Water Ingestion	Risk from Ingestion of Produce	Risk from Ingestion of Terrestrial Animal Products	Risk from Ingestion of Fish	Risk from Ingestion of Breast Milk	Total Risk from Individual Chemical
vinyl chloride	75-01-4	4.07E-12	8.47E-15	8.10E-19	2.89E-18	9.61E-15	4.86E-13	3.68E-16	2.50E-13	n/a	**4.83E-12**

RISK AND HAZARD BY PATHWAY FOR THE ADULT WORKER EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Adult Worker Exposure Scenario											
COPC	CAS Number	Risk from Inhalation	Risk from Dermal Water Contact	Risk from Dermal Soil Contact	Risk from Incidental Soil Ingestion	Risk from Incidental Surface Water Ingestion	Risk from Ingestion of Produce	Risk from Ingestion of Terrestrial Animal Products	Risk from Ingestion of Fish	Risk from Ingestion of Breast Milk	Total Risk from Individual Chemical
2-butanone	78-93-3		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
2-ethyl 1,3-butadiene	3404-63-5		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
acetone	67-64-1		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
benzene	71-43-2	1.47E-11	n/a	4.97E-18	3.77E-18	n/a	n/a	n/a	n/a	n/a	**1.48E-11**
benzyl alcohol	100-51-6		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
bis(2-ethylhexyl)-phthalate	117-81-7	2.45E-14	n/a	1.05E-16	4.39E-17	n/a	n/a	n/a	n/a	n/a	**2.47E-14**
bromodichloromethane	75-27-4	4.83E-15	n/a	2.43E-20	8.14E-20	n/a	n/a	n/a	n/a	n/a	**4.83E-15**
carbon disulfide	75-15-0		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
carbon tetrachloride	56-23-5	2.00E-16	n/a	5.18E-23	5.15E-23	n/a	n/a	n/a	n/a	n/a	**2.00E-16**
chlorobenzene	108-90-7		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
chloroform	67-66-3	2.00E-15	n/a	1.08E-22	8.19E-23	n/a	n/a	n/a	n/a	n/a	**2.00E-15**
chloromethane	74-87-3		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
dibromochloromethane	124-48-1	4.31E-15	n/a	4.03E-19	1.72E-18	n/a	n/a	n/a	n/a	n/a	**4.31E-15**
dimethyl phthalate	131-11-3		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
di-n-butyl phthalate	84-74-2		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
ethane	74-84-0		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
ethylbenzene	100-41-4	6.56E-16	n/a	6.81E-23	5.16E-23	n/a	n/a	n/a	n/a	n/a	**6.56E-16**
HD	505-60-2	3.24E-11	n/a	2.72E-17	2.06E-17	n/a	n/a	n/a	n/a	n/a	**3.24E-11**
hexane	110-54-3		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
methane	74-82-8		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
methylene chloride	75-09-2	5.15E-17	n/a	1.77E-23	1.34E-23	n/a	n/a	n/a	n/a	n/a	**5.15E-17**
propene	115-07-1		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
styrene	100-42-5		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
tetrachloroethene	127-18-4	1.83E-16	n/a	7.63E-22	5.78E-22	n/a	n/a	n/a	n/a	n/a	**1.83E-16**
toluene	108-88-3		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
trichloroethene	79-01-6	4.42E-15	n/a	1.25E-21	9.50E-22	n/a	n/a	n/a	n/a	n/a	**4.42E-15**
vinyl chloride	75-01-4	2.47E-14	n/a	1.04E-20	7.90E-21	n/a	n/a	n/a	n/a	n/a	**2.47E-14**
xylenes	1330-20-7		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
3,3',4,4'-TCB (PCB 77)	32598-13-3		n/a			n/a	n/a	n/a	n/a	n/a	
2,3',4,4',5-PeCB (PCB 118)	31508-00-6		n/a			n/a	n/a	n/a	n/a	n/a	
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4		n/a			n/a	n/a	n/a	n/a	n/a	
total coplanar PCBs	NA	1.04E-20	n/a	3.62E-21	1.96E-21	n/a	n/a	n/a	n/a	n/a	**1.60E-20**
ammonia	7664-41-7		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
aluminum	7429-90-5		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
cadmium	7440-43-9	7.61E-13	n/a			n/a	n/a	n/a	n/a	n/a	**7.61E-13**
chlorine	7782-50-5		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
chromium (3+)	7440-47-3		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
chromium (6+)	18540-29-9	1.40E-11	n/a	1.68E-20	2.30E-19	n/a	n/a	n/a	n/a	n/a	**1.40E-11**
copper	7440-50-8		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
hydrogen chloride	7647-01-0		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
iron	7439-89-6		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
lead	7439-92-1	2.10E-14	n/a	1.09E-20	4.47E-19	n/a	n/a	n/a	n/a	n/a	**2.10E-14**
manganese	7439-96-5		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
total mercury	NA		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
mercuric chloride	7487-94-7		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
methyl mercury	22967-92-6		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
elemental mercury	7439-97-6		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
nickel	7440-02-0	1.64E-13	n/a			n/a	n/a	n/a	n/a	n/a	**1.64E-13**
vanadium	7440-62-2		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
zinc	7440-66-6		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
Total Pathway Risk	**All Chemicals**	**6.22E-11**	**0.00E+00**	**1.38E-16**	**7.07E-17**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**6.22E-11**

RISK AND HAZARD BY PATHWAY FOR THE ADULT WORKER EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS: Adult Worker Exposure Scenario											
COPC	CAS Number	Hazard from Inhalation	Hazard from Dermal Water Contact	Hazard from Dermal Soil Contact	Hazard from Incidental Soil Ingestion	Hazard from Incidental Surface Water Ingestion	Hazard from Ingestion of Produce	Hazard from Ingestion of Terrestrial Animal Products	Hazard from Ingestion of Fish	Hazard from Ingestion of Breast Milk	Total Hazard from Individual Chemical
2-butanone	78-93-3	1.07E-12	n/a	1.25E-16	9.43E-17	n/a	n/a	n/a	n/a	n/a	**1.07E-12**
2-ethyl 1,3-butadiene	3404-63-5		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
acetone	67-64-1	2.97E-12	n/a	4.30E-17	3.26E-17	n/a	n/a	n/a	n/a	n/a	**2.97E-12**
benzene	71-43-2	8.89E-07	n/a	3.80E-13	2.88E-13	n/a	n/a	n/a	n/a	n/a	**8.89E-07**
benzyl alcohol	100-51-6		n/a	1.10E-13	9.99E-13	n/a	n/a	n/a	n/a	n/a	**1.11E-12**
bis(2-ethylhexyl)-phthalate	117-81-7		n/a	6.32E-12	2.63E-12	n/a	n/a	n/a	n/a	n/a	**8.95E-12**
bromodichloromethane	75-27-4		n/a	3.30E-16	1.10E-15	n/a	n/a	n/a	n/a	n/a	**1.43E-15**
carbon disulfide	75-15-0	1.64E-11	n/a	7.78E-19	5.90E-19	n/a	n/a	n/a	n/a	n/a	**1.64E-11**
carbon tetrachloride	56-23-5	4.67E-12	n/a	3.11E-18	3.09E-18	n/a	n/a	n/a	n/a	n/a	**4.67E-12**
chlorobenzene	108-90-7	8.23E-12	n/a	8.92E-18	5.92E-18	n/a	n/a	n/a	n/a	n/a	**8.23E-12**
chloroform	67-66-3	2.47E-11	n/a	5.86E-18	4.44E-18	n/a	n/a	n/a	n/a	n/a	**2.47E-11**
chloromethane	74-87-3	1.21E-10	n/a	5.31E-18	4.03E-18	n/a	n/a	n/a	n/a	n/a	**1.21E-10**
dibromochloromethane	124-48-1		n/a	4.03E-15	1.72E-14	n/a	n/a	n/a	n/a	n/a	**2.12E-14**
dimethyl phthalate	131-11-3		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
di-n-butyl phthalate	84-74-2		n/a	1.79E-12	3.82E-13	n/a	n/a	n/a	n/a	n/a	**2.17E-12**
ethane	74-84-0		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
ethylbenzene	100-41-4	3.57E-13	n/a	1.04E-18	7.88E-19	n/a	n/a	n/a	n/a	n/a	**3.57E-13**
HD	505-60-2	5.40E-06	n/a	8.48E-12	6.43E-12	n/a	n/a	n/a	n/a	n/a	**5.40E-06**
hexane	110-54-3	1.46E-12	n/a	1.81E-21	1.37E-21	n/a	n/a	n/a	n/a	n/a	**1.46E-12**
methane	74-82-8		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
methylene chloride	75-09-2	4.10E-12	n/a	6.62E-19	5.01E-19	n/a	n/a	n/a	n/a	n/a	**4.10E-12**
propene	115-07-1	8.89E-09	n/a			n/a	n/a	n/a	n/a	n/a	**8.89E-09**
styrene	100-42-5	4.01E-12	n/a	3.84E-15	2.00E-15	n/a	n/a	n/a	n/a	n/a	**4.02E-12**
tetrachloroethene	127-18-4	1.22E-11	n/a	2.38E-18	1.80E-18	n/a	n/a	n/a	n/a	n/a	**1.22E-11**
toluene	108-88-3	9.25E-10	n/a	8.27E-15	6.27E-15	n/a	n/a	n/a	n/a	n/a	**9.25E-10**
trichloroethene	79-01-6	1.55E-11	n/a	1.76E-16	1.33E-16	n/a	n/a	n/a	n/a	n/a	**1.55E-11**
vinyl chloride	75-01-4	7.96E-10	n/a	8.11E-17	6.15E-17	n/a	n/a	n/a	n/a	n/a	**7.96E-10**
xylenes	1330-20-7	1.62E-09	n/a	1.30E-15	9.82E-16	n/a	n/a	n/a	n/a	n/a	**1.62E-09**
3,3',4,4'-TCB (PCB 77)	32598-13-3	3.37E-17	n/a	4.68E-17	2.53E-17	n/a	n/a	n/a	n/a	n/a	**1.06E-16**
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	4.32E-17	n/a	5.91E-17	3.20E-17	n/a	n/a	n/a	n/a	n/a	**1.34E-16**
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	2.07E-17	n/a	2.84E-17	1.54E-17	n/a	n/a	n/a	n/a	n/a	**6.45E-17**
total coplanar PCBs	NA		n/a			n/a	n/a	n/a	n/a	n/a	
ammonia	7664-41-7	2.06E-09	n/a			n/a	n/a	n/a	n/a	n/a	**2.06E-09**
aluminum	7429-90-5	1.56E-07	n/a	1.29E-17	2.64E-16	n/a	n/a	n/a	n/a	n/a	**1.56E-07**
cadmium	7440-43-9	5.91E-07	n/a	3.77E-16	2.85E-14	n/a	n/a	n/a	n/a	n/a	**5.91E-07**
chlorine	7782-50-5	1.71E-05	n/a	9.21E-15	9.32E-14	n/a	n/a	n/a	n/a	n/a	**1.71E-05**
chromium (3+)	7440-47-3		n/a	3.77E-19	5.15E-18	n/a	n/a	n/a	n/a	n/a	**5.53E-18**
chromium (6+)	18540-29-9	1.63E-07	n/a	1.89E-16	2.58E-15	n/a	n/a	n/a	n/a	n/a	**1.63E-07**
copper	7440-50-8		n/a	7.03E-15	1.74E-13	n/a	n/a	n/a	n/a	n/a	**1.81E-13**
hydrogen chloride	7647-01-0	7.85E-07	n/a			n/a	n/a	n/a	n/a	n/a	**7.85E-07**
iron	7439-89-6		n/a	1.76E-17	1.94E-15	n/a	n/a	n/a	n/a	n/a	**1.96E-15**
lead	7439-92-1		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
manganese	7439-96-5	5.71E-05	n/a	1.20E-15	3.18E-14	n/a	n/a	n/a	n/a	n/a	**5.71E-05**
total mercury	NA		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
mercuric chloride	7487-94-7	1.35E-11	n/a	2.24E-15	2.68E-14	n/a	n/a	n/a	n/a	n/a	**1.35E-11**
methyl mercury	22967-92-6		n/a	1.29E-17	1.56E-15	n/a	n/a	n/a	n/a	n/a	**1.58E-15**
elemental mercury	7439-97-6	0.00E+00	n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
nickel	7440-02-0	1.07E-07	n/a	9.71E-17	1.25E-15	n/a	n/a	n/a	n/a	n/a	**1.07E-07**
vanadium	7440-62-2	2.95E-07	n/a	5.06E-15	1.40E-13	n/a	n/a	n/a	n/a	n/a	**2.95E-07**
zinc	7440-66-6		n/a	2.08E-16	8.45E-15	n/a	n/a	n/a	n/a	n/a	**8.66E-15**
Total Pathway Hazard	**All Chemicals**	**8.26E-05**	**0.00E+00**	**1.71E-11**	**1.13E-11**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**8.26E-05**

COPC UPTAKE

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Adult Resident Exposure Scenario														
COPC	CAS Number	Incidental Ingestion of Soil (mg/day)[a]	Ingestion of Exposed Produce (mg/day)[a]	Ingestion of Protected Produce (mg/day)[a]	Ingestion of Belowground Produce (mg/day)[a]	Ingestion of Beef (mg/day)[a]	Ingestion of Pork (mg/day)[a]	Ingestion of Poultry (mg/day)[a]	Ingestion of Eggs (mg/day)[a]	Ingestion of Milk (mg/day)[a]	Ingestion of Fish (mg/day)[a]	Incidental Ingestion of Surface Water (mg/day)[a]	Ingestion of Breast Milk (mg/day)[a]	Total Daily COPC Ingestion (mg/day)[a]
2-butanone	78-93-3	1.61E-15	3.99E-11	3.15E-11	4.19E-11	1.09E-14	2.60E-15	1.20E-16	4.82E-17	2.03E-14	1.51E-12	2.30E-14	n/a	**1.15E-10**
2-ethyl 1,3-butadiene	3404-63-5	1.62E-16	4.25E-13	2.46E-13	3.03E-12	1.31E-14	2.64E-15	1.21E-16	4.86E-17	2.31E-14	6.22E-10	6.49E-13	n/a	**6.26E-10**
acetone	67-64-1	8.32E-16	2.07E-11	1.63E-11	6.97E-11	1.54E-15	3.66E-16	1.69E-17	6.78E-18	2.86E-15	3.06E-12	4.67E-14	n/a	**1.10E-10**
benzene	71-43-2	3.27E-14	2.79E-10	1.81E-10	2.95E-09	2.42E-12	5.07E-13	2.29E-14	9.20E-15	4.38E-12	1.26E-08	7.35E-11	n/a	**1.61E-08**
benzyl alcohol	100-51-6	2.84E-12	7.05E-08	5.56E-08	2.12E-07	1.10E-10	2.61E-11	1.20E-12	4.84E-13	2.04E-10	1.11E-11	1.71E-12	n/a	**3.38E-07**
bis(2-ethylhexyl)-phthalate	117-81-7	1.49E-12	8.05E-08	1.53E-10	1.44E-14	7.54E-08	1.95E-09	7.67E-11	3.09E-11	1.23E-06	1.56E-09	4.19E-13	n/a	**1.39E-06**
bromodichloromethane	75-27-4	6.26E-16	4.41E-12	3.47E-12	6.18E-11	3.93E-11	9.44E-12	4.40E-13	1.77E-13	7.25E-14	9.48E-13	5.53E-15	n/a	**1.20E-10**
carbon disulfide	75-15-0	1.67E-18	1.53E-14	8.11E-15	2.39E-13	1.50E-16	2.75E-17	1.20E-18	4.82E-19	2.68E-16	6.44E-12	3.15E-14	n/a	**6.74E-12**
carbon tetrachloride	56-23-5	3.51E-19	1.87E-15	7.65E-16	3.76E-14	4.02E-14	6.32E-16	2.66E-16	1.07E-16	6.99E-14	7.92E-13	1.33E-15	n/a	**9.44E-13**
chlorobenzene	108-90-7	3.36E-18	1.57E-14	7.33E-15	2.87E-13	3.42E-13	5.88E-15	2.54E-15	1.02E-15	6.00E-13	7.04E-13	1.19E-15	n/a	**1.97E-12**
chloroform	67-66-3	1.26E-18	1.28E-14	7.96E-15	1.43E-13	9.41E-17	1.92E-17	8.61E-19	3.46E-19	1.70E-16	4.82E-13	3.35E-15	n/a	**6.49E-13**
chloromethane	74-87-3	2.97E-18	7.45E-14	5.83E-14	4.17E-13	7.90E-17	1.87E-17	8.60E-19	3.47E-19	1.46E-16	2.23E-12	3.39E-14	n/a	**2.81E-12**
dibromochloromethane	124-48-1	9.75E-15	5.75E-11	4.54E-11	1.90E-10	6.24E-10	1.50E-10	7.02E-12	2.83E-12	1.15E-12	1.72E-12	7.94E-15	n/a	**1.08E-09**
dimethyl phthalate	131-11-3	1.35E-13	2.45E-09	1.53E-09	4.47E-09	8.71E-09	1.77E-09	7.87E-11	3.17E-14	1.58E-11	2.59E-11	3.93E-13	n/a	**1.91E-08**
di-n-butyl phthalate	84-74-2	1.08E-12	1.78E-09	1.88E-10	2.27E-12	1.25E-06	5.25E-08	6.08E-13	2.44E-11	2.04E-05	2.30E-08	6.16E-13	n/a	**2.17E-05**
ethane	74-84-0	1.79E-15	1.95E-11	1.45E-11	7.59E-11	1.09E-13	2.50E-14	1.15E-15	4.63E-16	2.00E-13	2.33E-08	2.27E-10	n/a	**2.36E-08**
ethylbenzene	100-41-4	2.24E-18	9.71E-15	3.27E-15	1.96E-13	2.88E-16	4.10E-17	1.67E-18	6.72E-19	4.96E-16	1.08E-12	1.07E-15	n/a	**1.29E-12**
HD	505-60-2	1.28E-15	8.25E-11	4.69E-12	1.03E-11	9.77E-13	5.72E-14	9.48E-16	3.81E-16	1.62E-12	1.77E-10	5.96E-13	n/a	**2.78E-10**
hexane	110-54-3	4.29E-19	7.67E-16	2.21E-16	7.72E-15	4.72E-17	6.75E-18	2.88E-19	1.16E-19	7.87E-17	1.12E-11	2.70E-15	n/a	**1.13E-11**
methane	74-82-8	5.48E-15	1.51E-10	1.16E-10	5.62E-10	2.29E-13	1.94E-15	8.92E-17	3.58E-17	1.53E-14	1.25E-07	4.35E-09	n/a	**1.30E-07**
methylene chloride	75-09-2	8.54E-19	1.84E-14	1.37E-14	3.47E-13	4.17E-17	9.53E-18	4.36E-19	1.76E-19	7.67E-17	1.75E-13	4.21E-15	n/a	**5.58E-13**
propene	115-07-1	1.31E-15	1.49E-11	1.12E-11	5.74E-11	7.77E-14	1.80E-14	8.31E-16	3.34E-16	1.43E-13	5.79E-09	6.06E-11	n/a	**5.93E-09**
styrene	100-42-5	1.14E-14	2.42E-11	1.90E-11	5.07E-12	7.24E-11	1.79E-11	8.56E-12	3.44E-12	1.31E-09	1.01E-11	1.19E-14	n/a	**1.47E-09**
tetrachloroethene	127-18-4	5.11E-19	6.63E-15	5.02E-16	1.79E-13	2.46E-16	1.65E-17	3.69E-19	1.49E-19	4.06E-16	2.13E-12	1.24E-15	n/a	**2.32E-12**
toluene	108-88-3	1.42E-14	7.63E-11	3.56E-11	1.24E-09	1.46E-12	2.51E-13	1.08E-14	4.35E-15	2.57E-12	6.47E-09	1.30E-11	n/a	**7.84E-09**
trichloroethene	79-01-6	1.13E-18	6.52E-15	4.22E-15	6.35E-14	8.75E-17	1.85E-17	8.40E-19	3.37E-19	1.58E-16	4.48E-13	1.53E-15	n/a	**5.24E-13**
vinyl chloride	75-01-4	5.24E-18	9.89E-14	7.36E-14	1.45E-12	2.68E-16	6.19E-17	2.82E-18	1.14E-18	4.97E-16	1.04E-11	2.09E-13	n/a	**1.22E-11**
xylenes	1330-20-7	5.57E-15	1.30E-11	7.54E-12	1.04E-10	4.42E-13	9.00E-14	4.15E-15	1.67E-15	7.78E-13	5.14E-10	4.57E-13	n/a	**6.40E-10**
3,3',4,4'-TCB (PCB 77)	32598-13-3												n/a	
2,3',4,4',5-PeCB (PCB 118)	31508-00-6												n/a	
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4												n/a	
total coplanar PCBs	NA	8.21E-24	2.32E-21	1.30E-22	8.89E-23	1.67E-21	7.99E-23	2.49E-24	1.00E-24	2.66E-21	6.55E-20	2.61E-26	n/a	**7.25E-20**
ammonia	7664-41-7	3.80E-15	3.21E-10	2.53E-10	1.68E-09	7.58E-14	1.80E-14	8.28E-16	3.34E-16	1.41E-13	1.20E-10	1.83E-12	n/a	**2.37E-09**
aluminum	7429-90-5	7.51E-15	2.40E-14	1.90E-14	5.50E-15	3.76E-15	0.00E+00	0.00E+00	0.00E+00	2.12E-15	1.04E-10	1.59E-12	n/a	**1.06E-10**
cadmium	7440-43-9	4.05E-16	3.32E-09	1.18E-13	6.85E-14	9.38E-12	3.17E-13	1.15E-15	1.90E-17	3.94E-12	2.02E-10	1.07E-14	n/a	**3.54E-09**
chlorine	7782-50-5	2.64E-13	6.57E-09	5.19E-09	8.78E-09	6.15E-12	1.47E-12	6.79E-14	2.73E-14	1.14E-11	4.53E-10	6.90E-12	n/a	**2.10E-08**
chromium (3+)	7440-47-3	2.19E-16	9.16E-09	2.51E-15	1.11E-15	1.19E-09	0.00E+00	0.00E+00	0.00E+00	2.51E-09	1.72E-12	2.63E-14	n/a	**1.29E-08**
chromium (6+)	18540-29-9	2.19E-16	9.16E-09	2.51E-15	1.11E-15	1.19E-09	0.00E+00	0.00E+00	0.00E+00	2.51E-09	1.72E-12	2.63E-14	n/a	**1.29E-08**
copper	7440-50-8	1.97E-13	3.44E-07	1.24E-10	5.57E-11	8.08E-08	0.00E+00	0.00E+00	0.00E+00	9.40E-08	6.47E-11	9.90E-13	n/a	**5.19E-07**
hydrogen chloride	7647-01-0	3.27E-13	1.83E-08	1.44E-08	7.94E-08	2.48E-12	5.89E-13	2.72E-14	1.09E-14	4.61E-12	2.88E-09	4.39E-11	n/a	**1.15E-07**
iron	7439-89-6	3.86E-14	1.26E-06	1.25E-13	1.11E-11	5.93E-07	0.00E+00	0.00E+00	0.00E+00	5.74E-08	2.32E-10	3.54E-12	n/a	**1.91E-06**
lead	7439-92-1	2.51E-14	1.38E-08	7.99E-13	2.55E-13	9.72E-11	0.00E+00	0.00E+00	0.00E+00	6.28E-10	8.19E-14	4.42E-14	n/a	**1.45E-08**
manganese	7439-96-5	1.26E-13	1.60E-06	2.23E-11	7.13E-12	1.51E-08	0.00E+00	0.00E+00	0.00E+00	1.02E-07	2.94E-10	4.48E-12	n/a	**1.72E-06**
total mercury	NA												n/a	
mercuric chloride	7487-94-7	1.25E-15	2.31E-13	4.25E-14	5.09E-14	2.46E-14	8.95E-18	4.24E-16	2.99E-16	7.94E-14	0.00E+00	0.00E+00	n/a	**4.30E-13**
methyl mercury	22967-92-6	2.00E-17	5.16E-14	1.38E-15	2.23E-15	9.23E-16	1.43E-19	1.13E-18	7.97E-19	3.09E-15	4.91E-11	0.00E+00	n/a	**4.92E-11**
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	n/a	**0.00E+00**
nickel	7440-02-0	7.08E-16	5.38E-09	1.54E-14	4.79E-14	7.60E-10	0.00E+00	0.00E+00	0.00E+00	9.81E-10	2.81E-11	1.74E-14	n/a	**7.15E-09**
vanadium	7440-62-2	1.98E-14	1.72E-08	1.54E-13	6.71E-14	1.01E-09	0.00E+00	0.00E+00	0.00E+00	6.26E-11	3.06E-12	4.70E-14	n/a	**1.83E-08**
zinc	7440-66-6	7.20E-14	5.73E-07	1.63E-11	7.30E-11	1.21E-09	3.66E-11	1.48E-14	1.04E-14	3.40E-09	7.92E-08	1.85E-12	n/a	**6.57E-07**

a. Ingestion rates of total PCDDs/PCDFs and coplanar PCBs are presented in units of mg TEQ/day

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS: Adult Resident Exposure Scenario														
COPC	CAS Number	Incidental Ingestion of Soil (mg/day)[a]	Ingestion of Exposed Produce (mg/day)[a]	Ingestion of Protected Produce (mg/day)[a]	Ingestion of Belowground Produce (mg/day)[a]	Ingestion of Beef (mg/day)[a]	Ingestion of Pork (mg/day)[a]	Ingestion of Poultry (mg/day)[a]	Ingestion of Eggs (mg/day)[a]	Ingestion of Milk (mg/day)[a]	Ingestion of Fish (mg/day)[a]	Incidental Ingestion of Surface Water (mg/day)[a]	Ingestion of Breast Milk (mg/day)[a]	Total Daily COPC Ingestion (mg/day)[a]
2-butanone	78-93-3	9.64E-15	2.39E-10	1.89E-10	2.51E-10	6.54E-14	1.56E-14	7.19E-16	2.89E-16	1.21E-13	1.62E-12	2.47E-14	n/a	**6.82E-10**
2-ethyl 1,3-butadiene	3404-63-5	9.70E-16	1.98E-12	1.48E-12	1.82E-11	6.38E-14	1.52E-14	7.26E-16	2.92E-16	1.14E-13	6.22E-10	6.49E-13	n/a	**6.44E-10**
acetone	67-64-1	4.99E-15	1.24E-10	9.79E-11	4.18E-10	9.23E-15	2.20E-15	1.02E-16	4.07E-17	1.71E-14	3.17E-12	4.83E-14	n/a	**6.43E-10**
benzene	71-43-2	1.96E-13	1.43E-09	1.09E-09	1.77E-08	1.26E-11	2.97E-12	1.37E-13	5.52E-14	2.32E-11	1.26E-08	7.36E-11	n/a	**3.30E-08**
benzyl alcohol	100-51-6	1.70E-11	4.23E-07	3.34E-07	1.27E-06	6.57E-10	1.57E-10	7.22E-12	2.90E-12	1.22E-09	6.30E-11	9.67E-12	n/a	**2.03E-06**
bis(2-ethylhexyl)-phthalate	117-81-7	8.97E-12	8.15E-08	9.17E-10	8.62E-14	7.56E-08	2.02E-09	4.60E-10	1.85E-10	1.23E-06	1.68E-09	4.51E-13	n/a	**1.40E-06**
bromodichloromethane	75-27-4	3.76E-15	2.64E-11	2.08E-11	3.71E-10	2.35E-10	5.67E-11	2.64E-12	1.06E-12	4.34E-13	1.13E-12	6.61E-15	n/a	**7.15E-10**
carbon disulfide	75-15-0	1.00E-17	6.67E-14	4.86E-14	1.43E-12	6.82E-16	1.56E-16	7.19E-18	2.89E-18	1.25E-15	6.44E-12	3.15E-14	n/a	**8.02E-12**
carbon tetrachloride	56-23-5	2.10E-18	6.72E-15	4.59E-15	2.26E-13	1.54E-13	3.43E-15	1.59E-15	6.41E-16	2.77E-13	7.92E-13	1.33E-15	n/a	**1.47E-12**
chlorobenzene	108-90-7	2.02E-17	6.21E-14	4.40E-14	1.72E-12	1.43E-12	3.27E-14	1.53E-14	6.14E-15	2.58E-12	7.05E-13	1.19E-15	n/a	**6.60E-12**
chloroform	67-66-3	7.56E-18	6.32E-14	4.78E-14	8.58E-13	4.79E-16	1.12E-16	5.17E-18	2.07E-18	8.81E-16	4.82E-13	3.36E-15	n/a	**1.46E-12**
chloromethane	74-87-3	1.78E-17	4.43E-13	3.50E-13	2.50E-12	4.71E-16	1.12E-16	5.16E-18	2.08E-18	8.73E-16	2.23E-12	3.39E-14	n/a	**5.56E-12**
dibromochloromethane	124-48-1	5.85E-14	3.45E-10	2.72E-10	1.14E-09	3.74E-09	9.03E-10	4.21E-11	1.70E-11	6.89E-12	2.84E-12	1.32E-14	n/a	**6.47E-09**
dimethyl phthalate	131-11-3	8.09E-13	1.22E-08	9.20E-09	2.68E-08	4.43E-08	1.03E-08	4.72E-10	1.90E-13	8.16E-11	3.93E-11	5.96E-13	n/a	**1.03E-07**
di-n-butyl phthalate	84-74-2	6.51E-12	2.97E-09	1.13E-09	1.36E-11	1.26E-06	5.80E-08	3.65E-12	1.47E-10	2.07E-05	2.39E-08	6.40E-13	n/a	**2.20E-05**
ethane	74-84-0	1.07E-14	1.12E-10	8.73E-11	4.56E-10	6.25E-13	1.49E-13	6.90E-15	2.78E-15	1.16E-12	2.33E-08	2.27E-10	n/a	**2.42E-08**
ethylbenzene	100-41-4	1.34E-17	3.04E-14	1.96E-14	1.17E-12	9.81E-16	2.15E-16	1.00E-17	4.03E-18	1.75E-15	1.08E-12	1.07E-15	n/a	**2.31E-12**
HD	505-60-2	7.66E-15	1.12E-10	2.81E-11	6.15E-11	1.39E-12	1.58E-13	5.69E-15	2.29E-15	2.38E-12	1.77E-10	5.96E-13	n/a	**3.83E-10**
hexane	110-54-3	2.58E-18	2.17E-15	1.33E-15	4.63E-14	1.52E-16	3.51E-17	1.73E-18	6.94E-19	2.58E-16	1.12E-11	2.70E-15	n/a	**1.13E-11**
methane	74-82-8	3.29E-14	8.88E-10	6.98E-10	3.37E-09	1.35E-12	1.16E-14	5.35E-16	2.15E-16	9.06E-14	1.25E-07	4.35E-09	n/a	**1.34E-07**
methylene chloride	75-09-2	5.12E-18	1.05E-13	8.23E-14	2.08E-12	2.40E-16	5.68E-17	2.62E-18	1.05E-18	4.44E-16	1.75E-13	4.21E-15	n/a	**2.45E-12**
propene	115-07-1	7.85E-15	8.60E-11	6.74E-11	3.44E-10	4.52E-13	1.08E-13	4.99E-15	2.01E-15	8.34E-13	5.79E-09	6.06E-11	n/a	**6.35E-09**
styrene	100-42-5	6.83E-14	1.45E-10	1.14E-10	3.04E-11	4.33E-10	1.07E-10	5.14E-11	2.07E-11	7.81E-09	1.02E-11	1.21E-14	n/a	**8.72E-09**
tetrachloroethene	127-18-4	3.07E-18	9.81E-15	3.01E-15	1.08E-12	3.93E-16	5.42E-17	2.21E-18	8.92E-19	6.68E-16	2.13E-12	1.24E-15	n/a	**3.22E-12**
toluene	108-88-3	8.54E-14	3.02E-10	2.14E-10	7.46E-09	6.14E-12	1.40E-12	6.49E-14	2.61E-14	1.11E-11	6.48E-09	1.31E-11	n/a	**1.45E-08**
trichloroethene	79-01-6	6.80E-18	3.32E-14	2.53E-14	3.81E-13	4.57E-16	1.08E-16	5.04E-18	2.02E-18	8.39E-16	4.49E-13	1.53E-15	n/a	**8.91E-13**
vinyl chloride	75-01-4	3.14E-17	5.65E-13	4.42E-13	8.70E-12	1.54E-15	3.69E-16	1.69E-17	6.83E-18	2.88E-15	1.04E-11	2.09E-13	n/a	**2.03E-11**
xylenes	1330-20-7	3.34E-14	6.08E-11	4.52E-11	6.24E-10	2.15E-12	5.19E-13	2.49E-14	1.00E-14	3.85E-12	5.14E-10	4.58E-13	n/a	**1.25E-09**
3,3',4,4'-TCB (PCB 77)	32598-13-3	4.32E-20	8.43E-18	6.85E-19	4.67E-19	6.01E-18	3.50E-19	1.31E-20	5.26E-21	9.49E-18	3.17E-16	1.26E-22	n/a	**3.42E-16**
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	1.80E-19	3.51E-17	2.85E-18	1.95E-18	2.51E-17	1.46E-18	5.45E-20	2.19E-20	3.96E-17	1.32E-15	5.26E-22	n/a	**1.43E-15**
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	8.63E-20	1.69E-17	1.37E-18	9.34E-19	1.20E-17	6.99E-19	2.61E-20	1.05E-20	1.90E-17	6.33E-16	2.52E-22	n/a	**6.84E-16**
total coplanar PCBs	NA												n/a	
ammonia	7664-41-7	2.28E-14	1.92E-09	1.52E-09	1.01E-08	4.55E-13	1.08E-13	4.97E-15	2.00E-15	8.47E-13	1.20E-10	1.83E-12	n/a	**1.36E-08**
aluminum	7429-90-5	4.50E-14	1.44E-13	1.14E-13	3.30E-14	2.26E-14	0.00E+00	0.00E+00	0.00E+00	1.27E-14	1.04E-10	1.59E-12	n/a	**1.06E-10**
cadmium	7440-43-9	2.43E-15	3.32E-09	7.11E-13	4.11E-13	9.38E-12	3.17E-13	6.89E-15	1.14E-16	3.94E-12	2.02E-10	1.07E-14	n/a	**3.54E-09**
chlorine	7782-50-5	1.59E-12	3.94E-08	3.11E-08	5.27E-08	3.69E-11	8.80E-12	4.07E-13	1.64E-13	6.87E-11	4.71E-10	7.18E-12	n/a	**1.24E-07**
chromium (3+)	7440-47-3	1.32E-15	9.16E-09	1.50E-14	6.68E-15	1.19E-09	0.00E+00	0.00E+00	0.00E+00	2.51E-09	1.73E-12	2.63E-14	n/a	**1.29E-08**
chromium (6+)	18540-29-9	1.32E-15	9.16E-09	1.50E-14	6.68E-15	1.19E-09	0.00E+00	0.00E+00	0.00E+00	2.51E-09	1.73E-12	2.63E-14	n/a	**1.29E-08**
copper	7440-50-8	1.18E-12	3.45E-07	7.45E-10	3.34E-10	8.09E-08	0.00E+00	0.00E+00	0.00E+00	9.40E-08	6.49E-11	9.93E-13	n/a	**5.21E-07**
hydrogen chloride	7647-01-0	1.96E-12	1.10E-07	8.65E-08	4.76E-07	1.49E-11	3.53E-12	1.63E-13	6.55E-14	2.76E-11	2.93E-09	4.47E-11	n/a	**6.76E-07**
iron	7439-89-6	2.32E-13	1.26E-06	7.48E-13	6.65E-11	5.93E-07	0.00E+00	0.00E+00	0.00E+00	5.74E-08	2.32E-10	3.54E-12	n/a	**1.91E-06**
lead	7439-92-1	1.51E-13	1.38E-08	4.79E-12	1.53E-12	9.72E-11	0.00E+00	0.00E+00	0.00E+00	6.28E-10	8.26E-14	4.46E-14	n/a	**1.45E-08**
manganese	7439-96-5	7.59E-13	1.60E-06	1.34E-10	4.28E-11	1.51E-08	0.00E+00	0.00E+00	0.00E+00	1.02E-07	2.94E-10	4.49E-12	n/a	**1.72E-06**
total mercury	NA												n/a	
mercuric chloride	7487-94-7	1.37E-15	2.35E-13	4.64E-14	5.55E-14	2.48E-14	9.49E-18	4.63E-16	3.26E-16	8.00E-14	0.00E+00	0.00E+00	n/a	**4.44E-13**
methyl mercury	22967-92-6	2.66E-17	5.22E-14	1.83E-15	2.97E-15	9.26E-16	1.48E-19	1.51E-18	1.06E-18	3.10E-15	5.29E-11	0.00E+00	n/a	**5.30E-11**
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	n/a	**0.00E+00**
nickel	7440-02-0	4.25E-15	5.38E-09	9.26E-14	2.88E-13	7.60E-10	0.00E+00	0.00E+00	0.00E+00	9.81E-10	2.82E-11	1.74E-14	n/a	**7.15E-09**
vanadium	7440-62-2	1.19E-13	1.72E-08	9.24E-13	4.02E-13	1.01E-09	0.00E+00	0.00E+00	0.00E+00	6.26E-11	3.07E-12	4.73E-14	n/a	**1.83E-08**
zinc	7440-66-6	4.32E-13	5.73E-07	9.80E-11	4.38E-10	1.21E-09	3.66E-11	8.88E-14	6.26E-14	3.40E-09	7.92E-08	1.85E-12	n/a	**6.58E-07**

a. Ingestion rates of total PCDDs/PCDFs are presented in units of mg TEQ/day

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Adult Subsistence Fisher Exposure Scenario														
COPC	CAS Number	Incidental Ingestion of Soil (mg/day)[a]	Ingestion of Exposed Produce (mg/day)[a]	Ingestion of Protected Produce (mg/day)[a]	Ingestion of Belowground Produce (mg/day)[a]	Ingestion of Beef (mg/day)[a]	Ingestion of Pork (mg/day)[a]	Ingestion of Poultry (mg/day)[a]	Ingestion of Eggs (mg/day)[a]	Ingestion of Milk (mg/day)[a]	Ingestion of Fish (mg/day)[a]	Incidental Ingestion of Surface Water (mg/day)[a]	Ingestion of Breast Milk (mg/day)[a]	Total Daily COPC Ingestion (mg/day)[a]
2-butanone	78-93-3	1.61E-15	3.99E-11	3.15E-11	4.19E-11	1.09E-14	2.60E-15	1.20E-16	4.82E-17	2.03E-14	3.78E-12	2.30E-14	n/a	**1.17E-10**
2-ethyl 1,3-butadiene	3404-63-5	1.62E-16	4.25E-13	2.46E-13	3.03E-12	1.31E-14	2.64E-15	1.21E-16	4.86E-17	2.31E-14	1.55E-09	6.49E-13	n/a	**1.56E-09**
acetone	67-64-1	8.32E-16	2.07E-11	1.63E-11	6.97E-11	1.54E-15	3.66E-16	1.69E-17	6.78E-18	2.86E-15	7.66E-12	4.67E-14	n/a	**1.14E-10**
benzene	71-43-2	3.27E-14	2.79E-10	1.81E-10	2.95E-09	2.42E-12	5.07E-13	2.29E-14	9.20E-15	4.38E-12	3.15E-08	7.35E-11	n/a	**3.50E-08**
benzyl alcohol	100-51-6	2.84E-12	7.05E-08	5.56E-08	2.12E-07	1.10E-10	2.61E-11	1.20E-12	4.84E-13	2.04E-10	2.78E-11	1.71E-12	n/a	**3.38E-07**
bis(2-ethylhexyl)-phthalate	117-81-7	1.49E-12	8.05E-08	1.53E-10	1.44E-14	7.54E-08	1.95E-09	7.67E-11	3.09E-11	1.23E-06	3.90E-09	4.19E-13	n/a	**1.39E-06**
bromodichloromethane	75-27-4	6.26E-16	4.41E-12	3.47E-12	6.18E-11	3.93E-11	9.44E-12	4.40E-13	1.77E-13	7.25E-14	2.37E-12	5.53E-15	n/a	**1.21E-10**
carbon disulfide	75-15-0	1.67E-18	1.53E-14	8.11E-15	2.39E-13	1.50E-16	2.75E-17	1.20E-18	4.82E-19	2.68E-16	1.61E-11	3.15E-14	n/a	**1.64E-11**
carbon tetrachloride	56-23-5	3.51E-19	1.87E-15	7.65E-16	3.76E-14	4.02E-14	6.32E-16	2.66E-16	1.07E-16	6.99E-14	1.98E-12	1.33E-15	n/a	**2.13E-12**
chlorobenzene	108-90-7	3.36E-18	1.57E-14	7.33E-15	2.87E-13	3.42E-13	5.88E-15	2.54E-15	1.02E-15	6.00E-13	1.76E-12	1.19E-15	n/a	**3.02E-12**
chloroform	67-66-3	1.26E-18	1.28E-14	7.96E-15	1.43E-13	9.41E-17	1.92E-17	8.61E-19	3.46E-19	1.70E-16	1.20E-12	3.35E-15	n/a	**1.37E-12**
chloromethane	74-87-3	2.97E-18	7.45E-14	5.83E-14	4.17E-13	7.90E-17	1.87E-17	8.60E-19	3.47E-19	1.46E-16	5.56E-12	3.39E-14	n/a	**6.15E-12**
dibromochloromethane	124-48-1	9.75E-15	5.75E-11	4.54E-11	1.90E-10	6.24E-10	1.50E-10	7.02E-12	2.83E-12	1.15E-12	4.29E-12	7.94E-15	n/a	**1.08E-09**
dimethyl phthalate	131-11-3	1.35E-13	2.45E-09	1.53E-09	4.47E-09	8.71E-09	1.77E-09	7.87E-11	3.17E-14	1.58E-11	6.47E-11	3.93E-13	n/a	**1.91E-08**
di-n-butyl phthalate	84-74-2	1.08E-12	1.78E-09	1.88E-10	2.27E-12	1.25E-06	5.25E-08	6.08E-13	2.44E-11	2.04E-05	5.75E-08	6.16E-13	n/a	**2.18E-05**
ethane	74-84-0	1.79E-15	1.95E-11	1.45E-11	7.59E-11	1.09E-13	2.50E-14	1.15E-15	4.63E-16	2.00E-13	5.83E-08	2.27E-10	n/a	**5.86E-08**
ethylbenzene	100-41-4	2.24E-18	9.71E-15	3.27E-15	1.96E-13	2.88E-16	4.10E-17	1.67E-18	6.72E-19	4.96E-16	2.70E-12	1.07E-15	n/a	**2.91E-12**
HD	505-60-2	1.28E-15	8.25E-11	4.69E-12	1.03E-11	9.77E-13	5.72E-14	9.48E-16	3.81E-16	1.62E-12	4.42E-10	5.96E-13	n/a	**5.43E-10**
hexane	110-54-3	4.29E-19	7.67E-16	2.21E-16	7.72E-15	4.72E-17	6.75E-18	2.88E-19	1.16E-19	7.87E-17	2.81E-11	2.70E-15	n/a	**2.81E-11**
methane	74-82-8	5.48E-15	1.51E-10	1.16E-10	5.62E-10	2.29E-13	1.94E-15	8.92E-17	3.58E-17	1.53E-14	3.11E-07	4.35E-09	n/a	**3.17E-07**
methylene chloride	75-09-2	8.54E-19	1.84E-14	1.37E-14	3.47E-13	4.17E-17	9.53E-18	4.36E-19	1.76E-19	7.67E-17	4.37E-13	4.21E-15	n/a	**8.20E-13**
propene	115-07-1	1.31E-15	1.49E-11	1.12E-11	5.74E-11	7.77E-14	1.80E-14	8.31E-16	3.34E-16	1.43E-13	1.45E-08	6.06E-11	n/a	**1.46E-08**
styrene	100-42-5	1.14E-14	2.42E-11	1.90E-11	5.07E-12	7.24E-11	1.79E-11	8.56E-12	3.44E-12	1.31E-09	2.51E-11	1.19E-14	n/a	**1.48E-09**
tetrachloroethene	127-18-4	5.11E-19	6.63E-15	5.02E-16	1.79E-13	2.46E-16	1.65E-17	3.69E-19	1.49E-19	4.06E-16	5.32E-12	1.24E-15	n/a	**5.51E-12**
toluene	108-88-3	1.42E-14	7.63E-11	3.56E-11	1.24E-09	1.46E-12	2.51E-13	1.08E-14	4.35E-15	2.57E-12	1.62E-08	1.30E-11	n/a	**1.76E-08**
trichloroethene	79-01-6	1.13E-18	6.52E-15	4.22E-15	6.35E-14	8.75E-17	1.85E-17	8.40E-19	3.37E-19	1.58E-16	1.12E-12	1.53E-15	n/a	**1.20E-12**
vinyl chloride	75-01-4	5.24E-18	9.89E-14	7.36E-14	1.45E-12	2.68E-16	6.19E-17	2.82E-18	1.14E-18	4.97E-16	2.59E-11	2.09E-13	n/a	**2.77E-11**
xylenes	1330-20-7	5.57E-15	1.30E-11	7.54E-12	1.04E-10	4.42E-13	9.00E-14	4.15E-15	1.67E-15	7.78E-13	1.28E-09	4.57E-13	n/a	**1.41E-09**
3,3',4,4'-TCB (PCB 77)	32598-13-3												n/a	
2,3',4,4',5-PeCB (PCB 118)	31508-00-6												n/a	
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4												n/a	
total coplanar PCBs	NA	8.21E-24	2.32E-21	1.30E-22	8.89E-23	1.67E-21	7.99E-23	2.49E-24	1.00E-24	2.66E-21	1.64E-19	2.61E-26	n/a	**1.71E-19**
ammonia	7664-41-7	3.80E-15	3.21E-10	2.53E-10	1.68E-09	7.58E-14	1.80E-14	8.28E-16	3.34E-16	1.41E-13	3.00E-10	1.83E-12	n/a	**2.55E-09**
aluminum	7429-90-5	7.51E-15	2.40E-14	1.90E-14	5.50E-15	3.76E-15	0.00E+00	0.00E+00	0.00E+00	2.12E-15	2.61E-10	1.59E-12	n/a	**2.63E-10**
cadmium	7440-43-9	4.05E-16	3.32E-09	1.18E-13	6.85E-14	9.38E-12	3.17E-13	1.15E-15	1.90E-17	3.94E-12	5.05E-10	1.07E-14	n/a	**3.84E-09**
chlorine	7782-50-5	2.64E-13	6.57E-09	5.19E-09	8.78E-09	6.15E-12	1.47E-12	6.79E-14	2.73E-14	1.14E-11	1.13E-09	6.90E-12	n/a	**2.17E-08**
chromium (3+)	7440-47-3	2.19E-16	9.16E-09	2.51E-15	1.11E-15	1.19E-09	0.00E+00	0.00E+00	0.00E+00	2.51E-09	4.31E-12	2.63E-14	n/a	**1.29E-08**
chromium (6+)	18540-29-9	2.19E-16	9.16E-09	2.51E-15	1.11E-15	1.19E-09	0.00E+00	0.00E+00	0.00E+00	2.51E-09	4.31E-12	2.63E-14	n/a	**1.29E-08**
copper	7440-50-8	1.97E-13	3.44E-07	1.24E-10	5.57E-11	8.08E-08	0.00E+00	0.00E+00	0.00E+00	9.40E-08	1.62E-10	9.90E-13	n/a	**5.19E-07**
hydrogen chloride	7647-01-0	3.27E-13	1.83E-08	1.44E-08	7.94E-08	2.48E-12	5.89E-13	2.72E-14	1.09E-14	4.61E-12	7.20E-09	4.39E-11	n/a	**1.19E-07**
iron	7439-89-6	3.86E-14	1.26E-06	1.25E-13	1.11E-11	5.93E-07	0.00E+00	0.00E+00	0.00E+00	5.74E-08	5.80E-10	3.54E-12	n/a	**1.91E-06**
lead	7439-92-1	2.51E-14	1.38E-08	7.99E-13	2.55E-13	9.72E-11	0.00E+00	0.00E+00	0.00E+00	6.28E-10	2.05E-13	4.42E-14	n/a	**1.45E-08**
manganese	7439-96-5	1.26E-13	1.60E-06	2.23E-11	7.13E-12	1.51E-08	0.00E+00	0.00E+00	0.00E+00	1.02E-07	7.36E-10	4.48E-12	n/a	**1.72E-06**
total mercury	NA												n/a	
mercuric chloride	7487-94-7	1.25E-15	2.31E-13	4.25E-14	5.09E-14	2.46E-14	8.95E-18	4.24E-16	2.99E-16	7.94E-14	0.00E+00	0.00E+00	n/a	**4.30E-13**
methyl mercury	22967-92-6	2.00E-17	5.16E-14	1.38E-15	2.23E-15	9.23E-16	1.43E-19	1.13E-18	7.97E-19	3.09E-15	1.23E-10	0.00E+00	n/a	**1.23E-10**
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	n/a	**0.00E+00**
nickel	7440-02-0	7.08E-16	5.38E-09	1.54E-14	4.79E-14	7.60E-10	0.00E+00	0.00E+00	0.00E+00	9.81E-10	7.04E-11	1.74E-14	n/a	**7.19E-09**
vanadium	7440-62-2	1.98E-14	1.72E-08	1.54E-13	6.71E-14	1.01E-09	0.00E+00	0.00E+00	0.00E+00	6.26E-11	7.64E-12	4.70E-14	n/a	**1.83E-08**
zinc	7440-66-6	7.20E-14	5.73E-07	1.63E-11	7.30E-11	1.21E-09	3.66E-11	1.48E-14	1.04E-14	3.40E-09	1.98E-07	1.85E-12	n/a	**7.76E-07**

a. Ingestion rates of total PCDDs/PCDFs and coplanar PCBs are presented in units of mg TEQ/day

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS:
Adult Subsistence Fisher Exposure Scenario

COPC	CAS Number	Incidental Ingestion of Soil (mg/day)[a]	Ingestion of Exposed Produce (mg/day)[a]	Ingestion of Protected Produce (mg/day)[a]	Ingestion of Belowground Produce (mg/day)[a]	Ingestion of Beef (mg/day)[a]	Ingestion of Pork (mg/day)[a]	Ingestion of Poultry (mg/day)[a]	Ingestion of Eggs (mg/day)[a]	Ingestion of Milk (mg/day)[a]	Ingestion of Fish (mg/day)[a]	Incidental Ingestion of Surface Water (mg/day)[a]	Ingestion of Breast Milk (mg/day)[a]	Total Daily COPC Ingestion (mg/day)[a]
2-butanone	78-93-3	9.64E-15	2.39E-10	1.89E-10	2.51E-10	6.54E-14	1.56E-14	7.19E-16	2.89E-16	1.21E-13	4.05E-12	2.47E-14	n/a	**6.84E-10**
2-ethyl 1,3-butadiene	3404-63-5	9.70E-16	1.98E-12	1.48E-12	1.82E-11	6.38E-14	1.52E-14	7.26E-16	2.92E-16	1.14E-13	1.55E-09	6.49E-13	n/a	**1.58E-09**
acetone	67-64-1	4.99E-15	1.24E-10	9.79E-11	4.18E-10	9.23E-15	2.20E-15	1.02E-16	4.07E-17	1.71E-14	7.92E-12	4.83E-14	n/a	**6.48E-10**
benzene	71-43-2	1.96E-13	1.43E-09	1.09E-09	1.77E-08	1.26E-11	2.97E-12	1.37E-13	5.52E-14	2.32E-11	3.16E-08	7.36E-11	n/a	**5.19E-08**
benzyl alcohol	100-51-6	1.70E-11	4.23E-07	3.34E-07	1.27E-06	6.57E-10	1.57E-10	7.22E-12	2.90E-12	1.22E-09	1.58E-10	9.67E-12	n/a	**2.03E-06**
bis(2-ethylhexyl)-phthalate	117-81-7	8.97E-12	8.15E-08	9.17E-10	8.62E-14	7.56E-08	2.02E-09	4.60E-10	1.85E-10	1.23E-06	4.19E-09	4.51E-13	n/a	**1.40E-06**
bromodichloromethane	75-27-4	3.76E-15	2.64E-11	2.08E-11	3.71E-10	2.35E-10	5.67E-11	2.64E-12	1.06E-12	4.34E-13	2.83E-12	6.61E-15	n/a	**7.17E-10**
carbon disulfide	75-15-0	1.00E-17	6.67E-14	4.86E-14	1.43E-12	6.82E-16	1.56E-16	7.19E-18	2.89E-18	1.25E-15	1.61E-11	3.15E-14	n/a	**1.77E-11**
carbon tetrachloride	56-23-5	2.10E-18	6.72E-15	4.59E-15	2.26E-13	1.54E-13	3.43E-15	1.59E-15	6.41E-16	2.77E-13	1.98E-12	1.33E-15	n/a	**2.65E-12**
chlorobenzene	108-90-7	2.02E-17	6.21E-14	4.40E-14	1.72E-12	1.43E-12	3.27E-14	1.53E-14	6.14E-15	2.58E-12	1.76E-12	1.19E-15	n/a	**7.66E-12**
chloroform	67-66-3	7.56E-18	6.32E-14	4.78E-14	8.58E-13	4.79E-16	1.12E-16	5.17E-18	2.07E-18	8.81E-16	1.21E-12	3.36E-15	n/a	**2.18E-12**
chloromethane	74-87-3	1.78E-17	4.43E-13	3.50E-13	2.50E-12	4.71E-16	1.12E-16	5.16E-18	2.08E-18	8.73E-16	5.56E-12	3.39E-14	n/a	**8.90E-12**
dibromochloromethane	124-48-1	5.85E-14	3.45E-10	2.72E-10	1.14E-09	3.74E-09	9.03E-10	4.21E-11	1.70E-11	6.89E-12	7.11E-12	1.32E-14	n/a	**6.47E-09**
dimethyl phthalate	131-11-3	8.09E-13	1.22E-08	9.20E-09	2.68E-08	4.43E-08	1.03E-08	4.72E-10	1.90E-13	8.16E-11	9.81E-11	5.96E-13	n/a	**1.03E-07**
di-n-butyl phthalate	84-74-2	6.51E-12	2.97E-09	1.13E-09	1.36E-11	1.26E-06	5.80E-08	3.65E-12	1.47E-10	2.07E-05	5.97E-08	6.40E-13	n/a	**2.20E-05**
ethane	74-84-0	1.07E-14	1.12E-10	8.73E-11	4.56E-10	6.25E-13	1.49E-13	6.90E-15	2.78E-15	1.16E-12	5.83E-08	2.27E-10	n/a	**5.92E-08**
ethylbenzene	100-41-4	1.34E-17	3.04E-14	1.96E-14	1.17E-12	9.81E-16	2.15E-16	1.00E-17	4.03E-18	1.75E-15	2.70E-12	1.07E-15	n/a	**3.93E-12**
HD	505-60-2	7.66E-15	1.12E-10	2.81E-11	6.15E-11	1.39E-12	1.58E-13	5.69E-15	2.29E-15	2.38E-12	4.43E-10	5.96E-13	n/a	**6.49E-10**
hexane	110-54-3	2.58E-18	2.17E-15	1.33E-15	4.63E-14	1.52E-16	3.51E-17	1.73E-18	6.94E-19	2.58E-16	2.81E-11	2.70E-15	n/a	**2.82E-11**
methane	74-82-8	3.29E-14	8.88E-10	6.98E-10	3.37E-09	1.35E-12	1.16E-14	5.35E-16	2.15E-16	9.06E-14	3.11E-07	4.35E-09	n/a	**3.21E-07**
methylene chloride	75-09-2	5.12E-18	1.05E-13	8.23E-14	2.08E-12	2.40E-16	5.68E-17	2.62E-18	1.05E-18	4.44E-16	4.37E-13	4.21E-15	n/a	**2.71E-12**
propene	115-07-1	7.85E-15	8.60E-11	6.74E-11	3.44E-10	4.52E-13	1.08E-13	4.99E-15	2.01E-15	8.34E-13	1.45E-08	6.06E-11	n/a	**1.50E-08**
styrene	100-42-5	6.83E-14	1.45E-10	1.14E-10	3.04E-11	4.33E-10	1.07E-10	5.14E-11	2.07E-11	7.81E-09	2.56E-11	1.21E-14	n/a	**8.74E-09**
tetrachloroethene	127-18-4	3.07E-18	9.81E-15	3.01E-15	1.08E-12	3.93E-16	5.42E-17	2.21E-18	8.92E-19	6.68E-16	5.33E-12	1.24E-15	n/a	**6.42E-12**
toluene	108-88-3	8.54E-14	3.02E-10	2.14E-10	7.46E-09	6.14E-12	1.40E-12	6.49E-14	2.61E-14	1.11E-11	1.62E-08	1.31E-11	n/a	**2.42E-08**
trichloroethene	79-01-6	6.80E-18	3.32E-14	2.53E-14	3.81E-13	4.57E-16	1.08E-16	5.04E-18	2.02E-18	8.39E-16	1.12E-12	1.53E-15	n/a	**1.56E-12**
vinyl chloride	75-01-4	3.14E-17	5.65E-13	4.42E-13	8.70E-12	1.54E-15	3.69E-16	1.69E-17	6.83E-18	2.88E-15	2.59E-11	2.09E-13	n/a	**3.58E-11**
xylenes	1330-20-7	3.34E-14	6.08E-11	4.52E-11	6.24E-10	2.15E-12	5.19E-13	2.49E-14	1.00E-14	3.85E-12	1.29E-09	4.58E-13	n/a	**2.02E-09**
3,3',4,4'-TCB (PCB 77)	32598-13-3	4.32E-20	8.43E-18	6.85E-19	4.67E-19	6.01E-18	3.50E-19	1.31E-20	5.26E-21	9.49E-18	7.92E-16	1.26E-22	n/a	**8.17E-16**
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	1.80E-19	3.51E-17	2.85E-18	1.95E-18	2.51E-17	1.46E-18	5.45E-20	2.19E-20	3.96E-17	3.30E-15	5.26E-22	n/a	**3.41E-15**
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	8.63E-20	1.69E-17	1.37E-18	9.34E-19	1.20E-17	6.99E-19	2.61E-20	1.05E-20	1.90E-17	1.58E-15	2.52E-22	n/a	**1.63E-15**
total coplanar PCBs	NA												n/a	
ammonia	7664-41-7	2.28E-14	1.92E-09	1.52E-09	1.01E-08	4.55E-13	1.08E-13	4.97E-15	2.00E-15	8.47E-13	3.01E-10	1.83E-12	n/a	**1.38E-08**
aluminum	7429-90-5	4.50E-14	1.44E-13	1.14E-13	3.30E-14	2.26E-14	0.00E+00	0.00E+00	0.00E+00	1.27E-14	2.61E-10	1.59E-12	n/a	**2.63E-10**
cadmium	7440-43-9	2.43E-15	3.32E-09	7.11E-13	4.11E-13	9.38E-12	3.17E-13	6.89E-15	1.14E-16	3.94E-12	5.05E-10	1.07E-14	n/a	**3.84E-09**
chlorine	7782-50-5	1.59E-12	3.94E-08	3.11E-08	5.27E-08	3.69E-11	8.80E-12	4.07E-13	1.64E-13	6.87E-11	1.18E-09	7.18E-12	n/a	**1.25E-07**
chromium (3+)	7440-47-3	1.32E-15	9.16E-09	1.50E-14	6.68E-15	1.19E-09	0.00E+00	0.00E+00	0.00E+00	2.51E-09	4.31E-12	2.63E-14	n/a	**1.29E-08**
chromium (6+)	18540-29-9	1.32E-15	9.16E-09	1.50E-14	6.68E-15	1.19E-09	0.00E+00	0.00E+00	0.00E+00	2.51E-09	4.31E-12	2.63E-14	n/a	**1.29E-08**
copper	7440-50-8	1.18E-12	3.45E-07	7.45E-10	3.34E-10	8.09E-08	0.00E+00	0.00E+00	0.00E+00	9.40E-08	1.62E-10	9.93E-13	n/a	**5.21E-07**
hydrogen chloride	7647-01-0	1.96E-12	1.10E-07	8.65E-08	4.76E-07	1.49E-11	3.53E-12	1.63E-13	6.55E-14	2.76E-11	7.33E-09	4.47E-11	n/a	**6.80E-07**
iron	7439-89-6	2.32E-13	1.26E-06	7.48E-13	6.65E-11	5.93E-07	0.00E+00	0.00E+00	0.00E+00	5.74E-08	5.81E-10	3.54E-12	n/a	**1.91E-06**
lead	7439-92-1	1.51E-13	1.38E-08	4.79E-12	1.53E-12	9.72E-11	0.00E+00	0.00E+00	0.00E+00	6.28E-10	2.06E-13	4.46E-14	n/a	**1.45E-08**
manganese	7439-96-5	7.59E-13	1.60E-06	1.34E-10	4.28E-11	1.51E-08	0.00E+00	0.00E+00	0.00E+00	1.02E-07	7.36E-10	4.49E-12	n/a	**1.72E-06**
total mercury	NA												n/a	
mercuric chloride	7487-94-7	1.37E-15	2.35E-13	4.64E-14	5.55E-14	2.48E-14	9.49E-18	4.63E-16	3.26E-16	8.00E-14	0.00E+00	0.00E+00	n/a	**4.44E-13**
methyl mercury	22967-92-6	2.66E-17	5.22E-14	1.83E-15	2.97E-15	9.26E-16	1.48E-19	1.51E-18	1.06E-18	3.10E-15	1.32E-10	0.00E+00	n/a	**1.32E-10**
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	n/a	**0.00E+00**
nickel	7440-02-0	4.25E-15	5.38E-09	9.26E-14	2.88E-13	7.60E-10	0.00E+00	0.00E+00	0.00E+00	9.81E-10	7.04E-11	1.74E-14	n/a	**7.20E-09**
vanadium	7440-62-2	1.19E-13	1.72E-08	9.24E-13	4.02E-13	1.01E-09	0.00E+00	0.00E+00	0.00E+00	6.26E-11	7.68E-12	4.73E-14	n/a	**1.83E-08**
zinc	7440-66-6	4.32E-13	5.73E-07	9.80E-11	4.38E-10	1.21E-09	3.66E-11	8.88E-14	6.26E-14	3.40E-09	1.98E-07	1.85E-12	n/a	**7.77E-07**

a. Ingestion rates of total PCDDs/PCDFs are presented in units of mg TEQ/day

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Adult Subsistence Farmer Exposure Scenario														
COPC	CAS Number	Incidental Ingestion of Soil (mg/day)[a]	Ingestion of Exposed Produce (mg/day)[a]	Ingestion of Protected Produce (mg/day)[a]	Ingestion of Belowground Produce (mg/day)[a]	Ingestion of Beef (mg/day)[a]	Ingestion of Pork (mg/day)[a]	Ingestion of Poultry (mg/day)[a]	Ingestion of Eggs (mg/day)[a]	Ingestion of Milk (mg/day)[a]	Ingestion of Fish (mg/day)[a]	Incidental Ingestion of Surface Water (mg/day)[a]	Ingestion of Breast Milk (mg/day)[a]	Total Daily COPC Ingestion (mg/day)[a]
2-butanone	78-93-3	1.21E-15	7.49E-11	5.91E-11	7.85E-11	2.05E-14	4.87E-15	2.25E-16	9.04E-17	3.80E-14	1.51E-12	2.29E-14	n/a	**2.14E-10**
2-ethyl 1,3-butadiene	3404-63-5	1.21E-16	8.68E-13	4.61E-13	5.68E-12	2.64E-14	5.02E-15	2.27E-16	9.12E-17	4.63E-14	6.22E-10	6.49E-13	n/a	**6.29E-10**
acetone	67-64-1	6.24E-16	3.88E-11	3.06E-11	1.31E-10	2.88E-15	6.87E-16	3.17E-17	1.27E-17	5.36E-15	3.06E-12	4.66E-14	n/a	**2.03E-10**
benzene	71-43-2	2.45E-14	5.55E-10	3.40E-10	5.54E-09	4.76E-12	9.61E-13	4.30E-14	1.73E-14	8.60E-12	1.26E-08	7.35E-11	n/a	**1.91E-08**
benzyl alcohol	100-51-6	2.13E-12	1.32E-07	1.04E-07	3.97E-07	2.05E-10	4.89E-11	2.26E-12	9.07E-13	3.82E-10	8.52E-12	1.31E-12	n/a	**6.34E-07**
bis(2-ethylhexyl)-phthalate	117-81-7	1.12E-12	2.01E-07	2.86E-10	2.69E-14	1.89E-07	4.87E-09	1.44E-10	5.78E-11	3.08E-06	1.55E-09	4.17E-13	n/a	**3.47E-06**
bromodichloromethane	75-27-4	4.70E-16	8.28E-12	6.51E-12	1.16E-10	7.37E-11	1.77E-11	8.24E-13	3.32E-13	1.36E-13	9.38E-13	5.47E-15	n/a	**2.24E-10**
carbon disulfide	75-15-0	1.26E-18	3.20E-14	1.52E-14	4.47E-13	3.09E-16	5.27E-17	2.25E-18	9.03E-19	5.48E-16	6.44E-12	3.15E-14	n/a	**6.97E-12**
carbon tetrachloride	56-23-5	2.63E-19	4.08E-15	1.43E-15	7.06E-14	8.62E-14	1.23E-15	4.98E-16	2.00E-16	1.49E-13	7.92E-13	1.33E-15	n/a	**1.11E-12**
chlorobenzene	108-90-7	2.52E-18	3.35E-14	1.37E-14	5.38E-13	7.19E-13	1.13E-14	4.77E-15	1.92E-15	1.25E-12	7.04E-13	1.19E-15	n/a	**3.28E-12**
chloroform	67-66-3	9.45E-19	2.56E-14	1.49E-14	2.68E-13	1.87E-16	3.64E-17	1.61E-18	6.48E-19	3.37E-16	4.82E-13	3.35E-15	n/a	**7.95E-13**
chloromethane	74-87-3	2.23E-18	1.40E-13	1.09E-13	7.82E-13	1.48E-16	3.51E-17	1.61E-18	6.51E-19	2.75E-16	2.23E-12	3.39E-14	n/a	**3.29E-12**
dibromochloromethane	124-48-1	7.31E-15	1.08E-10	8.51E-11	3.56E-10	1.17E-09	2.82E-10	1.32E-11	5.30E-12	2.15E-12	1.66E-12	7.68E-15	n/a	**2.02E-09**
dimethyl phthalate	131-11-3	1.01E-13	4.92E-09	2.87E-09	8.39E-09	1.73E-08	3.35E-09	1.48E-10	5.94E-14	3.12E-11	2.52E-11	3.83E-13	n/a	**3.71E-08**
di-n-butyl phthalate	84-74-2	8.13E-13	4.31E-09	3.52E-10	4.26E-12	3.11E-06	1.31E-07	1.14E-12	4.58E-11	5.10E-05	2.30E-08	6.15E-13	n/a	**5.42E-05**
ethane	74-84-0	1.34E-15	3.73E-11	2.73E-11	1.42E-10	2.07E-13	4.70E-14	2.16E-15	8.68E-16	3.80E-13	2.33E-08	2.27E-10	n/a	**2.37E-08**
ethylbenzene	100-41-4	1.68E-18	2.17E-14	6.13E-15	3.67E-13	6.32E-16	8.07E-17	3.13E-18	1.26E-18	1.08E-15	1.08E-12	1.07E-15	n/a	**1.48E-12**
HD	505-60-2	9.58E-16	2.03E-10	8.80E-12	1.92E-11	2.39E-12	1.30E-13	1.78E-15	7.14E-16	3.94E-12	1.77E-10	5.96E-13	n/a	**4.15E-10**
hexane	110-54-3	3.22E-19	1.74E-15	4.14E-16	1.45E-14	1.05E-16	1.33E-17	5.40E-19	2.17E-19	1.74E-16	1.12E-11	2.70E-15	n/a	**1.13E-11**
methane	74-82-8	4.11E-15	2.85E-10	2.18E-10	1.05E-09	4.31E-13	3.64E-15	1.67E-16	6.72E-17	2.89E-14	1.25E-07	4.35E-09	n/a	**1.30E-07**
methylene chloride	75-09-2	6.40E-19	3.52E-14	2.57E-14	6.50E-13	7.94E-17	1.79E-17	8.18E-19	3.29E-19	1.46E-16	1.75E-13	4.21E-15	n/a	**8.90E-13**
propene	115-07-1	9.81E-16	2.83E-11	2.11E-11	1.08E-10	1.47E-13	3.39E-14	1.56E-15	6.27E-16	2.71E-13	5.79E-09	6.06E-11	n/a	**6.00E-09**
styrene	100-42-5	8.53E-15	4.55E-11	3.56E-11	9.50E-12	1.36E-10	3.36E-11	1.60E-11	6.46E-12	2.45E-09	1.00E-11	1.19E-14	n/a	**2.75E-09**
tetrachloroethene	127-18-4	3.83E-19	1.62E-14	9.41E-16	3.36E-13	5.95E-16	3.65E-17	6.92E-19	2.79E-19	9.82E-16	2.13E-12	1.24E-15	n/a	**2.49E-12**
toluene	108-88-3	1.07E-14	1.63E-10	6.68E-11	2.33E-09	3.08E-12	4.84E-13	2.03E-14	8.16E-15	5.37E-12	6.47E-09	1.30E-11	n/a	**9.06E-09**
trichloroethene	79-01-6	8.50E-19	1.30E-14	7.90E-15	1.19E-13	1.73E-16	3.50E-17	1.58E-18	6.33E-19	3.11E-16	4.48E-13	1.53E-15	n/a	**5.90E-13**
vinyl chloride	75-01-4	3.93E-18	1.89E-13	1.38E-13	2.72E-12	5.11E-16	1.16E-16	5.30E-18	2.13E-18	9.45E-16	1.04E-11	2.09E-13	n/a	**1.36E-11**
xylenes	1330-20-7	4.18E-15	2.66E-11	1.41E-11	1.95E-10	8.90E-13	1.71E-13	7.78E-15	3.13E-15	1.56E-12	5.14E-10	4.57E-13	n/a	**7.52E-10**
3,3',4,4'-TCB (PCB 77)	32598-13-3												n/a	
2,3',4,4',5-PeCB (PCB 118)	31508-00-6												n/a	
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4												n/a	
total coplanar PCBs	NA	7.39E-24	5.76E-21	2.93E-22	2.00E-22	4.14E-21	1.90E-22	5.60E-24	2.25E-24	6.62E-21	6.05E-20	2.41E-26	n/a	**7.78E-20**
ammonia	7664-41-7	2.85E-15	6.01E-10	4.75E-10	3.14E-09	1.42E-13	3.37E-14	1.55E-15	6.26E-16	2.65E-13	1.20E-10	1.82E-12	n/a	**4.34E-09**
aluminum	7429-90-5	5.63E-15	4.51E-14	3.56E-14	1.03E-14	7.06E-15	0.00E+00	0.00E+00	0.00E+00	3.97E-15	1.04E-10	1.59E-12	n/a	**1.06E-10**
cadmium	7440-43-9	3.04E-16	8.30E-09	2.22E-13	1.29E-13	2.34E-11	7.92E-13	2.15E-15	3.57E-17	9.84E-12	2.02E-10	1.07E-14	n/a	**8.54E-09**
chlorine	7782-50-5	1.98E-13	1.23E-08	9.72E-09	1.65E-08	1.15E-11	2.75E-12	1.27E-13	5.12E-14	2.15E-11	4.52E-10	6.89E-12	n/a	**3.90E-08**
chromium (3+)	7440-47-3	1.65E-16	2.29E-08	4.70E-15	2.09E-15	2.96E-09	0.00E+00	0.00E+00	0.00E+00	6.26E-09	1.72E-12	2.63E-14	n/a	**3.21E-08**
chromium (6+)	18540-29-9	1.65E-16	2.29E-08	4.70E-15	2.09E-15	2.96E-09	0.00E+00	0.00E+00	0.00E+00	6.26E-09	1.72E-12	2.63E-14	n/a	**3.21E-08**
copper	7440-50-8	1.48E-13	8.59E-07	2.33E-10	1.04E-10	2.02E-07	0.00E+00	0.00E+00	0.00E+00	2.35E-07	6.47E-11	9.90E-13	n/a	**1.30E-06**
hydrogen chloride	7647-01-0	2.45E-13	3.42E-08	2.70E-08	1.49E-07	4.65E-12	1.10E-12	5.10E-14	2.05E-14	8.64E-12	2.88E-09	4.38E-11	n/a	**2.13E-07**
iron	7439-89-6	2.90E-14	3.15E-06	2.34E-13	2.08E-11	1.48E-06	0.00E+00	0.00E+00	0.00E+00	1.44E-07	2.32E-10	3.54E-12	n/a	**4.78E-06**
lead	7439-92-1	1.88E-14	3.44E-08	1.50E-12	4.78E-13	2.43E-10	0.00E+00	0.00E+00	0.00E+00	1.57E-09	8.19E-14	4.42E-14	n/a	**3.62E-08**
manganese	7439-96-5	9.48E-14	4.01E-06	4.18E-11	1.34E-11	3.77E-08	0.00E+00	0.00E+00	0.00E+00	2.56E-07	2.94E-10	4.48E-12	n/a	**4.30E-06**
total mercury	NA												n/a	
mercuric chloride	7487-94-7	1.28E-15	5.79E-13	1.09E-13	1.30E-13	6.16E-14	2.27E-17	1.08E-15	7.63E-16	1.99E-13	0.00E+00	0.00E+00	n/a	**1.08E-12**
methyl mercury	22967-92-6	1.88E-17	1.29E-13	3.23E-15	5.25E-15	2.31E-15	3.54E-19	2.66E-18	1.87E-18	7.73E-15	5.00E-11	0.00E+00	n/a	**5.01E-11**
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	n/a	**0.00E+00**
nickel	7440-02-0	5.31E-16	1.35E-08	2.89E-14	8.99E-14	1.90E-09	0.00E+00	0.00E+00	0.00E+00	2.45E-09	2.81E-11	1.74E-14	n/a	**1.78E-08**
vanadium	7440-62-2	1.49E-14	4.30E-08	2.89E-13	1.26E-13	2.53E-09	0.00E+00	0.00E+00	0.00E+00	1.57E-10	3.06E-12	4.70E-14	n/a	**4.56E-08**
zinc	7440-66-6	5.40E-14	1.43E-06	3.06E-11	1.37E-10	3.03E-09	9.16E-11	2.78E-14	1.95E-14	8.49E-09	7.92E-08	1.85E-12	n/a	**1.52E-06**

a. Ingestion rates of total PCDDs/PCDFs and coplanar PCBs are presented in units of mg TEQ/day

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS: Adult Subsistence Farmer Exposure Scenario														
COPC	CAS Number	Incidental Ingestion of Soil (mg/day)[a]	Ingestion of Exposed Produce (mg/day)[a]	Ingestion of Protected Produce (mg/day)[a]	Ingestion of Belowground Produce (mg/day)[a]	Ingestion of Beef (mg/day)[a]	Ingestion of Pork (mg/day)[a]	Ingestion of Poultry (mg/day)[a]	Ingestion of Eggs (mg/day)[a]	Ingestion of Milk (mg/day)[a]	Ingestion of Fish (mg/day)[a]	Incidental Ingestion of Surface Water (mg/day)[a]	Ingestion of Breast Milk (mg/day)[a]	Total Daily COPC Ingestion (mg/day)[a]
2-butanone	78-93-3	9.64E-15	5.99E-10	4.73E-10	6.28E-10	1.64E-13	3.89E-14	1.80E-15	7.24E-16	3.04E-13	1.62E-12	2.47E-14	n/a	**1.70E-09**
2-ethyl 1,3-butadiene	3404-63-5	9.70E-16	4.96E-12	3.69E-12	4.55E-11	1.59E-13	3.80E-14	1.81E-15	7.30E-16	2.85E-13	6.22E-10	6.49E-13	n/a	**6.77E-10**
acetone	67-64-1	4.99E-15	3.10E-10	2.45E-10	1.05E-09	2.31E-14	5.49E-15	2.54E-16	1.02E-16	4.28E-14	3.17E-12	4.83E-14	n/a	**1.60E-09**
benzene	71-43-2	1.96E-13	3.57E-09	2.72E-09	4.43E-08	3.16E-11	7.42E-12	3.44E-13	1.38E-13	5.81E-11	1.26E-08	7.36E-11	n/a	**6.34E-08**
benzyl alcohol	100-51-6	1.70E-11	1.06E-06	8.34E-07	3.18E-06	1.64E-09	3.91E-10	1.81E-11	7.25E-12	3.06E-09	6.30E-11	9.67E-12	n/a	**5.07E-06**
bis(2-ethylhexyl)-phthalate	117-81-7	8.97E-12	2.04E-07	2.29E-09	2.15E-13	1.89E-07	5.04E-09	1.15E-09	4.63E-10	3.08E-06	1.68E-09	4.51E-13	n/a	**3.49E-06**
bromodichloromethane	75-27-4	3.76E-15	6.60E-11	5.21E-11	9.27E-10	5.88E-10	1.42E-10	6.59E-12	2.65E-12	1.09E-12	1.13E-12	6.61E-15	n/a	**1.79E-09**
carbon disulfide	75-15-0	1.00E-17	1.67E-13	1.22E-13	3.58E-12	1.71E-15	3.90E-16	1.80E-17	7.22E-18	3.12E-15	6.44E-12	3.15E-14	n/a	**1.03E-11**
carbon tetrachloride	56-23-5	2.10E-18	1.68E-14	1.15E-14	5.64E-13	3.85E-13	8.58E-15	3.98E-15	1.60E-15	6.92E-13	7.92E-13	1.33E-15	n/a	**2.48E-12**
chlorobenzene	108-90-7	2.02E-17	1.55E-13	1.10E-13	4.30E-12	3.58E-12	8.18E-14	3.82E-14	1.54E-14	6.46E-12	7.05E-13	1.19E-15	n/a	**1.54E-11**
chloroform	67-66-3	7.56E-18	1.58E-13	1.19E-13	2.15E-12	1.20E-15	2.79E-16	1.29E-17	5.19E-18	2.20E-15	4.82E-13	3.36E-15	n/a	**2.91E-12**
chloromethane	74-87-3	1.78E-17	1.11E-12	8.74E-13	6.26E-12	1.18E-15	2.80E-16	1.29E-17	5.21E-18	2.18E-15	2.23E-12	3.39E-14	n/a	**1.05E-11**
dibromochloromethane	124-48-1	5.85E-14	8.63E-10	6.81E-10	2.85E-09	9.35E-09	2.26E-09	1.05E-10	4.24E-11	1.72E-11	2.84E-12	1.32E-14	n/a	**1.62E-08**
dimethyl phthalate	131-11-3	8.09E-13	3.04E-08	2.30E-08	6.71E-08	1.11E-07	2.57E-08	1.18E-09	4.75E-13	2.04E-10	3.93E-11	5.96E-13	n/a	**2.58E-07**
di-n-butyl phthalate	84-74-2	6.51E-12	7.43E-09	2.82E-09	3.41E-11	3.16E-06	1.45E-07	9.12E-12	3.67E-10	5.16E-05	2.39E-08	6.40E-13	n/a	**5.50E-05**
ethane	74-84-0	1.07E-14	2.79E-10	2.18E-10	1.14E-09	1.56E-12	3.72E-13	1.73E-14	6.95E-15	2.89E-12	2.33E-08	2.27E-10	n/a	**2.52E-08**
ethylbenzene	100-41-4	1.34E-17	7.61E-14	4.91E-14	2.93E-12	2.45E-15	5.37E-16	2.51E-17	1.01E-17	4.37E-15	1.08E-12	1.07E-15	n/a	**4.15E-12**
HD	505-60-2	7.66E-15	2.81E-10	7.04E-11	1.54E-10	3.49E-12	3.96E-13	1.42E-14	5.71E-15	5.95E-12	1.77E-10	5.96E-13	n/a	**6.92E-10**
hexane	110-54-3	2.58E-18	5.42E-15	3.32E-15	1.16E-13	3.81E-16	8.78E-17	4.32E-18	1.73E-18	6.44E-16	1.12E-11	2.70E-15	n/a	**1.14E-11**
methane	74-82-8	3.29E-14	2.22E-09	1.75E-09	8.42E-09	3.37E-12	2.90E-14	1.34E-15	5.37E-16	2.26E-13	1.25E-07	4.35E-09	n/a	**1.41E-07**
methylene chloride	75-09-2	5.12E-18	2.63E-13	2.06E-13	5.20E-12	5.99E-16	1.42E-16	6.54E-18	2.64E-18	1.11E-15	1.75E-13	4.21E-15	n/a	**5.85E-12**
propene	115-07-1	7.85E-15	2.15E-10	1.68E-10	8.61E-10	1.13E-12	2.69E-13	1.25E-14	5.01E-15	2.09E-12	5.79E-09	6.06E-11	n/a	**7.10E-09**
styrene	100-42-5	6.83E-14	3.61E-10	2.85E-10	7.60E-11	1.08E-09	2.69E-10	1.28E-10	5.17E-11	1.95E-08	1.02E-11	1.21E-14	n/a	**2.18E-08**
tetrachloroethene	127-18-4	3.07E-18	2.45E-14	7.53E-15	2.69E-12	9.83E-16	1.36E-16	5.54E-18	2.23E-18	1.67E-15	2.13E-12	1.24E-15	n/a	**4.85E-12**
toluene	108-88-3	8.54E-14	7.55E-10	5.34E-10	1.87E-08	1.53E-11	3.49E-12	1.62E-13	6.53E-14	2.78E-11	6.48E-09	1.31E-11	n/a	**2.65E-08**
trichloroethene	79-01-6	6.80E-18	8.30E-14	6.32E-14	9.53E-13	1.14E-15	2.70E-16	1.26E-17	5.06E-18	2.10E-15	4.49E-13	1.53E-15	n/a	**1.55E-12**
vinyl chloride	75-01-4	3.14E-17	1.41E-12	1.10E-12	2.18E-11	3.86E-15	9.22E-16	4.24E-17	1.71E-17	7.19E-15	1.04E-11	2.09E-13	n/a	**3.49E-11**
xylenes	1330-20-7	3.34E-14	1.52E-10	1.13E-10	1.56E-09	5.38E-12	1.30E-12	6.22E-14	2.50E-14	9.64E-12	5.14E-10	4.58E-13	n/a	**2.36E-09**
3,3',4,4'-TCB (PCB 77)	32598-13-3	4.32E-20	2.11E-17	1.71E-18	1.17E-18	1.50E-17	8.74E-19	3.27E-20	1.31E-20	2.37E-17	3.17E-16	1.26E-22	n/a	**3.80E-16**
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	1.80E-19	8.78E-17	7.13E-18	4.86E-18	6.26E-17	3.64E-18	1.36E-19	5.48E-20	9.89E-17	1.32E-15	5.26E-22	n/a	**1.58E-15**
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	8.63E-20	4.21E-17	3.42E-18	2.34E-18	3.01E-17	1.75E-18	6.54E-20	2.63E-20	4.75E-17	6.33E-16	2.52E-22	n/a	**7.61E-16**
total coplanar PCBs	NA												n/a	
ammonia	7664-41-7	2.28E-14	4.81E-09	3.80E-09	2.52E-08	1.14E-12	2.69E-13	1.24E-14	5.01E-15	2.12E-12	1.20E-10	1.83E-12	n/a	**3.39E-08**
aluminum	7429-90-5	4.50E-14	3.60E-13	2.85E-13	8.25E-14	5.65E-14	0.00E+00	0.00E+00	0.00E+00	3.18E-14	1.04E-10	1.59E-12	n/a	**1.07E-10**
cadmium	7440-43-9	2.43E-15	8.31E-09	1.78E-12	1.03E-12	2.34E-11	7.92E-13	1.72E-14	2.86E-16	9.84E-12	2.02E-10	1.07E-14	n/a	**8.54E-09**
chlorine	7782-50-5	1.59E-12	9.85E-08	7.78E-08	1.32E-07	9.23E-11	2.20E-11	1.02E-12	4.10E-13	1.72E-10	4.71E-10	7.18E-12	n/a	**3.09E-07**
chromium (3+)	7440-47-3	1.32E-15	2.29E-08	3.76E-14	1.67E-14	2.96E-09	0.00E+00	0.00E+00	0.00E+00	6.26E-09	1.73E-12	2.63E-14	n/a	**3.21E-08**
chromium (6+)	18540-29-9	1.32E-15	2.29E-08	3.76E-14	1.67E-14	2.96E-09	0.00E+00	0.00E+00	0.00E+00	6.26E-09	1.73E-12	2.63E-14	n/a	**3.21E-08**
copper	7440-50-8	1.18E-12	8.61E-07	1.86E-09	8.35E-10	2.02E-07	0.00E+00	0.00E+00	0.00E+00	2.35E-07	6.49E-11	9.93E-13	n/a	**1.30E-06**
hydrogen chloride	7647-01-0	1.96E-12	2.74E-07	2.16E-07	1.19E-06	3.72E-11	8.84E-12	4.08E-13	1.64E-13	6.91E-11	2.93E-09	4.47E-11	n/a	**1.68E-06**
iron	7439-89-6	2.32E-13	3.15E-06	1.87E-12	1.66E-10	1.48E-06	0.00E+00	0.00E+00	0.00E+00	1.44E-07	2.32E-10	3.54E-12	n/a	**4.78E-06**
lead	7439-92-1	1.51E-13	3.44E-08	1.20E-11	3.82E-12	2.43E-10	0.00E+00	0.00E+00	0.00E+00	1.57E-09	8.26E-14	4.46E-14	n/a	**3.63E-08**
manganese	7439-96-5	7.59E-13	4.01E-06	3.35E-10	1.07E-10	3.77E-08	0.00E+00	0.00E+00	0.00E+00	2.56E-07	2.94E-10	4.49E-12	n/a	**4.30E-06**
total mercury	NA												n/a	
mercuric chloride	7487-94-7	1.37E-15	5.89E-13	1.16E-13	1.39E-13	6.20E-14	2.37E-17	1.16E-15	8.14E-16	2.00E-13	0.00E+00	0.00E+00	n/a	**1.11E-12**
methyl mercury	22967-92-6	2.66E-17	1.30E-13	4.58E-15	7.44E-15	2.31E-15	3.70E-19	3.77E-18	2.65E-18	7.75E-15	5.29E-11	0.00E+00	n/a	**5.31E-11**
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	n/a	**0.00E+00**
nickel	7440-02-0	4.25E-15	1.35E-08	2.31E-13	7.19E-13	1.90E-09	0.00E+00	0.00E+00	0.00E+00	2.45E-09	2.82E-11	1.74E-14	n/a	**1.78E-08**
vanadium	7440-62-2	1.19E-13	4.30E-08	2.31E-12	1.01E-12	2.53E-09	0.00E+00	0.00E+00	0.00E+00	1.57E-10	3.07E-12	4.73E-14	n/a	**4.56E-08**
zinc	7440-66-6	4.32E-13	1.43E-06	2.45E-10	1.10E-09	3.03E-09	9.16E-11	2.22E-13	1.56E-13	8.49E-09	7.92E-08	1.85E-12	n/a	**1.53E-06**

a. Ingestion rates of total PCDDs/PCDFs are presented in units of mg TEQ/day

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Adult Worker Exposure Scenario														
COPC	CAS Number	Incidental Ingestion of Soil (mg/day)[a]	Ingestion of Exposed Produce (mg/day)[a]	Ingestion of Protected Produce (mg/day)[a]	Ingestion of Belowground Produce (mg/day)[a]	Ingestion of Beef (mg/day)[a]	Ingestion of Pork (mg/day)[a]	Ingestion of Poultry (mg/day)[a]	Ingestion of Eggs (mg/day)[a]	Ingestion of Milk (mg/day)[a]	Ingestion of Fish (mg/day)[a]	Incidental Ingestion of Surface Water (mg/day)[a]	Ingestion of Breast Milk (mg/day)[a]	Total Daily COPC Ingestion (mg/day)[a]
2-butanone	78-93-3	9.64E-16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**9.64E-16**
2-ethyl 1,3-butadiene	3404-63-5	9.70E-17	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**9.70E-17**
acetone	67-64-1	4.99E-16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**4.99E-16**
benzene	71-43-2	1.96E-14	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.96E-14**
benzyl alcohol	100-51-6	1.70E-12	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.70E-12**
bis(2-ethylhexyl)-phthalate	117-81-7	8.97E-13	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**8.97E-13**
bromodichloromethane	75-27-4	3.76E-16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**3.76E-16**
carbon disulfide	75-15-0	1.00E-18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.00E-18**
carbon tetrachloride	56-23-5	2.10E-19	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**2.10E-19**
chlorobenzene	108-90-7	2.02E-18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**2.02E-18**
chloroform	67-66-3	7.56E-19	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**7.56E-19**
chloromethane	74-87-3	1.78E-18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.78E-18**
dibromochloromethane	124-48-1	5.85E-15	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**5.85E-15**
dimethyl phthalate	131-11-3	8.09E-14	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**8.09E-14**
di-n-butyl phthalate	84-74-2	6.51E-13	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**6.51E-13**
ethane	74-84-0	1.07E-15	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.07E-15**
ethylbenzene	100-41-4	1.34E-18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.34E-18**
HD	505-60-2	7.66E-16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**7.66E-16**
hexane	110-54-3	2.58E-19	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**2.58E-19**
methane	74-82-8	3.29E-15	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**3.29E-15**
methylene chloride	75-09-2	5.12E-19	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**5.12E-19**
propene	115-07-1	7.85E-16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**7.85E-16**
styrene	100-42-5	6.83E-15	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**6.83E-15**
tetrachloroethene	127-18-4	3.07E-19	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**3.07E-19**
toluene	108-88-3	8.54E-15	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**8.54E-15**
trichloroethene	79-01-6	6.80E-19	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**6.80E-19**
vinyl chloride	75-01-4	3.14E-18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**3.14E-18**
xylenes	1330-20-7	3.34E-15	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**3.34E-15**
3,3',4,4'-TCB (PCB 77)	32598-13-3		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
2,3',4,4',5-PeCB (PCB 118)	31508-00-6		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
total coplanar PCBs	NA	4.31E-24	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**4.31E-24**
ammonia	7664-41-7	2.28E-15	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**2.28E-15**
aluminum	7429-90-5	4.50E-15	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**4.50E-15**
cadmium	7440-43-9	2.43E-16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**2.43E-16**
chlorine	7782-50-5	1.59E-13	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.59E-13**
chromium (3+)	7440-47-3	1.32E-16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.32E-16**
chromium (6+)	18540-29-9	1.32E-16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.32E-16**
copper	7440-50-8	1.18E-13	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.18E-13**
hydrogen chloride	7647-01-0	1.96E-13	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.96E-13**
iron	7439-89-6	2.32E-14	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**2.32E-14**
lead	7439-92-1	1.51E-14	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.51E-14**
manganese	7439-96-5	7.59E-14	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**7.59E-14**
total mercury	NA		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
mercuric chloride	7487-94-7	6.15E-16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**6.15E-16**
methyl mercury	22967-92-6	1.02E-17	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.02E-17**
elemental mercury	7439-97-6	0.00E+00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**0.00E+00**
nickel	7440-02-0	4.25E-16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**4.25E-16**
vanadium	7440-62-2	1.19E-14	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.19E-14**
zinc	7440-66-6	4.32E-14	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**4.32E-14**

a. Ingestion rates of total PCDDs/PCDFs and coplanar PCBs are presented in units of mg TEQ/day

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS: Adult Worker Exposure Scenario														
COPC	CAS Number	Incidental Ingestion of Soil (mg/day)[a]	Ingestion of Exposed Produce (mg/day)[a]	Ingestion of Protected Produce (mg/day)[a]	Ingestion of Belowground Produce (mg/day)[a]	Ingestion of Beef (mg/day)[a]	Ingestion of Pork (mg/day)[a]	Ingestion of Poultry (mg/day)[a]	Ingestion of Eggs (mg/day)[a]	Ingestion of Milk (mg/day)[a]	Ingestion of Fish (mg/day)[a]	Incidental Ingestion of Surface Water (mg/day)[a]	Ingestion of Breast Milk (mg/day)[a]	Total Daily COPC Ingestion (mg/day)[a]
2-butanone	78-93-3	4.82E-15	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**4.82E-15**
2-ethyl 1,3-butadiene	3404-63-5	4.85E-16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**4.85E-16**
acetone	67-64-1	2.50E-15	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**2.50E-15**
benzene	71-43-2	9.80E-14	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**9.80E-14**
benzyl alcohol	100-51-6	8.51E-12	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**8.51E-12**
bis(2-ethylhexyl)-phthalate	117-81-7	4.48E-12	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**4.48E-12**
bromodichloromethane	75-27-4	1.88E-15	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.88E-15**
carbon disulfide	75-15-0	5.02E-18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**5.02E-18**
carbon tetrachloride	56-23-5	1.05E-18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.05E-18**
chlorobenzene	108-90-7	1.01E-17	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.01E-17**
chloroform	67-66-3	3.78E-18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**3.78E-18**
chloromethane	74-87-3	8.91E-18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**8.91E-18**
dibromochloromethane	124-48-1	2.92E-14	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**2.92E-14**
dimethyl phthalate	131-11-3	4.04E-13	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**4.04E-13**
di-n-butyl phthalate	84-74-2	3.25E-12	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**3.25E-12**
ethane	74-84-0	5.36E-15	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**5.36E-15**
ethylbenzene	100-41-4	6.71E-18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**6.71E-18**
HD	505-60-2	3.83E-15	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**3.83E-15**
hexane	110-54-3	1.29E-18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.29E-18**
methane	74-82-8	1.64E-14	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.64E-14**
methylene chloride	75-09-2	2.56E-18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**2.56E-18**
propene	115-07-1	3.92E-15	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**3.92E-15**
styrene	100-42-5	3.41E-14	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**3.41E-14**
tetrachloroethene	127-18-4	1.53E-18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.53E-18**
toluene	108-88-3	4.27E-14	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**4.27E-14**
trichloroethene	79-01-6	3.40E-18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**3.40E-18**
vinyl chloride	75-01-4	1.57E-17	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.57E-17**
xylenes	1330-20-7	1.67E-14	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.67E-14**
3,3',4,4'-TCB (PCB 77)	32598-13-3	2.16E-20	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**2.16E-20**
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	8.99E-20	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**8.99E-20**
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	4.32E-20	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**4.32E-20**
total coplanar PCBs	NA		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
ammonia	7664-41-7	1.14E-14	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.14E-14**
aluminum	7429-90-5	2.25E-14	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**2.25E-14**
cadmium	7440-43-9	1.22E-15	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.22E-15**
chlorine	7782-50-5	7.93E-13	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**7.93E-13**
chromium (3+)	7440-47-3	6.58E-16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**6.58E-16**
chromium (6+)	18540-29-9	6.58E-16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**6.58E-16**
copper	7440-50-8	5.92E-13	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**5.92E-13**
hydrogen chloride	7647-01-0	9.80E-13	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**9.80E-13**
iron	7439-89-6	1.16E-13	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.16E-13**
lead	7439-92-1	7.53E-14	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**7.53E-14**
manganese	7439-96-5	3.79E-13	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**3.79E-13**
total mercury	NA		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
mercuric chloride	7487-94-7	6.84E-16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**6.84E-16**
methyl mercury	22967-92-6	1.33E-17	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.33E-17**
elemental mercury	7439-97-6	0.00E+00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**0.00E+00**
nickel	7440-02-0	2.13E-15	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**2.13E-15**
vanadium	7440-62-2	5.94E-14	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**5.94E-14**
zinc	7440-66-6	2.16E-13	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**2.16E-13**

a. Ingestion rates of total PCDDs/PCDFs are presented in units of mg TEQ/day

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Child Resident Exposure Scenario														
COPC	CAS Number	Incidental Ingestion of Soil (mg/day)[a]	Ingestion of Exposed Produce (mg/day)[a]	Ingestion of Protected Produce (mg/day)[a]	Ingestion of Belowground Produce (mg/day)[a]	Ingestion of Beef (mg/day)[a]	Ingestion of Pork (mg/day)[a]	Ingestion of Poultry (mg/day)[a]	Ingestion of Eggs (mg/day)[a]	Ingestion of Milk (mg/day)[a]	Ingestion of Fish (mg/day)[a]	Incidental Ingestion of Surface Water (mg/day)[a]	Ingestion of Breast Milk (mg/day)[a]	Total Daily COPC Ingestion (mg/day)[a]
2-butanone	78-93-3	1.93E-14	1.75E-10	1.26E-10	1.02E-10	2.17E-14	7.20E-15	2.88E-16	1.77E-16	1.06E-13	8.48E-13	2.47E-14	n/a	**4.04E-10**
2-ethyl 1,3-butadiene	3404-63-5	1.94E-15	1.45E-12	9.83E-13	7.35E-12	2.11E-14	7.04E-15	2.91E-16	1.78E-16	9.94E-14	3.25E-10	6.49E-13	n/a	**3.36E-10**
acetone	67-64-1	9.98E-15	9.09E-11	6.52E-11	1.69E-10	3.06E-15	1.02E-15	4.08E-17	2.48E-17	1.49E-14	1.66E-12	4.83E-14	n/a	**3.27E-10**
benzene	71-43-2	3.92E-13	1.05E-09	7.25E-10	7.16E-09	4.19E-12	1.37E-12	5.52E-14	3.37E-14	2.02E-11	6.61E-09	7.36E-11	n/a	**1.56E-08**
benzyl alcohol	100-51-6	3.03E-11	2.76E-07	1.98E-07	4.57E-07	1.94E-10	6.45E-11	2.58E-12	1.58E-12	9.48E-10	2.94E-11	8.62E-12	n/a	**9.32E-07**
bis(2-ethylhexyl)-phthalate	117-81-7	1.76E-11	5.97E-08	6.00E-10	3.42E-14	2.51E-08	9.32E-10	1.81E-10	1.11E-10	1.07E-06	8.77E-10	4.50E-13	n/a	**1.16E-06**
bromodichloromethane	75-27-4	7.51E-15	1.93E-11	1.39E-11	1.50E-10	7.79E-11	2.62E-11	1.06E-12	6.47E-13	3.78E-13	5.93E-13	6.61E-15	n/a	**2.90E-10**
carbon disulfide	75-15-0	2.01E-17	4.89E-14	3.24E-14	5.79E-13	2.26E-16	7.21E-17	2.88E-18	1.76E-18	1.09E-15	3.37E-12	3.15E-14	n/a	**4.07E-12**
carbon tetrachloride	56-23-5	4.21E-18	4.92E-15	3.06E-15	9.13E-14	5.10E-14	1.59E-15	6.39E-16	3.91E-16	2.41E-13	4.14E-13	1.33E-15	n/a	**8.10E-13**
chlorobenzene	108-90-7	4.03E-17	4.55E-14	2.93E-14	6.96E-13	4.74E-13	1.51E-14	6.13E-15	3.75E-15	2.25E-12	3.69E-13	1.19E-15	n/a	**3.89E-12**
chloroform	67-66-3	1.51E-17	4.63E-14	3.19E-14	3.47E-13	1.59E-16	5.16E-17	2.07E-18	1.27E-18	7.67E-16	2.52E-13	3.36E-15	n/a	**6.82E-13**
chloromethane	74-87-3	3.57E-17	3.25E-13	2.33E-13	1.01E-12	1.56E-16	5.18E-17	2.07E-18	1.27E-18	7.60E-16	1.16E-12	3.39E-14	n/a	**2.77E-12**
dibromochloromethane	124-48-1	1.17E-13	2.52E-10	1.81E-10	4.60E-10	1.23E-09	4.16E-10	1.69E-11	1.03E-11	5.98E-12	1.49E-12	1.31E-14	n/a	**2.58E-09**
dimethyl phthalate	131-11-3	1.61E-12	8.87E-09	6.10E-09	1.08E-08	1.46E-08	4.72E-09	1.88E-10	1.15E-13	7.07E-11	2.05E-11	5.95E-13	n/a	**4.54E-08**
di-n-butyl phthalate	84-74-2	1.28E-11	2.16E-09	7.37E-10	5.41E-12	4.18E-07	2.68E-08	1.44E-12	8.79E-11	1.80E-05	1.25E-08	6.39E-13	n/a	**1.84E-05**
ethane	74-84-0	2.14E-14	8.18E-11	5.82E-11	1.84E-10	2.07E-13	6.88E-14	2.77E-15	1.70E-15	1.01E-12	1.22E-08	2.27E-10	n/a	**1.28E-08**
ethylbenzene	100-41-4	2.68E-17	2.23E-14	1.31E-14	4.75E-13	3.25E-16	9.94E-17	4.03E-18	2.46E-18	1.52E-15	5.66E-13	1.07E-15	n/a	**1.08E-12**
HD	505-60-2	1.53E-14	8.23E-11	1.88E-11	2.49E-11	4.62E-13	7.33E-14	2.28E-15	1.39E-15	2.07E-12	9.27E-11	5.96E-13	n/a	**2.22E-10**
hexane	110-54-3	5.15E-18	1.59E-15	8.84E-16	1.87E-14	5.04E-17	1.62E-17	6.94E-19	4.23E-19	2.24E-16	5.88E-12	2.70E-15	n/a	**5.91E-12**
methane	74-82-8	6.57E-14	6.50E-10	4.65E-10	1.36E-09	4.47E-13	5.36E-15	2.15E-16	1.31E-16	7.89E-14	6.52E-08	4.35E-09	n/a	**7.20E-08**
methylene chloride	75-09-2	1.02E-17	7.71E-14	5.48E-14	8.41E-13	7.94E-17	2.63E-17	1.05E-18	6.43E-19	3.86E-16	9.15E-14	4.21E-15	n/a	**1.07E-12**
propene	115-07-1	1.57E-14	6.30E-11	4.49E-11	1.39E-10	1.50E-13	4.98E-14	2.00E-15	1.22E-15	7.26E-13	3.03E-09	6.06E-11	n/a	**3.34E-09**
styrene	100-42-5	1.36E-13	1.06E-10	7.59E-11	1.23E-11	1.43E-10	4.96E-11	2.06E-11	1.26E-11	6.79E-09	5.35E-12	1.21E-14	n/a	**7.21E-09**
tetrachloroethene	127-18-4	6.13E-18	7.19E-15	2.01E-15	4.35E-13	1.30E-16	2.51E-17	8.89E-19	5.44E-19	5.81E-16	1.12E-12	1.24E-15	n/a	**1.56E-12**
toluene	108-88-3	1.71E-13	2.21E-10	1.43E-10	3.02E-09	2.03E-12	6.45E-13	2.61E-14	1.59E-14	9.67E-12	3.39E-09	1.31E-11	n/a	**6.80E-09**
trichloroethene	79-01-6	1.36E-17	2.43E-14	1.69E-14	1.54E-13	1.51E-16	5.00E-17	2.02E-18	1.24E-18	7.31E-16	2.35E-13	1.53E-15	n/a	**4.33E-13**
vinyl chloride	75-01-4	6.28E-17	4.14E-13	2.95E-13	3.52E-12	5.12E-16	1.71E-16	6.80E-18	4.17E-18	2.50E-15	5.42E-12	2.09E-13	n/a	**9.86E-12**
xylenes	1330-20-7	6.69E-14	4.45E-11	3.02E-11	2.52E-10	7.13E-13	2.40E-13	9.99E-15	6.11E-15	3.36E-12	2.69E-10	4.58E-13	n/a	**6.01E-10**
3,3',4,4'-TCB (PCB 77)	32598-13-3												n/a	
2,3',4,4',5-PeCB (PCB 118)	31508-00-6												n/a	
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4												n/a	
total coplanar PCBs	NA	1.26E-23	1.67E-21	6.67E-23	2.76E-23	5.45E-22	3.27E-23	7.67E-25	4.69E-25	2.29E-21	2.83E-20	2.15E-26	n/a	**3.29E-20**
ammonia	7664-41-7	4.55E-14	1.41E-09	1.01E-09	4.07E-09	1.51E-13	4.98E-14	1.99E-15	1.22E-15	7.37E-13	6.30E-11	1.83E-12	n/a	**6.56E-09**
aluminum	7429-90-5	9.01E-14	1.06E-13	7.59E-14	1.33E-14	7.48E-15	0.00E+00	0.00E+00	0.00E+00	1.11E-14	5.47E-11	1.59E-12	n/a	**5.66E-11**
cadmium	7440-43-9	4.86E-15	2.43E-09	4.74E-13	1.66E-13	3.11E-12	1.47E-13	2.77E-15	6.97E-17	3.43E-12	1.06E-10	1.07E-14	n/a	**2.55E-09**
chlorine	7782-50-5	3.17E-12	2.89E-08	2.07E-08	2.13E-08	1.22E-11	4.07E-12	1.63E-13	9.99E-14	5.98E-11	2.47E-10	7.18E-12	n/a	**7.13E-08**
chromium (3+)	7440-47-3	2.63E-15	6.71E-09	1.00E-14	2.70E-15	3.93E-10	0.00E+00	0.00E+00	0.00E+00	2.18E-09	9.03E-13	2.63E-14	n/a	**9.29E-09**
chromium (6+)	18540-29-9	2.63E-15	6.71E-09	1.00E-14	2.70E-15	3.93E-10	0.00E+00	0.00E+00	0.00E+00	2.18E-09	9.03E-13	2.63E-14	n/a	**9.29E-09**
copper	7440-50-8	2.37E-12	2.52E-07	4.97E-10	1.35E-10	2.68E-08	0.00E+00	0.00E+00	0.00E+00	8.19E-08	3.40E-11	9.93E-13	n/a	**3.62E-07**
hydrogen chloride	7647-01-0	3.92E-12	8.03E-08	5.77E-08	1.93E-07	4.93E-12	1.63E-12	6.55E-14	3.99E-14	2.41E-11	1.54E-09	4.47E-11	n/a	**3.32E-07**
iron	7439-89-6	4.63E-13	9.23E-07	4.99E-13	2.69E-11	1.96E-07	0.00E+00	0.00E+00	0.00E+00	5.00E-08	1.22E-10	3.54E-12	n/a	**1.17E-06**
lead	7439-92-1	3.01E-13	1.01E-08	3.19E-12	6.17E-13	3.22E-11	0.00E+00	0.00E+00	0.00E+00	5.47E-10	4.32E-14	4.46E-14	n/a	**1.07E-08**
manganese	7439-96-5	1.52E-12	1.18E-06	8.92E-11	1.73E-11	5.00E-09	0.00E+00	0.00E+00	0.00E+00	8.91E-08	1.54E-10	4.49E-12	n/a	**1.27E-06**
total mercury	NA												n/a	
mercuric chloride	7487-94-7	1.37E-15	1.51E-13	1.55E-14	1.12E-14	7.70E-15	2.89E-18	9.28E-17	9.94E-17	6.66E-14	0.00E+00	0.00E+00	n/a	**2.54E-13**
methyl mercury	22967-92-6	2.71E-17	3.74E-14	6.20E-16	6.11E-16	3.05E-16	6.35E-20	3.07E-19	3.29E-19	2.69E-15	1.61E-11	0.00E+00	n/a	**1.62E-11**
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	n/a	**0.00E+00**
nickel	7440-02-0	8.50E-15	3.94E-09	6.17E-14	1.16E-13	2.52E-10	0.00E+00	0.00E+00	0.00E+00	8.55E-10	1.47E-11	1.74E-14	n/a	**5.07E-09**
vanadium	7440-62-2	2.38E-13	1.26E-08	6.15E-13	1.62E-13	3.35E-10	0.00E+00	0.00E+00	0.00E+00	5.46E-11	1.61E-12	4.73E-14	n/a	**1.30E-08**
zinc	7440-66-6	8.63E-13	4.20E-07	6.53E-11	1.77E-10	4.02E-10	1.69E-11	3.57E-14	3.82E-14	2.96E-09	4.15E-08	1.85E-12	n/a	**4.65E-07**

a. Ingestion rates of total PCDDs/PCDFs and coplanar PCBs are presented in units of mg TEQ/day

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS: Child Resident Exposure Scenario														
COPC	CAS Number	Incidental Ingestion of Soil (mg/day)[a]	Ingestion of Exposed Produce (mg/day)[a]	Ingestion of Protected Produce (mg/day)[a]	Ingestion of Belowground Produce (mg/day)[a]	Ingestion of Beef (mg/day)[a]	Ingestion of Pork (mg/day)[a]	Ingestion of Poultry (mg/day)[a]	Ingestion of Eggs (mg/day)[a]	Ingestion of Milk (mg/day)[a]	Ingestion of Fish (mg/day)[a]	Incidental Ingestion of Surface Water (mg/day)[a]	Ingestion of Breast Milk (mg/day)[a]	Total Daily COPC Ingestion (mg/day)[a]
2-butanone	78-93-3	1.93E-14	1.75E-10	1.26E-10	1.02E-10	2.17E-14	7.20E-15	2.89E-16	1.77E-16	1.06E-13	8.48E-13	2.47E-14	n/a	**4.04E-10**
2-ethyl 1,3-butadiene	3404-63-5	1.94E-15	1.45E-12	9.83E-13	7.35E-12	2.11E-14	7.04E-15	2.91E-16	1.78E-16	9.94E-14	3.25E-10	6.49E-13	n/a	**3.36E-10**
acetone	67-64-1	9.98E-15	9.09E-11	6.53E-11	1.69E-10	3.06E-15	1.02E-15	4.08E-17	2.48E-17	1.49E-14	1.66E-12	4.83E-14	n/a	**3.27E-10**
benzene	71-43-2	3.92E-13	1.05E-09	7.25E-10	7.16E-09	4.19E-12	1.37E-12	5.52E-14	3.37E-14	2.02E-11	6.61E-09	7.36E-11	n/a	**1.56E-08**
benzyl alcohol	100-51-6	3.40E-11	3.10E-07	2.23E-07	5.14E-07	2.18E-10	7.24E-11	2.90E-12	1.77E-12	1.06E-09	3.30E-11	9.67E-12	n/a	**1.05E-06**
bis(2-ethylhexyl)-phthalate	117-81-7	1.79E-11	5.97E-08	6.11E-10	3.48E-14	2.51E-08	9.32E-10	1.85E-10	1.13E-10	1.07E-06	8.78E-10	4.51E-13	n/a	**1.16E-06**
bromodichloromethane	75-27-4	7.51E-15	1.93E-11	1.39E-11	1.50E-10	7.80E-11	2.62E-11	1.06E-12	6.47E-13	3.78E-13	5.93E-13	6.61E-15	n/a	**2.90E-10**
carbon disulfide	75-15-0	2.01E-17	4.89E-14	3.24E-14	5.79E-13	2.26E-16	7.21E-17	2.88E-18	1.76E-18	1.09E-15	3.37E-12	3.15E-14	n/a	**4.07E-12**
carbon tetrachloride	56-23-5	4.21E-18	4.92E-15	3.06E-15	9.13E-14	5.10E-14	1.59E-15	6.39E-16	3.91E-16	2.41E-13	4.14E-13	1.33E-15	n/a	**8.10E-13**
chlorobenzene	108-90-7	4.03E-17	4.55E-14	2.93E-14	6.96E-13	4.75E-13	1.51E-14	6.13E-15	3.75E-15	2.25E-12	3.69E-13	1.19E-15	n/a	**3.89E-12**
chloroform	67-66-3	1.51E-17	4.63E-14	3.19E-14	3.47E-13	1.59E-16	5.16E-17	2.07E-18	1.27E-18	7.67E-16	2.52E-13	3.36E-15	n/a	**6.82E-13**
chloromethane	74-87-3	3.57E-17	3.25E-13	2.33E-13	1.01E-12	1.56E-16	5.18E-17	2.07E-18	1.27E-18	7.60E-16	1.16E-12	3.39E-14	n/a	**2.77E-12**
dibromochloromethane	124-48-1	1.17E-13	2.53E-10	1.82E-10	4.61E-10	1.24E-09	4.18E-10	1.69E-11	1.03E-11	6.00E-12	1.49E-12	1.32E-14	n/a	**2.59E-09**
dimethyl phthalate	131-11-3	1.62E-12	8.91E-09	6.13E-09	1.08E-08	1.47E-08	4.75E-09	1.89E-10	1.16E-13	7.11E-11	2.05E-11	5.96E-13	n/a	**4.56E-08**
di-n-butyl phthalate	84-74-2	1.30E-11	2.18E-09	7.51E-10	5.51E-12	4.18E-07	2.68E-08	1.46E-12	8.95E-11	1.80E-05	1.25E-08	6.40E-13	n/a	**1.85E-05**
ethane	74-84-0	2.14E-14	8.18E-11	5.82E-11	1.84E-10	2.07E-13	6.88E-14	2.77E-15	1.70E-15	1.01E-12	1.22E-08	2.27E-10	n/a	**1.28E-08**
ethylbenzene	100-41-4	2.68E-17	2.23E-14	1.31E-14	4.75E-13	3.25E-16	9.94E-17	4.03E-18	2.46E-18	1.52E-15	5.66E-13	1.07E-15	n/a	**1.08E-12**
HD	505-60-2	1.53E-14	8.23E-11	1.88E-11	2.49E-11	4.62E-13	7.33E-14	2.28E-15	1.39E-15	2.07E-12	9.27E-11	5.96E-13	n/a	**2.22E-10**
hexane	110-54-3	5.15E-18	1.59E-15	8.84E-16	1.87E-14	5.04E-17	1.62E-17	6.94E-19	4.23E-19	2.24E-16	5.88E-12	2.70E-15	n/a	**5.91E-12**
methane	74-82-8	6.57E-14	6.50E-10	4.65E-10	1.36E-09	4.47E-13	5.36E-15	2.15E-16	1.31E-16	7.89E-14	6.52E-08	4.35E-09	n/a	**7.20E-08**
methylene chloride	75-09-2	1.02E-17	7.71E-14	5.48E-14	8.41E-13	7.94E-17	2.63E-17	1.05E-18	6.43E-19	3.86E-16	9.15E-14	4.21E-15	n/a	**1.07E-12**
propene	115-07-1	1.57E-14	6.30E-11	4.49E-11	1.39E-10	1.50E-13	4.98E-14	2.00E-15	1.22E-15	7.26E-13	3.03E-09	6.06E-11	n/a	**3.34E-09**
styrene	100-42-5	1.37E-13	1.06E-10	7.60E-11	1.23E-11	1.43E-10	4.97E-11	2.06E-11	1.26E-11	6.80E-09	5.35E-12	1.21E-14	n/a	**7.23E-09**
tetrachloroethene	127-18-4	6.13E-18	7.19E-15	2.01E-15	4.35E-13	1.30E-16	2.51E-17	8.89E-19	5.44E-19	5.81E-16	1.12E-12	1.24E-15	n/a	**1.56E-12**
toluene	108-88-3	1.71E-13	2.21E-10	1.43E-10	3.02E-09	2.03E-12	6.45E-13	2.61E-14	1.59E-14	9.67E-12	3.39E-09	1.31E-11	n/a	**6.80E-09**
trichloroethene	79-01-6	1.36E-17	2.43E-14	1.69E-14	1.54E-13	1.51E-16	5.00E-17	2.02E-18	1.24E-18	7.31E-16	2.35E-13	1.53E-15	n/a	**4.33E-13**
vinyl chloride	75-01-4	6.28E-17	4.14E-13	2.95E-13	3.52E-12	5.12E-16	1.71E-16	6.80E-18	4.17E-18	2.50E-15	5.42E-12	2.09E-13	n/a	**9.86E-12**
xylenes	1330-20-7	6.69E-14	4.45E-11	3.02E-11	2.52E-10	7.13E-13	2.40E-13	9.99E-15	6.11E-15	3.36E-12	2.69E-10	4.58E-13	n/a	**6.01E-10**
3,3',4,4'-TCB (PCB 77)	32598-13-3	8.63E-20	6.17E-18	4.57E-19	1.89E-19	1.99E-18	1.62E-19	5.25E-21	3.21E-21	8.27E-18	1.66E-16	1.26E-22	n/a	**1.83E-16**
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	3.60E-19	2.57E-17	1.90E-18	7.87E-19	8.30E-18	6.74E-19	2.19E-20	1.34E-20	3.44E-17	6.91E-16	5.26E-22	n/a	**7.63E-16**
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	1.73E-19	1.23E-17	9.13E-19	3.78E-19	3.98E-18	3.23E-19	1.05E-20	6.42E-21	1.65E-17	3.32E-16	2.52E-22	n/a	**3.66E-16**
total coplanar PCBs	NA												n/a	
ammonia	7664-41-7	4.55E-14	1.41E-09	1.01E-09	4.07E-09	1.51E-13	4.98E-14	1.99E-15	1.22E-15	7.37E-13	6.30E-11	1.83E-12	n/a	**6.56E-09**
aluminum	7429-90-5	9.01E-14	1.06E-13	7.59E-14	1.33E-14	7.48E-15	0.00E+00	0.00E+00	0.00E+00	1.11E-14	5.47E-11	1.59E-12	n/a	**5.66E-11**
cadmium	7440-43-9	4.86E-15	2.43E-09	4.74E-13	1.66E-13	3.11E-12	1.47E-13	2.77E-15	6.97E-17	3.43E-12	1.06E-10	1.07E-14	n/a	**2.55E-09**
chlorine	7782-50-5	3.17E-12	2.89E-08	2.07E-08	2.13E-08	1.22E-11	4.07E-12	1.63E-13	9.99E-14	5.98E-11	2.47E-10	7.18E-12	n/a	**7.13E-08**
chromium (3+)	7440-47-3	2.63E-15	6.71E-09	1.00E-14	2.70E-15	3.93E-10	0.00E+00	0.00E+00	0.00E+00	2.18E-09	9.03E-13	2.63E-14	n/a	**9.29E-09**
chromium (6+)	18540-29-9	2.63E-15	6.71E-09	1.00E-14	2.70E-15	3.93E-10	0.00E+00	0.00E+00	0.00E+00	2.18E-09	9.03E-13	2.63E-14	n/a	**9.29E-09**
copper	7440-50-8	2.37E-12	2.52E-07	4.97E-10	1.35E-10	2.68E-08	0.00E+00	0.00E+00	0.00E+00	8.19E-08	3.40E-11	9.93E-13	n/a	**3.62E-07**
hydrogen chloride	7647-01-0	3.92E-12	8.03E-08	5.77E-08	1.93E-07	4.93E-12	1.63E-12	6.55E-14	3.99E-14	2.41E-11	1.54E-09	4.47E-11	n/a	**3.32E-07**
iron	7439-89-6	4.63E-13	9.23E-07	4.99E-13	2.69E-11	1.96E-07	0.00E+00	0.00E+00	0.00E+00	5.00E-08	1.22E-10	3.54E-12	n/a	**1.17E-06**
lead	7439-92-1	3.01E-13	1.01E-08	3.19E-12	6.18E-13	3.22E-11	0.00E+00	0.00E+00	0.00E+00	5.47E-10	4.32E-14	4.46E-14	n/a	**1.07E-08**
manganese	7439-96-5	1.52E-12	1.18E-06	8.92E-11	1.73E-11	5.00E-09	0.00E+00	0.00E+00	0.00E+00	8.91E-08	1.54E-10	4.49E-12	n/a	**1.27E-06**
total mercury	NA												n/a	
mercuric chloride	7487-94-7	2.73E-15	1.73E-13	3.09E-14	2.24E-14	8.22E-15	4.39E-18	1.86E-16	1.99E-16	6.97E-14	0.00E+00	0.00E+00	n/a	**3.07E-13**
methyl mercury	22967-92-6	5.33E-17	3.82E-14	1.22E-15	1.20E-15	3.07E-16	6.85E-20	6.05E-19	6.48E-19	2.70E-15	2.77E-11	0.00E+00	n/a	**2.78E-11**
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	n/a	**0.00E+00**
nickel	7440-02-0	8.50E-15	3.94E-09	6.17E-14	1.16E-13	2.52E-10	0.00E+00	0.00E+00	0.00E+00	8.55E-10	1.47E-11	1.74E-14	n/a	**5.07E-09**
vanadium	7440-62-2	2.38E-13	1.26E-08	6.16E-13	1.63E-13	3.35E-10	0.00E+00	0.00E+00	0.00E+00	5.46E-11	1.61E-12	4.73E-14	n/a	**1.30E-08**
zinc	7440-66-6	8.63E-13	4.20E-07	6.53E-11	1.77E-10	4.02E-10	1.69E-11	3.57E-14	3.82E-14	2.96E-09	4.15E-08	1.85E-12	n/a	**4.65E-07**

a. Ingestion rates of total PCDDs/PCDFs are presented in units of mg TEQ/day

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS:
Child Subsistence Fisher Exposure Scenario

COPC	CAS Number	Incidental Ingestion of Soil (mg/day)[a]	Ingestion of Exposed Produce (mg/day)[a]	Ingestion of Protected Produce (mg/day)[a]	Ingestion of Belowground Produce (mg/day)[a]	Ingestion of Beef (mg/day)[a]	Ingestion of Pork (mg/day)[a]	Ingestion of Poultry (mg/day)[a]	Ingestion of Eggs (mg/day)[a]	Ingestion of Milk (mg/day)[a]	Ingestion of Fish (mg/day)[a]	Incidental Ingestion of Surface Water (mg/day)[a]	Ingestion of Breast Milk (mg/day)[a]	Total Daily COPC Ingestion (mg/day)[a]
2-butanone	78-93-3	1.93E-14	1.75E-10	1.26E-10	1.02E-10	2.17E-14	7.20E-15	2.88E-16	1.77E-16	1.06E-13	2.12E-12	2.47E-14	n/a	**4.05E-10**
2-ethyl 1,3-butadiene	3404-63-5	1.94E-15	1.45E-12	9.83E-13	7.35E-12	2.11E-14	7.04E-15	2.91E-16	1.78E-16	9.94E-14	8.13E-10	6.49E-13	n/a	**8.24E-10**
acetone	67-64-1	9.98E-15	9.09E-11	6.52E-11	1.69E-10	3.06E-15	1.02E-15	4.08E-17	2.48E-17	1.49E-14	4.15E-12	4.83E-14	n/a	**3.29E-10**
benzene	71-43-2	3.92E-13	1.05E-09	7.25E-10	7.16E-09	4.19E-12	1.37E-12	5.52E-14	3.37E-14	2.02E-11	1.65E-08	7.36E-11	n/a	**2.56E-08**
benzyl alcohol	100-51-6	3.03E-11	2.76E-07	1.98E-07	4.57E-07	1.94E-10	6.45E-11	2.58E-12	1.58E-12	9.48E-10	7.35E-11	8.62E-12	n/a	**9.32E-07**
bis(2-ethylhexyl)-phthalate	117-81-7	1.76E-11	5.97E-08	6.00E-10	3.42E-14	2.51E-08	9.32E-10	1.81E-10	1.11E-10	1.07E-06	2.19E-09	4.50E-13	n/a	**1.16E-06**
bromodichloromethane	75-27-4	7.51E-15	1.93E-11	1.39E-11	1.50E-10	7.79E-11	2.62E-11	1.06E-12	6.47E-13	3.78E-13	1.48E-12	6.61E-15	n/a	**2.91E-10**
carbon disulfide	75-15-0	2.01E-17	4.89E-14	3.24E-14	5.79E-13	2.26E-16	7.21E-17	2.88E-18	1.76E-18	1.09E-15	8.43E-12	3.15E-14	n/a	**9.13E-12**
carbon tetrachloride	56-23-5	4.21E-18	4.92E-15	3.06E-15	9.13E-14	5.10E-14	1.59E-15	6.39E-16	3.91E-16	2.41E-13	1.04E-12	1.33E-15	n/a	**1.43E-12**
chlorobenzene	108-90-7	4.03E-17	4.55E-14	2.93E-14	6.96E-13	4.74E-13	1.51E-14	6.13E-15	3.75E-15	2.25E-12	9.23E-13	1.19E-15	n/a	**4.44E-12**
chloroform	67-66-3	1.51E-17	4.63E-14	3.19E-14	3.47E-13	1.59E-16	5.16E-17	2.07E-18	1.27E-18	7.67E-16	6.31E-13	3.36E-15	n/a	**1.06E-12**
chloromethane	74-87-3	3.57E-17	3.25E-13	2.33E-13	1.01E-12	1.56E-16	5.18E-17	2.07E-18	1.27E-18	7.60E-16	2.91E-12	3.39E-14	n/a	**4.52E-12**
dibromochloromethane	124-48-1	1.17E-13	2.52E-10	1.81E-10	4.60E-10	1.23E-09	4.16E-10	1.69E-11	1.03E-11	5.98E-12	3.71E-12	1.31E-14	n/a	**2.58E-09**
dimethyl phthalate	131-11-3	1.61E-12	8.87E-09	6.10E-09	1.08E-08	1.46E-08	4.72E-09	1.88E-10	1.15E-13	7.07E-11	5.13E-11	5.95E-13	n/a	**4.54E-08**
di-n-butyl phthalate	84-74-2	1.28E-11	2.16E-09	7.37E-10	5.41E-12	4.18E-07	2.68E-08	1.44E-12	8.79E-11	1.80E-05	3.12E-08	6.39E-13	n/a	**1.85E-05**
ethane	74-84-0	2.14E-14	8.18E-11	5.82E-11	1.84E-10	2.07E-13	6.88E-14	2.77E-15	1.70E-15	1.01E-12	3.05E-08	2.27E-10	n/a	**3.11E-08**
ethylbenzene	100-41-4	2.68E-17	2.23E-14	1.31E-14	4.75E-13	3.25E-16	9.94E-17	4.03E-18	2.46E-18	1.52E-15	1.41E-12	1.07E-15	n/a	**1.93E-12**
HD	505-60-2	1.53E-14	8.23E-11	1.88E-11	2.49E-11	4.62E-13	7.33E-14	2.28E-15	1.39E-15	2.07E-12	2.32E-10	5.96E-13	n/a	**3.61E-10**
hexane	110-54-3	5.15E-18	1.59E-15	8.84E-16	1.87E-14	5.04E-17	1.62E-17	6.94E-19	4.23E-19	2.24E-16	1.47E-11	2.70E-15	n/a	**1.47E-11**
methane	74-82-8	6.57E-14	6.50E-10	4.65E-10	1.36E-09	4.47E-13	5.36E-15	2.15E-16	1.31E-16	7.89E-14	1.63E-07	4.35E-09	n/a	**1.70E-07**
methylene chloride	75-09-2	1.02E-17	7.71E-14	5.48E-14	8.41E-13	7.94E-17	2.63E-17	1.05E-18	6.43E-19	3.86E-16	2.29E-13	4.21E-15	n/a	**1.21E-12**
propene	115-07-1	1.57E-14	6.30E-11	4.49E-11	1.39E-10	1.50E-13	4.98E-14	2.00E-15	1.22E-15	7.26E-13	7.57E-09	6.06E-11	n/a	**7.88E-09**
styrene	100-42-5	1.36E-13	1.06E-10	7.59E-11	1.23E-11	1.43E-10	4.96E-11	2.06E-11	1.26E-11	6.79E-09	1.34E-11	1.21E-14	n/a	**7.22E-09**
tetrachloroethene	127-18-4	6.13E-18	7.19E-15	2.01E-15	4.35E-13	1.30E-16	2.51E-17	8.89E-19	5.44E-19	5.81E-16	2.79E-12	1.24E-15	n/a	**3.23E-12**
toluene	108-88-3	1.71E-13	2.21E-10	1.43E-10	3.02E-09	2.03E-12	6.45E-13	2.61E-14	1.59E-14	9.67E-12	8.48E-09	1.31E-11	n/a	**1.19E-08**
trichloroethene	79-01-6	1.36E-17	2.43E-14	1.69E-14	1.54E-13	1.51E-16	5.00E-17	2.02E-18	1.24E-18	7.31E-16	5.87E-13	1.53E-15	n/a	**7.85E-13**
vinyl chloride	75-01-4	6.28E-17	4.14E-13	2.95E-13	3.52E-12	5.12E-16	1.71E-16	6.80E-18	4.17E-18	2.50E-15	1.36E-11	2.09E-13	n/a	**1.80E-11**
xylenes	1330-20-7	6.69E-14	4.45E-11	3.02E-11	2.52E-10	7.13E-13	2.40E-13	9.99E-15	6.11E-15	3.36E-12	6.73E-10	4.58E-13	n/a	**1.00E-09**
3,3',4,4'-TCB (PCB 77)	32598-13-3												n/a	
2,3',4,4',5-PeCB (PCB 118)	31508-00-6												n/a	
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4												n/a	
total coplanar PCBs	NA	1.26E-23	1.67E-21	6.67E-23	2.76E-23	5.45E-22	3.27E-23	7.67E-25	4.69E-25	2.29E-21	7.06E-20	2.15E-26	n/a	**7.53E-20**
ammonia	7664-41-7	4.55E-14	1.41E-09	1.01E-09	4.07E-09	1.51E-13	4.98E-14	1.99E-15	1.22E-15	7.37E-13	1.58E-10	1.83E-12	n/a	**6.65E-09**
aluminum	7429-90-5	9.01E-14	1.06E-13	7.59E-14	1.33E-14	7.48E-15	0.00E+00	0.00E+00	0.00E+00	1.11E-14	1.37E-10	1.59E-12	n/a	**1.39E-10**
cadmium	7440-43-9	4.86E-15	2.43E-09	4.74E-13	1.66E-13	3.11E-12	1.47E-13	2.77E-15	6.97E-17	3.43E-12	2.64E-10	1.07E-14	n/a	**2.71E-09**
chlorine	7782-50-5	3.17E-12	2.89E-08	2.07E-08	2.13E-08	1.22E-11	4.07E-12	1.63E-13	9.99E-14	5.98E-11	6.17E-10	7.18E-12	n/a	**7.16E-08**
chromium (3+)	7440-47-3	2.63E-15	6.71E-09	1.00E-14	2.70E-15	3.93E-10	0.00E+00	0.00E+00	0.00E+00	2.18E-09	2.26E-12	2.63E-14	n/a	**9.29E-09**
chromium (6+)	18540-29-9	2.63E-15	6.71E-09	1.00E-14	2.70E-15	3.93E-10	0.00E+00	0.00E+00	0.00E+00	2.18E-09	2.26E-12	2.63E-14	n/a	**9.29E-09**
copper	7440-50-8	2.37E-12	2.52E-07	4.97E-10	1.35E-10	2.68E-08	0.00E+00	0.00E+00	0.00E+00	8.19E-08	8.49E-11	9.93E-13	n/a	**3.62E-07**
hydrogen chloride	7647-01-0	3.92E-12	8.03E-08	5.77E-08	1.93E-07	4.93E-12	1.63E-12	6.55E-14	3.99E-14	2.41E-11	3.84E-09	4.47E-11	n/a	**3.35E-07**
iron	7439-89-6	4.63E-13	9.23E-07	4.99E-13	2.69E-11	1.96E-07	0.00E+00	0.00E+00	0.00E+00	5.00E-08	3.04E-10	3.54E-12	n/a	**1.17E-06**
lead	7439-92-1	3.01E-13	1.01E-08	3.19E-12	6.17E-13	3.22E-11	0.00E+00	0.00E+00	0.00E+00	5.47E-10	1.08E-13	4.46E-14	n/a	**1.07E-08**
manganese	7439-96-5	1.52E-12	1.18E-06	8.92E-11	1.73E-11	5.00E-09	0.00E+00	0.00E+00	0.00E+00	8.91E-08	3.85E-10	4.49E-12	n/a	**1.27E-06**
total mercury	NA												n/a	
mercuric chloride	7487-94-7	1.37E-15	1.51E-13	1.55E-14	1.12E-14	7.70E-15	2.89E-18	9.28E-17	9.94E-17	6.66E-14	0.00E+00	0.00E+00	n/a	**2.54E-13**
methyl mercury	22967-92-6	2.71E-17	3.74E-14	6.20E-16	6.11E-16	3.05E-16	6.35E-20	3.07E-19	3.29E-19	2.69E-15	4.03E-11	0.00E+00	n/a	**4.04E-11**
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	n/a	**0.00E+00**
nickel	7440-02-0	8.50E-15	3.94E-09	6.17E-14	1.16E-13	2.52E-10	0.00E+00	0.00E+00	0.00E+00	8.55E-10	3.69E-11	1.74E-14	n/a	**5.09E-09**
vanadium	7440-62-2	2.38E-13	1.26E-08	6.15E-13	1.62E-13	3.35E-10	0.00E+00	0.00E+00	0.00E+00	5.46E-11	4.02E-12	4.73E-14	n/a	**1.30E-08**
zinc	7440-66-6	8.63E-13	4.20E-07	6.53E-11	1.77E-10	4.02E-10	1.69E-11	3.57E-14	3.82E-14	2.96E-09	1.04E-07	1.85E-12	n/a	**5.27E-07**

a. Ingestion rates of total PCDDs/PCDFs and coplanar PCBs are presented in units of mg TEQ/day

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS: Child Subsistence Fisher Exposure Scenario														
COPC	CAS Number	Incidental Ingestion of Soil (mg/day)[a]	Ingestion of Exposed Produce (mg/day)[a]	Ingestion of Protected Produce (mg/day)[a]	Ingestion of Belowground Produce (mg/day)[a]	Ingestion of Beef (mg/day)[a]	Ingestion of Pork (mg/day)[a]	Ingestion of Poultry (mg/day)[a]	Ingestion of Eggs (mg/day)[a]	Ingestion of Milk (mg/day)[a]	Ingestion of Fish (mg/day)[a]	Incidental Ingestion of Surface Water (mg/day)[a]	Ingestion of Breast Milk (mg/day)[a]	Total Daily COPC Ingestion (mg/day)[a]
2-butanone	78-93-3	1.93E-14	1.75E-10	1.26E-10	1.02E-10	2.17E-14	7.20E-15	2.89E-16	1.77E-16	1.06E-13	2.12E-12	2.47E-14	n/a	**4.05E-10**
2-ethyl 1,3-butadiene	3404-63-5	1.94E-15	1.45E-12	9.83E-13	7.35E-12	2.11E-14	7.04E-15	2.91E-16	1.78E-16	9.94E-14	8.13E-10	6.49E-13	n/a	**8.24E-10**
acetone	67-64-1	9.98E-15	9.09E-11	6.53E-11	1.69E-10	3.06E-15	1.02E-15	4.08E-17	2.48E-17	1.49E-14	4.15E-12	4.83E-14	n/a	**3.29E-10**
benzene	71-43-2	3.92E-13	1.05E-09	7.25E-10	7.16E-09	4.19E-12	1.37E-12	5.52E-14	3.37E-14	2.02E-11	1.65E-08	7.36E-11	n/a	**2.56E-08**
benzyl alcohol	100-51-6	3.40E-11	3.10E-07	2.23E-07	5.14E-07	2.18E-10	7.24E-11	2.90E-12	1.77E-12	1.06E-09	8.25E-11	9.67E-12	n/a	**1.05E-06**
bis(2-ethylhexyl)-phthalate	117-81-7	1.79E-11	5.97E-08	6.11E-10	3.48E-14	2.51E-08	9.32E-10	1.85E-10	1.13E-10	1.07E-06	2.20E-09	4.51E-13	n/a	**1.16E-06**
bromodichloromethane	75-27-4	7.51E-15	1.93E-11	1.39E-11	1.50E-10	7.80E-11	2.62E-11	1.06E-12	6.47E-13	3.78E-13	1.48E-12	6.61E-15	n/a	**2.91E-10**
carbon disulfide	75-15-0	2.01E-17	4.89E-14	3.24E-14	5.79E-13	2.26E-16	7.21E-17	2.88E-18	1.76E-18	1.09E-15	8.43E-12	3.15E-14	n/a	**9.13E-12**
carbon tetrachloride	56-23-5	4.21E-18	4.92E-15	3.06E-15	9.13E-14	5.10E-14	1.59E-15	6.39E-16	3.91E-16	2.41E-13	1.04E-12	1.33E-15	n/a	**1.43E-12**
chlorobenzene	108-90-7	4.03E-17	4.55E-14	2.93E-14	6.96E-13	4.75E-13	1.51E-14	6.13E-15	3.75E-15	2.25E-12	9.23E-13	1.19E-15	n/a	**4.44E-12**
chloroform	67-66-3	1.51E-17	4.63E-14	3.19E-14	3.47E-13	1.59E-16	5.16E-17	2.07E-18	1.27E-18	7.67E-16	6.31E-13	3.36E-15	n/a	**1.06E-12**
chloromethane	74-87-3	3.57E-17	3.25E-13	2.33E-13	1.01E-12	1.56E-16	5.18E-17	2.07E-18	1.27E-18	7.60E-16	2.91E-12	3.39E-14	n/a	**4.52E-12**
dibromochloromethane	124-48-1	1.17E-13	2.53E-10	1.82E-10	4.61E-10	1.24E-09	4.18E-10	1.69E-11	1.03E-11	6.00E-12	3.72E-12	1.32E-14	n/a	**2.59E-09**
dimethyl phthalate	131-11-3	1.62E-12	8.91E-09	6.13E-09	1.08E-08	1.47E-08	4.75E-09	1.89E-10	1.16E-13	7.11E-11	5.14E-11	5.96E-13	n/a	**4.56E-08**
di-n-butyl phthalate	84-74-2	1.30E-11	2.18E-09	7.51E-10	5.51E-12	4.18E-07	2.68E-08	1.46E-12	8.95E-11	1.80E-05	3.12E-08	6.40E-13	n/a	**1.85E-05**
ethane	74-84-0	2.14E-14	8.18E-11	5.82E-11	1.84E-10	2.07E-13	6.88E-14	2.77E-15	1.70E-15	1.01E-12	3.05E-08	2.27E-10	n/a	**3.11E-08**
ethylbenzene	100-41-4	2.68E-17	2.23E-14	1.31E-14	4.75E-13	3.25E-16	9.94E-17	4.03E-18	2.46E-18	1.52E-15	1.41E-12	1.07E-15	n/a	**1.93E-12**
HD	505-60-2	1.53E-14	8.23E-11	1.88E-11	2.49E-11	4.62E-13	7.33E-14	2.28E-15	1.39E-15	2.07E-12	2.32E-10	5.96E-13	n/a	**3.61E-10**
hexane	110-54-3	5.15E-18	1.59E-15	8.84E-16	1.87E-14	5.04E-17	1.62E-17	6.94E-19	4.23E-19	2.24E-16	1.47E-11	2.70E-15	n/a	**1.47E-11**
methane	74-82-8	6.57E-14	6.50E-10	4.65E-10	1.36E-09	4.47E-13	5.36E-15	2.15E-16	1.31E-16	7.89E-14	1.63E-07	4.35E-09	n/a	**1.70E-07**
methylene chloride	75-09-2	1.02E-17	7.71E-14	5.48E-14	8.41E-13	7.94E-17	2.63E-17	1.05E-18	6.43E-19	3.86E-16	2.29E-13	4.21E-15	n/a	**1.21E-12**
propene	115-07-1	1.57E-14	6.30E-11	4.49E-11	1.39E-10	1.50E-13	4.98E-14	2.00E-15	1.22E-15	7.26E-13	7.57E-09	6.06E-11	n/a	**7.88E-09**
styrene	100-42-5	1.37E-13	1.06E-10	7.60E-11	1.23E-11	1.43E-10	4.97E-11	2.06E-11	1.26E-11	6.80E-09	1.34E-11	1.21E-14	n/a	**7.24E-09**
tetrachloroethene	127-18-4	6.13E-18	7.19E-15	2.01E-15	4.35E-13	1.30E-16	2.51E-17	8.89E-19	5.44E-19	5.81E-16	2.79E-12	1.24E-15	n/a	**3.23E-12**
toluene	108-88-3	1.71E-13	2.21E-10	1.43E-10	3.02E-09	2.03E-12	6.45E-13	2.61E-14	1.59E-14	9.67E-12	8.48E-09	1.31E-11	n/a	**1.19E-08**
trichloroethene	79-01-6	1.36E-17	2.43E-14	1.69E-14	1.54E-13	1.51E-16	5.00E-17	2.02E-18	1.24E-18	7.31E-16	5.87E-13	1.53E-15	n/a	**7.85E-13**
vinyl chloride	75-01-4	6.28E-17	4.14E-13	2.95E-13	3.52E-12	5.12E-16	1.71E-16	6.80E-18	4.17E-18	2.50E-15	1.36E-11	2.09E-13	n/a	**1.80E-11**
xylenes	1330-20-7	6.69E-14	4.45E-11	3.02E-11	2.52E-10	7.13E-13	2.40E-13	9.99E-15	6.11E-15	3.36E-12	6.73E-10	4.58E-13	n/a	**1.00E-09**
3,3',4,4'-TCB (PCB 77)	32598-13-3	8.63E-20	6.17E-18	4.57E-19	1.89E-19	1.99E-18	1.62E-19	5.25E-21	3.21E-21	8.27E-18	4.14E-16	1.26E-22	n/a	**4.32E-16**
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	3.60E-19	2.57E-17	1.90E-18	7.87E-19	8.30E-18	6.74E-19	2.19E-20	1.34E-20	3.44E-17	1.73E-15	5.26E-22	n/a	**1.80E-15**
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	1.73E-19	1.23E-17	9.13E-19	3.78E-19	3.98E-18	3.23E-19	1.05E-20	6.42E-21	1.65E-17	8.29E-16	2.52E-22	n/a	**8.64E-16**
total coplanar PCBs	NA												n/a	
ammonia	7664-41-7	4.55E-14	1.41E-09	1.01E-09	4.07E-09	1.51E-13	4.98E-14	1.99E-15	1.22E-15	7.37E-13	1.58E-10	1.83E-12	n/a	**6.65E-09**
aluminum	7429-90-5	9.01E-14	1.06E-13	7.59E-14	1.33E-14	7.48E-15	0.00E+00	0.00E+00	0.00E+00	1.11E-14	1.37E-10	1.59E-12	n/a	**1.39E-10**
cadmium	7440-43-9	4.86E-15	2.43E-09	4.74E-13	1.66E-13	3.11E-12	1.47E-13	2.77E-15	6.97E-17	3.43E-12	2.64E-10	1.07E-14	n/a	**2.71E-09**
chlorine	7782-50-5	3.17E-12	2.89E-08	2.07E-08	2.13E-08	1.22E-11	4.07E-12	1.63E-13	9.99E-14	5.98E-11	6.17E-10	7.18E-12	n/a	**7.16E-08**
chromium (3+)	7440-47-3	2.63E-15	6.71E-09	1.00E-14	2.70E-15	3.93E-10	0.00E+00	0.00E+00	0.00E+00	2.18E-09	2.26E-12	2.63E-14	n/a	**9.29E-09**
chromium (6+)	18540-29-9	2.63E-15	6.71E-09	1.00E-14	2.70E-15	3.93E-10	0.00E+00	0.00E+00	0.00E+00	2.18E-09	2.26E-12	2.63E-14	n/a	**9.29E-09**
copper	7440-50-8	2.37E-12	2.52E-07	4.97E-10	1.35E-10	2.68E-08	0.00E+00	0.00E+00	0.00E+00	8.19E-08	8.49E-11	9.93E-13	n/a	**3.62E-07**
hydrogen chloride	7647-01-0	3.92E-12	8.03E-08	5.77E-08	1.93E-07	4.93E-12	1.63E-12	6.55E-14	3.99E-14	2.41E-11	3.84E-09	4.47E-11	n/a	**3.35E-07**
iron	7439-89-6	4.63E-13	9.23E-07	4.99E-13	2.69E-11	1.96E-07	0.00E+00	0.00E+00	0.00E+00	5.00E-08	3.04E-10	3.54E-12	n/a	**1.17E-06**
lead	7439-92-1	3.01E-13	1.01E-08	3.19E-12	6.18E-13	3.22E-11	0.00E+00	0.00E+00	0.00E+00	5.47E-10	1.08E-13	4.46E-14	n/a	**1.07E-08**
manganese	7439-96-5	1.52E-12	1.18E-06	8.92E-11	1.73E-11	5.00E-09	0.00E+00	0.00E+00	0.00E+00	8.91E-08	3.85E-10	4.49E-12	n/a	**1.27E-06**
total mercury	NA												n/a	
mercuric chloride	7487-94-7	2.73E-15	1.73E-13	3.09E-14	2.24E-14	8.22E-15	4.39E-18	1.86E-16	1.99E-16	6.97E-14	0.00E+00	0.00E+00	n/a	**3.07E-13**
methyl mercury	22967-92-6	5.33E-17	3.82E-14	1.22E-15	1.20E-15	3.07E-16	6.85E-20	6.05E-19	6.48E-19	2.70E-15	6.93E-11	0.00E+00	n/a	**6.93E-11**
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	n/a	**0.00E+00**
nickel	7440-02-0	8.50E-15	3.94E-09	6.17E-14	1.16E-13	2.52E-10	0.00E+00	0.00E+00	0.00E+00	8.55E-10	3.69E-11	1.74E-14	n/a	**5.09E-09**
vanadium	7440-62-2	2.38E-13	1.26E-08	6.16E-13	1.63E-13	3.35E-10	0.00E+00	0.00E+00	0.00E+00	5.46E-11	4.02E-12	4.73E-14	n/a	**1.30E-08**
zinc	7440-66-6	8.63E-13	4.20E-07	6.53E-11	1.77E-10	4.02E-10	1.69E-11	3.57E-14	3.82E-14	2.96E-09	1.04E-07	1.85E-12	n/a	**5.27E-07**

a. Ingestion rates of total PCDDs/PCDFs are presented in units of mg TEQ/day

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS:
Child Subsistence Farmer Exposure Scenario

COPC	CAS Number	Incidental Ingestion of Soil (mg/day)[a]	Ingestion of Exposed Produce (mg/day)[a]	Ingestion of Protected Produce (mg/day)[a]	Ingestion of Belowground Produce (mg/day)[a]	Ingestion of Beef (mg/day)[a]	Ingestion of Pork (mg/day)[a]	Ingestion of Poultry (mg/day)[a]	Ingestion of Eggs (mg/day)[a]	Ingestion of Milk (mg/day)[a]	Ingestion of Fish (mg/day)[a]	Incidental Ingestion of Surface Water (mg/day)[a]	Ingestion of Breast Milk (mg/day)[a]	Total Daily COPC Ingestion (mg/day)[a]
2-butanone	78-93-3	1.93E-14	4.39E-10	3.15E-10	2.54E-10	5.42E-14	1.80E-14	7.21E-16	4.41E-16	2.64E-13	8.48E-13	2.47E-14	n/a	**1.01E-09**
2-ethyl 1,3-butadiene	3404-63-5	1.94E-15	3.63E-12	2.46E-12	1.84E-11	5.28E-14	1.76E-14	7.29E-16	4.45E-16	2.49E-13	3.25E-10	6.49E-13	n/a	**3.51E-10**
acetone	67-64-1	9.98E-15	2.27E-10	1.63E-10	4.23E-10	7.64E-15	2.54E-15	1.02E-16	6.20E-17	3.73E-14	1.66E-12	4.83E-14	n/a	**8.15E-10**
benzene	71-43-2	3.92E-13	2.61E-09	1.81E-09	1.79E-08	1.05E-11	3.43E-12	1.38E-13	8.42E-14	5.06E-11	6.61E-09	7.36E-11	n/a	**2.91E-08**
benzyl alcohol	100-51-6	3.03E-11	6.90E-07	4.95E-07	1.14E-06	4.84E-10	1.61E-10	6.45E-12	3.94E-12	2.37E-09	2.94E-11	8.62E-12	n/a	**2.33E-06**
bis(2-ethylhexyl)-phthalate	117-81-7	1.76E-11	1.49E-07	1.50E-09	8.55E-14	6.26E-08	2.33E-09	4.53E-10	2.77E-10	2.68E-06	8.77E-10	4.50E-13	n/a	**2.90E-06**
bromodichloromethane	75-27-4	7.51E-15	4.84E-11	3.47E-11	3.74E-10	1.95E-10	6.55E-11	2.65E-12	1.62E-12	9.45E-13	5.93E-13	6.61E-15	n/a	**7.24E-10**
carbon disulfide	75-15-0	2.01E-17	1.22E-13	8.11E-14	1.45E-12	5.65E-16	1.80E-16	7.21E-18	4.41E-18	2.72E-15	3.37E-12	3.15E-14	n/a	**5.06E-12**
carbon tetrachloride	56-23-5	4.21E-18	1.23E-14	7.65E-15	2.28E-13	1.28E-13	3.97E-15	1.60E-15	9.78E-16	6.03E-13	4.14E-13	1.33E-15	n/a	**1.40E-12**
chlorobenzene	108-90-7	4.03E-17	1.14E-13	7.33E-14	1.74E-12	1.19E-12	3.78E-14	1.53E-14	9.37E-15	5.62E-12	3.69E-13	1.19E-15	n/a	**9.17E-12**
chloroform	67-66-3	1.51E-17	1.16E-13	7.96E-14	8.68E-13	3.97E-16	1.29E-16	5.18E-18	3.16E-18	1.92E-15	2.52E-13	3.36E-15	n/a	**1.32E-12**
chloromethane	74-87-3	3.57E-17	8.12E-13	5.83E-13	2.53E-12	3.90E-16	1.30E-16	5.18E-18	3.18E-18	1.90E-15	1.16E-12	3.39E-14	n/a	**5.13E-12**
dibromochloromethane	124-48-1	1.17E-13	6.30E-10	4.53E-10	1.15E-09	3.09E-09	1.04E-09	4.21E-11	2.58E-11	1.49E-11	1.49E-12	1.31E-14	n/a	**6.44E-09**
dimethyl phthalate	131-11-3	1.61E-12	2.22E-08	1.52E-08	2.70E-08	3.65E-08	1.18E-08	4.71E-10	2.88E-13	1.77E-10	2.05E-11	5.95E-13	n/a	**1.13E-07**
di-n-butyl phthalate	84-74-2	1.28E-11	5.40E-09	1.84E-09	1.35E-11	1.05E-06	6.69E-08	3.59E-12	2.20E-10	4.50E-05	1.25E-08	6.39E-13	n/a	**4.61E-05**
ethane	74-84-0	2.14E-14	2.05E-10	1.45E-10	4.60E-10	5.18E-13	1.72E-13	6.93E-15	4.24E-15	2.52E-12	1.22E-08	2.27E-10	n/a	**1.32E-08**
ethylbenzene	100-41-4	2.68E-17	5.57E-14	3.27E-14	1.19E-12	8.12E-16	2.49E-16	1.01E-17	6.15E-18	3.81E-15	5.66E-13	1.07E-15	n/a	**1.85E-12**
HD	505-60-2	1.53E-14	2.06E-10	4.69E-11	6.22E-11	1.16E-12	1.83E-13	5.71E-15	3.49E-15	5.18E-12	9.27E-11	5.96E-13	n/a	**4.15E-10**
hexane	110-54-3	5.15E-18	3.97E-15	2.21E-15	4.68E-14	1.26E-16	4.06E-17	1.73E-18	1.06E-18	5.61E-16	5.88E-12	2.70E-15	n/a	**5.94E-12**
methane	74-82-8	6.57E-14	1.63E-09	1.16E-09	3.41E-09	1.12E-12	1.34E-14	5.37E-16	3.28E-16	1.97E-13	6.52E-08	4.35E-09	n/a	**7.58E-08**
methylene chloride	75-09-2	1.02E-17	1.93E-13	1.37E-13	2.10E-12	1.99E-16	6.56E-17	2.63E-18	1.61E-18	9.66E-16	9.15E-14	4.21E-15	n/a	**2.53E-12**
propene	115-07-1	1.57E-14	1.58E-10	1.12E-10	3.48E-10	3.75E-13	1.24E-13	5.00E-15	3.06E-15	1.82E-12	3.03E-09	6.06E-11	n/a	**3.71E-09**
styrene	100-42-5	1.36E-13	2.64E-10	1.90E-10	3.07E-11	3.58E-10	1.24E-10	5.14E-11	3.14E-11	1.70E-08	5.35E-12	1.21E-14	n/a	**1.80E-08**
tetrachloroethene	127-18-4	6.13E-18	1.80E-14	5.02E-15	1.09E-12	3.26E-16	6.27E-17	2.22E-18	1.36E-18	1.45E-15	1.12E-12	1.24E-15	n/a	**2.23E-12**
toluene	108-88-3	1.71E-13	5.53E-10	3.56E-10	7.54E-09	5.08E-12	1.61E-12	6.51E-14	3.98E-14	2.42E-11	3.39E-09	1.31E-11	n/a	**1.19E-08**
trichloroethene	79-01-6	1.36E-17	6.09E-14	4.22E-14	3.85E-13	3.79E-16	1.25E-16	5.06E-18	3.09E-18	1.83E-15	2.35E-13	1.53E-15	n/a	**7.27E-13**
vinyl chloride	75-01-4	6.28E-17	1.04E-12	7.36E-13	8.80E-12	1.28E-15	4.26E-16	1.70E-17	1.04E-17	6.26E-15	5.42E-12	2.09E-13	n/a	**1.62E-11**
xylenes	1330-20-7	6.69E-14	1.11E-10	7.54E-11	6.30E-10	1.78E-12	6.01E-13	2.50E-14	1.53E-14	8.39E-12	2.69E-10	4.58E-13	n/a	**1.10E-09**
3,3',4,4'-TCB (PCB 77)	32598-13-3												n/a	
2,3',4,4',5-PeCB (PCB 118)	31508-00-6												n/a	
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4												n/a	
total coplanar PCBs	NA	1.26E-23	4.18E-21	1.67E-22	6.90E-23	1.36E-21	8.18E-23	1.92E-24	1.17E-24	5.74E-21	2.83E-20	2.15E-26	n/a	**3.99E-20**
ammonia	7664-41-7	4.55E-14	3.53E-09	2.53E-09	1.02E-08	3.77E-13	1.25E-13	4.99E-15	3.05E-15	1.84E-12	6.30E-11	1.83E-12	n/a	**1.63E-08**
aluminum	7429-90-5	9.01E-14	2.64E-13	1.90E-13	3.34E-14	1.87E-14	0.00E+00	0.00E+00	0.00E+00	2.77E-14	5.47E-11	1.59E-12	n/a	**5.69E-11**
cadmium	7440-43-9	4.86E-15	6.09E-09	1.18E-12	4.16E-13	7.77E-12	3.66E-13	6.92E-15	1.74E-16	8.57E-12	1.06E-10	1.07E-14	n/a	**6.21E-09**
chlorine	7782-50-5	3.17E-12	7.22E-08	5.19E-08	5.33E-08	3.06E-11	1.02E-11	4.09E-13	2.50E-13	1.50E-10	2.47E-10	7.18E-12	n/a	**1.78E-07**
chromium (3+)	7440-47-3	2.63E-15	1.68E-08	2.51E-14	6.76E-15	9.82E-10	0.00E+00	0.00E+00	0.00E+00	5.45E-09	9.03E-13	2.63E-14	n/a	**2.32E-08**
chromium (6+)	18540-29-9	2.63E-15	1.68E-08	2.51E-14	6.76E-15	9.82E-10	0.00E+00	0.00E+00	0.00E+00	5.45E-09	9.03E-13	2.63E-14	n/a	**2.32E-08**
copper	7440-50-8	2.37E-12	6.31E-07	1.24E-09	3.37E-10	6.70E-08	0.00E+00	0.00E+00	0.00E+00	2.05E-07	3.40E-11	9.93E-13	n/a	**9.04E-07**
hydrogen chloride	7647-01-0	3.92E-12	2.01E-07	1.44E-07	4.81E-07	1.23E-11	4.09E-12	1.64E-13	9.98E-14	6.02E-11	1.54E-09	4.47E-11	n/a	**8.28E-07**
iron	7439-89-6	4.63E-13	2.31E-06	1.25E-12	6.72E-11	4.91E-07	0.00E+00	0.00E+00	0.00E+00	1.25E-07	1.22E-10	3.54E-12	n/a	**2.92E-06**
lead	7439-92-1	3.01E-13	2.52E-08	7.97E-12	1.54E-12	8.05E-11	0.00E+00	0.00E+00	0.00E+00	1.37E-09	4.32E-14	4.46E-14	n/a	**2.67E-08**
manganese	7439-96-5	1.52E-12	2.94E-06	2.23E-10	4.32E-11	1.25E-08	0.00E+00	0.00E+00	0.00E+00	2.23E-07	1.54E-10	4.49E-12	n/a	**3.17E-06**
total mercury	NA												n/a	
mercuric chloride	7487-94-7	1.37E-15	3.77E-13	3.87E-14	2.81E-14	1.93E-14	7.21E-18	2.32E-16	2.48E-16	1.66E-13	0.00E+00	0.00E+00	n/a	**6.32E-13**
methyl mercury	22967-92-6	2.71E-17	9.34E-14	1.55E-15	1.53E-15	7.62E-16	1.59E-19	7.68E-19	8.22E-19	6.72E-15	1.61E-11	0.00E+00	n/a	**1.62E-11**
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	n/a	**0.00E+00**
nickel	7440-02-0	8.50E-15	9.86E-09	1.54E-13	2.91E-13	6.29E-10	0.00E+00	0.00E+00	0.00E+00	2.14E-09	1.47E-11	1.74E-14	n/a	**1.26E-08**
vanadium	7440-62-2	2.38E-13	3.15E-08	1.54E-12	4.06E-13	8.37E-10	0.00E+00	0.00E+00	0.00E+00	1.36E-10	1.61E-12	4.73E-14	n/a	**3.25E-08**
zinc	7440-66-6	8.63E-13	1.05E-06	1.63E-10	4.43E-10	1.01E-09	4.24E-11	8.91E-14	9.54E-14	7.39E-09	4.15E-08	1.85E-12	n/a	**1.10E-06**

a. Ingestion rates of total PCDDs/PCDFs and coplanar PCBs are presented in units of mg TEQ/day

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS: Child Subsistence Farmer Exposure Scenario														
COPC	CAS Number	Incidental Ingestion of Soil (mg/day)[a]	Ingestion of Exposed Produce (mg/day)[a]	Ingestion of Protected Produce (mg/day)[a]	Ingestion of Belowground Produce (mg/day)[a]	Ingestion of Beef (mg/day)[a]	Ingestion of Pork (mg/day)[a]	Ingestion of Poultry (mg/day)[a]	Ingestion of Eggs (mg/day)[a]	Ingestion of Milk (mg/day)[a]	Ingestion of Fish (mg/day)[a]	Incidental Ingestion of Surface Water (mg/day)[a]	Ingestion of Breast Milk (mg/day)[a]	Total Daily COPC Ingestion (mg/day)[a]
2-butanone	78-93-3	1.93E-14	4.39E-10	3.15E-10	2.54E-10	5.42E-14	1.80E-14	7.21E-16	4.41E-16	2.64E-13	8.48E-13	2.47E-14	n/a	**1.01E-09**
2-ethyl 1,3-butadiene	3404-63-5	1.94E-15	3.63E-12	2.46E-12	1.84E-11	5.28E-14	1.76E-14	7.29E-16	4.45E-16	2.49E-13	3.25E-10	6.49E-13	n/a	**3.51E-10**
acetone	67-64-1	9.98E-15	2.27E-10	1.63E-10	4.23E-10	7.64E-15	2.54E-15	1.02E-16	6.20E-17	3.73E-14	1.66E-12	4.83E-14	n/a	**8.15E-10**
benzene	71-43-2	3.92E-13	2.61E-09	1.81E-09	1.79E-08	1.05E-11	3.43E-12	1.38E-13	8.42E-14	5.06E-11	6.61E-09	7.36E-11	n/a	**2.91E-08**
benzyl alcohol	100-51-6	3.40E-11	7.75E-07	5.56E-07	1.28E-06	5.44E-10	1.81E-10	7.25E-12	4.43E-12	2.66E-09	3.30E-11	9.67E-12	n/a	**2.62E-06**
bis(2-ethylhexyl)-phthalate	117-81-7	1.79E-11	1.49E-07	1.53E-09	8.71E-14	6.26E-08	2.33E-09	4.62E-10	2.82E-10	2.68E-06	8.78E-10	4.51E-13	n/a	**2.90E-06**
bromodichloromethane	75-27-4	7.51E-15	4.84E-11	3.47E-11	3.75E-10	1.95E-10	6.55E-11	2.65E-12	1.62E-12	9.45E-13	5.93E-13	6.61E-15	n/a	**7.24E-10**
carbon disulfide	75-15-0	2.01E-17	1.22E-13	8.11E-14	1.45E-12	5.65E-16	1.80E-16	7.21E-18	4.41E-18	2.72E-15	3.37E-12	3.15E-14	n/a	**5.06E-12**
carbon tetrachloride	56-23-5	4.21E-18	1.23E-14	7.65E-15	2.28E-13	1.28E-13	3.97E-15	1.60E-15	9.78E-16	6.03E-13	4.14E-13	1.33E-15	n/a	**1.40E-12**
chlorobenzene	108-90-7	4.03E-17	1.14E-13	7.33E-14	1.74E-12	1.19E-12	3.78E-14	1.53E-14	9.37E-15	5.62E-12	3.69E-13	1.19E-15	n/a	**9.17E-12**
chloroform	67-66-3	1.51E-17	1.16E-13	7.96E-14	8.68E-13	3.97E-16	1.29E-16	5.18E-18	3.16E-18	1.92E-15	2.52E-13	3.36E-15	n/a	**1.32E-12**
chloromethane	74-87-3	3.57E-17	8.12E-13	5.83E-13	2.53E-12	3.90E-16	1.30E-16	5.18E-18	3.18E-18	1.90E-15	1.16E-12	3.39E-14	n/a	**5.13E-12**
dibromochloromethane	124-48-1	1.17E-13	6.32E-10	4.54E-10	1.15E-09	3.10E-09	1.04E-09	4.23E-11	2.59E-11	1.50E-11	1.49E-12	1.32E-14	n/a	**6.46E-09**
dimethyl phthalate	131-11-3	1.62E-12	2.23E-08	1.53E-08	2.71E-08	3.67E-08	1.19E-08	4.74E-10	2.90E-13	1.78E-10	2.05E-11	5.96E-13	n/a	**1.14E-07**
di-n-butyl phthalate	84-74-2	1.30E-11	5.44E-09	1.88E-09	1.38E-11	1.05E-06	6.70E-08	3.66E-12	2.24E-10	4.50E-05	1.25E-08	6.40E-13	n/a	**4.61E-05**
ethane	74-84-0	2.14E-14	2.05E-10	1.45E-10	4.60E-10	5.18E-13	1.72E-13	6.93E-15	4.24E-15	2.52E-12	1.22E-08	2.27E-10	n/a	**1.32E-08**
ethylbenzene	100-41-4	2.68E-17	5.57E-14	3.27E-14	1.19E-12	8.12E-16	2.49E-16	1.01E-17	6.15E-18	3.81E-15	5.66E-13	1.07E-15	n/a	**1.85E-12**
HD	505-60-2	1.53E-14	2.06E-10	4.69E-11	6.22E-11	1.16E-12	1.83E-13	5.71E-15	3.49E-15	5.18E-12	9.27E-11	5.96E-13	n/a	**4.15E-10**
hexane	110-54-3	5.15E-18	3.97E-15	2.21E-15	4.68E-14	1.26E-16	4.06E-17	1.73E-18	1.06E-18	5.61E-16	5.88E-12	2.70E-15	n/a	**5.94E-12**
methane	74-82-8	6.57E-14	1.63E-09	1.16E-09	3.41E-09	1.12E-12	1.34E-14	5.37E-16	3.28E-16	1.97E-13	6.52E-08	4.35E-09	n/a	**7.58E-08**
methylene chloride	75-09-2	1.02E-17	1.93E-13	1.37E-13	2.10E-12	1.99E-16	6.56E-17	2.63E-18	1.61E-18	9.66E-16	9.15E-14	4.21E-15	n/a	**2.53E-12**
propene	115-07-1	1.57E-14	1.58E-10	1.12E-10	3.48E-10	3.75E-13	1.24E-13	5.00E-15	3.06E-15	1.82E-12	3.03E-09	6.06E-11	n/a	**3.71E-09**
styrene	100-42-5	1.37E-13	2.65E-10	1.90E-10	3.07E-11	3.58E-10	1.24E-10	5.15E-11	3.15E-11	1.70E-08	5.35E-12	1.21E-14	n/a	**1.81E-08**
tetrachloroethene	127-18-4	6.13E-18	1.80E-14	5.02E-15	1.09E-12	3.26E-16	6.27E-17	2.22E-18	1.36E-18	1.45E-15	1.12E-12	1.24E-15	n/a	**2.23E-12**
toluene	108-88-3	1.71E-13	5.53E-10	3.56E-10	7.54E-09	5.08E-12	1.61E-12	6.51E-14	3.98E-14	2.42E-11	3.39E-09	1.31E-11	n/a	**1.19E-08**
trichloroethene	79-01-6	1.36E-17	6.09E-14	4.22E-14	3.85E-13	3.79E-16	1.25E-16	5.06E-18	3.09E-18	1.83E-15	2.35E-13	1.53E-15	n/a	**7.27E-13**
vinyl chloride	75-01-4	6.28E-17	1.04E-12	7.36E-13	8.80E-12	1.28E-15	4.26E-16	1.70E-17	1.04E-17	6.26E-15	5.42E-12	2.09E-13	n/a	**1.62E-11**
xylenes	1330-20-7	6.69E-14	1.11E-10	7.54E-11	6.30E-10	1.78E-12	6.01E-13	2.50E-14	1.53E-14	8.39E-12	2.69E-10	4.58E-13	n/a	**1.10E-09**
3,3',4,4'-TCB (PCB 77)	32598-13-3	8.63E-20	1.54E-17	1.14E-18	4.72E-19	4.98E-18	4.04E-19	1.31E-20	8.02E-21	2.07E-17	1.66E-16	1.26E-22	n/a	**2.09E-16**
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	3.60E-19	6.43E-17	4.76E-18	1.97E-18	2.08E-17	1.68E-18	5.47E-20	3.34E-20	8.61E-17	6.91E-16	5.26E-22	n/a	**8.71E-16**
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	1.73E-19	3.09E-17	2.28E-18	9.44E-19	9.96E-18	8.09E-19	2.62E-20	1.60E-20	4.13E-17	3.32E-16	2.52E-22	n/a	**4.18E-16**
total coplanar PCBs	NA												n/a	
ammonia	7664-41-7	4.55E-14	3.53E-09	2.53E-09	1.02E-08	3.77E-13	1.25E-13	4.99E-15	3.05E-15	1.84E-12	6.30E-11	1.83E-12	n/a	**1.63E-08**
aluminum	7429-90-5	9.01E-14	2.64E-13	1.90E-13	3.34E-14	1.87E-14	0.00E+00	0.00E+00	0.00E+00	2.77E-14	5.47E-11	1.59E-12	n/a	**5.69E-11**
cadmium	7440-43-9	4.86E-15	6.09E-09	1.18E-12	4.16E-13	7.77E-12	3.66E-13	6.92E-15	1.74E-16	8.57E-12	1.06E-10	1.07E-14	n/a	**6.21E-09**
chlorine	7782-50-5	3.17E-12	7.22E-08	5.19E-08	5.33E-08	3.06E-11	1.02E-11	4.09E-13	2.50E-13	1.50E-10	2.47E-10	7.18E-12	n/a	**1.78E-07**
chromium (3+)	7440-47-3	2.63E-15	1.68E-08	2.51E-14	6.76E-15	9.82E-10	0.00E+00	0.00E+00	0.00E+00	5.45E-09	9.03E-13	2.63E-14	n/a	**2.32E-08**
chromium (6+)	18540-29-9	2.63E-15	1.68E-08	2.51E-14	6.76E-15	9.82E-10	0.00E+00	0.00E+00	0.00E+00	5.45E-09	9.03E-13	2.63E-14	n/a	**2.32E-08**
copper	7440-50-8	2.37E-12	6.31E-07	1.24E-09	3.38E-10	6.70E-08	0.00E+00	0.00E+00	0.00E+00	2.05E-07	3.40E-11	9.93E-13	n/a	**9.04E-07**
hydrogen chloride	7647-01-0	3.92E-12	2.01E-07	1.44E-07	4.81E-07	1.23E-11	4.09E-12	1.64E-13	9.98E-14	6.02E-11	1.54E-09	4.47E-11	n/a	**8.28E-07**
iron	7439-89-6	4.63E-13	2.31E-06	1.25E-12	6.72E-11	4.91E-07	0.00E+00	0.00E+00	0.00E+00	1.25E-07	1.22E-10	3.54E-12	n/a	**2.92E-06**
lead	7439-92-1	3.01E-13	2.52E-08	7.99E-12	1.54E-12	8.05E-11	0.00E+00	0.00E+00	0.00E+00	1.37E-09	4.32E-14	4.46E-14	n/a	**2.67E-08**
manganese	7439-96-5	1.52E-12	2.94E-06	2.23E-10	4.32E-11	1.25E-08	0.00E+00	0.00E+00	0.00E+00	2.23E-07	1.54E-10	4.49E-12	n/a	**3.17E-06**
total mercury	NA												n/a	
mercuric chloride	7487-94-7	2.73E-15	4.31E-13	7.73E-14	5.61E-14	2.06E-14	1.10E-17	4.64E-16	4.97E-16	1.74E-13	0.00E+00	0.00E+00	n/a	**7.63E-13**
methyl mercury	22967-92-6	5.33E-17	9.55E-14	3.05E-15	3.01E-15	7.67E-16	1.71E-19	1.51E-18	1.62E-18	6.75E-15	2.77E-11	0.00E+00	n/a	**2.78E-11**
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	n/a	**0.00E+00**
nickel	7440-02-0	8.50E-15	9.86E-09	1.54E-13	2.91E-13	6.29E-10	0.00E+00	0.00E+00	0.00E+00	2.14E-09	1.47E-11	1.74E-14	n/a	**1.26E-08**
vanadium	7440-62-2	2.38E-13	3.15E-08	1.54E-12	4.07E-13	8.37E-10	0.00E+00	0.00E+00	0.00E+00	1.36E-10	1.61E-12	4.73E-14	n/a	**3.25E-08**
zinc	7440-66-6	8.63E-13	1.05E-06	1.63E-10	4.43E-10	1.01E-09	4.24E-11	8.91E-14	9.54E-14	7.39E-09	4.15E-08	1.85E-12	n/a	**1.10E-06**

a. Ingestion rates of total PCDDs/PCDFs are presented in units of mg TEQ/day

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS:
Infant Resident Exposure Scenario

COPC	CAS Number	Incidental Ingestion of Soil (mg/day)[a]	Ingestion of Exposed Produce (mg/day)[a]	Ingestion of Protected Produce (mg/day)[a]	Ingestion of Belowground Produce (mg/day)[a]	Ingestion of Beef (mg/day)[a]	Ingestion of Pork (mg/day)[a]	Ingestion of Poultry (mg/day)[a]	Ingestion of Eggs (mg/day)[a]	Ingestion of Milk (mg/day)[a]	Ingestion of Fish (mg/day)[a]	Incidental Ingestion of Surface Water (mg/day)[a]	Ingestion of Breast Milk (mg/day)[a]	Total Daily COPC Ingestion (mg/day)[a]
2-butanone	78-93-3	1.93E-14	1.49E-10	5.20E-11	8.55E-11	1.28E-14	3.31E-15	1.77E-16	9.55E-17	2.48E-13	8.48E-13	n/a		**2.88E-10**
2-ethyl 1,3-butadiene	3404-63-5	1.94E-15	1.24E-12	4.06E-13	6.19E-12	1.25E-14	3.23E-15	1.79E-16	9.63E-17	2.33E-13	3.25E-10	n/a		**3.33E-10**
acetone	67-64-1	9.98E-15	7.73E-11	2.69E-11	1.42E-10	1.81E-15	4.67E-16	2.50E-17	1.34E-17	3.50E-14	1.66E-12	n/a		**2.48E-10**
benzene	71-43-2	3.92E-13	8.89E-10	2.99E-10	6.03E-09	2.48E-12	6.31E-13	3.39E-14	1.82E-14	4.75E-11	6.61E-09	n/a	1.58E-06	**1.59E-06**
benzyl alcohol	100-51-6	3.03E-11	2.35E-07	8.18E-08	3.85E-07	1.15E-10	2.96E-11	1.58E-12	8.52E-13	2.23E-09	2.94E-11	n/a		**7.04E-07**
bis(2-ethylhexyl)-phthalate	117-81-7	1.76E-11	5.08E-08	2.48E-10	2.88E-14	1.48E-08	4.28E-10	1.11E-10	6.00E-11	2.52E-06	8.77E-10	n/a		**2.59E-06**
bromodichloromethane	75-27-4	7.51E-15	1.65E-11	5.73E-12	1.26E-10	4.62E-11	1.20E-11	6.50E-13	3.50E-13	8.87E-13	5.93E-13	n/a		**2.09E-10**
carbon disulfide	75-15-0	2.01E-17	4.16E-14	1.34E-14	4.87E-13	1.34E-16	3.31E-17	1.77E-18	9.54E-19	2.55E-15	3.37E-12	n/a		**3.92E-12**
carbon tetrachloride	56-23-5	4.21E-18	4.19E-15	1.26E-15	7.69E-14	3.02E-14	7.30E-16	3.93E-16	2.12E-16	5.66E-13	4.14E-13	n/a		**1.09E-12**
chlorobenzene	108-90-7	4.03E-17	3.87E-14	1.21E-14	5.86E-13	2.81E-13	6.95E-15	3.76E-15	2.03E-15	5.28E-12	3.69E-13	n/a		**6.58E-12**
chloroform	67-66-3	1.51E-17	3.94E-14	1.32E-14	2.92E-13	9.40E-17	2.37E-17	1.27E-18	6.85E-19	1.80E-15	2.52E-13	n/a	7.13E-11	**7.19E-11**
chloromethane	74-87-3	3.57E-17	2.76E-13	9.62E-14	8.52E-13	9.24E-17	2.38E-17	1.27E-18	6.87E-19	1.78E-15	1.16E-12	n/a		**2.39E-12**
dibromochloromethane	124-48-1	1.17E-13	2.14E-10	7.47E-11	3.87E-10	7.32E-10	1.91E-10	1.04E-11	5.58E-12	1.40E-11	1.49E-12	n/a		**1.63E-09**
dimethyl phthalate	131-11-3	1.61E-12	7.55E-09	2.52E-09	9.09E-09	8.65E-09	2.17E-09	1.16E-10	6.24E-14	1.66E-10	2.05E-11	n/a		**3.03E-08**
di-n-butyl phthalate	84-74-2	1.28E-11	1.84E-09	3.04E-10	4.56E-12	2.48E-07	1.23E-08	8.82E-13	4.75E-11	4.22E-05	1.25E-08	n/a		**4.25E-05**
ethane	74-84-0	2.14E-14	6.96E-11	2.40E-11	1.55E-10	1.23E-13	3.16E-14	1.70E-15	9.17E-16	2.36E-12	1.22E-08	n/a		**1.25E-08**
ethylbenzene	100-41-4	2.68E-17	1.90E-14	5.40E-15	4.00E-13	1.93E-16	4.57E-17	2.47E-18	1.33E-18	3.58E-15	5.66E-13	n/a	2.26E-11	**2.36E-11**
HD	505-60-2	1.53E-14	7.00E-11	7.75E-12	2.09E-11	2.74E-13	3.37E-14	1.40E-15	7.54E-16	4.87E-12	9.27E-11	n/a		**1.97E-10**
hexane	110-54-3	5.15E-18	1.35E-15	3.65E-16	1.58E-14	2.99E-17	7.46E-18	4.26E-19	2.29E-19	5.26E-16	5.88E-12	n/a		**5.90E-12**
methane	74-82-8	6.57E-14	5.53E-10	1.92E-10	1.15E-09	2.65E-13	2.46E-15	1.32E-16	7.09E-17	1.85E-13	6.52E-08	n/a		**6.71E-08**
methylene chloride	75-09-2	1.02E-17	6.56E-14	2.26E-14	7.08E-13	4.71E-17	1.21E-17	6.45E-19	3.48E-19	9.07E-16	9.15E-14	n/a	9.33E-11	**9.42E-11**
propene	115-07-1	1.57E-14	5.36E-11	1.85E-11	1.17E-10	8.88E-14	2.29E-14	1.23E-15	6.62E-16	1.70E-12	3.03E-09	n/a		**3.22E-09**
styrene	100-42-5	1.36E-13	9.00E-11	3.13E-11	1.03E-11	8.47E-11	2.28E-11	1.26E-11	6.81E-12	1.59E-08	5.35E-12	n/a		**1.62E-08**
tetrachloroethene	127-18-4	6.13E-18	6.12E-15	8.29E-16	3.66E-13	7.72E-17	1.15E-17	5.46E-19	2.94E-19	1.36E-15	1.12E-12	n/a	2.69E-11	**2.84E-11**
toluene	108-88-3	1.71E-13	1.88E-10	5.88E-11	2.54E-09	1.20E-12	2.97E-13	1.60E-14	8.62E-15	2.27E-11	3.39E-09	n/a		**6.20E-09**
trichloroethene	79-01-6	1.36E-17	2.07E-14	6.96E-15	1.30E-13	8.98E-17	2.30E-17	1.24E-18	6.68E-19	1.72E-15	2.35E-13	n/a	3.20E-11	**3.24E-11**
vinyl chloride	75-01-4	6.28E-17	3.52E-13	1.22E-13	2.96E-12	3.03E-16	7.84E-17	4.18E-18	2.25E-18	5.88E-15	5.42E-12	n/a		**8.87E-12**
xylenes	1330-20-7	6.69E-14	3.79E-11	1.25E-11	2.12E-10	4.23E-13	1.10E-13	6.13E-15	3.30E-15	7.88E-12	2.69E-10	n/a		**5.40E-10**
3,3',4,4'-TCB (PCB 77)	32598-13-3											n/a		
2,3',4,4',5-PeCB (PCB 118)	31508-00-6											n/a		
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4											n/a		
total coplanar PCBs	NA	1.26E-23	1.42E-21	2.75E-23	2.32E-23	3.23E-22	1.50E-23	4.71E-25	2.54E-25	5.39E-21	2.83E-20	n/a	1.23E-13	**1.23E-13**
ammonia	7664-41-7	4.55E-14	1.20E-09	4.18E-10	3.43E-09	8.92E-14	2.29E-14	1.22E-15	6.61E-16	1.73E-12	6.30E-11	n/a		**5.11E-09**
aluminum	7429-90-5	9.01E-14	8.99E-14	3.13E-14	1.12E-14	4.43E-15	0.00E+00	0.00E+00	0.00E+00	2.60E-14	5.47E-11	n/a		**5.49E-11**
cadmium	7440-43-9	4.86E-15	2.07E-09	1.96E-13	1.40E-13	1.84E-12	6.73E-14	1.70E-15	3.77E-17	8.05E-12	1.06E-10	n/a		**2.19E-09**
chlorine	7782-50-5	3.17E-12	2.46E-08	8.56E-09	1.79E-08	7.25E-12	1.87E-12	1.00E-13	5.41E-14	1.40E-10	2.47E-10	n/a		**5.15E-08**
chromium (3+)	7440-47-3	2.63E-15	5.71E-09	4.14E-15	2.28E-15	2.33E-10	0.00E+00	0.00E+00	0.00E+00	5.12E-09	9.03E-13	n/a		**1.11E-08**
chromium (6+)	18540-29-9	2.63E-15	5.71E-09	4.14E-15	2.28E-15	2.33E-10	0.00E+00	0.00E+00	0.00E+00	5.12E-09	9.03E-13	n/a	9.48E-09	**2.05E-08**
copper	7440-50-8	2.37E-12	2.15E-07	2.05E-10	1.14E-10	1.59E-08	0.00E+00	0.00E+00	0.00E+00	1.92E-07	3.40E-11	n/a		**4.23E-07**
hydrogen chloride	7647-01-0	3.92E-12	6.83E-08	2.38E-08	1.62E-07	2.92E-12	7.51E-13	4.02E-14	2.16E-14	5.65E-11	1.54E-09	n/a		**2.56E-07**
iron	7439-89-6	4.63E-13	7.86E-07	2.06E-13	2.27E-11	1.16E-07	0.00E+00	0.00E+00	0.00E+00	1.17E-07	1.22E-10	n/a		**1.02E-06**
lead	7439-92-1	3.01E-13	8.59E-09	1.32E-12	5.19E-13	1.91E-11	0.00E+00	0.00E+00	0.00E+00	1.28E-09	4.32E-14	n/a	1.10E-08	**2.09E-08**
manganese	7439-96-5	1.52E-12	1.00E-06	3.68E-11	1.46E-11	2.96E-09	0.00E+00	0.00E+00	0.00E+00	2.09E-07	1.54E-10	n/a		**1.21E-06**
total mercury	NA											n/a		
mercuric chloride	7487-94-7	1.37E-15	1.28E-13	6.38E-15	9.45E-15	3.98E-15	1.33E-18	5.70E-17	5.38E-17	1.36E-13	0.00E+00	n/a		**2.86E-13**
methyl mercury	22967-92-6	2.71E-17	3.18E-14	2.56E-16	5.14E-16	1.56E-16	2.92E-20	1.89E-19	1.78E-19	5.45E-15	1.61E-11	n/a		**1.62E-11**
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	n/a		**0.00E+00**
nickel	7440-02-0	8.50E-15	3.36E-09	2.55E-14	9.79E-14	1.49E-10	0.00E+00	0.00E+00	0.00E+00	2.01E-09	1.47E-11	n/a		**5.53E-09**
vanadium	7440-62-2	2.38E-13	1.07E-08	2.54E-13	1.37E-13	1.98E-10	0.00E+00	0.00E+00	0.00E+00	1.28E-10	1.61E-12	n/a		**1.10E-08**
zinc	7440-66-6	8.63E-13	3.57E-07	2.70E-11	1.49E-10	2.38E-10	7.79E-12	2.19E-14	2.06E-14	6.94E-09	4.15E-08	n/a		**4.06E-07**

a. Ingestion rates of total PCDDs/PCDFs and coplanar PCBs are presented in units of mg TEQ/day

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS: Infant Resident Exposure Scenario														
COPC	CAS Number	Incidental Ingestion of Soil (mg/day)[a]	Ingestion of Exposed Produce (mg/day)[a]	Ingestion of Protected Produce (mg/day)[a]	Ingestion of Belowground Produce (mg/day)[a]	Ingestion of Beef (mg/day)[a]	Ingestion of Pork (mg/day)[a]	Ingestion of Poultry (mg/day)[a]	Ingestion of Eggs (mg/day)[a]	Ingestion of Milk (mg/day)[a]	Ingestion of Fish (mg/day)[a]	Incidental Ingestion of Surface Water (mg/day)[a]	Ingestion of Breast Milk (mg/day)[a]	Total Daily COPC Ingestion (mg/day)[a]
2-butanone	78-93-3	1.93E-14	1.49E-10	5.20E-11	8.55E-11	1.28E-14	3.31E-15	1.77E-16	9.55E-17	2.48E-13	8.48E-13	n/a	7.56E-10	**1.04E-09**
2-ethyl 1,3-butadiene	3404-63-5	1.94E-15	1.24E-12	4.06E-13	6.19E-12	1.25E-14	3.23E-15	1.79E-16	9.63E-17	2.33E-13	3.25E-10	n/a		**3.33E-10**
acetone	67-64-1	9.98E-15	7.73E-11	2.69E-11	1.42E-10	1.81E-15	4.67E-16	2.50E-17	1.34E-17	3.50E-14	1.66E-12	n/a	9.70E-10	**1.22E-09**
benzene	71-43-2	3.92E-13	8.89E-10	2.99E-10	6.03E-09	2.48E-12	6.31E-13	3.39E-14	1.82E-14	4.75E-11	6.61E-09	n/a	1.58E-06	**1.59E-06**
benzyl alcohol	100-51-6	3.40E-11	2.64E-07	9.19E-08	4.32E-07	1.29E-10	3.33E-11	1.78E-12	9.58E-13	2.50E-09	3.30E-11	n/a		**7.91E-07**
bis(2-ethylhexyl)-phthalate	117-81-7	1.79E-11	5.08E-08	2.52E-10	2.93E-14	1.48E-08	4.28E-10	1.13E-10	6.11E-11	2.52E-06	8.78E-10	n/a		**2.59E-06**
bromodichloromethane	75-27-4	7.51E-15	1.65E-11	5.73E-12	1.26E-10	4.62E-11	1.20E-11	6.50E-13	3.50E-13	8.87E-13	5.93E-13	n/a		**2.09E-10**
carbon disulfide	75-15-0	2.01E-17	4.16E-14	1.34E-14	4.87E-13	1.34E-16	3.31E-17	1.77E-18	9.54E-19	2.55E-15	3.37E-12	n/a	6.71E-10	**6.75E-10**
carbon tetrachloride	56-23-5	4.21E-18	4.19E-15	1.26E-15	7.69E-14	3.02E-14	7.30E-16	3.93E-16	2.12E-16	5.66E-13	4.14E-13	n/a		**1.09E-12**
chlorobenzene	108-90-7	4.03E-17	3.87E-14	1.21E-14	5.86E-13	2.81E-13	6.95E-15	3.76E-15	2.03E-15	5.28E-12	3.69E-13	n/a		**6.58E-12**
chloroform	67-66-3	1.51E-17	3.94E-14	1.32E-14	2.92E-13	9.40E-17	2.37E-17	1.27E-18	6.85E-19	1.80E-15	2.52E-13	n/a	7.13E-11	**7.19E-11**
chloromethane	74-87-3	3.57E-17	2.76E-13	9.62E-14	8.52E-13	9.24E-17	2.38E-17	1.27E-18	6.87E-19	1.78E-15	1.16E-12	n/a	6.42E-10	**6.44E-10**
dibromochloromethane	124-48-1	1.17E-13	2.15E-10	7.50E-11	3.88E-10	7.34E-10	1.92E-10	1.04E-11	5.60E-12	1.41E-11	1.49E-12	n/a		**1.64E-09**
dimethyl phthalate	131-11-3	1.62E-12	7.58E-09	2.53E-09	9.14E-09	8.69E-09	2.18E-09	1.16E-10	6.27E-14	1.67E-10	2.05E-11	n/a		**3.04E-08**
di-n-butyl phthalate	84-74-2	1.30E-11	1.85E-09	3.10E-10	4.64E-12	2.48E-07	1.23E-08	8.99E-13	4.84E-11	4.22E-05	1.25E-08	n/a		**4.25E-05**
ethane	74-84-0	2.14E-14	6.96E-11	2.40E-11	1.55E-10	1.23E-13	3.16E-14	1.70E-15	9.17E-16	2.36E-12	1.22E-08	n/a		**1.25E-08**
ethylbenzene	100-41-4	2.68E-17	1.90E-14	5.40E-15	4.00E-13	1.93E-16	4.57E-17	2.47E-18	1.33E-18	3.58E-15	5.66E-13	n/a	2.26E-11	**2.36E-11**
HD	505-60-2	1.53E-14	7.00E-11	7.75E-12	2.09E-11	2.74E-13	3.37E-14	1.40E-15	7.54E-16	4.87E-12	9.27E-11	n/a		**1.97E-10**
hexane	110-54-3	5.15E-18	1.35E-15	3.65E-16	1.58E-14	2.99E-17	7.46E-18	4.26E-19	2.29E-19	5.26E-16	5.88E-12	n/a	6.68E-11	**7.27E-11**
methane	74-82-8	6.57E-14	5.53E-10	1.92E-10	1.15E-09	2.65E-13	2.46E-15	1.32E-16	7.09E-17	1.85E-13	6.52E-08	n/a		**6.71E-08**
methylene chloride	75-09-2	1.02E-17	6.56E-14	2.26E-14	7.08E-13	4.71E-17	1.21E-17	6.45E-19	3.48E-19	9.07E-16	9.15E-14	n/a	9.33E-11	**9.42E-11**
propene	115-07-1	1.57E-14	5.36E-11	1.85E-11	1.17E-10	8.88E-14	2.29E-14	1.23E-15	6.62E-16	1.70E-12	3.03E-09	n/a		**3.22E-09**
styrene	100-42-5	1.37E-13	9.02E-11	3.14E-11	1.04E-11	8.49E-11	2.28E-11	1.27E-11	6.82E-12	1.60E-08	5.35E-12	n/a	6.02E-09	**2.23E-08**
tetrachloroethene	127-18-4	6.13E-18	6.12E-15	8.29E-16	3.66E-13	7.72E-17	1.15E-17	5.46E-19	2.94E-19	1.36E-15	1.12E-12	n/a	2.69E-11	**2.84E-11**
toluene	108-88-3	1.71E-13	1.88E-10	5.88E-11	2.54E-09	1.20E-12	2.97E-13	1.60E-14	8.62E-15	2.27E-11	3.39E-09	n/a	2.73E-07	**2.79E-07**
trichloroethene	79-01-6	1.36E-17	2.07E-14	6.96E-15	1.30E-13	8.98E-17	2.30E-17	1.24E-18	6.68E-19	1.72E-15	2.35E-13	n/a	3.20E-11	**3.24E-11**
vinyl chloride	75-01-4	6.28E-17	3.52E-13	1.22E-13	2.96E-12	3.03E-16	7.84E-17	4.18E-18	2.25E-18	5.88E-15	5.42E-12	n/a		**8.87E-12**
xylenes	1330-20-7	6.69E-14	3.79E-11	1.25E-11	2.12E-10	4.23E-13	1.10E-13	6.13E-15	3.31E-15	7.88E-12	2.69E-10	n/a	1.04E-08	**1.09E-08**
3,3',4,4'-TCB (PCB 77)	32598-13-3	8.63E-20	5.25E-18	1.88E-19	1.59E-19	1.18E-18	7.43E-20	3.22E-21	1.74E-21	1.94E-17	1.66E-16	n/a	1.72E-14	**1.74E-14**
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	3.60E-19	2.19E-17	7.85E-19	6.62E-19	4.92E-18	3.10E-19	1.34E-20	7.23E-21	8.09E-17	6.91E-16	n/a	7.17E-14	**7.25E-14**
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	1.73E-19	1.05E-17	3.77E-19	3.18E-19	2.36E-18	1.49E-19	6.44E-21	3.47E-21	3.88E-17	3.32E-16	n/a	3.44E-14	**3.48E-14**
total coplanar PCBs	NA											n/a		
ammonia	7664-41-7	4.55E-14	1.20E-09	4.18E-10	3.43E-09	8.93E-14	2.29E-14	1.22E-15	6.61E-16	1.73E-12	6.30E-11	n/a		**5.11E-09**
aluminum	7429-90-5	9.01E-14	8.99E-14	3.13E-14	1.12E-14	4.43E-15	0.00E+00	0.00E+00	0.00E+00	2.60E-14	5.47E-11	n/a	4.55E-08	**4.56E-08**
cadmium	7440-43-9	4.86E-15	2.07E-09	1.96E-13	1.40E-13	1.84E-12	6.73E-14	1.70E-15	3.77E-17	8.05E-12	1.06E-10	n/a	2.69E-09	**4.88E-09**
chlorine	7782-50-5	3.17E-12	2.46E-08	8.56E-09	1.79E-08	7.25E-12	1.87E-12	1.00E-13	5.41E-14	1.40E-10	2.47E-10	n/a	2.26E-07	**2.77E-07**
chromium (3+)	7440-47-3	2.63E-15	5.71E-09	4.14E-15	2.28E-15	2.33E-10	0.00E+00	0.00E+00	0.00E+00	5.12E-09	9.03E-13	n/a	9.48E-09	**2.05E-08**
chromium (6+)	18540-29-9	2.63E-15	5.71E-09	4.14E-15	2.28E-15	2.33E-10	0.00E+00	0.00E+00	0.00E+00	5.12E-09	9.03E-13	n/a	9.48E-09	**2.05E-08**
copper	7440-50-8	2.37E-12	2.15E-07	2.05E-10	1.14E-10	1.59E-08	0.00E+00	0.00E+00	0.00E+00	1.92E-07	3.40E-11	n/a	3.81E-07	**8.04E-07**
hydrogen chloride	7647-01-0	3.92E-12	6.83E-08	2.38E-08	1.62E-07	2.92E-12	7.51E-13	4.02E-14	2.16E-14	5.65E-11	1.54E-09	n/a		**2.56E-07**
iron	7439-89-6	4.63E-13	7.86E-07	2.06E-13	2.27E-11	1.16E-07	0.00E+00	0.00E+00	0.00E+00	1.17E-07	1.22E-10	n/a	1.40E-06	**2.42E-06**
lead	7439-92-1	3.01E-13	8.59E-09	1.32E-12	5.20E-13	1.91E-11	0.00E+00	0.00E+00	0.00E+00	1.28E-09	4.32E-14	n/a		**9.89E-09**
manganese	7439-96-5	1.52E-12	1.00E-06	3.68E-11	1.46E-11	2.96E-09	0.00E+00	0.00E+00	0.00E+00	2.09E-07	1.54E-10	n/a	1.31E-06	**2.52E-06**
total mercury	NA											n/a		
mercuric chloride	7487-94-7	2.73E-15	1.47E-13	1.28E-14	1.89E-14	4.87E-15	2.02E-18	1.14E-16	1.08E-16	1.64E-13	0.00E+00	n/a	3.18E-13	**6.68E-13**
methyl mercury	22967-92-6	5.33E-17	3.25E-14	5.04E-16	1.01E-15	1.82E-16	3.15E-20	3.72E-19	3.50E-19	6.34E-15	2.77E-11	n/a	3.52E-11	**6.29E-11**
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	n/a		**0.00E+00**
nickel	7440-02-0	8.50E-15	3.36E-09	2.55E-14	9.79E-14	1.49E-10	0.00E+00	0.00E+00	0.00E+00	2.01E-09	1.47E-11	n/a	5.30E-09	**1.08E-08**
vanadium	7440-62-2	2.38E-13	1.07E-08	2.54E-13	1.37E-13	1.98E-10	0.00E+00	0.00E+00	0.00E+00	1.28E-10	1.61E-12	n/a	1.39E-08	**2.49E-08**
zinc	7440-66-6	8.63E-13	3.57E-07	2.70E-11	1.49E-10	2.38E-10	7.79E-12	2.19E-14	2.06E-14	6.94E-09	4.15E-08	n/a	4.96E-07	**9.02E-07**

a. Ingestion rates of total PCDDs/PCDFs are presented in units of mg TEQ/day

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS:
Infant Subsistence Fisher Exposure Scenario

COPC	CAS Number	Incidental Ingestion of Soil (mg/day)[a]	Ingestion of Exposed Produce (mg/day)[a]	Ingestion of Protected Produce (mg/day)[a]	Ingestion of Belowground Produce (mg/day)[a]	Ingestion of Beef (mg/day)[a]	Ingestion of Pork (mg/day)[a]	Ingestion of Poultry (mg/day)[a]	Ingestion of Eggs (mg/day)[a]	Ingestion of Milk (mg/day)[a]	Ingestion of Fish (mg/day)[a]	Incidental Ingestion of Surface Water (mg/day)[a]	Ingestion of Breast Milk (mg/day)[a]	Total Daily COPC Ingestion (mg/day)[a]
2-butanone	78-93-3	1.93E-14	1.49E-10	5.20E-11	8.55E-11	1.28E-14	3.31E-15	1.77E-16	9.55E-17	2.48E-13	2.12E-12	n/a		**2.89E-10**
2-ethyl 1,3-butadiene	3404-63-5	1.94E-15	1.24E-12	4.06E-13	6.19E-12	1.25E-14	3.23E-15	1.79E-16	9.63E-17	2.33E-13	8.13E-10	n/a		**8.21E-10**
acetone	67-64-1	9.98E-15	7.73E-11	2.69E-11	1.42E-10	1.81E-15	4.67E-16	2.50E-17	1.34E-17	3.50E-14	4.15E-12	n/a		**2.51E-10**
benzene	71-43-2	3.92E-13	8.89E-10	2.99E-10	6.03E-09	2.48E-12	6.31E-13	3.39E-14	1.82E-14	4.75E-11	1.65E-08	n/a	1.59E-06	**1.61E-06**
benzyl alcohol	100-51-6	3.03E-11	2.35E-07	8.18E-08	3.85E-07	1.15E-10	2.96E-11	1.58E-12	8.52E-13	2.23E-09	7.35E-11	n/a		**7.04E-07**
bis(2-ethylhexyl)-phthalate	117-81-7	1.76E-11	5.08E-08	2.48E-10	2.88E-14	1.48E-08	4.28E-10	1.11E-10	6.00E-11	2.52E-06	2.19E-09	n/a		**2.59E-06**
bromodichloromethane	75-27-4	7.51E-15	1.65E-11	5.73E-12	1.26E-10	4.62E-11	1.20E-11	6.50E-13	3.50E-13	8.87E-13	1.48E-12	n/a		**2.10E-10**
carbon disulfide	75-15-0	2.01E-17	4.16E-14	1.34E-14	4.87E-13	1.34E-16	3.31E-17	1.77E-18	9.54E-19	2.55E-15	8.43E-12	n/a		**8.98E-12**
carbon tetrachloride	56-23-5	4.21E-18	4.19E-15	1.26E-15	7.69E-14	3.02E-14	7.30E-16	3.93E-16	2.12E-16	5.66E-13	1.04E-12	n/a		**1.72E-12**
chlorobenzene	108-90-7	4.03E-17	3.87E-14	1.21E-14	5.86E-13	2.81E-13	6.95E-15	3.76E-15	2.03E-15	5.28E-12	9.23E-13	n/a		**7.13E-12**
chloroform	67-66-3	1.51E-17	3.94E-14	1.32E-14	2.92E-13	9.40E-17	2.37E-17	1.27E-18	6.85E-19	1.80E-15	6.31E-13	n/a	7.18E-11	**7.27E-11**
chloromethane	74-87-3	3.57E-17	2.76E-13	9.62E-14	8.52E-13	9.24E-17	2.38E-17	1.27E-18	6.87E-19	1.78E-15	2.91E-12	n/a		**4.14E-12**
dibromochloromethane	124-48-1	1.17E-13	2.14E-10	7.47E-11	3.87E-10	7.32E-10	1.91E-10	1.04E-11	5.58E-12	1.40E-11	3.71E-12	n/a		**1.63E-09**
dimethyl phthalate	131-11-3	1.61E-12	7.55E-09	2.52E-09	9.09E-09	8.65E-09	2.17E-09	1.16E-10	6.24E-14	1.66E-10	5.13E-11	n/a		**3.03E-08**
di-n-butyl phthalate	84-74-2	1.28E-11	1.84E-09	3.04E-10	4.56E-12	2.48E-07	1.23E-08	8.82E-13	4.75E-11	4.22E-05	3.12E-08	n/a		**4.25E-05**
ethane	74-84-0	2.14E-14	6.96E-11	2.40E-11	1.55E-10	1.23E-13	3.16E-14	1.70E-15	9.17E-16	2.36E-12	3.05E-08	n/a		**3.08E-08**
ethylbenzene	100-41-4	2.68E-17	1.90E-14	5.40E-15	4.00E-13	1.93E-16	4.57E-17	2.47E-18	1.33E-18	3.58E-15	1.41E-12	n/a	2.37E-11	**2.55E-11**
HD	505-60-2	1.53E-14	7.00E-11	7.75E-12	2.09E-11	2.74E-13	3.37E-14	1.40E-15	7.54E-16	4.87E-12	2.32E-10	n/a		**3.35E-10**
hexane	110-54-3	5.15E-18	1.35E-15	3.65E-16	1.58E-14	2.99E-17	7.46E-18	4.26E-19	2.29E-19	5.26E-16	1.47E-11	n/a		**1.47E-11**
methane	74-82-8	6.57E-14	5.53E-10	1.92E-10	1.15E-09	2.65E-13	2.46E-15	1.32E-16	7.09E-17	1.85E-13	1.63E-07	n/a		**1.65E-07**
methylene chloride	75-09-2	1.02E-17	6.56E-14	2.26E-14	7.08E-13	4.71E-17	1.21E-17	6.45E-19	3.48E-19	9.07E-16	2.29E-13	n/a	9.35E-11	**9.45E-11**
propene	115-07-1	1.57E-14	5.36E-11	1.85E-11	1.17E-10	8.88E-14	2.29E-14	1.23E-15	6.62E-16	1.70E-12	7.57E-09	n/a		**7.76E-09**
styrene	100-42-5	1.36E-13	9.00E-11	3.13E-11	1.03E-11	8.47E-11	2.28E-11	1.26E-11	6.81E-12	1.59E-08	1.34E-11	n/a		**1.62E-08**
tetrachloroethene	127-18-4	6.13E-18	6.12E-15	8.29E-16	3.66E-13	7.72E-17	1.15E-17	5.46E-19	2.94E-19	1.36E-15	2.79E-12	n/a	2.90E-11	**3.22E-11**
toluene	108-88-3	1.71E-13	1.88E-10	5.88E-11	2.54E-09	1.20E-12	2.97E-13	1.60E-14	8.62E-15	2.27E-11	8.48E-09	n/a		**1.13E-08**
trichloroethene	79-01-6	1.36E-17	2.07E-14	6.96E-15	1.30E-13	8.98E-17	2.30E-17	1.24E-18	6.68E-19	1.72E-15	5.87E-13	n/a	3.25E-11	**3.32E-11**
vinyl chloride	75-01-4	6.28E-17	3.52E-13	1.22E-13	2.96E-12	3.03E-16	7.84E-17	4.18E-18	2.25E-18	5.88E-15	1.36E-11	n/a		**1.70E-11**
xylenes	1330-20-7	6.69E-14	3.79E-11	1.25E-11	2.12E-10	4.23E-13	1.10E-13	6.13E-15	3.30E-15	7.88E-12	6.73E-10	n/a		**9.44E-10**
3,3',4,4'-TCB (PCB 77)	32598-13-3											n/a		
2,3',4,4',5-PeCB (PCB 118)	31508-00-6											n/a		
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4											n/a		
total coplanar PCBs	NA	1.26E-23	1.42E-21	2.75E-23	2.32E-23	3.23E-22	1.50E-23	4.71E-25	2.54E-25	5.39E-21	7.06E-20	n/a	2.94E-13	**2.94E-13**
ammonia	7664-41-7	4.55E-14	1.20E-09	4.18E-10	3.43E-09	8.92E-14	2.29E-14	1.22E-15	6.61E-16	1.73E-12	1.58E-10	n/a		**5.20E-09**
aluminum	7429-90-5	9.01E-14	8.99E-14	3.13E-14	1.12E-14	4.43E-15	0.00E+00	0.00E+00	0.00E+00	2.60E-14	1.37E-10	n/a		**1.37E-10**
cadmium	7440-43-9	4.86E-15	2.07E-09	1.96E-13	1.40E-13	1.84E-12	6.73E-14	1.70E-15	3.77E-17	8.05E-12	2.64E-10	n/a		**2.35E-09**
chlorine	7782-50-5	3.17E-12	2.46E-08	8.56E-09	1.79E-08	7.25E-12	1.87E-12	1.00E-13	5.41E-14	1.40E-10	6.17E-10	n/a		**5.18E-08**
chromium (3+)	7440-47-3	2.63E-15	5.71E-09	4.14E-15	2.28E-15	2.33E-10	0.00E+00	0.00E+00	0.00E+00	5.12E-09	2.26E-12	n/a		**1.11E-08**
chromium (6+)	18540-29-9	2.63E-15	5.71E-09	4.14E-15	2.28E-15	2.33E-10	0.00E+00	0.00E+00	0.00E+00	5.12E-09	2.26E-12	n/a	9.48E-09	**2.05E-08**
copper	7440-50-8	2.37E-12	2.15E-07	2.05E-10	1.14E-10	1.59E-08	0.00E+00	0.00E+00	0.00E+00	1.92E-07	8.49E-11	n/a		**4.23E-07**
hydrogen chloride	7647-01-0	3.92E-12	6.83E-08	2.38E-08	1.62E-07	2.92E-12	7.51E-13	4.02E-14	2.16E-14	5.65E-11	3.84E-09	n/a		**2.58E-07**
iron	7439-89-6	4.63E-13	7.86E-07	2.06E-13	2.27E-11	1.16E-07	0.00E+00	0.00E+00	0.00E+00	1.17E-07	3.04E-10	n/a		**1.02E-06**
lead	7439-92-1	3.01E-13	8.59E-09	1.32E-12	5.19E-13	1.91E-11	0.00E+00	0.00E+00	0.00E+00	1.28E-09	1.08E-13	n/a	1.11E-08	**2.09E-08**
manganese	7439-96-5	1.52E-12	1.00E-06	3.68E-11	1.46E-11	2.96E-09	0.00E+00	0.00E+00	0.00E+00	2.09E-07	3.85E-10	n/a		**1.21E-06**
total mercury	NA											n/a		
mercuric chloride	7487-94-7	1.37E-15	1.28E-13	6.38E-15	9.45E-15	3.98E-15	1.33E-18	5.70E-17	5.38E-17	1.36E-13	0.00E+00	n/a		**2.86E-13**
methyl mercury	22967-92-6	2.71E-17	3.18E-14	2.56E-16	5.14E-16	1.56E-16	2.92E-20	1.89E-19	1.78E-19	5.45E-15	4.03E-11	n/a		**4.04E-11**
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	n/a		**0.00E+00**
nickel	7440-02-0	8.50E-15	3.36E-09	2.55E-14	9.79E-14	1.49E-10	0.00E+00	0.00E+00	0.00E+00	2.01E-09	3.69E-11	n/a		**5.55E-09**
vanadium	7440-62-2	2.38E-13	1.07E-08	2.54E-13	1.37E-13	1.98E-10	0.00E+00	0.00E+00	0.00E+00	1.28E-10	4.02E-12	n/a		**1.10E-08**
zinc	7440-66-6	8.63E-13	3.57E-07	2.70E-11	1.49E-10	2.38E-10	7.79E-12	2.19E-14	2.06E-14	6.94E-09	1.04E-07	n/a		**4.69E-07**

a. Ingestion rates of total PCDDs/PCDFs and coplanar PCBs are presented in units of mg TEQ/day

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS:
Infant Subsistence Fisher Exposure Scenario

COPC	CAS Number	Incidental Ingestion of Soil (mg/day)[a]	Ingestion of Exposed Produce (mg/day)[a]	Ingestion of Protected Produce (mg/day)[a]	Ingestion of Belowground Produce (mg/day)[a]	Ingestion of Beef (mg/day)[a]	Ingestion of Pork (mg/day)[a]	Ingestion of Poultry (mg/day)[a]	Ingestion of Eggs (mg/day)[a]	Ingestion of Milk (mg/day)[a]	Ingestion of Fish (mg/day)[a]	Incidental Ingestion of Surface Water (mg/day)[a]	Ingestion of Breast Milk (mg/day)[a]	Total Daily COPC Ingestion (mg/day)[a]
2-butanone	78-93-3	1.93E-14	1.49E-10	5.20E-11	8.55E-11	1.28E-14	3.31E-15	1.77E-16	9.55E-17	2.48E-13	2.12E-12	n/a	7.58E-10	**1.05E-09**
2-ethyl 1,3-butadiene	3404-63-5	1.94E-15	1.24E-12	4.06E-13	6.19E-12	1.25E-14	3.23E-15	1.79E-16	9.63E-17	2.33E-13	8.13E-10	n/a		**8.21E-10**
acetone	67-64-1	9.98E-15	7.73E-11	2.69E-11	1.42E-10	1.81E-15	4.67E-16	2.50E-17	1.34E-17	3.50E-14	4.15E-12	n/a	9.73E-10	**1.22E-09**
benzene	71-43-2	3.92E-13	8.89E-10	2.99E-10	6.03E-09	2.48E-12	6.31E-13	3.39E-14	1.82E-14	4.75E-11	1.65E-08	n/a	1.59E-06	**1.61E-06**
benzyl alcohol	100-51-6	3.40E-11	2.64E-07	9.19E-08	4.32E-07	1.29E-10	3.33E-11	1.78E-12	9.58E-13	2.50E-09	8.25E-11	n/a		**7.91E-07**
bis(2-ethylhexyl)-phthalate	117-81-7	1.79E-11	5.08E-08	2.52E-10	2.93E-14	1.48E-08	4.28E-10	1.13E-10	6.11E-11	2.52E-06	2.20E-09	n/a		**2.59E-06**
bromodichloromethane	75-27-4	7.51E-15	1.65E-11	5.73E-12	1.26E-10	4.62E-11	1.20E-11	6.50E-13	3.50E-13	8.87E-13	1.48E-12	n/a		**2.10E-10**
carbon disulfide	75-15-0	2.01E-17	4.16E-14	1.34E-14	4.87E-13	1.34E-16	3.31E-17	1.77E-18	9.54E-19	2.55E-15	8.43E-12	n/a	6.77E-10	**6.86E-10**
carbon tetrachloride	56-23-5	4.21E-18	4.19E-15	1.26E-15	7.69E-14	3.02E-14	7.30E-16	3.93E-16	2.12E-16	5.66E-13	1.04E-12	n/a		**1.72E-12**
chlorobenzene	108-90-7	4.03E-17	3.87E-14	1.21E-14	5.86E-13	2.81E-13	6.95E-15	3.76E-15	2.03E-15	5.28E-12	9.23E-13	n/a		**7.13E-12**
chloroform	67-66-3	1.51E-17	3.94E-14	1.32E-14	2.92E-13	9.40E-17	2.37E-17	1.27E-18	6.85E-19	1.80E-15	6.31E-13	n/a	7.18E-11	**7.27E-11**
chloromethane	74-87-3	3.57E-17	2.76E-13	9.62E-14	8.52E-13	9.24E-17	2.38E-17	1.27E-18	6.87E-19	1.78E-15	2.91E-12	n/a	6.44E-10	**6.48E-10**
dibromochloromethane	124-48-1	1.17E-13	2.15E-10	7.50E-11	3.88E-10	7.34E-10	1.92E-10	1.04E-11	5.60E-12	1.41E-11	3.72E-12	n/a		**1.64E-09**
dimethyl phthalate	131-11-3	1.62E-12	7.58E-09	2.53E-09	9.14E-09	8.69E-09	2.18E-09	1.16E-10	6.27E-14	1.67E-10	5.14E-11	n/a		**3.05E-08**
di-n-butyl phthalate	84-74-2	1.30E-11	1.85E-09	3.10E-10	4.64E-12	2.48E-07	1.23E-08	8.99E-13	4.84E-11	4.22E-05	3.12E-08	n/a		**4.25E-05**
ethane	74-84-0	2.14E-14	6.96E-11	2.40E-11	1.55E-10	1.23E-13	3.16E-14	1.70E-15	9.17E-16	2.36E-12	3.05E-08	n/a		**3.08E-08**
ethylbenzene	100-41-4	2.68E-17	1.90E-14	5.40E-15	4.00E-13	1.93E-16	4.57E-17	2.47E-18	1.33E-18	3.58E-15	1.41E-12	n/a	2.37E-11	**2.55E-11**
HD	505-60-2	1.53E-14	7.00E-11	7.75E-12	2.09E-11	2.74E-13	3.37E-14	1.40E-15	7.54E-16	4.87E-12	2.32E-10	n/a		**3.35E-10**
hexane	110-54-3	5.15E-18	1.35E-15	3.65E-16	1.58E-14	2.99E-17	7.46E-18	4.26E-19	2.29E-19	5.26E-16	1.47E-11	n/a	7.80E-11	**9.27E-11**
methane	74-82-8	6.57E-14	5.53E-10	1.92E-10	1.15E-09	2.65E-13	2.46E-15	1.32E-16	7.09E-17	1.85E-13	1.63E-07	n/a		**1.65E-07**
methylene chloride	75-09-2	1.02E-17	6.56E-14	2.26E-14	7.08E-13	4.71E-17	1.21E-17	6.45E-19	3.48E-19	9.07E-16	2.29E-13	n/a	9.35E-11	**9.45E-11**
propene	115-07-1	1.57E-14	5.36E-11	1.85E-11	1.17E-10	8.88E-14	2.29E-14	1.23E-15	6.62E-16	1.70E-12	7.57E-09	n/a		**7.76E-09**
styrene	100-42-5	1.37E-13	9.02E-11	3.14E-11	1.04E-11	8.49E-11	2.28E-11	1.27E-11	6.82E-12	1.60E-08	1.34E-11	n/a	6.03E-09	**2.23E-08**
tetrachloroethene	127-18-4	6.13E-18	6.12E-15	8.29E-16	3.66E-13	7.72E-17	1.15E-17	5.46E-19	2.94E-19	1.36E-15	2.79E-12	n/a	2.90E-11	**3.22E-11**
toluene	108-88-3	1.71E-13	1.88E-10	5.88E-11	2.54E-09	1.20E-12	2.97E-13	1.60E-14	8.62E-15	2.27E-11	8.48E-09	n/a	2.79E-07	**2.91E-07**
trichloroethene	79-01-6	1.36E-17	2.07E-14	6.96E-15	1.30E-13	8.98E-17	2.30E-17	1.24E-18	6.68E-19	1.72E-15	5.87E-13	n/a	3.25E-11	**3.32E-11**
vinyl chloride	75-01-4	6.28E-17	3.52E-13	1.22E-13	2.96E-12	3.03E-16	7.84E-17	4.18E-18	2.25E-18	5.88E-15	1.36E-11	n/a		**1.70E-11**
xylenes	1330-20-7	6.69E-14	3.79E-11	1.25E-11	2.12E-10	4.23E-13	1.10E-13	6.13E-15	3.31E-15	7.88E-12	6.73E-10	n/a	1.09E-08	**1.19E-08**
3,3',4,4'-TCB (PCB 77)	32598-13-3	8.63E-20	5.25E-18	1.88E-19	1.59E-19	1.18E-18	7.43E-20	3.22E-21	1.74E-21	1.94E-17	4.14E-16	n/a	4.10E-14	**4.15E-14**
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	3.60E-19	2.19E-17	7.85E-19	6.62E-19	4.92E-18	3.10E-19	1.34E-20	7.23E-21	8.09E-17	1.73E-15	n/a	1.71E-13	**1.73E-13**
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	1.73E-19	1.05E-17	3.77E-19	3.18E-19	2.36E-18	1.49E-19	6.44E-21	3.47E-21	3.88E-17	8.29E-16	n/a	8.20E-14	**8.29E-14**
total coplanar PCBs	NA											n/a		
ammonia	7664-41-7	4.55E-14	1.20E-09	4.18E-10	3.43E-09	8.93E-14	2.29E-14	1.22E-15	6.61E-16	1.73E-12	1.58E-10	n/a		**5.20E-09**
aluminum	7429-90-5	9.01E-14	8.99E-14	3.13E-14	1.12E-14	4.43E-15	0.00E+00	0.00E+00	0.00E+00	2.60E-14	1.37E-10	n/a	4.56E-08	**4.58E-08**
cadmium	7440-43-9	4.86E-15	2.07E-09	1.96E-13	1.40E-13	1.84E-12	6.73E-14	1.70E-15	3.77E-17	8.05E-12	2.64E-10	n/a	2.89E-09	**5.24E-09**
chlorine	7782-50-5	3.17E-12	2.46E-08	8.56E-09	1.79E-08	7.25E-12	1.87E-12	1.00E-13	5.41E-14	1.40E-10	6.17E-10	n/a	2.26E-07	**2.78E-07**
chromium (3+)	7440-47-3	2.63E-15	5.71E-09	4.14E-15	2.28E-15	2.33E-10	0.00E+00	0.00E+00	0.00E+00	5.12E-09	2.26E-12	n/a	9.48E-09	**2.05E-08**
chromium (6+)	18540-29-9	2.63E-15	5.71E-09	4.14E-15	2.28E-15	2.33E-10	0.00E+00	0.00E+00	0.00E+00	5.12E-09	2.26E-12	n/a	9.48E-09	**2.05E-08**
copper	7440-50-8	2.37E-12	2.15E-07	2.05E-10	1.14E-10	1.59E-08	0.00E+00	0.00E+00	0.00E+00	1.92E-07	8.49E-11	n/a	3.81E-07	**8.04E-07**
hydrogen chloride	7647-01-0	3.92E-12	6.83E-08	2.38E-08	1.62E-07	2.92E-12	7.51E-13	4.02E-14	2.16E-14	5.65E-11	3.84E-09	n/a		**2.58E-07**
iron	7439-89-6	4.63E-13	7.86E-07	2.06E-13	2.27E-11	1.16E-07	0.00E+00	0.00E+00	0.00E+00	1.17E-07	3.04E-10	n/a	1.40E-06	**2.42E-06**
lead	7439-92-1	3.01E-13	8.59E-09	1.32E-12	5.20E-13	1.91E-11	0.00E+00	0.00E+00	0.00E+00	1.28E-09	1.08E-13	n/a		**9.90E-09**
manganese	7439-96-5	1.52E-12	1.00E-06	3.68E-11	1.46E-11	2.96E-09	0.00E+00	0.00E+00	0.00E+00	2.09E-07	3.85E-10	n/a	1.31E-06	**2.52E-06**
total mercury	NA											n/a		
mercuric chloride	7487-94-7	2.73E-15	1.47E-13	1.28E-14	1.89E-14	4.87E-15	2.02E-18	1.14E-16	1.08E-16	1.64E-13	0.00E+00	n/a	3.18E-13	**6.68E-13**
methyl mercury	22967-92-6	5.33E-17	3.25E-14	5.04E-16	1.01E-15	1.82E-16	3.15E-20	3.72E-19	3.50E-19	6.34E-15	6.93E-11	n/a	8.78E-11	**1.57E-10**
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	n/a		**0.00E+00**
nickel	7440-02-0	8.50E-15	3.36E-09	2.55E-14	9.79E-14	1.49E-10	0.00E+00	0.00E+00	0.00E+00	2.01E-09	3.69E-11	n/a	5.33E-09	**1.09E-08**
vanadium	7440-62-2	2.38E-13	1.07E-08	2.54E-13	1.37E-13	1.98E-10	0.00E+00	0.00E+00	0.00E+00	1.28E-10	4.02E-12	n/a	1.39E-08	**2.49E-08**
zinc	7440-66-6	8.63E-13	3.57E-07	2.70E-11	1.49E-10	2.38E-10	7.79E-12	2.19E-14	2.06E-14	6.94E-09	1.04E-07	n/a	5.74E-07	**1.04E-06**

a. Ingestion rates of total PCDDs/PCDFs are presented in units of mg TEQ/day

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS:
Infant Subsistence Farmer Exposure Scenario

COPC	CAS Number	Incidental Ingestion of Soil (mg/day)[a]	Ingestion of Exposed Produce (mg/day)[a]	Ingestion of Protected Produce (mg/day)[a]	Ingestion of Belowground Produce (mg/day)[a]	Ingestion of Beef (mg/day)[a]	Ingestion of Pork (mg/day)[a]	Ingestion of Poultry (mg/day)[a]	Ingestion of Eggs (mg/day)[a]	Ingestion of Milk (mg/day)[a]	Ingestion of Fish (mg/day)[a]	Incidental Ingestion of Surface Water (mg/day)[a]	Ingestion of Breast Milk (mg/day)[a]	Total Daily COPC Ingestion (mg/day)[a]
2-butanone	78-93-3	1.93E-14	3.73E-10	1.30E-10	2.14E-10	3.21E-14	8.27E-15	4.43E-16	2.39E-16	6.21E-13	8.48E-13	n/a		**7.19E-10**
2-ethyl 1,3-butadiene	3404-63-5	1.94E-15	3.09E-12	1.01E-12	1.55E-11	3.13E-14	8.08E-15	4.47E-16	2.41E-16	5.84E-13	3.25E-10	n/a		**3.46E-10**
acetone	67-64-1	9.98E-15	1.93E-10	6.73E-11	3.56E-10	4.53E-15	1.17E-15	6.26E-17	3.36E-17	8.76E-14	1.66E-12	n/a		**6.18E-10**
benzene	71-43-2	3.92E-13	2.22E-09	7.48E-10	1.51E-08	6.20E-12	1.58E-12	8.47E-14	4.56E-14	1.19E-10	6.61E-09	n/a	1.60E-06	**1.62E-06**
benzyl alcohol	100-51-6	3.03E-11	5.87E-07	2.04E-07	9.62E-07	2.87E-10	7.40E-11	3.96E-12	2.13E-12	5.56E-09	2.94E-11	n/a		**1.76E-06**
bis(2-ethylhexyl)-phthalate	117-81-7	1.76E-11	1.27E-07	6.19E-10	7.20E-14	3.71E-08	1.07E-09	2.78E-10	1.50E-10	6.30E-06	8.77E-10	n/a		**6.47E-06**
bromodichloromethane	75-27-4	7.51E-15	4.11E-11	1.43E-11	3.15E-10	1.15E-10	3.01E-11	1.62E-12	8.75E-13	2.22E-12	5.93E-13	n/a		**5.22E-10**
carbon disulfide	75-15-0	2.01E-17	1.04E-13	3.35E-14	1.22E-12	3.35E-16	8.29E-17	4.43E-18	2.38E-18	6.38E-15	3.37E-12	n/a		**4.74E-12**
carbon tetrachloride	56-23-5	4.21E-18	1.05E-14	3.16E-15	1.92E-13	7.56E-14	1.82E-15	9.82E-16	5.29E-16	1.42E-12	4.14E-13	n/a		**2.11E-12**
chlorobenzene	108-90-7	4.03E-17	9.68E-14	3.02E-14	1.46E-12	7.03E-13	1.74E-14	9.40E-15	5.07E-15	1.32E-11	3.69E-13	n/a		**1.59E-11**
chloroform	67-66-3	1.51E-17	9.85E-14	3.29E-14	7.31E-13	2.35E-16	5.93E-17	3.18E-18	1.71E-18	4.50E-15	2.52E-13	n/a	7.22E-11	**7.34E-11**
chloromethane	74-87-3	3.57E-17	6.91E-13	2.41E-13	2.13E-12	2.31E-16	5.95E-17	3.18E-18	1.72E-18	4.46E-15	1.16E-12	n/a		**4.23E-12**
dibromochloromethane	124-48-1	1.17E-13	5.36E-10	1.87E-10	9.68E-10	1.83E-09	4.78E-10	2.59E-11	1.39E-11	3.51E-11	1.49E-12	n/a		**4.07E-09**
dimethyl phthalate	131-11-3	1.61E-12	1.89E-08	6.30E-09	2.27E-08	2.16E-08	5.43E-09	2.89E-10	1.56E-13	4.15E-10	2.05E-11	n/a		**7.57E-08**
di-n-butyl phthalate	84-74-2	1.28E-11	4.59E-09	7.61E-10	1.14E-11	6.20E-07	3.07E-08	2.21E-12	1.19E-10	1.06E-04	1.25E-08	n/a		**1.06E-04**
ethane	74-84-0	2.14E-14	1.74E-10	6.00E-11	3.88E-10	3.07E-13	7.90E-14	4.25E-15	2.29E-15	5.91E-12	1.22E-08	n/a		**1.28E-08**
ethylbenzene	100-41-4	2.68E-17	4.74E-14	1.35E-14	9.99E-13	4.81E-16	1.14E-16	6.18E-18	3.33E-18	8.94E-15	5.66E-13	n/a	2.38E-11	**2.55E-11**
HD	505-60-2	1.53E-14	1.75E-10	1.94E-11	5.24E-11	6.84E-13	8.41E-14	3.50E-15	1.89E-15	1.22E-11	9.27E-11	n/a		**3.52E-10**
hexane	110-54-3	5.15E-18	3.38E-15	9.12E-16	3.94E-14	7.47E-17	1.87E-17	1.07E-18	5.72E-19	1.32E-15	5.88E-12	n/a		**5.93E-12**
methane	74-82-8	6.57E-14	1.38E-09	4.80E-10	2.87E-09	6.62E-13	6.16E-15	3.30E-16	1.77E-16	4.63E-13	6.52E-08	n/a		**6.99E-08**
methylene chloride	75-09-2	1.02E-17	1.64E-13	5.66E-14	1.77E-12	1.18E-16	3.02E-17	1.61E-18	8.70E-19	2.27E-15	9.15E-14	n/a	9.56E-11	**9.76E-11**
propene	115-07-1	1.57E-14	1.34E-10	4.64E-11	2.93E-10	2.22E-13	5.72E-14	3.07E-15	1.65E-15	4.26E-12	3.03E-09	n/a		**3.51E-09**
styrene	100-42-5	1.36E-13	2.25E-10	7.83E-11	2.58E-11	2.12E-10	5.70E-11	3.16E-11	1.70E-11	3.98E-08	5.35E-12	n/a		**4.05E-08**
tetrachloroethene	127-18-4	6.13E-18	1.53E-14	2.07E-15	9.15E-13	1.93E-16	2.88E-17	1.36E-18	7.36E-19	3.41E-15	1.12E-12	n/a	2.80E-11	**3.00E-11**
toluene	108-88-3	1.71E-13	4.71E-10	1.47E-10	6.35E-09	3.01E-12	7.41E-13	4.00E-14	2.15E-14	5.67E-11	3.39E-09	n/a		**1.04E-08**
trichloroethene	79-01-6	1.36E-17	5.18E-14	1.74E-14	3.24E-13	2.24E-16	5.74E-17	3.11E-18	1.67E-18	4.29E-15	2.35E-13	n/a	3.25E-11	**3.31E-11**
vinyl chloride	75-01-4	6.28E-17	8.81E-13	3.04E-13	7.41E-12	7.58E-16	1.96E-16	1.04E-17	5.63E-18	1.47E-14	5.42E-12	n/a		**1.40E-11**
xylenes	1330-20-7	6.69E-14	9.47E-11	3.11E-11	5.31E-10	1.06E-12	2.76E-13	1.53E-14	8.26E-15	1.97E-11	2.69E-10	n/a		**9.47E-10**
3,3',4,4'-TCB (PCB 77)	32598-13-3											n/a		
2,3',4,4',5-PeCB (PCB 118)	31508-00-6											n/a		
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4											n/a		
total coplanar PCBs	NA	1.26E-23	3.56E-21	6.89E-23	5.81E-23	8.07E-22	3.76E-23	1.18E-24	6.34E-25	1.35E-20	2.83E-20	n/a	1.37E-13	**1.37E-13**
ammonia	7664-41-7	4.55E-14	3.00E-09	1.05E-09	8.56E-09	2.23E-13	5.72E-14	3.06E-15	1.65E-15	4.33E-12	6.30E-11	n/a		**1.27E-08**
aluminum	7429-90-5	9.01E-14	2.25E-13	7.83E-14	2.81E-14	1.11E-14	0.00E+00	0.00E+00	0.00E+00	6.49E-14	5.47E-11	n/a		**5.52E-11**
cadmium	7440-43-9	4.86E-15	5.18E-09	4.89E-13	3.50E-13	4.60E-12	1.68E-13	4.25E-15	9.42E-17	2.01E-11	1.06E-10	n/a		**5.31E-09**
chlorine	7782-50-5	3.17E-12	6.14E-08	2.14E-08	4.48E-08	1.81E-11	4.68E-12	2.51E-13	1.35E-13	3.51E-10	2.47E-10	n/a		**1.28E-07**
chromium (3+)	7440-47-3	2.63E-15	1.43E-08	1.03E-14	5.69E-15	5.82E-10	0.00E+00	0.00E+00	0.00E+00	1.28E-08	9.03E-13	n/a		**2.77E-08**
chromium (6+)	18540-29-9	2.63E-15	1.43E-08	1.03E-14	5.69E-15	5.82E-10	0.00E+00	0.00E+00	0.00E+00	1.28E-08	9.03E-13	n/a	2.23E-08	**4.99E-08**
copper	7440-50-8	2.37E-12	5.37E-07	5.13E-10	2.84E-10	3.97E-08	0.00E+00	0.00E+00	0.00E+00	4.80E-07	3.40E-11	n/a		**1.06E-06**
hydrogen chloride	7647-01-0	3.92E-12	1.71E-07	5.95E-08	4.05E-07	7.30E-12	1.88E-12	1.00E-13	5.40E-14	1.41E-10	1.54E-09	n/a		**6.38E-07**
iron	7439-89-6	4.63E-13	1.96E-06	5.15E-13	5.66E-11	2.91E-07	0.00E+00	0.00E+00	0.00E+00	2.93E-07	1.22E-10	n/a		**2.55E-06**
lead	7439-92-1	3.01E-13	2.15E-08	3.29E-12	1.30E-12	4.77E-11	0.00E+00	0.00E+00	0.00E+00	3.21E-09	4.32E-14	n/a	2.55E-08	**5.02E-08**
manganese	7439-96-5	1.52E-12	2.50E-06	9.21E-11	3.64E-11	7.41E-09	0.00E+00	0.00E+00	0.00E+00	5.23E-07	1.54E-10	n/a		**3.03E-06**
total mercury	NA											n/a		
mercuric chloride	7487-94-7	1.37E-15	3.21E-13	1.60E-14	2.36E-14	9.94E-15	3.31E-18	1.43E-16	1.34E-16	3.39E-13	0.00E+00	n/a		**7.12E-13**
methyl mercury	22967-92-6	2.71E-17	7.95E-14	6.40E-16	1.29E-15	3.90E-16	7.29E-20	4.72E-19	4.45E-19	1.36E-14	1.61E-11	n/a		**1.62E-11**
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	n/a		**0.00E+00**
nickel	7440-02-0	8.50E-15	8.39E-09	6.37E-14	2.45E-13	3.73E-10	0.00E+00	0.00E+00	0.00E+00	5.02E-09	1.47E-11	n/a		**1.38E-08**
vanadium	7440-62-2	2.38E-13	2.68E-08	6.35E-13	3.42E-13	4.96E-10	0.00E+00	0.00E+00	0.00E+00	3.20E-10	1.61E-12	n/a		**2.76E-08**
zinc	7440-66-6	8.63E-13	8.94E-07	6.74E-11	3.73E-10	5.96E-10	1.95E-11	5.47E-14	5.16E-14	1.74E-08	4.15E-08	n/a		**9.54E-07**

a. Ingestion rates of total PCDDs/PCDFs and coplanar PCBs are presented in units of mg TEQ/day

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS: Infant Subsistence Farmer Exposure Scenario														
COPC	CAS Number	Incidental Ingestion of Soil (mg/day)[a]	Ingestion of Exposed Produce (mg/day)[a]	Ingestion of Protected Produce (mg/day)[a]	Ingestion of Belowground Produce (mg/day)[a]	Ingestion of Beef (mg/day)[a]	Ingestion of Pork (mg/day)[a]	Ingestion of Poultry (mg/day)[a]	Ingestion of Eggs (mg/day)[a]	Ingestion of Milk (mg/day)[a]	Ingestion of Fish (mg/day)[a]	Incidental Ingestion of Surface Water (mg/day)[a]	Ingestion of Breast Milk (mg/day)[a]	Total Daily COPC Ingestion (mg/day)[a]
2-butanone	78-93-3	1.93E-14	3.73E-10	1.30E-10	2.14E-10	3.21E-14	8.27E-15	4.43E-16	2.39E-16	6.21E-13	8.48E-13	n/a	1.43E-09	**2.15E-09**
2-ethyl 1,3-butadiene	3404-63-5	1.94E-15	3.09E-12	1.01E-12	1.55E-11	3.13E-14	8.08E-15	4.47E-16	2.41E-16	5.84E-13	3.25E-10	n/a		**3.46E-10**
acetone	67-64-1	9.98E-15	1.93E-10	6.73E-11	3.56E-10	4.53E-15	1.17E-15	6.26E-17	3.36E-17	8.76E-14	1.66E-12	n/a	1.61E-09	**2.22E-09**
benzene	71-43-2	3.92E-13	2.22E-09	7.48E-10	1.51E-08	6.20E-12	1.58E-12	8.47E-14	4.56E-14	1.19E-10	6.61E-09	n/a	1.60E-06	**1.62E-06**
benzyl alcohol	100-51-6	3.40E-11	6.59E-07	2.30E-07	1.08E-06	3.22E-10	8.32E-11	4.45E-12	2.39E-12	6.25E-09	3.30E-11	n/a		**1.98E-06**
bis(2-ethylhexyl)-phthalate	117-81-7	1.79E-11	1.27E-07	6.31E-10	7.33E-14	3.71E-08	1.07E-09	2.83E-10	1.53E-10	6.30E-06	8.78E-10	n/a		**6.47E-06**
bromodichloromethane	75-27-4	7.51E-15	4.12E-11	1.43E-11	3.15E-10	1.15E-10	3.01E-11	1.63E-12	8.76E-13	2.22E-12	5.93E-13	n/a		**5.22E-10**
carbon disulfide	75-15-0	2.01E-17	1.04E-13	3.35E-14	1.22E-12	3.35E-16	8.29E-17	4.43E-18	2.38E-18	6.38E-15	3.37E-12	n/a	6.72E-10	**6.77E-10**
carbon tetrachloride	56-23-5	4.21E-18	1.05E-14	3.16E-15	1.92E-13	7.56E-14	1.82E-15	9.82E-16	5.29E-16	1.42E-12	4.14E-13	n/a		**2.11E-12**
chlorobenzene	108-90-7	4.03E-17	9.68E-14	3.02E-14	1.46E-12	7.03E-13	1.74E-14	9.40E-15	5.07E-15	1.32E-11	3.69E-13	n/a		**1.59E-11**
chloroform	67-66-3	1.51E-17	9.85E-14	3.29E-14	7.31E-13	2.35E-16	5.93E-17	3.18E-18	1.71E-18	4.50E-15	2.52E-13	n/a	7.22E-11	**7.34E-11**
chloromethane	74-87-3	3.57E-17	6.91E-13	2.41E-13	2.13E-12	2.31E-16	5.95E-17	3.18E-18	1.72E-18	4.46E-15	1.16E-12	n/a	6.45E-10	**6.49E-10**
dibromochloromethane	124-48-1	1.17E-13	5.38E-10	1.87E-10	9.71E-10	1.84E-09	4.80E-10	2.60E-11	1.40E-11	3.52E-11	1.49E-12	n/a		**4.09E-09**
dimethyl phthalate	131-11-3	1.62E-12	1.90E-08	6.33E-09	2.28E-08	2.17E-08	5.46E-09	2.91E-10	1.57E-13	4.17E-10	2.05E-11	n/a		**7.60E-08**
di-n-butyl phthalate	84-74-2	1.30E-11	4.63E-09	7.75E-10	1.16E-11	6.20E-07	3.08E-08	2.25E-12	1.21E-10	1.06E-04	1.25E-08	n/a		**1.06E-04**
ethane	74-84-0	2.14E-14	1.74E-10	6.00E-11	3.88E-10	3.07E-13	7.90E-14	4.25E-15	2.29E-15	5.91E-12	1.22E-08	n/a		**1.28E-08**
ethylbenzene	100-41-4	2.68E-17	4.74E-14	1.35E-14	9.99E-13	4.81E-16	1.14E-16	6.18E-18	3.33E-18	8.94E-15	5.66E-13	n/a	2.38E-11	**2.55E-11**
HD	505-60-2	1.53E-14	1.75E-10	1.94E-11	5.24E-11	6.84E-13	8.41E-14	3.50E-15	1.89E-15	1.22E-11	9.27E-11	n/a		**3.52E-10**
hexane	110-54-3	5.15E-18	3.38E-15	9.12E-16	3.94E-14	7.47E-17	1.87E-17	1.07E-18	5.72E-19	1.32E-15	5.88E-12	n/a	6.69E-11	**7.28E-11**
methane	74-82-8	6.57E-14	1.38E-09	4.80E-10	2.87E-09	6.62E-13	6.16E-15	3.30E-16	1.77E-16	4.63E-13	6.52E-08	n/a		**6.99E-08**
methylene chloride	75-09-2	1.02E-17	1.64E-13	5.66E-14	1.77E-12	1.18E-16	3.02E-17	1.61E-18	8.70E-19	2.27E-15	9.15E-14	n/a	9.56E-11	**9.76E-11**
propene	115-07-1	1.57E-14	1.34E-10	4.64E-11	2.93E-10	2.22E-13	5.72E-14	3.07E-15	1.65E-15	4.26E-12	3.03E-09	n/a		**3.51E-09**
styrene	100-42-5	1.37E-13	2.25E-10	7.85E-11	2.59E-11	2.12E-10	5.71E-11	3.16E-11	1.70E-11	3.99E-08	5.35E-12	n/a	1.47E-08	**5.53E-08**
tetrachloroethene	127-18-4	6.13E-18	1.53E-14	2.07E-15	9.15E-13	1.93E-16	2.88E-17	1.36E-18	7.36E-19	3.41E-15	1.12E-12	n/a	2.80E-11	**3.00E-11**
toluene	108-88-3	1.71E-13	4.71E-10	1.47E-10	6.35E-09	3.01E-12	7.41E-13	4.00E-14	2.15E-14	5.67E-11	3.39E-09	n/a	2.81E-07	**2.91E-07**
trichloroethene	79-01-6	1.36E-17	5.18E-14	1.74E-14	3.24E-13	2.24E-16	5.74E-17	3.11E-18	1.67E-18	4.29E-15	2.35E-13	n/a	3.25E-11	**3.31E-11**
vinyl chloride	75-01-4	6.28E-17	8.81E-13	3.04E-13	7.41E-12	7.58E-16	1.96E-16	1.04E-17	5.63E-18	1.47E-14	5.42E-12	n/a		**1.40E-11**
xylenes	1330-20-7	6.69E-14	9.47E-11	3.11E-11	5.31E-10	1.06E-12	2.76E-13	1.53E-14	8.26E-15	1.97E-11	2.69E-10	n/a	1.11E-08	**1.21E-08**
3,3',4,4'-TCB (PCB 77)	32598-13-3	8.63E-20	1.31E-17	4.71E-19	3.97E-19	2.95E-18	1.86E-19	8.05E-21	4.34E-21	4.85E-17	1.66E-16	n/a	1.91E-14	**1.94E-14**
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	3.60E-19	5.47E-17	1.96E-18	1.66E-18	1.23E-17	7.74E-19	3.36E-20	1.81E-20	2.02E-16	6.91E-16	n/a	7.97E-14	**8.06E-14**
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	1.73E-19	2.63E-17	9.42E-19	7.95E-19	5.90E-18	3.71E-19	1.61E-20	8.68E-21	9.70E-17	3.32E-16	n/a	3.82E-14	**3.87E-14**
total coplanar PCBs	NA											n/a		
ammonia	7664-41-7	4.55E-14	3.00E-09	1.05E-09	8.56E-09	2.23E-13	5.72E-14	3.06E-15	1.65E-15	4.33E-12	6.30E-11	n/a		**1.27E-08**
aluminum	7429-90-5	9.01E-14	2.25E-13	7.83E-14	2.81E-14	1.11E-14	0.00E+00	0.00E+00	0.00E+00	6.49E-14	5.47E-11	n/a	4.55E-08	**4.56E-08**
cadmium	7440-43-9	4.86E-15	5.18E-09	4.89E-13	3.50E-13	4.60E-12	1.68E-13	4.25E-15	9.43E-17	2.01E-11	1.06E-10	n/a	6.01E-09	**1.13E-08**
chlorine	7782-50-5	3.17E-12	6.14E-08	2.14E-08	4.48E-08	1.81E-11	4.68E-12	2.51E-13	1.35E-13	3.51E-10	2.47E-10	n/a	3.48E-07	**4.77E-07**
chromium (3+)	7440-47-3	2.63E-15	1.43E-08	1.03E-14	5.69E-15	5.82E-10	0.00E+00	0.00E+00	0.00E+00	1.28E-08	9.03E-13	n/a	2.23E-08	**4.99E-08**
chromium (6+)	18540-29-9	2.63E-15	1.43E-08	1.03E-14	5.69E-15	5.82E-10	0.00E+00	0.00E+00	0.00E+00	1.28E-08	9.03E-13	n/a	2.23E-08	**4.99E-08**
copper	7440-50-8	2.37E-12	5.37E-07	5.13E-10	2.84E-10	3.97E-08	0.00E+00	0.00E+00	0.00E+00	4.80E-07	3.40E-11	n/a	8.99E-07	**1.96E-06**
hydrogen chloride	7647-01-0	3.92E-12	1.71E-07	5.95E-08	4.05E-07	7.30E-12	1.88E-12	1.00E-13	5.40E-14	1.41E-10	1.54E-09	n/a		**6.38E-07**
iron	7439-89-6	4.63E-13	1.96E-06	5.15E-13	5.66E-11	2.91E-07	0.00E+00	0.00E+00	0.00E+00	2.93E-07	1.22E-10	n/a	3.30E-06	**5.85E-06**
lead	7439-92-1	3.01E-13	2.15E-08	3.30E-12	1.30E-12	4.77E-11	0.00E+00	0.00E+00	0.00E+00	3.21E-09	4.32E-14	n/a		**2.47E-08**
manganese	7439-96-5	1.52E-12	2.50E-06	9.21E-11	3.64E-11	7.41E-09	0.00E+00	0.00E+00	0.00E+00	5.23E-07	1.54E-10	n/a	3.02E-06	**6.05E-06**
total mercury	NA											n/a		
mercuric chloride	7487-94-7	2.73E-15	3.67E-13	3.19E-14	4.72E-14	1.22E-14	5.04E-18	2.85E-16	2.69E-16	4.09E-13	0.00E+00	n/a	7.59E-13	**1.63E-12**
methyl mercury	22967-92-6	5.33E-17	8.13E-14	1.26E-15	2.53E-15	4.54E-16	7.87E-20	9.29E-19	8.76E-19	1.58E-14	2.77E-11	n/a	3.52E-11	**6.30E-11**
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	n/a		**0.00E+00**
nickel	7440-02-0	8.50E-15	8.39E-09	6.37E-14	2.45E-13	3.73E-10	0.00E+00	0.00E+00	0.00E+00	5.02E-09	1.47E-11	n/a	1.24E-08	**2.62E-08**
vanadium	7440-62-2	2.38E-13	2.68E-08	6.36E-13	3.42E-13	4.96E-10	0.00E+00	0.00E+00	0.00E+00	3.20E-10	1.61E-12	n/a	3.21E-08	**5.97E-08**
zinc	7440-66-6	8.63E-13	8.94E-07	6.74E-11	3.73E-10	5.96E-10	1.95E-11	5.47E-14	5.16E-14	1.74E-08	4.15E-08	n/a	1.07E-06	**2.02E-06**

a. Ingestion rates of total PCDDs/PCDFs are presented in units of mg TEQ/day

DERMAL UPTAKE OF COPCS FROM CONTACT WITH SOIL FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: All Exposure Scenarios							
COPC	CAS Number	Adult Resident DA_{event} mg/(cm^2-event)[a]	Adult Fisher DA_{event} mg/(cm^2-event)[a]	Adult Farmer DA_{event} mg/(cm^2-event)[a]	Adult Worker DA_{event} mg/(cm^2-event)[a]	Child DA_{event} mg/(cm^2-event)[a]	Infant DA_{event} mg/(cm^2-event)[a]
2-butanone	78-93-3	1.12E-19	1.12E-19	8.44E-20	3.86E-19	1.93E-18	1.93E-18
2-ethyl 1,3-butadiene	3404-63-5	1.13E-20	1.13E-20	8.49E-21	3.88E-20	1.94E-19	1.94E-19
acetone	67-64-1	5.82E-20	5.82E-20	4.37E-20	2.00E-19	9.98E-19	9.98E-19
benzene	71-43-2	2.29E-18	2.29E-18	1.71E-18	7.84E-18	3.92E-17	3.92E-17
benzyl alcohol	100-51-6	1.66E-17	1.66E-17	1.25E-17	5.70E-17	2.53E-16	2.53E-16
bis(2-ethylhexyl)-phthalate	117-81-7	1.90E-16	1.90E-16	1.43E-16	6.52E-16	3.20E-15	3.20E-15
bromodichloromethane	75-27-4	9.93E-21	9.93E-21	7.44E-21	3.40E-20	1.70E-19	1.70E-19
carbon disulfide	75-15-0	1.17E-22	1.17E-22	8.79E-23	4.02E-22	2.01E-21	2.01E-21
carbon tetrachloride	56-23-5	1.87E-23	1.87E-23	1.41E-23	6.42E-23	3.21E-22	3.21E-22
chlorobenzene	108-90-7	2.69E-22	2.69E-22	2.01E-22	9.21E-22	4.61E-21	4.61E-21
chloroform	67-66-3	8.82E-23	8.82E-23	6.62E-23	3.03E-22	1.51E-21	1.51E-21
chloromethane	74-87-3	2.08E-22	2.08E-22	1.56E-22	7.13E-22	3.57E-21	3.57E-21
dibromochloromethane	124-48-1	1.21E-19	1.21E-19	9.09E-20	4.16E-19	2.07E-18	2.07E-18
dimethyl phthalate	131-11-3	7.08E-19	7.08E-19	5.31E-19	2.43E-18	1.21E-17	1.21E-17
di-n-butyl phthalate	84-74-2	2.70E-16	2.70E-16	2.02E-16	9.25E-16	4.54E-15	4.54E-15
ethane	74-84-0	1.25E-19	1.25E-19	9.38E-20	4.29E-19	2.14E-18	2.14E-18
ethylbenzene	100-41-4	1.57E-22	1.57E-22	1.17E-22	5.37E-22	2.68E-21	2.68E-21
HD	505-60-2	8.94E-20	8.94E-20	6.70E-20	3.06E-19	1.53E-18	1.53E-18
hexane	110-54-3	3.01E-23	3.01E-23	2.25E-23	1.03E-22	5.15E-22	5.15E-22
methane	74-82-8	3.83E-19	3.83E-19	2.87E-19	1.31E-18	6.57E-18	6.57E-18
methylene chloride	75-09-2	5.98E-23	5.98E-23	4.48E-23	2.05E-22	1.02E-21	1.02E-21
propene	115-07-1	9.16E-20	9.16E-20	6.87E-20	3.14E-19	1.57E-18	1.57E-18
styrene	100-42-5	1.16E-18	1.16E-18	8.67E-19	3.97E-18	1.98E-17	1.98E-17
tetrachloroethene	127-18-4	3.58E-23	3.58E-23	2.68E-23	1.23E-22	6.13E-22	6.13E-22
toluene	108-88-3	9.96E-19	9.96E-19	7.47E-19	3.42E-18	1.71E-17	1.71E-17
trichloroethene	79-01-6	7.93E-23	7.93E-23	5.95E-23	2.72E-22	1.36E-21	1.36E-21
vinyl chloride	75-01-4	3.66E-22	3.66E-22	2.75E-22	1.26E-21	6.28E-21	6.28E-21
xylenes	1330-20-7	3.90E-19	3.90E-19	2.93E-19	1.34E-18	6.69E-18	6.69E-18
3,3',4,4'-TCB (PCB 77)	32598-13-3						
2,3',4,4',5-PeCB (PCB 118)	31508-00-6						
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4						
total coplanar PCBs	NA	8.05E-28	8.05E-28	7.25E-28	2.41E-27	1.77E-27	1.77E-27
ammonia	7664-41-7	2.66E-19	2.66E-19	1.99E-19	9.11E-19	4.55E-18	4.55E-18
aluminum	7429-90-5	1.94E-20	1.94E-20	1.46E-20	6.65E-20	3.33E-19	3.33E-19
cadmium	7440-43-9	2.84E-22	2.84E-22	2.13E-22	9.72E-22	4.86E-21	4.86E-21
chlorine	7782-50-5	1.39E-18	1.39E-18	1.04E-18	4.75E-18	2.38E-17	2.38E-17
chromium (3+)	7440-47-3	8.52E-22	8.52E-22	6.39E-22	2.92E-21	1.46E-20	1.46E-20
chromium (6+)	18540-29-9	8.52E-22	8.52E-22	6.39E-22	2.92E-21	1.46E-20	1.46E-20
copper	7440-50-8	4.23E-19	4.23E-19	3.18E-19	1.45E-18	7.26E-18	7.26E-18
hydrogen chloride	7647-01-0	1.19E-18	1.19E-18	8.96E-19	4.10E-18	2.05E-17	2.05E-17
iron	7439-89-6	1.86E-20	1.86E-20	1.39E-20	6.38E-20	3.19E-19	3.19E-19
lead	7439-92-1	3.23E-20	3.23E-20	2.42E-20	1.11E-19	5.53E-19	5.53E-19
manganese	7439-96-5	2.52E-19	2.52E-19	1.89E-19	8.65E-19	4.32E-18	4.32E-18
total mercury	NA						
mercuric chloride	7487-94-7	5.56E-21	5.56E-21	5.68E-21	1.56E-20	8.66E-21	8.66E-21
methyl mercury	22967-92-6	8.77E-24	8.77E-24	8.25E-24	2.57E-23	1.70E-23	1.70E-23
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	2.92E-21	2.92E-21	2.19E-21	1.00E-20	5.01E-20	5.01E-20
vanadium	7440-62-2	3.81E-20	3.81E-20	2.86E-20	1.31E-19	6.52E-19	6.52E-19
zinc	7440-66-6	9.40E-20	9.40E-20	7.05E-20	3.22E-19	1.61E-18	1.61E-18

a. The dermally absorbed dose of total PCDDs/PCDFs and coplanar PCBs per event are presented in units of mg TEQ/(cm^2-event)

DERMAL UPTAKE OF COPCS FROM CONTACT WITH SOIL FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS: All Exposure Scenarios							
COPC	CAS Number	Adult Resident DA_{event} mg/(cm^2-event)[a]	Adult Fisher DA_{event} mg/(cm^2-event)[a]	Adult Farmer DA_{event} mg/(cm^2-event)[a]	Adult Worker DA_{event} mg/(cm^2-event)[a]	Child DA_{event} mg/(cm^2-event)[a]	Infant DA_{event} mg/(cm^2-event)[a]
2-butanone	78-93-3	6.75E-19	6.75E-19	6.75E-19	1.93E-18	1.93E-18	1.93E-18
2-ethyl 1,3-butadiene	3404-63-5	6.79E-20	6.79E-20	6.79E-20	1.94E-19	1.94E-19	1.94E-19
acetone	67-64-1	3.49E-19	3.49E-19	3.49E-19	9.98E-19	9.98E-19	9.98E-19
benzene	71-43-2	1.37E-17	1.37E-17	1.37E-17	3.92E-17	3.92E-17	3.92E-17
benzyl alcohol	100-51-6	9.97E-17	9.97E-17	9.97E-17	2.85E-16	2.85E-16	2.85E-16
bis(2-ethylhexyl)-phthalate	117-81-7	1.14E-15	1.14E-15	1.14E-15	3.26E-15	3.26E-15	3.26E-15
bromodichloromethane	75-27-4	5.96E-20	5.96E-20	5.96E-20	1.70E-19	1.70E-19	1.70E-19
carbon disulfide	75-15-0	7.03E-22	7.03E-22	7.03E-22	2.01E-21	2.01E-21	2.01E-21
carbon tetrachloride	56-23-5	1.12E-22	1.12E-22	1.12E-22	3.21E-22	3.21E-22	3.21E-22
chlorobenzene	108-90-7	1.61E-21	1.61E-21	1.61E-21	4.61E-21	4.61E-21	4.61E-21
chloroform	67-66-3	5.29E-22	5.29E-22	5.29E-22	1.51E-21	1.51E-21	1.51E-21
chloromethane	74-87-3	1.25E-21	1.25E-21	1.25E-21	3.57E-21	3.57E-21	3.57E-21
dibromochloromethane	124-48-1	7.27E-19	7.27E-19	7.27E-19	2.08E-18	2.08E-18	2.08E-18
dimethyl phthalate	131-11-3	4.25E-18	4.25E-18	4.25E-18	1.21E-17	1.21E-17	1.21E-17
di-n-butyl phthalate	84-74-2	1.62E-15	1.62E-15	1.62E-15	4.62E-15	4.62E-15	4.62E-15
ethane	74-84-0	7.50E-19	7.50E-19	7.50E-19	2.14E-18	2.14E-18	2.14E-18
ethylbenzene	100-41-4	9.39E-22	9.39E-22	9.39E-22	2.68E-21	2.68E-21	2.68E-21
HD	505-60-2	5.36E-19	5.36E-19	5.36E-19	1.53E-18	1.53E-18	1.53E-18
hexane	110-54-3	1.80E-22	1.80E-22	1.80E-22	5.15E-22	5.15E-22	5.15E-22
methane	74-82-8	2.30E-18	2.30E-18	2.30E-18	6.57E-18	6.57E-18	6.57E-18
methylene chloride	75-09-2	3.59E-22	3.59E-22	3.59E-22	1.02E-21	1.02E-21	1.02E-21
propene	115-07-1	5.49E-19	5.49E-19	5.49E-19	1.57E-18	1.57E-18	1.57E-18
styrene	100-42-5	6.94E-18	6.94E-18	6.94E-18	1.98E-17	1.98E-17	1.98E-17
tetrachloroethene	127-18-4	2.15E-22	2.15E-22	2.15E-22	6.13E-22	6.13E-22	6.13E-22
toluene	108-88-3	5.98E-18	5.98E-18	5.98E-18	1.71E-17	1.71E-17	1.71E-17
trichloroethene	79-01-6	4.76E-22	4.76E-22	4.76E-22	1.36E-21	1.36E-21	1.36E-21
vinyl chloride	75-01-4	2.20E-21	2.20E-21	2.20E-21	6.28E-21	6.28E-21	6.28E-21
xylenes	1330-20-7	2.34E-18	2.34E-18	2.34E-18	6.69E-18	6.69E-18	6.69E-18
3,3',4,4'-TCB (PCB 77)	32598-13-3	4.23E-24	4.23E-24	4.23E-24	1.21E-23	1.21E-23	1.21E-23
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	1.76E-23	1.76E-23	1.76E-23	5.04E-23	5.04E-23	5.04E-23
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	8.46E-24	8.46E-24	8.46E-24	2.42E-23	2.42E-23	2.42E-23
total coplanar PCBs	NA						
ammonia	7664-41-7	1.59E-18	1.59E-18	1.59E-18	4.55E-18	4.55E-18	4.55E-18
aluminum	7429-90-5	1.16E-19	1.16E-19	1.16E-19	3.33E-19	3.33E-19	3.33E-19
cadmium	7440-43-9	1.70E-21	1.70E-21	1.70E-21	4.86E-21	4.86E-21	4.86E-21
chlorine	7782-50-5	8.32E-18	8.32E-18	8.32E-18	2.38E-17	2.38E-17	2.38E-17
chromium (3+)	7440-47-3	5.11E-21	5.11E-21	5.11E-21	1.46E-20	1.46E-20	1.46E-20
chromium (6+)	18540-29-9	5.11E-21	5.11E-21	5.11E-21	1.46E-20	1.46E-20	1.46E-20
copper	7440-50-8	2.54E-18	2.54E-18	2.54E-18	7.26E-18	7.26E-18	7.26E-18
hydrogen chloride	7647-01-0	7.17E-18	7.17E-18	7.17E-18	2.05E-17	2.05E-17	2.05E-17
iron	7439-89-6	1.12E-19	1.12E-19	1.12E-19	3.19E-19	3.19E-19	3.19E-19
lead	7439-92-1	1.94E-19	1.94E-19	1.94E-19	5.54E-19	5.54E-19	5.54E-19
manganese	7439-96-5	1.51E-18	1.51E-18	1.51E-18	4.33E-18	4.33E-18	4.33E-18
total mercury	NA						
mercuric chloride	7487-94-7	6.06E-21	6.06E-21	6.06E-21	1.73E-20	1.73E-20	1.73E-20
methyl mercury	22967-92-6	1.17E-23	1.17E-23	1.17E-23	3.34E-23	3.34E-23	3.34E-23
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	1.75E-20	1.75E-20	1.75E-20	5.01E-20	5.01E-20	5.01E-20
vanadium	7440-62-2	2.28E-19	2.28E-19	2.28E-19	6.53E-19	6.53E-19	6.53E-19
zinc	7440-66-6	5.64E-19	5.64E-19	5.64E-19	1.61E-18	1.61E-18	1.61E-18

a. The dermally absorbed dose of total PCDDs/PCDFs per event are presented in units of mg TEQ/(cm^2-event)

DERMAL UPTAKE OF COPCS FROM SWIMMING FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Adult Resident and Adult Subsistence Fisher Exposure Scenarios								
COPC	CAS Number	B (dimensionless)	D_{sc} (cm^2/hr)	τ_{event} (hr)	b (dimensionless)	c (dimensionless)	t* (hr)	Dermally Absorbed Dose per Event DA_{event} mg/(cm^2-event)[a]
2-butanone	78-93-3	3.14E-03	6.25E-07	2.66E-01			6.40E-01	1.58E-17
2-ethyl 1,3-butadiene	3404-63-5	2.03E-01	5.50E-07	3.03E-01			7.28E-01	2.47E-14
acetone	67-64-1	1.53E-03	7.49E-07	2.22E-01			5.34E-01	1.70E-17
benzene	71-43-2	5.10E-02	5.79E-07	2.88E-01			6.91E-01	7.74E-13
benzyl alcohol	100-51-6	8.36E-03	3.93E-07	4.24E-01			1.02E+00	2.77E-15
bis(2-ethylhexyl)-phthalate	117-81-7	1.82E-01	1.03E-08	1.62E+01			3.88E+01	3.61E-14
bromodichloromethane	75-27-4	2.26E-02	1.92E-07	8.70E-01			2.09E+00	2.43E-17
carbon disulfide	75-15-0	5.70E-02	5.94E-07	2.81E-01			6.73E-01	3.72E-16
carbon tetrachloride	56-23-5	7.63E-02	2.18E-07	7.64E-01			1.83E+00	1.92E-17
chlorobenzene	108-90-7	1.14E-01	3.71E-07	4.49E-01			1.08E+00	2.48E-17
chloroform	67-66-3	2.86E-02	3.40E-07	4.90E-01			1.18E+00	1.81E-17
chloromethane	74-87-3	9.02E-03	8.27E-07	2.02E-01			4.84E-01	7.67E-17
dibromochloromethane	124-48-1	1.78E-02	1.08E-07	1.54E+00			3.70E+00	3.07E-17
dimethyl phthalate	131-11-3	7.50E-03	1.30E-07	1.29E+00			3.09E+00	6.06E-16
di-n-butyl phthalate	84-74-2	3.55E-01	4.38E-08	3.81E+00			9.14E+00	6.46E-14
ethane	74-84-0	3.55E-02	1.08E-06	1.55E-01			3.72E-01	2.50E-12
ethylbenzene	100-41-4	1.94E-01	4.03E-07	4.14E-01			9.93E-01	3.72E-17
HD	505-60-2	2.18E-02	2.04E-07	8.18E-01			1.96E+00	2.50E-15
hexane	110-54-3	6.98E-01	5.22E-07	3.20E-01	9.42E-01	8.95E-01	1.24E+00	2.97E-16
methane	74-82-8	1.04E-02	1.29E-06	1.29E-01			3.10E-01	1.92E-11
methylene chloride	75-09-2	1.24E-02	5.30E-07	3.14E-01			7.55E-01	1.07E-17
propene	115-07-1	3.39E-02	9.21E-07	1.81E-01			4.34E-01	5.46E-13
styrene	100-42-5	1.45E-01	4.14E-07	4.03E-01			9.67E-01	3.16E-16
tetrachloroethene	127-18-4	1.63E-01	1.87E-07	8.92E-01			2.14E+00	3.85E-17
toluene	108-88-3	1.14E-01	4.83E-07	3.45E-01			8.28E-01	2.84E-13
trichloroethene	79-01-6	5.29E-02	2.91E-07	5.72E-01			1.37E+00	1.51E-17
vinyl chloride	75-01-4	1.70E-02	7.08E-07	2.35E-01			5.65E-01	8.13E-16
xylenes	1330-20-7	2.10E-01	4.03E-07	4.13E-01			9.92E-01	1.71E-14
3,3',4,4'-TCB (PCB 77)	32598-13-3							
2,3',4,4',5-PeCB (PCB 118)	31508-00-6							
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4							
total coplanar PCBs	NA	4.97E+00	2.35E-08	7.08E+00	1.77E+01	5.03E+00	3.10E+01	1.70E-26
ammonia	7664-41-7							2.00E-15
aluminum	7429-90-5							1.79E-15
cadmium	7440-43-9							6.52E-18
chlorine	7782-50-5							9.70E-15
chromium (3+)	7440-47-3							3.20E-17
chromium (6+)	18540-29-9							3.20E-17
copper	7440-50-8							6.00E-16
hydrogen chloride	7647-01-0							6.00E-14
iron	7439-89-6							5.15E-16
lead	7439-92-1							8.86E-18
manganese	7439-96-5							2.73E-15
total mercury	NA							
mercuric chloride	7487-94-7							1.20E-21
methyl mercury	22967-92-6							2.35E-23
elemental mercury	7439-97-6							0.00E+00
nickel	7440-02-0							2.11E-17
vanadium	7440-62-2							2.83E-17
zinc	7440-66-6							6.75E-16

a. The dermally absorbed dose of total PCDDs/PCDFs and coplanar PCBs per event are presented in units of mg TEQ/(cm^2-event)

DERMAL UPTAKE OF COPCS FROM SWIMMING FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Adult Subsistence Farmer Exposure Scenario								
COPC	CAS Number	B (dimensionless)	D_{sc} (cm^2/hr)	τ_{event} (hr)	b (dimensionless)	c (dimensionless)	t* (hr)	Dermally Absorbed Dose per Event DA_{event} mg/(cm^2-event)
2-butanone	78-93-3	3.14E-03	6.25E-07	2.66E-01			6.40E-01	1.57E-17
2-ethyl 1,3-butadiene	3404-63-5	2.03E-01	5.50E-07	3.03E-01			7.28E-01	2.47E-14
acetone	67-64-1	1.53E-03	7.49E-07	2.22E-01			5.34E-01	1.69E-17
benzene	71-43-2	5.10E-02	5.79E-07	2.88E-01			6.91E-01	7.74E-13
benzyl alcohol	100-51-6	8.36E-03	3.93E-07	4.24E-01			1.02E+00	2.12E-15
bis(2-ethylhexyl)-phthalate	117-81-7	1.82E-01	1.03E-08	1.62E+01			3.88E+01	3.60E-14
bromodichloromethane	75-27-4	2.26E-02	1.92E-07	8.70E-01			2.09E+00	2.40E-17
carbon disulfide	75-15-0	5.70E-02	5.94E-07	2.81E-01			6.73E-01	3.72E-16
carbon tetrachloride	56-23-5	7.63E-02	2.18E-07	7.64E-01			1.83E+00	1.92E-17
chlorobenzene	108-90-7	1.14E-01	3.71E-07	4.49E-01			1.08E+00	2.48E-17
chloroform	67-66-3	2.86E-02	3.40E-07	4.90E-01			1.18E+00	1.81E-17
chloromethane	74-87-3	9.02E-03	8.27E-07	2.02E-01			4.84E-01	7.67E-17
dibromochloromethane	124-48-1	1.78E-02	1.08E-07	1.54E+00			3.70E+00	2.96E-17
dimethyl phthalate	131-11-3	7.50E-03	1.30E-07	1.29E+00			3.09E+00	5.91E-16
di-n-butyl phthalate	84-74-2	3.55E-01	4.38E-08	3.81E+00			9.14E+00	6.44E-14
ethane	74-84-0	3.55E-02	1.08E-06	1.55E-01			3.72E-01	2.50E-12
ethylbenzene	100-41-4	1.94E-01	4.03E-07	4.14E-01			9.93E-01	3.72E-17
HD	505-60-2	2.18E-02	2.04E-07	8.18E-01			1.96E+00	2.50E-15
hexane	110-54-3	6.98E-01	5.22E-07	3.20E-01	9.42E-01	8.95E-01	1.24E+00	2.97E-16
methane	74-82-8	1.04E-02	1.29E-06	1.29E-01			3.10E-01	1.92E-11
methylene chloride	75-09-2	1.24E-02	5.30E-07	3.14E-01			7.55E-01	1.07E-17
propene	115-07-1	3.39E-02	9.21E-07	1.81E-01			4.34E-01	5.46E-13
styrene	100-42-5	1.45E-01	4.14E-07	4.03E-01			9.67E-01	3.16E-16
tetrachloroethene	127-18-4	1.63E-01	1.87E-07	8.92E-01			2.14E+00	3.85E-17
toluene	108-88-3	1.14E-01	4.83E-07	3.45E-01			8.28E-01	2.84E-13
trichloroethene	79-01-6	5.29E-02	2.91E-07	5.72E-01			1.37E+00	1.51E-17
vinyl chloride	75-01-4	1.70E-02	7.08E-07	2.35E-01			5.65E-01	8.13E-16
xylenes	1330-20-7	2.10E-01	4.03E-07	4.13E-01			9.92E-01	1.71E-14
3,3',4,4'-TCB (PCB 77)	32598-13-3							
2,3',4,4',5-PeCB (PCB 118)	31508-00-6							
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4							
total coplanar PCBs	NA	4.97E+00	2.35E-08	7.08E+00	1.77E+01	5.03E+00	3.10E+01	1.57E-26
ammonia	7664-41-7							2.00E-15
aluminum	7429-90-5							1.79E-15
cadmium	7440-43-9							6.52E-18
chlorine	7782-50-5							9.68E-15
chromium (3+)	7440-47-3							3.20E-17
chromium (6+)	18540-29-9							3.20E-17
copper	7440-50-8							6.00E-16
hydrogen chloride	7647-01-0							6.00E-14
iron	7439-89-6							5.15E-16
lead	7439-92-1							8.86E-18
manganese	7439-96-5							2.73E-15
total mercury	NA							
mercuric chloride	7487-94-7							1.22E-21
methyl mercury	22967-92-6							2.39E-23
elemental mercury	7439-97-6							0.00E+00
nickel	7440-02-0							2.11E-17
vanadium	7440-62-2							2.83E-17
zinc	7440-66-6							6.75E-16

a. The dermally absorbed dose of total PCDDs/PCDFs and coplanar PCBs per event are presented in units of mg TEQ/(cm^2-event)

DERMAL UPTAKE OF COPCS FROM SWIMMING FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Child Exposure Scenarios								
COPC	CAS Number	B (dimensionless)	D_{sc} (cm^2/hr)	τ_{event} (hr)	b (dimensionless)	c (dimensionless)	t* (hr)	Dermally Absorbed Dose per Event DA_{event} mg/(cm^2-event)
2-butanone	78-93-3	3.14E-03	6.25E-07	2.66E-01			6.40E-01	1.69E-17
2-ethyl 1,3-butadiene	3404-63-5	2.03E-01	5.50E-07	3.03E-01			7.28E-01	2.47E-14
acetone	67-64-1	1.53E-03	7.49E-07	2.22E-01			5.34E-01	1.75E-17
benzene	71-43-2	5.10E-02	5.79E-07	2.88E-01			6.91E-01	7.74E-13
benzyl alcohol	100-51-6	8.36E-03	3.93E-07	4.24E-01			1.02E+00	1.40E-14
bis(2-ethylhexyl)-phthalate	117-81-7	1.82E-01	1.03E-08	1.62E+01			3.88E+01	3.88E-14
bromodichloromethane	75-27-4	2.26E-02	1.92E-07	8.70E-01			2.09E+00	2.91E-17
carbon disulfide	75-15-0	5.70E-02	5.94E-07	2.81E-01			6.73E-01	3.72E-16
carbon tetrachloride	56-23-5	7.63E-02	2.18E-07	7.64E-01			1.83E+00	1.92E-17
chlorobenzene	108-90-7	1.14E-01	3.71E-07	4.49E-01			1.08E+00	2.49E-17
chloroform	67-66-3	2.86E-02	3.40E-07	4.90E-01			1.18E+00	1.82E-17
chloromethane	74-87-3	9.02E-03	8.27E-07	2.02E-01			4.84E-01	7.67E-17
dibromochloromethane	124-48-1	1.78E-02	1.08E-07	1.54E+00			3.70E+00	5.07E-17
dimethyl phthalate	131-11-3	7.50E-03	1.30E-07	1.29E+00			3.09E+00	9.17E-16
di-n-butyl phthalate	84-74-2	3.55E-01	4.38E-08	3.81E+00			9.14E+00	6.69E-14
ethane	74-84-0	3.55E-02	1.08E-06	1.55E-01			3.72E-01	2.50E-12
ethylbenzene	100-41-4	1.94E-01	4.03E-07	4.14E-01			9.93E-01	3.72E-17
HD	505-60-2	2.18E-02	2.04E-07	8.18E-01			1.96E+00	2.50E-15
hexane	110-54-3	6.98E-01	5.22E-07	3.20E-01	9.42E-01	8.95E-01	1.24E+00	2.97E-16
methane	74-82-8	1.04E-02	1.29E-06	1.29E-01			3.10E-01	1.92E-11
methylene chloride	75-09-2	1.24E-02	5.30E-07	3.14E-01			7.55E-01	1.08E-17
propene	115-07-1	3.39E-02	9.21E-07	1.81E-01			4.34E-01	5.46E-13
styrene	100-42-5	1.45E-01	4.14E-07	4.03E-01			9.67E-01	3.21E-16
tetrachloroethene	127-18-4	1.63E-01	1.87E-07	8.92E-01			2.14E+00	3.85E-17
toluene	108-88-3	1.14E-01	4.83E-07	3.45E-01			8.28E-01	2.84E-13
trichloroethene	79-01-6	5.29E-02	2.91E-07	5.72E-01			1.37E+00	1.51E-17
vinyl chloride	75-01-4	1.70E-02	7.08E-07	2.35E-01			5.65E-01	8.13E-16
xylenes	1330-20-7	2.10E-01	4.03E-07	4.13E-01			9.92E-01	1.71E-14
3,3',4,4'-TCB (PCB 77)	32598-13-3							
2,3',4,4',5-PeCB (PCB 118)	31508-00-6							
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4							
total coplanar PCBs	NA	4.97E+00	2.35E-08	7.08E+00	1.77E+01	5.03E+00	3.10E+01	1.40E-26
ammonia	7664-41-7							2.01E-15
aluminum	7429-90-5							1.79E-15
cadmium	7440-43-9							6.53E-18
chlorine	7782-50-5							1.01E-14
chromium (3+)	7440-47-3							3.20E-17
chromium (6+)	18540-29-9							3.20E-17
copper	7440-50-8							6.01E-16
hydrogen chloride	7647-01-0							6.11E-14
iron	7439-89-6							5.15E-16
lead	7439-92-1							8.93E-18
manganese	7439-96-5							2.73E-15
total mercury	NA							
mercuric chloride	7487-94-7							7.53E-22
methyl mercury	22967-92-6							1.47E-23
elemental mercury	7439-97-6							0.00E+00
nickel	7440-02-0							2.12E-17
vanadium	7440-62-2							2.85E-17
zinc	7440-66-6							6.76E-16

a. The dermally absorbed dose of total PCDDs/PCDFs and coplanar PCBs per event are presented in units of mg TEQ/(cm^2-event)

DERMAL UPTAKE OF COPCS FROM SWIMMING FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS: All Exposure Scenarios (Except Infants and Adult Worker)								
COPC	CAS Number	B (dimensionless)	D_{sc} (cm^2/hr)	τ_{event} (hr)	b (dimensionless)	c (dimensionless)	t* (hr)	Dermally Absorbed Dose per Event DA_{event} mg/(cm^2-event)
2-butanone	78-93-3	3.14E-03	6.25E-07	2.66E-01			6.40E-01	1.69E-17
2-ethyl 1,3-butadiene	3404-63-5	2.03E-01	5.50E-07	3.03E-01			7.28E-01	2.47E-14
acetone	67-64-1	1.53E-03	7.49E-07	2.22E-01			5.34E-01	1.75E-17
benzene	71-43-2	5.10E-02	5.79E-07	2.88E-01			6.91E-01	7.74E-13
benzyl alcohol	100-51-6	8.36E-03	3.93E-07	4.24E-01			1.02E+00	1.57E-14
bis(2-ethylhexyl)-phthalate	117-81-7	1.82E-01	1.03E-08	1.62E+01			3.88E+01	3.89E-14
bromodichloromethane	75-27-4	2.26E-02	1.92E-07	8.70E-01			2.09E+00	2.91E-17
carbon disulfide	75-15-0	5.70E-02	5.94E-07	2.81E-01			6.73E-01	3.72E-16
carbon tetrachloride	56-23-5	7.63E-02	2.18E-07	7.64E-01			1.83E+00	1.92E-17
chlorobenzene	108-90-7	1.14E-01	3.71E-07	4.49E-01			1.08E+00	2.49E-17
chloroform	67-66-3	2.86E-02	3.40E-07	4.90E-01			1.18E+00	1.82E-17
chloromethane	74-87-3	9.02E-03	8.27E-07	2.02E-01			4.84E-01	7.67E-17
dibromochloromethane	124-48-1	1.78E-02	1.08E-07	1.54E+00			3.70E+00	5.08E-17
dimethyl phthalate	131-11-3	7.50E-03	1.30E-07	1.29E+00			3.09E+00	9.19E-16
di-n-butyl phthalate	84-74-2	3.55E-01	4.38E-08	3.81E+00			9.14E+00	6.70E-14
ethane	74-84-0	3.55E-02	1.08E-06	1.55E-01			3.72E-01	2.50E-12
ethylbenzene	100-41-4	1.94E-01	4.03E-07	4.14E-01			9.93E-01	3.72E-17
HD	505-60-2	2.18E-02	2.04E-07	8.18E-01			1.96E+00	2.50E-15
hexane	110-54-3	6.98E-01	5.22E-07	3.20E-01	9.42E-01	8.95E-01	1.24E+00	2.97E-16
methane	74-82-8	1.04E-02	1.29E-06	1.29E-01			3.10E-01	1.92E-11
methylene chloride	75-09-2	1.24E-02	5.30E-07	3.14E-01			7.55E-01	1.08E-17
propene	115-07-1	3.39E-02	9.21E-07	1.81E-01			4.34E-01	5.46E-13
styrene	100-42-5	1.45E-01	4.14E-07	4.03E-01			9.67E-01	3.21E-16
tetrachloroethene	127-18-4	1.63E-01	1.87E-07	8.92E-01			2.14E+00	3.85E-17
toluene	108-88-3	1.14E-01	4.83E-07	3.45E-01			8.28E-01	2.84E-13
trichloroethene	79-01-6	5.29E-02	2.91E-07	5.72E-01			1.37E+00	1.51E-17
vinyl chloride	75-01-4	1.70E-02	7.08E-07	2.35E-01			5.65E-01	8.13E-16
xylenes	1330-20-7	2.10E-01	4.03E-07	4.13E-01			9.92E-01	1.71E-14
3,3',4,4'-TCB (PCB 77)	32598-13-3	4.71E+00	3.67E-08	4.54E+00	1.60E+01	4.76E+00	1.98E+01	6.58E-23
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	3.19E+00	2.35E-08	7.08E+00	7.91E+00	3.27E+00	3.01E+01	2.19E-22
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	3.19E+00	2.35E-08	7.08E+00	7.91E+00	3.27E+00	3.01E+01	1.05E-22
total coplanar PCBs	NA							
ammonia	7664-41-7							2.01E-15
aluminum	7429-90-5							1.79E-15
cadmium	7440-43-9							6.53E-18
chlorine	7782-50-5							1.01E-14
chromium (3+)	7440-47-3							3.20E-17
chromium (6+)	18540-29-9							3.20E-17
copper	7440-50-8							6.01E-16
hydrogen chloride	7647-01-0							6.11E-14
iron	7439-89-6							5.15E-16
lead	7439-92-1							8.93E-18
manganese	7439-96-5							2.73E-15
total mercury	NA							
mercuric chloride	7487-94-7							1.29E-21
methyl mercury	22967-92-6							2.53E-23
elemental mercury	7439-97-6							0.00E+00
nickel	7440-02-0							2.12E-17
vanadium	7440-62-2							2.85E-17
zinc	7440-66-6							6.76E-16

a. The dermally absorbed dose of total PCDDs/PCDFs per event are presented in units of mg TEQ/(cm^2-event)

TOTAL COPC UPTAKE FOR EACH EXPOSURE SCENARIO

Adult Resident Exposure Scenario													
		CARCINOGENIC EFFECTS:						NONCARCINOGENIC EFFECTS:					
		Direct Exposure		Indirect Exposure				Direct Exposure		Indirect Exposure			
COPC	CAS Number	Inhalation Cancer Slope Factor?	Inhalation Exposure (mg/kg-day)[a]	Oral Cancer Slope Factor?	Dermal Exposure (mg/kg-day)[a]	Total Ingestion Exposure (mg/kg-day)[a]	Total Indirect Exposure (mg/kg-day)[a]	Inhalation Reference Dose?	Inhalation Exposure (mg/kg-day)[b]	Oral Reference Dose?	Dermal Exposure (mg/kg-day)[b]	Total Ingestion Exposure (mg/kg-day)[b]	Total Indirect Exposure (mg/kg-day)[b]
2-butanone	78-93-3		4.48E-13		6.10E-17	6.74E-13	6.74E-13	Yes	6.27E-12	Yes	1.96E-16	9.34E-12	9.34E-12
2-ethyl 1,3-butadiene	3404-63-5		2.12E-11		8.96E-14	3.67E-12	3.76E-12		2.97E-10		2.09E-13	8.82E-12	9.03E-12
acetone	67-64-1		8.01E-13		6.34E-17	6.45E-13	6.45E-13	Yes	1.12E-11	Yes	1.75E-16	8.81E-12	8.81E-12
benzene	71-43-2	Yes	2.29E-09	Yes	2.80E-12	9.46E-11	9.74E-11	Yes	3.21E-08	Yes	6.55E-12	4.52E-10	4.58E-10
benzyl alcohol	100-51-6		1.68E-12		1.06E-14	1.99E-09	1.99E-09		2.35E-11	Yes	1.41E-13	2.78E-08	2.78E-08
bis(2-ethylhexyl)-phthalate	117-81-7	Yes	1.23E-11	Yes	1.37E-13	8.16E-09	8.16E-09		1.72E-10	Yes	4.18E-13	1.91E-08	1.91E-08
bromodichloromethane	75-27-4	Yes	1.56E-13	Yes	8.83E-17	7.05E-13	7.05E-13		2.19E-12	Yes	2.50E-16	9.80E-12	9.80E-12
carbon disulfide	75-15-0		9.81E-13		1.35E-15	3.96E-14	4.09E-14	Yes	1.37E-11	Yes	3.15E-15	1.10E-13	1.13E-13
carbon tetrachloride	56-23-5	Yes	4.01E-14	Yes	6.94E-17	5.54E-15	5.61E-15	Yes	5.61E-13	Yes	1.62E-16	2.01E-14	2.03E-14
chlorobenzene	108-90-7		3.53E-14		9.00E-17	1.15E-14	1.16E-14	Yes	4.94E-13	Yes	2.11E-16	9.04E-14	9.07E-14
chloroform	67-66-3	Yes	1.04E-13	Yes	6.58E-17	3.81E-15	3.88E-15	Yes	1.45E-12	Yes	1.54E-16	2.00E-14	2.01E-14
chloromethane	74-87-3		9.41E-13		2.78E-16	1.65E-14	1.68E-14	Yes	1.32E-11	Yes	6.49E-16	7.61E-14	7.68E-14
dibromochloromethane	124-48-1	Yes	1.93E-13	Yes	1.15E-16	6.34E-12	6.34E-12		2.70E-12	Yes	4.86E-16	8.86E-11	8.86E-11
dimethyl phthalate	131-11-3		1.67E-12		2.22E-15	1.12E-10	1.12E-10		2.33E-11		8.10E-15	1.42E-09	1.42E-09
di-n-butyl phthalate	84-74-2		3.88E-12		2.43E-13	1.27E-07	1.27E-07		5.44E-11	Yes	6.93E-13	3.01E-07	3.01E-07
ethane	74-84-0		9.35E-09		9.05E-12	1.39E-10	1.48E-10		1.31E-07		2.11E-11	3.31E-10	3.53E-10
ethylbenzene	100-41-4	Yes	3.11E-14	Yes	1.35E-16	7.57E-15	7.71E-15	Yes	4.35E-13	Yes	3.15E-16	3.16E-14	3.19E-14
HD	505-60-2	Yes	9.72E-12	Yes	9.07E-15	1.63E-12	1.64E-12	Yes	1.36E-10	Yes	2.12E-14	5.25E-12	5.27E-12
hexane	110-54-3		8.73E-14		1.07E-15	6.61E-14	6.71E-14	Yes	1.22E-12	Yes	2.51E-15	1.55E-13	1.57E-13
methane	74-82-8		2.12E-07		6.96E-11	7.62E-10	8.31E-10		2.97E-06		1.63E-10	1.83E-09	2.00E-09
methylene chloride	75-09-2	Yes	1.35E-13	Yes	3.89E-17	3.28E-15	3.31E-15	Yes	1.89E-12	Yes	9.09E-17	3.35E-14	3.36E-14
propene	115-07-1		2.29E-09		1.98E-12	3.48E-11	3.68E-11	Yes	3.21E-08		4.62E-12	8.69E-11	9.16E-11
styrene	100-42-5		3.44E-13		1.18E-15	8.62E-12	8.62E-12	Yes	4.82E-12	Yes	3.26E-15	1.20E-10	1.20E-10
tetrachloroethene	127-18-4	Yes	3.65E-14	Yes	1.40E-16	1.36E-14	1.37E-14	Yes	5.11E-13	Yes	3.26E-16	4.41E-14	4.44E-14
toluene	108-88-3		3.88E-10		1.03E-12	4.61E-11	4.71E-11	Yes	5.44E-09	Yes	2.40E-12	1.98E-10	2.01E-10
trichloroethene	79-01-6	Yes	4.64E-14	Yes	5.47E-17	3.08E-15	3.13E-15	Yes	6.50E-13	Yes	1.28E-16	1.22E-14	1.23E-14
vinyl chloride	75-01-4	Yes	6.93E-12	Yes	2.94E-15	7.16E-14	7.45E-14	Yes	9.70E-11	Yes	6.87E-15	2.78E-13	2.85E-13
xylenes	1330-20-7		1.41E-11		6.19E-14	3.76E-12	3.82E-12	Yes	1.98E-10	Yes	1.45E-13	1.71E-11	1.73E-11
3,3',4,4'-TCB (PCB 77)	32598-13-3							Yes	1.62E-20	Yes	8.86E-22	4.69E-18	4.69E-18
2,3',4,4',5-PeCB (PCB 118)	31508-00-6							Yes	6.74E-20	Yes	3.23E-21	1.95E-17	1.95E-17
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4							Yes	3.23E-20	Yes	1.55E-21	9.38E-18	9.38E-18
total coplanar PCBs	NA	Yes	3.29E-25	Yes	8.85E-26	4.25E-22	4.26E-22						
ammonia	7664-41-7		1.76E-11		7.27E-15	1.39E-11	1.39E-11	Yes	2.47E-10		1.72E-14	1.87E-10	1.87E-10
aluminum	7429-90-5		6.71E-11		6.48E-15	6.23E-13	6.29E-13	Yes	9.39E-10	Yes	1.51E-14	1.46E-12	1.47E-12
cadmium	7440-43-9	Yes	5.07E-13		2.36E-17	2.08E-11	2.08E-11	Yes	7.10E-12	Yes	5.53E-17	4.85E-11	4.85E-11
chlorine	7782-50-5		2.12E-10		3.52E-14	1.23E-10	1.23E-10	Yes	2.97E-09	Yes	8.60E-14	1.70E-09	1.70E-09
chromium (3+)	7440-47-3		1.40E-12		1.16E-16	7.55E-11	7.55E-11		1.96E-11	Yes	2.71E-16	1.76E-10	1.76E-10
chromium (6+)	18540-29-9	Yes	1.40E-12	Yes	1.16E-16	7.55E-11	7.55E-11	Yes	1.96E-11	Yes	2.71E-16	1.76E-10	1.76E-10
copper	7440-50-8		5.25E-11		2.19E-15	3.05E-09	3.05E-09		7.35E-10	Yes	5.28E-15	7.13E-09	7.13E-09
hydrogen chloride	7647-01-0		1.35E-09		2.17E-13	6.75E-10	6.75E-10	Yes	1.89E-08		5.17E-13	9.25E-09	9.25E-09
iron	7439-89-6		1.92E-10		1.87E-15	1.12E-08	1.12E-08		2.69E-09	Yes	4.36E-15	2.62E-08	2.62E-08
lead	7439-92-1	Yes	2.10E-12	Yes	3.32E-17	8.51E-11	8.51E-11		2.95E-11		9.06E-17	1.99E-10	1.99E-10
manganese	7439-96-5		2.45E-10		9.89E-15	1.01E-08	1.01E-08	Yes	3.43E-09	Yes	2.32E-14	2.36E-08	2.36E-08
total mercury	NA												
mercuric chloride	7487-94-7		3.46E-17		1.90E-19	2.52E-15	2.52E-15	Yes	4.84E-16	Yes	4.84E-19	6.09E-15	6.09E-15
methyl mercury	22967-92-6		0.00E+00		3.79E-22	2.89E-13	2.89E-13		0.00E+00	Yes	1.13E-21	7.26E-13	7.26E-13
elemental mercury	7439-97-6		0.00E+00		0.00E+00	0.00E+00	0.00E+00	Yes	0.00E+00		0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	Yes	8.22E-13		7.67E-17	4.20E-11	4.20E-11	Yes	1.15E-11	Yes	1.80E-16	9.80E-11	9.80E-11
vanadium	7440-62-2		2.62E-12		1.04E-16	1.07E-10	1.07E-10	Yes	3.67E-11	Yes	2.58E-16	2.50E-10	2.50E-10
zinc	7440-66-6		8.76E-11		2.45E-15	3.86E-09	3.86E-09		1.23E-09	Yes	5.76E-15	9.01E-09	9.01E-09

a. Exposures to total PCDDs/PCDFs and total coplanar PCBs are presented in units of mg TEQ/(kg-day)

b. Exposures to total PCDDs/PCDFs are presented in units of mg TEQ/(kg-day)

TOTAL COPC UPTAKE FOR EACH EXPOSURE SCENARIO

Adult Subsistence Fisher Exposure Scenario													
		CARCINOGENIC EFFECTS:						NONCARCINOGENIC EFFECTS:					
		Direct Exposure		Indirect Exposure				Direct Exposure		Indirect Exposure			
COPC	CAS Number	Inhalation Cancer Slope Factor?	Inhalation Exposure (mg/kg-day)[a]	Oral Cancer Slope Factor?	Dermal Exposure (mg/kg-day)[a]	Total Ingestion Exposure (mg/kg-day)[a]	Total Indirect Exposure (mg/kg-day)[a]	Inhalation Reference Dose?	Inhalation Exposure (mg/kg-day)[b]	Oral Reference Dose?	Dermal Exposure (mg/kg-day)[b]	Total Ingestion Exposure (mg/kg-day)[b]	Total Indirect Exposure (mg/kg-day)[b]
2-butanone	78-93-3		4.48E-13		6.10E-17	6.88E-13	6.88E-13	Yes	6.27E-12	Yes	1.96E-16	9.37E-12	9.37E-12
2-ethyl 1,3-butadiene	3404-63-5		2.12E-11		8.96E-14	9.15E-12	9.24E-12		2.97E-10		2.09E-13	2.16E-11	2.18E-11
acetone	67-64-1		8.01E-13		6.34E-17	6.71E-13	6.72E-13	Yes	1.12E-11	Yes	1.75E-16	8.88E-12	8.88E-12
benzene	71-43-2	Yes	2.29E-09	Yes	2.80E-12	2.06E-10	2.08E-10	Yes	3.21E-08	Yes	6.55E-12	7.11E-10	7.18E-10
benzyl alcohol	100-51-6		1.68E-12		1.06E-14	1.99E-09	1.99E-09		2.35E-11	Yes	1.41E-13	2.78E-08	2.78E-08
bis(2-ethylhexyl)-phthalate	117-81-7	Yes	1.23E-11	Yes	1.37E-13	8.17E-09	8.17E-09		1.72E-10	Yes	4.18E-13	1.92E-08	1.92E-08
bromodichloromethane	75-27-4	Yes	1.56E-13	Yes	8.83E-17	7.13E-13	7.13E-13		2.19E-12	Yes	2.50E-16	9.82E-12	9.82E-12
carbon disulfide	75-15-0		9.81E-13		1.35E-15	9.63E-14	9.76E-14	Yes	1.37E-11	Yes	3.15E-15	2.42E-13	2.45E-13
carbon tetrachloride	56-23-5	Yes	4.01E-14	Yes	6.94E-17	1.25E-14	1.26E-14	Yes	5.61E-13	Yes	1.62E-16	3.64E-14	3.65E-14
chlorobenzene	108-90-7		3.53E-14		9.00E-17	1.77E-14	1.78E-14	Yes	4.94E-13	Yes	2.11E-16	1.05E-13	1.05E-13
chloroform	67-66-3	Yes	1.04E-13	Yes	6.58E-17	8.06E-15	8.12E-15	Yes	1.45E-12	Yes	1.54E-16	2.99E-14	3.00E-14
chloromethane	74-87-3		9.41E-13		2.78E-16	3.61E-14	3.64E-14	Yes	1.32E-11	Yes	6.49E-16	1.22E-13	1.23E-13
dibromochloromethane	124-48-1	Yes	1.93E-13	Yes	1.15E-16	6.35E-12	6.35E-12		2.70E-12	Yes	4.86E-16	8.87E-11	8.87E-11
dimethyl phthalate	131-11-3		1.67E-12		2.22E-15	1.12E-10	1.12E-10		2.33E-11		8.10E-15	1.42E-09	1.42E-09
di-n-butyl phthalate	84-74-2		3.88E-12		2.43E-13	1.28E-07	1.28E-07		5.44E-11	Yes	6.93E-13	3.02E-07	3.02E-07
ethane	74-84-0		9.35E-09		9.05E-12	3.44E-10	3.53E-10		1.31E-07		2.11E-11	8.10E-10	8.32E-10
ethylbenzene	100-41-4	Yes	3.11E-14	Yes	1.35E-16	1.71E-14	1.72E-14	Yes	4.35E-13	Yes	3.15E-16	5.38E-14	5.42E-14
HD	505-60-2	Yes	9.72E-12	Yes	9.07E-15	3.19E-12	3.20E-12	Yes	1.36E-10	Yes	2.12E-14	8.89E-12	8.91E-12
hexane	110-54-3		8.73E-14		1.07E-15	1.65E-13	1.66E-13	Yes	1.22E-12	Yes	2.51E-15	3.86E-13	3.88E-13
methane	74-82-8		2.12E-07		6.96E-11	1.86E-09	1.93E-09		2.97E-06		1.63E-10	4.39E-09	4.56E-09
methylene chloride	75-09-2	Yes	1.35E-13	Yes	3.89E-17	4.81E-15	4.85E-15	Yes	1.89E-12	Yes	9.09E-17	3.71E-14	3.72E-14
propene	115-07-1		2.29E-09		1.98E-12	8.58E-11	8.78E-11	Yes	3.21E-08		4.62E-12	2.06E-10	2.10E-10
styrene	100-42-5		3.44E-13		1.18E-15	8.70E-12	8.71E-12	Yes	4.82E-12	Yes	3.26E-15	1.20E-10	1.20E-10
tetrachloroethene	127-18-4	Yes	3.65E-14	Yes	1.40E-16	3.24E-14	3.25E-14	Yes	5.11E-13	Yes	3.26E-16	8.79E-14	8.82E-14
toluene	108-88-3		3.88E-10		1.03E-12	1.03E-10	1.04E-10	Yes	5.44E-09	Yes	2.40E-12	3.32E-10	3.34E-10
trichloroethene	79-01-6	Yes	4.64E-14	Yes	5.47E-17	7.03E-15	7.08E-15	Yes	6.50E-13	Yes	1.28E-16	2.14E-14	2.16E-14
vinyl chloride	75-01-4	Yes	6.93E-12	Yes	2.94E-15	1.63E-13	1.66E-13	Yes	9.70E-11	Yes	6.87E-15	4.91E-13	4.98E-13
xylenes	1330-20-7		1.41E-11		6.19E-14	8.28E-12	8.34E-12	Yes	1.98E-10	Yes	1.45E-13	2.77E-11	2.79E-11
3,3',4,4'-TCB (PCB 77)	32598-13-3							Yes	1.62E-20	Yes	8.86E-22	1.12E-17	1.12E-17
2,3',4,4',5-PeCB (PCB 118)	31508-00-6							Yes	6.74E-20	Yes	3.23E-21	4.66E-17	4.67E-17
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4							Yes	3.23E-20	Yes	1.55E-21	2.24E-17	2.24E-17
total coplanar PCBs	NA	Yes	3.29E-25	Yes	8.85E-26	1.00E-21	1.00E-21						
ammonia	7664-41-7		1.76E-11		7.27E-15	1.50E-11	1.50E-11	Yes	2.47E-10		1.72E-14	1.89E-10	1.89E-10
aluminum	7429-90-5		6.71E-11		6.48E-15	1.54E-12	1.55E-12	Yes	9.39E-10	Yes	1.51E-14	3.60E-12	3.62E-12
cadmium	7440-43-9	Yes	5.07E-13		2.36E-17	2.25E-11	2.25E-11	Yes	7.10E-12	Yes	5.53E-17	5.26E-11	5.26E-11
chlorine	7782-50-5		2.12E-10		3.52E-14	1.27E-10	1.27E-10	Yes	2.97E-09	Yes	8.60E-14	1.71E-09	1.71E-09
chromium (3+)	7440-47-3		1.40E-12		1.16E-16	7.55E-11	7.55E-11		1.96E-11	Yes	2.71E-16	1.76E-10	1.76E-10
chromium (6+)	18540-29-9	Yes	1.40E-12	Yes	1.16E-16	7.55E-11	7.55E-11	Yes	1.96E-11	Yes	2.71E-16	1.76E-10	1.76E-10
copper	7440-50-8		5.25E-11		2.19E-15	3.05E-09	3.05E-09		7.35E-10	Yes	5.28E-15	7.13E-09	7.13E-09
hydrogen chloride	7647-01-0		1.35E-09		2.17E-13	7.01E-10	7.01E-10	Yes	1.89E-08		5.17E-13	9.31E-09	9.32E-09
iron	7439-89-6		1.92E-10		1.87E-15	1.12E-08	1.12E-08		2.69E-09	Yes	4.36E-15	2.62E-08	2.62E-08
lead	7439-92-1	Yes	2.10E-12	Yes	3.32E-17	8.51E-11	8.51E-11		2.95E-11		9.06E-17	1.99E-10	1.99E-10
manganese	7439-96-5		2.45E-10		9.89E-15	1.01E-08	1.01E-08	Yes	3.43E-09	Yes	2.32E-14	2.36E-08	2.36E-08
total mercury	NA												
mercuric chloride	7487-94-7		3.46E-17		1.90E-19	2.52E-15	2.52E-15	Yes	4.84E-16	Yes	4.84E-19	6.09E-15	6.09E-15
methyl mercury	22967-92-6		0.00E+00		3.79E-22	7.21E-13	7.21E-13		0.00E+00	Yes	1.13E-21	1.81E-12	1.81E-12
elemental mercury	7439-97-6		0.00E+00		0.00E+00	0.00E+00	0.00E+00	Yes	0.00E+00		0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	Yes	8.22E-13		7.67E-17	4.22E-11	4.22E-11	Yes	1.15E-11	Yes	1.80E-16	9.86E-11	9.86E-11
vanadium	7440-62-2		2.62E-12		1.04E-16	1.07E-10	1.07E-10	Yes	3.67E-11	Yes	2.58E-16	2.50E-10	2.50E-10
zinc	7440-66-6		8.76E-11		2.45E-15	4.56E-09	4.56E-09		1.23E-09	Yes	5.76E-15	1.06E-08	1.06E-08

a. Exposures to total PCDDs/PCDFs and total coplanar PCBs are presented in units of mg TEQ/(kg-day)

b. Exposures to total PCDDs/PCDFs are presented in units of mg TEQ/(kg-day)

TOTAL COPC UPTAKE FOR EACH EXPOSURE SCENARIO

Adult Subsistence Farmer Exposure Scenario													
		CARCINOGENIC EFFECTS:						NONCARCINOGENIC EFFECTS:					
		Direct Exposure		Indirect Exposure				Direct Exposure		Indirect Exposure			
COPC	CAS Number	Inhalation Cancer Slope Factor?	Inhalation Exposure (mg/kg-day)[a]	Oral Cancer Slope Factor?	Dermal Exposure (mg/kg-day)[a]	Total Ingestion Exposure (mg/kg-day)[a]	Total Indirect Exposure (mg/kg-day)[a]	Inhalation Reference Dose?	Inhalation Exposure (mg/kg-day)[b]	Oral Reference Dose?	Dermal Exposure (mg/kg-day)[b]	Total Ingestion Exposure (mg/kg-day)[b]	Total Indirect Exposure (mg/kg-day)[b]
2-butanone	78-93-3		4.48E-13		7.98E-17	1.68E-12	1.68E-12	Yes	6.27E-12	Yes	1.96E-16	2.33E-11	2.33E-11
2-ethyl 1,3-butadiene	3404-63-5		2.12E-11		1.19E-13	4.93E-12	5.05E-12		2.97E-10		2.09E-13	9.27E-12	9.48E-12
acetone	67-64-1		8.01E-13		8.37E-17	1.59E-12	1.59E-12	Yes	1.12E-11	Yes	1.75E-16	2.20E-11	2.20E-11
benzene	71-43-2	Yes	2.29E-09	Yes	3.74E-12	1.50E-10	1.54E-10	Yes	3.21E-08	Yes	6.55E-12	8.68E-10	8.75E-10
benzyl alcohol	100-51-6		1.68E-12		1.08E-14	4.96E-09	4.96E-09		2.35E-11	Yes	1.41E-13	6.95E-08	6.95E-08
bis(2-ethylhexyl)-phthalate	117-81-7	Yes	1.23E-11	Yes	1.80E-13	2.72E-08	2.72E-08		1.72E-10	Yes	4.18E-13	4.78E-08	4.78E-08
bromodichloromethane	75-27-4	Yes	1.56E-13	Yes	1.16E-16	1.76E-12	1.76E-12		2.19E-12	Yes	2.50E-16	2.45E-11	2.45E-11
carbon disulfide	75-15-0		9.81E-13		1.80E-15	5.46E-14	5.64E-14	Yes	1.37E-11	Yes	3.15E-15	1.42E-13	1.45E-13
carbon tetrachloride	56-23-5	Yes	4.01E-14	Yes	9.26E-17	8.66E-15	8.75E-15	Yes	5.61E-13	Yes	1.62E-16	3.39E-14	3.41E-14
chlorobenzene	108-90-7		3.53E-14		1.20E-16	2.57E-14	2.58E-14	Yes	4.94E-13	Yes	2.11E-16	2.12E-13	2.12E-13
chloroform	67-66-3	Yes	1.04E-13	Yes	8.77E-17	6.22E-15	6.31E-15	Yes	1.45E-12	Yes	1.54E-16	3.99E-14	4.01E-14
chloromethane	74-87-3		9.41E-13		3.71E-16	2.58E-14	2.61E-14	Yes	1.32E-11	Yes	6.49E-16	1.44E-13	1.45E-13
dibromochloromethane	124-48-1	Yes	1.93E-13	Yes	1.47E-16	1.58E-11	1.58E-11		2.70E-12	Yes	4.86E-16	2.21E-10	2.21E-10
dimethyl phthalate	131-11-3		1.67E-12		2.88E-15	2.90E-10	2.90E-10		2.33E-11		8.10E-15	3.54E-09	3.54E-09
di-n-butyl phthalate	84-74-2		3.88E-12		3.20E-13	4.24E-07	4.24E-07		5.44E-11	Yes	6.93E-13	7.53E-07	7.53E-07
ethane	74-84-0		9.35E-09		1.21E-11	1.86E-10	1.98E-10		1.31E-07		2.11E-11	3.45E-10	3.66E-10
ethylbenzene	100-41-4	Yes	3.11E-14	Yes	1.80E-16	1.16E-14	1.17E-14	Yes	4.35E-13	Yes	3.15E-16	5.68E-14	5.71E-14
HD	505-60-2	Yes	9.72E-12	Yes	1.21E-14	3.25E-12	3.26E-12	Yes	1.36E-10	Yes	2.12E-14	9.48E-12	9.50E-12
hexane	110-54-3		8.73E-14		1.43E-15	8.81E-14	8.96E-14	Yes	1.22E-12	Yes	2.51E-15	1.56E-13	1.58E-13
methane	74-82-8		2.12E-07		9.29E-11	1.02E-09	1.11E-09		2.97E-06		1.63E-10	1.94E-09	2.10E-09
methylene chloride	75-09-2	Yes	1.35E-13	Yes	5.19E-17	6.97E-15	7.02E-15	Yes	1.89E-12	Yes	9.09E-17	8.02E-14	8.02E-14
propene	115-07-1		2.29E-09		2.64E-12	4.70E-11	4.96E-11	Yes	3.21E-08		4.62E-12	9.72E-11	1.02E-10
styrene	100-42-5		3.44E-13		1.56E-15	2.15E-11	2.15E-11	Yes	4.82E-12	Yes	3.26E-15	2.99E-10	2.99E-10
tetrachloroethene	127-18-4	Yes	3.65E-14	Yes	1.86E-16	1.95E-14	1.96E-14	Yes	5.11E-13	Yes	3.26E-16	6.65E-14	6.68E-14
toluene	108-88-3		3.88E-10		1.37E-12	7.09E-11	7.23E-11	Yes	5.44E-09	Yes	2.40E-12	3.63E-10	3.65E-10
trichloroethene	79-01-6	Yes	4.64E-14	Yes	7.30E-17	4.62E-15	4.69E-15	Yes	6.50E-13	Yes	1.28E-16	2.13E-14	2.14E-14
vinyl chloride	75-01-4	Yes	6.93E-12	Yes	3.93E-15	1.07E-13	1.11E-13	Yes	9.70E-11	Yes	6.87E-15	4.78E-13	4.84E-13
xylenes	1330-20-7		1.41E-11		8.25E-14	5.89E-12	5.97E-12	Yes	1.98E-10	Yes	1.45E-13	3.23E-11	3.24E-11
3,3',4,4'-TCB (PCB 77)	32598-13-3							Yes	1.62E-20	Yes	8.86E-22	5.21E-18	5.21E-18
2,3',4,4',5-PeCB (PCB 118)	31508-00-6							Yes	6.74E-20	Yes	3.23E-21	2.17E-17	2.17E-17
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4							Yes	3.23E-20	Yes	1.55E-21	1.04E-17	1.04E-17
total coplanar PCBs	NA	Yes	3.29E-25	Yes	1.08E-25	6.09E-22	6.09E-22						
ammonia	7664-41-7		1.76E-11		9.69E-15	3.40E-11	3.40E-11	Yes	2.47E-10		1.72E-14	4.64E-10	4.64E-10
aluminum	7429-90-5		6.71E-11		8.63E-15	8.31E-13	8.39E-13	Yes	9.39E-10	Yes	1.51E-14	1.46E-12	1.48E-12
cadmium	7440-43-9	Yes	5.07E-13		3.15E-17	6.69E-11	6.69E-11	Yes	7.10E-12	Yes	5.53E-17	1.17E-10	1.17E-10
chlorine	7782-50-5		2.12E-10		4.68E-14	3.05E-10	3.05E-10	Yes	2.97E-09	Yes	8.60E-14	4.23E-09	4.23E-09
chromium (3+)	7440-47-3		1.40E-12		1.55E-16	2.52E-10	2.52E-10		1.96E-11	Yes	2.71E-16	4.40E-10	4.40E-10
chromium (6+)	18540-29-9	Yes	1.40E-12	Yes	1.55E-16	2.52E-10	2.52E-10	Yes	1.96E-11	Yes	2.71E-16	4.40E-10	4.40E-10
copper	7440-50-8		5.25E-11		2.91E-15	1.02E-08	1.02E-08		7.35E-10	Yes	5.28E-15	1.78E-08	1.78E-08
hydrogen chloride	7647-01-0		1.35E-09		2.90E-13	1.67E-09	1.67E-09	Yes	1.89E-08		5.17E-13	2.31E-08	2.31E-08
iron	7439-89-6		1.92E-10		2.49E-15	3.74E-08	3.74E-08		2.69E-09	Yes	4.36E-15	6.54E-08	6.54E-08
lead	7439-92-1	Yes	2.10E-12	Yes	4.39E-17	2.84E-10	2.84E-10		2.95E-11		9.06E-17	4.97E-10	4.97E-10
manganese	7439-96-5		2.45E-10		1.32E-14	3.37E-08	3.37E-08	Yes	3.43E-09	Yes	2.32E-14	5.90E-08	5.90E-08
total mercury	NA												
mercuric chloride	7487-94-7		3.46E-17		2.60E-19	8.47E-15	8.47E-15	Yes	4.84E-16	Yes	4.84E-19	1.52E-14	1.52E-14
methyl mercury	22967-92-6		0.00E+00		4.83E-22	3.92E-13	3.92E-13		0.00E+00	Yes	1.13E-21	7.27E-13	7.27E-13
elemental mercury	7439-97-6		0.00E+00		0.00E+00	0.00E+00	0.00E+00	Yes	0.00E+00		0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	Yes	8.22E-13		1.02E-16	1.40E-10	1.40E-10	Yes	1.15E-11	Yes	1.80E-16	2.44E-10	2.44E-10
vanadium	7440-62-2		2.62E-12		1.38E-16	3.57E-10	3.57E-10	Yes	3.67E-11	Yes	2.58E-16	6.25E-10	6.25E-10
zinc	7440-66-6		8.76E-11		3.27E-15	1.19E-08	1.19E-08		1.23E-09	Yes	5.76E-15	2.09E-08	2.09E-08

a. Exposures to total PCDDs/PCDFs and total coplanar PCBs are presented in units of mg TEQ/(kg-day)

b. Exposures to total PCDDs/PCDFs are presented in units of mg TEQ/(kg-day)

TOTAL COPC UPTAKE FOR EACH EXPOSURE SCENARIO

Adult Worker Exposure Scenario													
		CARCINOGENIC EFFECTS:						NONCARCINOGENIC EFFECTS:					
		Direct Exposure		Indirect Exposure				Direct Exposure		Indirect Exposure			
COPC	CAS Number	Inhalation Cancer Slope Factor?	Inhalation Exposure (mg/kg-day)[a]	Oral Cancer Slope Factor?	Dermal Exposure (mg/kg-day)[a]	Total Ingestion Exposure (mg/kg-day)[a]	Total Indirect Exposure (mg/kg-day)[a]	Inhalation Reference Dose?	Inhalation Exposure (mg/kg-day)[b]	Oral Reference Dose?	Dermal Exposure (mg/kg-day)[b]	Total Ingestion Exposure (mg/kg-day)[b]	Total Indirect Exposure (mg/kg-day)[b]
2-butanone	78-93-3		1.07E-13		4.45E-18	3.37E-18	7.82E-18	Yes	1.49E-12	Yes	6.23E-17	4.13E-17	1.04E-16
2-ethyl 1,3-butadiene	3404-63-5		5.04E-12		4.47E-19	3.39E-19	7.86E-19		7.06E-11		6.26E-18	4.15E-18	1.04E-17
acetone	67-64-1		1.91E-13		2.30E-18	1.74E-18	4.05E-18	Yes	2.67E-12	Yes	3.22E-17	2.14E-17	5.36E-17
benzene	71-43-2	Yes	5.46E-10	Yes	9.04E-17	6.85E-17	1.59E-16	Yes	7.65E-09	Yes	1.27E-15	8.39E-16	2.10E-15
benzyl alcohol	100-51-6		4.00E-13		6.57E-16	5.95E-15	6.61E-15		5.60E-12	Yes	9.19E-15	7.29E-14	8.21E-14
bis(2-ethylhexyl)-phthalate	117-81-7	Yes	2.92E-12	Yes	7.52E-15	3.13E-15	1.07E-14		4.09E-11	Yes	1.05E-13	3.84E-14	1.44E-13
bromodichloromethane	75-27-4	Yes	3.72E-14	Yes	3.92E-19	1.31E-18	1.71E-18		5.20E-13	Yes	5.49E-18	1.61E-17	2.16E-17
carbon disulfide	75-15-0		2.34E-13		4.63E-21	3.51E-21	8.14E-21	Yes	3.27E-12	Yes	6.48E-20	4.30E-20	1.08E-19
carbon tetrachloride	56-23-5	Yes	9.55E-15	Yes	7.41E-22	7.35E-22	1.48E-21	Yes	1.34E-13	Yes	1.04E-20	9.01E-21	1.94E-20
chlorobenzene	108-90-7		8.40E-15		1.06E-20	7.04E-21	1.77E-20	Yes	1.18E-13	Yes	1.49E-19	8.63E-20	2.35E-19
chloroform	67-66-3	Yes	2.47E-14	Yes	3.49E-21	2.64E-21	6.13E-21	Yes	3.46E-13	Yes	4.88E-20	3.24E-20	8.12E-20
chloromethane	74-87-3		2.24E-13		8.22E-21	6.23E-21	1.45E-20	Yes	3.14E-12	Yes	1.15E-19	7.63E-20	1.91E-19
dibromochloromethane	124-48-1	Yes	4.59E-14	Yes	4.79E-18	2.04E-17	2.52E-17		6.42E-13	Yes	6.71E-17	2.50E-16	3.18E-16
dimethyl phthalate	131-11-3		3.97E-13		2.80E-17	2.83E-16	3.11E-16		5.55E-12		3.92E-16	3.46E-15	3.85E-15
di-n-butyl phthalate	84-74-2		9.25E-13		1.07E-14	2.27E-15	1.29E-14		1.29E-11	Yes	1.49E-13	2.79E-14	1.77E-13
ethane	74-84-0		2.23E-09		4.94E-18	3.74E-18	8.69E-18		3.12E-08		6.92E-17	4.59E-17	1.15E-16
ethylbenzene	100-41-4	Yes	7.40E-15	Yes	6.19E-21	4.69E-21	1.09E-20	Yes	1.04E-13	Yes	8.67E-20	5.75E-20	1.44E-19
HD	505-60-2	Yes	2.32E-12	Yes	3.53E-18	2.68E-18	6.21E-18	Yes	3.24E-11	Yes	4.95E-17	3.28E-17	8.23E-17
hexane	110-54-3		2.08E-14		1.19E-21	9.00E-22	2.09E-21	Yes	2.91E-13	Yes	1.66E-20	1.10E-20	2.77E-20
methane	74-82-8		5.04E-08		1.52E-17	1.15E-17	2.66E-17		7.06E-07		2.12E-16	1.41E-16	3.53E-16
methylene chloride	75-09-2	Yes	3.22E-14	Yes	2.36E-21	1.79E-21	4.15E-21	Yes	4.51E-13	Yes	3.31E-20	2.19E-20	5.50E-20
propene	115-07-1		5.46E-10		3.62E-18	2.74E-18	6.36E-18	Yes	7.65E-09		5.07E-17	3.36E-17	8.43E-17
styrene	100-42-5		8.20E-14		4.57E-17	2.39E-17	6.96E-17	Yes	1.15E-12	Yes	6.40E-16	2.92E-16	9.32E-16
tetrachloroethene	127-18-4	Yes	8.70E-15	Yes	1.41E-21	1.07E-21	2.49E-21	Yes	1.22E-13	Yes	1.98E-20	1.31E-20	3.29E-20
toluene	108-88-3		9.25E-11		3.94E-17	2.98E-17	6.92E-17	Yes	1.29E-09	Yes	5.51E-16	3.66E-16	9.17E-16
trichloroethene	79-01-6	Yes	1.10E-14	Yes	3.14E-21	2.38E-21	5.51E-21	Yes	1.55E-13	Yes	4.39E-20	2.91E-20	7.30E-20
vinyl chloride	75-01-4	Yes	1.65E-12	Yes	1.45E-20	1.10E-20	2.55E-20	Yes	2.31E-11	Yes	2.03E-19	1.34E-19	3.37E-19
xylenes	1330-20-7		3.36E-12		1.54E-17	1.17E-17	2.71E-17	Yes	4.71E-11	Yes	2.16E-16	1.43E-16	3.59E-16
3,3',4,4'-TCB (PCB 77)	32598-13-3							Yes	3.85E-21	Yes	3.90E-22	1.85E-22	5.75E-22
2,3',4,4',5-PeCB (PCB 118)	31508-00-6							Yes	1.60E-20	Yes	1.63E-21	7.70E-22	2.40E-21
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4							Yes	7.70E-21	Yes	7.81E-22	3.70E-22	1.15E-21
total coplanar PCBs	NA	Yes	7.84E-26	Yes	2.78E-26	1.51E-26	4.29E-26						
ammonia	7664-41-7		4.20E-12		1.05E-17	7.96E-18	1.85E-17	Yes	5.88E-11		1.47E-16	9.75E-17	2.45E-16
aluminum	7429-90-5		1.60E-11		7.67E-19	1.57E-17	1.65E-17	Yes	2.24E-10	Yes	1.07E-17	1.93E-16	2.04E-16
cadmium	7440-43-9	Yes	1.21E-13		1.12E-20	8.49E-19	8.61E-19	Yes	1.69E-12	Yes	1.57E-19	1.04E-17	1.06E-17
chlorine	7782-50-5		5.04E-11		5.48E-17	5.55E-16	6.09E-16	Yes	7.06E-10	Yes	7.67E-16	6.79E-15	7.56E-15
chromium (3+)	7440-47-3		3.33E-13		3.37E-20	4.60E-19	4.94E-19		4.67E-12	Yes	4.72E-19	5.64E-18	6.11E-18
chromium (6+)	18540-29-9	Yes	3.33E-13	Yes	3.37E-20	4.60E-19	4.94E-19	Yes	4.67E-12	Yes	4.72E-19	5.64E-18	6.11E-18
copper	7440-50-8		1.25E-11		1.67E-17	4.14E-16	4.31E-16		1.75E-10	Yes	2.34E-16	5.07E-15	5.30E-15
hydrogen chloride	7647-01-0		3.21E-10		4.72E-17	6.85E-16	7.32E-16	Yes	4.49E-09		6.61E-16	8.39E-15	9.05E-15
iron	7439-89-6		4.58E-11		7.35E-19	8.09E-17	8.17E-17		6.42E-10	Yes	1.03E-17	9.92E-16	1.00E-15
lead	7439-92-1	Yes	5.01E-13	Yes	1.28E-18	5.26E-17	5.39E-17		7.01E-12		1.79E-17	6.44E-16	6.62E-16
manganese	7439-96-5		5.83E-11		9.98E-18	2.65E-16	2.75E-16	Yes	8.16E-10	Yes	1.40E-16	3.25E-15	3.39E-15
total mercury	NA												
mercuric chloride	7487-94-7		8.24E-18		1.80E-19	2.15E-18	2.33E-18	Yes	1.15E-16	Yes	5.60E-19	5.85E-18	6.41E-18
methyl mercury	22967-92-6		0.00E+00		2.96E-22	3.58E-20	3.61E-20		0.00E+00	Yes	1.08E-21	1.14E-19	1.15E-19
elemental mercury	7439-97-6		0.00E+00		0.00E+00	0.00E+00	0.00E+00	Yes	0.00E+00		0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	Yes	1.96E-13		1.16E-19	1.49E-18	1.60E-18	Yes	2.74E-12	Yes	1.62E-18	1.82E-17	1.98E-17
vanadium	7440-62-2		6.25E-13		1.51E-18	4.15E-17	4.31E-17	Yes	8.75E-12	Yes	2.11E-17	5.09E-16	5.30E-16
zinc	7440-66-6		2.08E-11		3.72E-18	1.51E-16	1.55E-16		2.92E-10	Yes	5.20E-17	1.85E-15	1.90E-15

a. Exposures to total PCDDs/PCDFs and total coplanar PCBs are presented in units of mg TEQ/(kg-day)

b. Exposures to total PCDDs/PCDFs are presented in units of mg TEQ/(kg-day)

TOTAL COPC UPTAKE FOR EACH EXPOSURE SCENARIO

Child Resident Exposure Scenario													
		CARCINOGENIC EFFECTS:						NONCARCINOGENIC EFFECTS:					
		Direct Exposure		Indirect Exposure				Direct Exposure		Indirect Exposure			
COPC	CAS Number	Inhalation Cancer Slope Factor?	Inhalation Exposure (mg/kg-day)[a]	Oral Cancer Slope Factor?	Dermal Exposure (mg/kg-day)[a]	Total Ingestion Exposure (mg/kg-day)[a]	Total Indirect Exposure (mg/kg-day)[a]	Inhalation Reference Dose?	Inhalation Exposure (mg/kg-day)[b]	Oral Reference Dose?	Dermal Exposure (mg/kg-day)[b]	Total Ingestion Exposure (mg/kg-day)[b]	Total Indirect Exposure (mg/kg-day)[b]
2-butanone	78-93-3		1.25E-12		4.21E-17	1.84E-12	1.84E-12	Yes	1.76E-11	Yes	5.90E-16	2.58E-11	2.58E-11
2-ethyl 1,3-butadiene	3404-63-5		5.93E-11		2.56E-14	1.53E-12	1.56E-12		8.30E-10		3.58E-13	2.15E-11	2.18E-11
acetone	67-64-1		2.24E-12		3.09E-17	1.49E-12	1.49E-12	Yes	3.14E-11	Yes	4.32E-16	2.09E-11	2.09E-11
benzene	71-43-2	Yes	6.42E-09	Yes	8.01E-13	7.14E-11	7.22E-11	Yes	8.99E-08	Yes	1.12E-11	1.00E-09	1.01E-09
benzyl alcohol	100-51-6		4.70E-12		1.77E-14	4.26E-09	4.26E-09		6.58E-11	Yes	2.78E-13	6.70E-08	6.70E-08
bis(2-ethylhexyl)-phthalate	117-81-7	Yes	3.44E-11	Yes	8.10E-14	5.30E-09	5.30E-09		4.81E-10	Yes	1.15E-12	7.42E-08	7.42E-08
bromodichloromethane	75-27-4	Yes	4.37E-13	Yes	3.22E-17	1.32E-12	1.32E-12		6.12E-12	Yes	4.51E-16	1.85E-11	1.85E-11
carbon disulfide	75-15-0		2.75E-12		3.85E-16	1.86E-14	1.90E-14	Yes	3.85E-11	Yes	5.39E-15	2.60E-13	2.65E-13
carbon tetrachloride	56-23-5	Yes	1.12E-13	Yes	1.98E-17	3.70E-15	3.72E-15	Yes	1.57E-12	Yes	2.77E-16	5.18E-14	5.20E-14
chlorobenzene	108-90-7		9.88E-14		2.58E-17	1.78E-14	1.78E-14	Yes	1.38E-12	Yes	3.61E-16	2.49E-13	2.49E-13
chloroform	67-66-3	Yes	2.90E-13	Yes	1.88E-17	3.11E-15	3.13E-15	Yes	4.07E-12	Yes	2.63E-16	4.36E-14	4.39E-14
chloromethane	74-87-3		2.64E-12		7.93E-17	1.26E-14	1.27E-14	Yes	3.69E-11	Yes	1.11E-15	1.77E-13	1.78E-13
dibromochloromethane	124-48-1	Yes	5.39E-13	Yes	7.89E-17	1.18E-11	1.18E-11		7.55E-12	Yes	1.11E-15	1.65E-10	1.65E-10
dimethyl phthalate	131-11-3		4.66E-12		1.10E-15	2.07E-10	2.07E-10		6.53E-11		1.55E-14	2.91E-09	2.91E-09
di-n-butyl phthalate	84-74-2		1.09E-11		1.27E-13	8.42E-08	8.42E-08		1.52E-10	Yes	1.80E-12	1.18E-06	1.18E-06
ethane	74-84-0		2.62E-08		2.58E-12	5.82E-11	6.08E-11		3.67E-07		3.61E-11	8.15E-10	8.51E-10
ethylbenzene	100-41-4	Yes	8.70E-14	Yes	3.85E-17	4.93E-15	4.96E-15	Yes	1.22E-12	Yes	5.39E-16	6.90E-14	6.95E-14
HD	505-60-2	Yes	2.72E-11	Yes	2.61E-15	1.01E-12	1.02E-12	Yes	3.81E-10	Yes	3.65E-14	1.42E-11	1.42E-11
hexane	110-54-3		2.45E-13		3.07E-16	2.70E-14	2.73E-14	Yes	3.42E-12	Yes	4.29E-15	3.78E-13	3.82E-13
methane	74-82-8		5.93E-07		1.99E-11	3.29E-10	3.49E-10		8.30E-06		2.78E-10	4.60E-09	4.88E-09
methylene chloride	75-09-2	Yes	3.79E-13	Yes	1.11E-17	4.88E-15	4.89E-15	Yes	5.30E-12	Yes	1.56E-16	6.84E-14	6.85E-14
propene	115-07-1		6.42E-09		5.64E-13	1.52E-11	1.58E-11	Yes	8.99E-08		7.90E-12	2.13E-10	2.21E-10
styrene	100-42-5		9.64E-13		5.85E-16	3.29E-11	3.29E-11	Yes	1.35E-11	Yes	8.20E-15	4.62E-10	4.62E-10
tetrachloroethene	127-18-4	Yes	1.02E-13	Yes	3.98E-17	7.13E-15	7.17E-15	Yes	1.43E-12	Yes	5.58E-16	9.98E-14	1.00E-13
toluene	108-88-3		1.09E-09		2.94E-13	3.10E-11	3.13E-11	Yes	1.52E-08	Yes	4.11E-12	4.35E-10	4.39E-10
trichloroethene	79-01-6	Yes	1.30E-13	Yes	1.56E-17	1.98E-15	1.99E-15	Yes	1.82E-12	Yes	2.19E-16	2.77E-14	2.79E-14
vinyl chloride	75-01-4	Yes	1.94E-11	Yes	8.40E-16	4.50E-14	4.59E-14	Yes	2.72E-10	Yes	1.18E-14	6.31E-13	6.42E-13
xylenes	1330-20-7		3.95E-11		1.77E-14	2.74E-12	2.76E-12	Yes	5.53E-10	Yes	2.48E-13	3.84E-11	3.87E-11
3,3',4,4'-TCB (PCB 77)	32598-13-3							Yes	4.53E-20	Yes	3.12E-21	1.17E-17	1.17E-17
2,3',4,4',5-PeCB (PCB 118)	31508-00-6							Yes	1.89E-19	Yes	1.22E-20	4.88E-17	4.88E-17
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4							Yes	9.05E-20	Yes	5.85E-21	2.34E-17	2.34E-17
total coplanar PCBs	NA	Yes	9.21E-25	Yes	3.70E-26	1.50E-22	1.50E-22						
ammonia	7664-41-7		4.94E-11		2.14E-15	2.99E-11	2.99E-11	Yes	6.92E-10		2.99E-14	4.19E-10	4.19E-10
aluminum	7429-90-5		1.88E-10		1.85E-15	2.58E-13	2.60E-13	Yes	2.63E-09	Yes	2.59E-14	3.62E-12	3.64E-12
cadmium	7440-43-9	Yes	1.42E-12		6.80E-18	1.16E-11	1.16E-11	Yes	1.99E-11	Yes	9.53E-17	1.63E-10	1.63E-10
chlorine	7782-50-5		5.93E-10		1.07E-14	3.25E-10	3.25E-10	Yes	8.30E-09	Yes	1.50E-13	4.56E-09	4.56E-09
chromium (3+)	7440-47-3		3.92E-12		3.32E-17	4.24E-11	4.24E-11		5.49E-11	Yes	4.65E-16	5.94E-10	5.94E-10
chromium (6+)	18540-29-9	Yes	3.92E-12	Yes	3.32E-17	4.24E-11	4.24E-11	Yes	5.49E-11	Yes	4.65E-16	5.94E-10	5.94E-10
copper	7440-50-8		1.47E-10		7.14E-16	1.65E-09	1.65E-09		2.06E-09	Yes	1.00E-14	2.31E-08	2.31E-08
hydrogen chloride	7647-01-0		3.77E-09		6.34E-14	1.52E-09	1.52E-09	Yes	5.28E-08		8.88E-13	2.12E-08	2.12E-08
iron	7439-89-6		5.39E-10		5.37E-16	5.34E-09	5.34E-09		7.54E-09	Yes	7.51E-15	7.48E-08	7.48E-08
lead	7439-92-1	Yes	5.89E-12	Yes	1.63E-17	4.88E-11	4.88E-11		8.25E-11		2.28E-16	6.83E-10	6.83E-10
manganese	7439-96-5		6.86E-10		2.87E-15	5.80E-09	5.80E-09	Yes	9.60E-09	Yes	4.02E-14	8.12E-08	8.12E-08
total mercury	NA												
mercuric chloride	7487-94-7		9.69E-17		1.12E-19	1.16E-15	1.16E-15	Yes	1.36E-15	Yes	3.12E-18	1.96E-14	1.96E-14
methyl mercury	22967-92-6		0.00E+00		2.32E-22	7.39E-14	7.39E-14		0.00E+00	Yes	6.34E-21	1.77E-12	1.77E-12
elemental mercury	7439-97-6		0.00E+00		0.00E+00	0.00E+00	0.00E+00	Yes	0.00E+00		0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	Yes	2.30E-12		2.25E-17	2.31E-11	2.31E-11	Yes	3.22E-11	Yes	3.15E-16	3.24E-10	3.24E-10
vanadium	7440-62-2		7.35E-12		3.77E-17	5.93E-11	5.93E-11	Yes	1.03E-10	Yes	5.29E-16	8.30E-10	8.30E-10
zinc	7440-66-6		2.45E-10		7.19E-16	2.12E-09	2.12E-09		3.43E-09	Yes	1.01E-14	2.97E-08	2.97E-08

a. Exposures to total PCDDs/PCDFs and total coplanar PCBs are presented in units of mg TEQ/(kg-day)

b. Exposures to total PCDDs/PCDFs are presented in units of mg TEQ/(kg-day)

TOTAL COPC UPTAKE FOR EACH EXPOSURE SCENARIO

Child Subsistence Fisher Exposure Scenario													
		CARCINOGENIC EFFECTS:						NONCARCINOGENIC EFFECTS:					
		Direct Exposure		Indirect Exposure				Direct Exposure		Indirect Exposure			
COPC	CAS Number	Inhalation Cancer Slope Factor?	Inhalation Exposure (mg/kg-day)[a]	Oral Cancer Slope Factor?	Dermal Exposure (mg/kg-day)[a]	Total Ingestion Exposure (mg/kg-day)[a]	Total Indirect Exposure (mg/kg-day)[a]	Inhalation Reference Dose?	Inhalation Exposure (mg/kg-day)[b]	Oral Reference Dose?	Dermal Exposure (mg/kg-day)[b]	Total Ingestion Exposure (mg/kg-day)[b]	Total Indirect Exposure (mg/kg-day)[b]
2-butanone	78-93-3		1.25E-12		4.21E-17	1.85E-12	1.85E-12	Yes	1.76E-11	Yes	5.90E-16	2.59E-11	2.59E-11
2-ethyl 1,3-butadiene	3404-63-5		5.93E-11		2.56E-14	3.76E-12	3.79E-12		8.30E-10		3.58E-13	5.27E-11	5.30E-11
acetone	67-64-1		2.24E-12		3.09E-17	1.50E-12	1.50E-12	Yes	3.14E-11	Yes	4.32E-16	2.11E-11	2.11E-11
benzene	71-43-2	Yes	6.42E-09	Yes	8.01E-13	1.17E-10	1.17E-10	Yes	8.99E-08	Yes	1.12E-11	1.63E-09	1.64E-09
benzyl alcohol	100-51-6		4.70E-12		1.77E-14	4.26E-09	4.26E-09		6.58E-11	Yes	2.78E-13	6.70E-08	6.70E-08
bis(2-ethylhexyl)-phthalate	117-81-7	Yes	3.44E-11	Yes	8.10E-14	5.31E-09	5.31E-09		4.81E-10	Yes	1.15E-12	7.43E-08	7.43E-08
bromodichloromethane	75-27-4	Yes	4.37E-13	Yes	3.22E-17	1.33E-12	1.33E-12		6.12E-12	Yes	4.51E-16	1.86E-11	1.86E-11
carbon disulfide	75-15-0		2.75E-12		3.85E-16	4.17E-14	4.21E-14	Yes	3.85E-11	Yes	5.39E-15	5.83E-13	5.89E-13
carbon tetrachloride	56-23-5	Yes	1.12E-13	Yes	1.98E-17	6.54E-15	6.56E-15	Yes	1.57E-12	Yes	2.77E-16	9.15E-14	9.18E-14
chlorobenzene	108-90-7		9.88E-14		2.58E-17	2.03E-14	2.03E-14	Yes	1.38E-12	Yes	3.61E-16	2.84E-13	2.84E-13
chloroform	67-66-3	Yes	2.90E-13	Yes	1.88E-17	4.84E-15	4.86E-15	Yes	4.07E-12	Yes	2.63E-16	6.78E-14	6.81E-14
chloromethane	74-87-3		2.64E-12		7.93E-17	2.06E-14	2.07E-14	Yes	3.69E-11	Yes	1.11E-15	2.89E-13	2.90E-13
dibromochloromethane	124-48-1	Yes	5.39E-13	Yes	7.89E-17	1.18E-11	1.18E-11		7.55E-12	Yes	1.11E-15	1.66E-10	1.66E-10
dimethyl phthalate	131-11-3		4.66E-12		1.10E-15	2.07E-10	2.07E-10		6.53E-11		1.55E-14	2.92E-09	2.92E-09
di-n-butyl phthalate	84-74-2		1.09E-11		1.27E-13	8.43E-08	8.43E-08		1.52E-10	Yes	1.80E-12	1.18E-06	1.18E-06
ethane	74-84-0		2.62E-08		2.58E-12	1.42E-10	1.44E-10		3.67E-07		3.61E-11	1.99E-09	2.02E-09
ethylbenzene	100-41-4	Yes	8.70E-14	Yes	3.85E-17	8.80E-15	8.84E-15	Yes	1.22E-12	Yes	5.39E-16	1.23E-13	1.24E-13
HD	505-60-2	Yes	2.72E-11	Yes	2.61E-15	1.65E-12	1.65E-12	Yes	3.81E-10	Yes	3.65E-14	2.31E-11	2.31E-11
hexane	110-54-3		2.45E-13		3.07E-16	6.73E-14	6.76E-14	Yes	3.42E-12	Yes	4.29E-15	9.42E-13	9.46E-13
methane	74-82-8		5.93E-07		1.99E-11	7.76E-10	7.95E-10		8.30E-06		2.78E-10	1.09E-08	1.11E-08
methylene chloride	75-09-2	Yes	3.79E-13	Yes	1.11E-17	5.51E-15	5.52E-15	Yes	5.30E-12	Yes	1.56E-16	7.71E-14	7.73E-14
propene	115-07-1		6.42E-09		5.64E-13	3.60E-11	3.66E-11	Yes	8.99E-08		7.90E-12	5.04E-10	5.12E-10
styrene	100-42-5		9.64E-13		5.85E-16	3.30E-11	3.30E-11	Yes	1.35E-11	Yes	8.20E-15	4.63E-10	4.63E-10
tetrachloroethene	127-18-4	Yes	1.02E-13	Yes	3.98E-17	1.48E-14	1.48E-14	Yes	1.43E-12	Yes	5.58E-16	2.07E-13	2.07E-13
toluene	108-88-3		1.09E-09		2.94E-13	5.43E-11	5.46E-11	Yes	1.52E-08	Yes	4.11E-12	7.60E-10	7.64E-10
trichloroethene	79-01-6	Yes	1.30E-13	Yes	1.56E-17	3.58E-15	3.60E-15	Yes	1.82E-12	Yes	2.19E-16	5.02E-14	5.04E-14
vinyl chloride	75-01-4	Yes	1.94E-11	Yes	8.40E-16	8.22E-14	8.30E-14	Yes	2.72E-10	Yes	1.18E-14	1.15E-12	1.16E-12
xylenes	1330-20-7		3.95E-11		1.77E-14	4.59E-12	4.61E-12	Yes	5.53E-10	Yes	2.48E-13	6.42E-11	6.45E-11
3,3',4,4'-TCB (PCB 77)	32598-13-3							Yes	4.53E-20	Yes	3.12E-21	2.76E-17	2.76E-17
2,3',4,4',5-PeCB (PCB 118)	31508-00-6							Yes	1.89E-19	Yes	1.22E-20	1.15E-16	1.15E-16
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4							Yes	9.05E-20	Yes	5.85E-21	5.52E-17	5.52E-17
total coplanar PCBs	NA	Yes	9.21E-25	Yes	3.70E-26	3.44E-22	3.44E-22						
ammonia	7664-41-7		4.94E-11		2.14E-15	3.04E-11	3.04E-11	Yes	6.92E-10		2.99E-14	4.25E-10	4.25E-10
aluminum	7429-90-5		1.88E-10		1.85E-15	6.33E-13	6.34E-13	Yes	2.63E-09	Yes	2.59E-14	8.86E-12	8.88E-12
cadmium	7440-43-9	Yes	1.42E-12		6.80E-18	1.24E-11	1.24E-11	Yes	1.99E-11	Yes	9.53E-17	1.73E-10	1.73E-10
chlorine	7782-50-5		5.93E-10		1.07E-14	3.27E-10	3.27E-10	Yes	8.30E-09	Yes	1.50E-13	4.58E-09	4.58E-09
chromium (3+)	7440-47-3		3.92E-12		3.32E-17	4.24E-11	4.24E-11		5.49E-11	Yes	4.65E-16	5.94E-10	5.94E-10
chromium (6+)	18540-29-9	Yes	3.92E-12	Yes	3.32E-17	4.24E-11	4.24E-11	Yes	5.49E-11	Yes	4.65E-16	5.94E-10	5.94E-10
copper	7440-50-8		1.47E-10		7.14E-16	1.65E-09	1.65E-09		2.06E-09	Yes	1.00E-14	2.31E-08	2.31E-08
hydrogen chloride	7647-01-0		3.77E-09		6.34E-14	1.53E-09	1.53E-09	Yes	5.28E-08		8.88E-13	2.14E-08	2.14E-08
iron	7439-89-6		5.39E-10		5.37E-16	5.34E-09	5.34E-09		7.54E-09	Yes	7.51E-15	7.48E-08	7.48E-08
lead	7439-92-1	Yes	5.89E-12	Yes	1.63E-17	4.88E-11	4.88E-11		8.25E-11		2.28E-16	6.83E-10	6.83E-10
manganese	7439-96-5		6.86E-10		2.87E-15	5.80E-09	5.80E-09	Yes	9.60E-09	Yes	4.02E-14	8.12E-08	8.12E-08
total mercury	NA												
mercuric chloride	7487-94-7		9.69E-17		1.12E-19	1.16E-15	1.16E-15	Yes	1.36E-15	Yes	3.12E-18	1.96E-14	1.96E-14
methyl mercury	22967-92-6		0.00E+00		2.32E-22	1.84E-13	1.84E-13		0.00E+00	Yes	6.34E-21	4.43E-12	4.43E-12
elemental mercury	7439-97-6		0.00E+00		0.00E+00	0.00E+00	0.00E+00	Yes	0.00E+00		0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	Yes	2.30E-12		2.25E-17	2.32E-11	2.32E-11	Yes	3.22E-11	Yes	3.15E-16	3.25E-10	3.25E-10
vanadium	7440-62-2		7.35E-12		3.77E-17	5.93E-11	5.93E-11	Yes	1.03E-10	Yes	5.29E-16	8.30E-10	8.30E-10
zinc	7440-66-6		2.45E-10		7.19E-16	2.41E-09	2.41E-09		3.43E-09	Yes	1.01E-14	3.37E-08	3.37E-08

a. Exposures to total PCDDs/PCDFs and total coplanar PCBs are presented in units of mg TEQ/(kg-day)

b. Exposures to total PCDDs/PCDFs are presented in units of mg TEQ/(kg-day)

TOTAL COPC UPTAKE FOR EACH EXPOSURE SCENARIO

Child Subsistence Farmer Exposure Scenario													
		CARCINOGENIC EFFECTS:						NONCARCINOGENIC EFFECTS:					
		Direct Exposure		Indirect Exposure				Direct Exposure		Indirect Exposure			
COPC	CAS Number	Inhalation Cancer Slope Factor?	Inhalation Exposure (mg/kg-day)[a]	Oral Cancer Slope Factor?	Dermal Exposure (mg/kg-day)[a]	Total Ingestion Exposure (mg/kg-day)[a]	Total Indirect Exposure (mg/kg-day)[a]	Inhalation Reference Dose?	Inhalation Exposure (mg/kg-day)[b]	Oral Reference Dose?	Dermal Exposure (mg/kg-day)[b]	Total Ingestion Exposure (mg/kg-day)[b]	Total Indirect Exposure (mg/kg-day)[b]
2-butanone	78-93-3		1.25E-12		4.21E-17	4.61E-12	4.61E-12	Yes	1.76E-11	Yes	5.90E-16	6.45E-11	6.45E-11
2-ethyl 1,3-butadiene	3404-63-5		5.93E-11		2.56E-14	1.60E-12	1.63E-12		8.30E-10		3.58E-13	2.24E-11	2.28E-11
acetone	67-64-1		2.24E-12		3.09E-17	3.72E-12	3.72E-12	Yes	3.14E-11	Yes	4.32E-16	5.21E-11	5.21E-11
benzene	71-43-2	Yes	6.42E-09	Yes	8.01E-13	1.33E-10	1.34E-10	Yes	8.99E-08	Yes	1.12E-11	1.86E-09	1.87E-09
benzyl alcohol	100-51-6		4.70E-12		1.77E-14	1.06E-08	1.06E-08		6.58E-11	Yes	2.78E-13	1.67E-07	1.67E-07
bis(2-ethylhexyl)-phthalate	117-81-7	Yes	3.44E-11	Yes	8.10E-14	1.32E-08	1.32E-08		4.81E-10	Yes	1.15E-12	1.86E-07	1.86E-07
bromodichloromethane	75-27-4	Yes	4.37E-13	Yes	3.22E-17	3.30E-12	3.30E-12		6.12E-12	Yes	4.51E-16	4.63E-11	4.63E-11
carbon disulfide	75-15-0		2.75E-12		3.85E-16	2.31E-14	2.35E-14	Yes	3.85E-11	Yes	5.39E-15	3.23E-13	3.29E-13
carbon tetrachloride	56-23-5	Yes	1.12E-13	Yes	1.98E-17	6.40E-15	6.42E-15	Yes	1.57E-12	Yes	2.77E-16	8.96E-14	8.98E-14
chlorobenzene	108-90-7		9.88E-14		2.58E-17	4.19E-14	4.19E-14	Yes	1.38E-12	Yes	3.61E-16	5.86E-13	5.86E-13
chloroform	67-66-3	Yes	2.90E-13	Yes	1.88E-17	6.03E-15	6.05E-15	Yes	4.07E-12	Yes	2.63E-16	8.45E-14	8.47E-14
chloromethane	74-87-3		2.64E-12		7.93E-17	2.34E-14	2.35E-14	Yes	3.69E-11	Yes	1.11E-15	3.28E-13	3.29E-13
dibromochloromethane	124-48-1	Yes	5.39E-13	Yes	7.89E-17	2.94E-11	2.94E-11		7.55E-12	Yes	1.11E-15	4.13E-10	4.13E-10
dimethyl phthalate	131-11-3		4.66E-12		1.10E-15	5.18E-10	5.18E-10		6.53E-11		1.55E-14	7.28E-09	7.28E-09
di-n-butyl phthalate	84-74-2		1.09E-11		1.27E-13	2.10E-07	2.10E-07		1.52E-10	Yes	1.80E-12	2.95E-06	2.95E-06
ethane	74-84-0		2.62E-08		2.58E-12	6.05E-11	6.31E-11		3.67E-07		3.61E-11	8.47E-10	8.83E-10
ethylbenzene	100-41-4	Yes	8.70E-14	Yes	3.85E-17	8.43E-15	8.47E-15	Yes	1.22E-12	Yes	5.39E-16	1.18E-13	1.19E-13
HD	505-60-2	Yes	2.72E-11	Yes	2.61E-15	1.89E-12	1.90E-12	Yes	3.81E-10	Yes	3.65E-14	2.65E-11	2.65E-11
hexane	110-54-3		2.45E-13		3.07E-16	2.71E-14	2.74E-14	Yes	3.42E-12	Yes	4.29E-15	3.80E-13	3.84E-13
methane	74-82-8		5.93E-07		1.99E-11	3.46E-10	3.66E-10		8.30E-06		2.78E-10	4.84E-09	5.12E-09
methylene chloride	75-09-2	Yes	3.79E-13	Yes	1.11E-17	1.16E-14	1.16E-14	Yes	5.30E-12	Yes	1.56E-16	1.62E-13	1.62E-13
propene	115-07-1		6.42E-09		5.64E-13	1.69E-11	1.75E-11	Yes	8.99E-08		7.90E-12	2.37E-10	2.45E-10
styrene	100-42-5		9.64E-13		5.85E-16	8.23E-11	8.23E-11	Yes	1.35E-11	Yes	8.20E-15	1.15E-09	1.15E-09
tetrachloroethene	127-18-4	Yes	1.02E-13	Yes	3.98E-17	1.02E-14	1.02E-14	Yes	1.43E-12	Yes	5.58E-16	1.42E-13	1.43E-13
toluene	108-88-3		1.09E-09		2.94E-13	5.43E-11	5.46E-11	Yes	1.52E-08	Yes	4.11E-12	7.60E-10	7.64E-10
trichloroethene	79-01-6	Yes	1.30E-13	Yes	1.56E-17	3.32E-15	3.34E-15	Yes	1.82E-12	Yes	2.19E-16	4.65E-14	4.67E-14
vinyl chloride	75-01-4	Yes	1.94E-11	Yes	8.40E-16	7.40E-14	7.49E-14	Yes	2.72E-10	Yes	1.18E-14	1.04E-12	1.05E-12
xylenes	1330-20-7		3.95E-11		1.77E-14	5.01E-12	5.03E-12	Yes	5.53E-10	Yes	2.48E-13	7.02E-11	7.04E-11
3,3',4,4'-TCB (PCB 77)	32598-13-3							Yes	4.53E-20	Yes	3.12E-21	1.34E-17	1.34E-17
2,3',4,4',5-PeCB (PCB 118)	31508-00-6							Yes	1.89E-19	Yes	1.22E-20	5.57E-17	5.57E-17
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4							Yes	9.05E-20	Yes	5.85E-21	2.67E-17	2.67E-17
total coplanar PCBs	NA	Yes	9.21E-25	Yes	3.70E-26	1.82E-22	1.82E-22						
ammonia	7664-41-7		4.94E-11		2.14E-15	7.44E-11	7.44E-11	Yes	6.92E-10		2.99E-14	1.04E-09	1.04E-09
aluminum	7429-90-5		1.88E-10		1.85E-15	2.60E-13	2.62E-13	Yes	2.63E-09	Yes	2.59E-14	3.64E-12	3.66E-12
cadmium	7440-43-9	Yes	1.42E-12		6.80E-18	2.84E-11	2.84E-11	Yes	1.99E-11	Yes	9.53E-17	3.97E-10	3.97E-10
chlorine	7782-50-5		5.93E-10		1.07E-14	8.12E-10	8.12E-10	Yes	8.30E-09	Yes	1.50E-13	1.14E-08	1.14E-08
chromium (3+)	7440-47-3		3.92E-12		3.32E-17	1.06E-10	1.06E-10		5.49E-11	Yes	4.65E-16	1.48E-09	1.48E-09
chromium (6+)	18540-29-9	Yes	3.92E-12	Yes	3.32E-17	1.06E-10	1.06E-10	Yes	5.49E-11	Yes	4.65E-16	1.48E-09	1.48E-09
copper	7440-50-8		1.47E-10		7.14E-16	4.13E-09	4.13E-09		2.06E-09	Yes	1.00E-14	5.78E-08	5.78E-08
hydrogen chloride	7647-01-0		3.77E-09		6.34E-14	3.78E-09	3.78E-09	Yes	5.28E-08		8.88E-13	5.29E-08	5.29E-08
iron	7439-89-6		5.39E-10		5.37E-16	1.34E-08	1.34E-08		7.54E-09	Yes	7.51E-15	1.87E-07	1.87E-07
lead	7439-92-1	Yes	5.89E-12	Yes	1.63E-17	1.22E-10	1.22E-10		8.25E-11		2.28E-16	1.71E-09	1.71E-09
manganese	7439-96-5		6.86E-10		2.87E-15	1.45E-08	1.45E-08	Yes	9.60E-09	Yes	4.02E-14	2.03E-07	2.03E-07
total mercury	NA												
mercuric chloride	7487-94-7		9.69E-17		1.12E-19	2.88E-15	2.88E-15	Yes	1.36E-15	Yes	3.12E-18	4.88E-14	4.88E-14
methyl mercury	22967-92-6		0.00E+00		2.32E-22	7.42E-14	7.42E-14		0.00E+00	Yes	6.34E-21	1.78E-12	1.78E-12
elemental mercury	7439-97-6		0.00E+00		0.00E+00	0.00E+00	0.00E+00	Yes	0.00E+00		0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	Yes	2.30E-12		2.25E-17	5.77E-11	5.77E-11	Yes	3.22E-11	Yes	3.15E-16	8.08E-10	8.08E-10
vanadium	7440-62-2		7.35E-12		3.77E-17	1.48E-10	1.48E-10	Yes	1.03E-10	Yes	5.29E-16	2.07E-09	2.07E-09
zinc	7440-66-6		2.45E-10		7.19E-16	5.03E-09	5.03E-09		3.43E-09	Yes	1.01E-14	7.04E-08	7.04E-08

a. Exposures to total PCDDs/PCDFs and total coplanar PCBs are presented in units of mg TEQ/(kg-day)

b. Exposures to total PCDDs/PCDFs are presented in units of mg TEQ/(kg-day)

TOTAL COPC UPTAKE FOR EACH EXPOSURE SCENARIO

Infant Resident Exposure Scenario													
		CARCINOGENIC EFFECTS:						NONCARCINOGENIC EFFECTS:					
		Direct Exposure		Indirect Exposure				Direct Exposure		Indirect Exposure			
COPC	CAS Number	Inhalation Cancer Slope Factor?	Inhalation Exposure (mg/kg-day)[a]	Oral Cancer Slope Factor?	Dermal Exposure (mg/kg-day)[a]	Total Ingestion Exposure (mg/kg-day)[a]	Total Indirect Exposure (mg/kg-day)[a]	Inhalation Reference Dose?	Inhalation Exposure (mg/kg-day)[b]	Oral Reference Dose?	Dermal Exposure (mg/kg-day)[b]	Total Ingestion Exposure (mg/kg-day)[b]	Total Indirect Exposure (mg/kg-day)[b]
2-butanone	78-93-3		1.41E-13		6.93E-18	3.94E-13	3.94E-13	Yes	9.88E-12	Yes	4.85E-16	1.00E-10	1.00E-10
2-ethyl 1,3-butadiene	3404-63-5		6.67E-12		6.97E-19	4.57E-13	4.57E-13		4.67E-10		4.88E-17	3.20E-11	3.20E-11
acetone	67-64-1		2.52E-13		3.59E-18	3.40E-13	3.40E-13	Yes	1.77E-11	Yes	2.51E-16	1.17E-10	1.17E-10
benzene	71-43-2	Yes	7.23E-10	Yes	1.41E-16	2.18E-09	2.18E-09	Yes	5.06E-08	Yes	9.87E-15	1.53E-07	1.53E-07
benzyl alcohol	100-51-6		5.29E-13		9.11E-16	9.64E-10	9.64E-10		3.70E-11	Yes	7.17E-14	7.58E-08	7.58E-08
bis(2-ethylhexyl)-phthalate	117-81-7	Yes	3.87E-12	Yes	1.15E-14	3.55E-09	3.55E-09		2.71E-10	Yes	8.21E-13	2.48E-07	2.48E-07
bromodichloromethane	75-27-4	Yes	4.92E-14	Yes	6.12E-19	2.86E-13	2.86E-13		3.44E-12	Yes	4.28E-17	2.01E-11	2.01E-11
carbon disulfide	75-15-0		3.09E-13		7.22E-21	5.37E-15	5.37E-15	Yes	2.16E-11	Yes	5.06E-19	6.47E-11	6.47E-11
carbon tetrachloride	56-23-5	Yes	1.26E-14	Yes	1.15E-21	1.50E-15	1.50E-15	Yes	8.84E-13	Yes	8.08E-20	1.05E-13	1.05E-13
chlorobenzene	108-90-7		1.11E-14		1.66E-20	9.01E-15	9.01E-15	Yes	7.78E-13	Yes	1.16E-18	6.31E-13	6.31E-13
chloroform	67-66-3	Yes	3.27E-14	Yes	5.44E-21	9.85E-14	9.85E-14	Yes	2.29E-12	Yes	3.81E-19	6.89E-12	6.89E-12
chloromethane	74-87-3		2.96E-13		1.28E-20	3.28E-15	3.28E-15	Yes	2.08E-11	Yes	8.97E-19	6.18E-11	6.18E-11
dibromochloromethane	124-48-1	Yes	6.07E-14	Yes	7.45E-18	2.23E-12	2.23E-12		4.25E-12	Yes	5.23E-16	1.57E-10	1.57E-10
dimethyl phthalate	131-11-3		5.25E-13		4.34E-17	4.15E-11	4.15E-11		3.67E-11		3.06E-15	2.92E-09	2.92E-09
di-n-butyl phthalate	84-74-2		1.22E-12		1.63E-14	5.82E-08	5.82E-08		8.56E-11	Yes	1.16E-12	4.08E-06	4.08E-06
ethane	74-84-0		2.95E-09		7.71E-18	1.71E-11	1.71E-11		2.06E-07		5.39E-16	1.19E-09	1.19E-09
ethylbenzene	100-41-4	Yes	9.79E-15	Yes	9.65E-21	3.23E-14	3.23E-14	Yes	6.85E-13	Yes	6.76E-19	2.26E-12	2.26E-12
HD	505-60-2	Yes	3.06E-12	Yes	5.51E-18	2.69E-13	2.69E-13	Yes	2.14E-10	Yes	3.86E-16	1.88E-11	1.88E-11
hexane	110-54-3		2.75E-14		1.85E-21	8.08E-15	8.08E-15	Yes	1.93E-12	Yes	1.30E-19	6.97E-12	6.97E-12
methane	74-82-8		6.67E-08		2.36E-17	9.19E-11	9.19E-11		4.67E-06		1.65E-15	6.43E-09	6.43E-09
methylene chloride	75-09-2	Yes	4.26E-14	Yes	3.69E-21	1.29E-13	1.29E-13	Yes	2.98E-12	Yes	2.58E-19	9.03E-12	9.03E-12
propene	115-07-1		7.23E-10		5.64E-18	4.41E-12	4.41E-12	Yes	5.06E-08		3.95E-16	3.09E-10	3.09E-10
styrene	100-42-5		1.08E-13		7.11E-17	2.22E-11	2.22E-11	Yes	7.59E-12	Yes	4.99E-15	2.13E-09	2.13E-09
tetrachloroethene	127-18-4	Yes	1.15E-14	Yes	2.20E-21	3.89E-14	3.89E-14	Yes	8.05E-13	Yes	1.54E-19	2.72E-12	2.72E-12
toluene	108-88-3		1.22E-10		6.14E-17	8.50E-12	8.50E-12	Yes	8.56E-09	Yes	4.30E-15	2.68E-08	2.68E-08
trichloroethene	79-01-6	Yes	1.46E-14	Yes	4.89E-21	4.44E-14	4.44E-14	Yes	1.02E-12	Yes	3.42E-19	3.11E-12	3.11E-12
vinyl chloride	75-01-4	Yes	2.18E-12	Yes	2.26E-20	1.21E-14	1.21E-14	Yes	1.53E-10	Yes	1.58E-18	8.50E-13	8.50E-13
xylenes	1330-20-7		4.45E-12		2.41E-17	7.40E-13	7.40E-13	Yes	3.11E-10	Yes	1.68E-15	1.05E-09	1.05E-09
3,3',4,4'-TCB (PCB 77)	32598-13-3							Yes	2.55E-20	Yes	3.04E-21	1.67E-15	1.67E-15
2,3',4,4',5-PeCB (PCB 118)	31508-00-6							Yes	1.06E-19	Yes	1.27E-20	6.95E-15	6.95E-15
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4							Yes	5.09E-20	Yes	6.08E-21	3.34E-15	3.34E-15
total coplanar PCBs	NA	Yes	1.04E-25	Yes	6.35E-27	1.69E-16	1.69E-16						
ammonia	7664-41-7		5.56E-12		1.64E-17	7.00E-12	7.00E-12	Yes	3.89E-10		1.15E-15	4.90E-10	4.90E-10
aluminum	7429-90-5		2.11E-11		1.20E-18	7.52E-14	7.52E-14	Yes	1.48E-09	Yes	8.37E-17	4.37E-09	4.37E-09
cadmium	7440-43-9	Yes	1.60E-13		1.75E-20	3.00E-12	3.00E-12	Yes	1.12E-11	Yes	1.22E-18	4.68E-10	4.68E-10
chlorine	7782-50-5		6.67E-11		8.54E-17	7.05E-11	7.05E-11	Yes	4.67E-09	Yes	5.98E-15	2.66E-08	2.66E-08
chromium (3+)	7440-47-3		4.41E-13		5.25E-20	1.52E-11	1.52E-11		3.09E-11	Yes	3.68E-18	1.97E-09	1.97E-09
chromium (6+)	18540-29-9	Yes	4.41E-13	Yes	5.25E-20	2.81E-11	2.81E-11	Yes	3.09E-11	Yes	3.68E-18	1.97E-09	1.97E-09
copper	7440-50-8		1.65E-11		2.61E-17	5.80E-10	5.80E-10		1.16E-09	Yes	1.83E-15	7.71E-08	7.71E-08
hydrogen chloride	7647-01-0		4.24E-10		7.36E-17	3.51E-10	3.51E-10	Yes	2.97E-08		5.15E-15	2.45E-08	2.45E-08
iron	7439-89-6		6.06E-11		1.15E-18	1.40E-09	1.40E-09		4.24E-09	Yes	8.02E-17	2.32E-07	2.32E-07
lead	7439-92-1	Yes	6.63E-13	Yes	1.99E-18	2.87E-11	2.87E-11		4.64E-11		1.39E-16	9.49E-10	9.49E-10
manganese	7439-96-5		7.72E-11		1.56E-17	1.66E-09	1.66E-09	Yes	5.40E-09	Yes	1.09E-15	2.42E-07	2.42E-07
total mercury	NA												
mercuric chloride	7487-94-7		1.09E-17		3.12E-20	3.91E-16	3.91E-16	Yes	7.63E-16	Yes	4.36E-18	6.41E-14	6.41E-14
methyl mercury	22967-92-6		0.00E+00		6.10E-23	2.22E-14	2.22E-14		0.00E+00	Yes	8.41E-21	6.03E-12	6.03E-12
elemental mercury	7439-97-6		0.00E+00		0.00E+00	0.00E+00	0.00E+00	Yes	0.00E+00		0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	Yes	2.59E-13		1.80E-19	7.57E-12	7.57E-12	Yes	1.81E-11	Yes	1.26E-17	1.04E-09	1.04E-09
vanadium	7440-62-2		8.27E-13		2.34E-18	1.51E-11	1.51E-11	Yes	5.79E-11	Yes	1.64E-16	2.39E-09	2.39E-09
zinc	7440-66-6		2.76E-11		5.79E-18	5.57E-10	5.57E-10		1.93E-09	Yes	4.06E-16	8.65E-08	8.65E-08

a. Exposures to total PCDDs/PCDFs and total coplanar PCBs are presented in units of mg TEQ/(kg-day)

b. Exposures to total PCDDs/PCDFs are presented in units of mg TEQ/(kg-day)

TOTAL COPC UPTAKE FOR EACH EXPOSURE SCENARIO

Infant Subsistence Fisher Exposure Scenario													
		CARCINOGENIC EFFECTS:						NONCARCINOGENIC EFFECTS:					
		Direct Exposure		Indirect Exposure				Direct Exposure		Indirect Exposure			
COPC	CAS Number	Inhalation Cancer Slope Factor?	Inhalation Exposure (mg/kg-day)[a]	Oral Cancer Slope Factor?	Dermal Exposure (mg/kg-day)[a]	Total Ingestion Exposure (mg/kg-day)[a]	Total Indirect Exposure (mg/kg-day)[a]	Inhalation Reference Dose?	Inhalation Exposure (mg/kg-day)[b]	Oral Reference Dose?	Dermal Exposure (mg/kg-day)[b]	Total Ingestion Exposure (mg/kg-day)[b]	Total Indirect Exposure (mg/kg-day)[b]
2-butanone	78-93-3		1.41E-13		6.93E-18	3.96E-13	3.96E-13	Yes	9.88E-12	Yes	4.85E-16	1.00E-10	1.00E-10
2-ethyl 1,3-butadiene	3404-63-5		6.67E-12		6.97E-19	1.13E-12	1.13E-12		4.67E-10		4.88E-17	7.88E-11	7.88E-11
acetone	67-64-1		2.52E-13		3.59E-18	3.43E-13	3.43E-13	Yes	1.77E-11	Yes	2.51E-16	1.17E-10	1.17E-10
benzene	71-43-2	Yes	7.23E-10	Yes	1.41E-16	2.21E-09	2.21E-09	Yes	5.06E-08	Yes	9.87E-15	1.55E-07	1.55E-07
benzyl alcohol	100-51-6		5.29E-13		9.11E-16	9.64E-10	9.64E-10		3.70E-11	Yes	7.17E-14	7.58E-08	7.58E-08
bis(2-ethylhexyl)-phthalate	117-81-7	Yes	3.87E-12	Yes	1.15E-14	3.55E-09	3.55E-09		2.71E-10	Yes	8.21E-13	2.48E-07	2.48E-07
bromodichloromethane	75-27-4	Yes	4.92E-14	Yes	6.12E-19	2.88E-13	2.88E-13		3.44E-12	Yes	4.28E-17	2.01E-11	2.01E-11
carbon disulfide	75-15-0		3.09E-13		7.22E-21	1.23E-14	1.23E-14	Yes	2.16E-11	Yes	5.06E-19	6.58E-11	6.58E-11
carbon tetrachloride	56-23-5	Yes	1.26E-14	Yes	1.15E-21	2.35E-15	2.35E-15	Yes	8.84E-13	Yes	8.08E-20	1.65E-13	1.65E-13
chlorobenzene	108-90-7		1.11E-14		1.66E-20	9.77E-15	9.77E-15	Yes	7.78E-13	Yes	1.16E-18	6.84E-13	6.84E-13
chloroform	67-66-3	Yes	3.27E-14	Yes	5.44E-21	9.96E-14	9.96E-14	Yes	2.29E-12	Yes	3.81E-19	6.97E-12	6.97E-12
chloromethane	74-87-3		2.96E-13		1.28E-20	5.67E-15	5.67E-15	Yes	2.08E-11	Yes	8.97E-19	6.21E-11	6.21E-11
dibromochloromethane	124-48-1	Yes	6.07E-14	Yes	7.45E-18	2.24E-12	2.24E-12		4.25E-12	Yes	5.23E-16	1.57E-10	1.57E-10
dimethyl phthalate	131-11-3		5.25E-13		4.34E-17	4.15E-11	4.15E-11		3.67E-11		3.06E-15	2.92E-09	2.92E-09
di-n-butyl phthalate	84-74-2		1.22E-12		1.63E-14	5.82E-08	5.82E-08		8.56E-11	Yes	1.16E-12	4.08E-06	4.08E-06
ethane	74-84-0		2.95E-09		7.71E-18	4.21E-11	4.21E-11		2.06E-07		5.39E-16	2.95E-09	2.95E-09
ethylbenzene	100-41-4	Yes	9.79E-15	Yes	9.65E-21	3.50E-14	3.50E-14	Yes	6.85E-13	Yes	6.76E-19	2.45E-12	2.45E-12
HD	505-60-2	Yes	3.06E-12	Yes	5.51E-18	4.60E-13	4.60E-13	Yes	2.14E-10	Yes	3.86E-16	3.22E-11	3.22E-11
hexane	110-54-3		2.75E-14		1.85E-21	2.02E-14	2.02E-14	Yes	1.93E-12	Yes	1.30E-19	8.89E-12	8.89E-12
methane	74-82-8		6.67E-08		2.36E-17	2.26E-10	2.26E-10		4.67E-06		1.65E-15	1.58E-08	1.58E-08
methylene chloride	75-09-2	Yes	4.26E-14	Yes	3.69E-21	1.29E-13	1.29E-13	Yes	2.98E-12	Yes	2.58E-19	9.06E-12	9.06E-12
propene	115-07-1		7.23E-10		5.64E-18	1.06E-11	1.06E-11	Yes	5.06E-08		3.95E-16	7.45E-10	7.45E-10
styrene	100-42-5		1.08E-13		7.11E-17	2.22E-11	2.22E-11	Yes	7.59E-12	Yes	4.99E-15	2.14E-09	2.14E-09
tetrachloroethene	127-18-4	Yes	1.15E-14	Yes	2.20E-21	4.41E-14	4.41E-14	Yes	8.05E-13	Yes	1.54E-19	3.09E-12	3.09E-12
toluene	108-88-3		1.22E-10		6.14E-17	1.55E-11	1.55E-11	Yes	8.56E-09	Yes	4.30E-15	2.79E-08	2.79E-08
trichloroethene	79-01-6	Yes	1.46E-14	Yes	4.89E-21	4.55E-14	4.55E-14	Yes	1.02E-12	Yes	3.42E-19	3.19E-12	3.19E-12
vinyl chloride	75-01-4	Yes	2.18E-12	Yes	2.26E-20	2.33E-14	2.33E-14	Yes	1.53E-10	Yes	1.58E-18	1.63E-12	1.63E-12
xylenes	1330-20-7		4.45E-12		2.41E-17	1.29E-12	1.29E-12	Yes	3.11E-10	Yes	1.68E-15	1.14E-09	1.14E-09
3,3',4,4'-TCB (PCB 77)	32598-13-3							Yes	2.55E-20	Yes	3.04E-21	3.97E-15	3.97E-15
2,3',4,4',5-PeCB (PCB 118)	31508-00-6							Yes	1.06E-19	Yes	1.27E-20	1.66E-14	1.66E-14
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4							Yes	5.09E-20	Yes	6.08E-21	7.95E-15	7.95E-15
total coplanar PCBs	NA	Yes	1.04E-25	Yes	6.35E-27	4.03E-16	4.03E-16						
ammonia	7664-41-7		5.56E-12		1.64E-17	7.13E-12	7.13E-12	Yes	3.89E-10		1.15E-15	4.99E-10	4.99E-10
aluminum	7429-90-5		2.11E-11		1.20E-18	1.88E-13	1.88E-13	Yes	1.48E-09	Yes	8.37E-17	4.39E-09	4.39E-09
cadmium	7440-43-9	Yes	1.60E-13		1.75E-20	3.21E-12	3.21E-12	Yes	1.12E-11	Yes	1.22E-18	5.02E-10	5.02E-10
chlorine	7782-50-5		6.67E-11		8.54E-17	7.10E-11	7.10E-11	Yes	4.67E-09	Yes	5.98E-15	2.67E-08	2.67E-08
chromium (3+)	7440-47-3		4.41E-13		5.25E-20	1.52E-11	1.52E-11		3.09E-11	Yes	3.68E-18	1.97E-09	1.97E-09
chromium (6+)	18540-29-9	Yes	4.41E-13	Yes	5.25E-20	2.81E-11	2.81E-11	Yes	3.09E-11	Yes	3.68E-18	1.97E-09	1.97E-09
copper	7440-50-8		1.65E-11		2.61E-17	5.80E-10	5.80E-10		1.16E-09	Yes	1.83E-15	7.71E-08	7.71E-08
hydrogen chloride	7647-01-0		4.24E-10		7.36E-17	3.54E-10	3.54E-10	Yes	2.97E-08		5.15E-15	2.48E-08	2.48E-08
iron	7439-89-6		6.06E-11		1.15E-18	1.40E-09	1.40E-09		4.24E-09	Yes	8.02E-17	2.32E-07	2.32E-07
lead	7439-92-1	Yes	6.63E-13	Yes	1.99E-18	2.87E-11	2.87E-11		4.64E-11		1.39E-16	9.49E-10	9.49E-10
manganese	7439-96-5		7.72E-11		1.56E-17	1.66E-09	1.66E-09	Yes	5.40E-09	Yes	1.09E-15	2.42E-07	2.42E-07
total mercury	NA												
mercuric chloride	7487-94-7		1.09E-17		3.12E-20	3.91E-16	3.91E-16	Yes	7.63E-16	Yes	4.36E-18	6.41E-14	6.41E-14
methyl mercury	22967-92-6		0.00E+00		6.10E-23	5.53E-14	5.53E-14		0.00E+00	Yes	8.41E-21	1.51E-11	1.51E-11
elemental mercury	7439-97-6		0.00E+00		0.00E+00	0.00E+00	0.00E+00	Yes	0.00E+00		0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	Yes	2.59E-13		1.80E-19	7.60E-12	7.60E-12	Yes	1.81E-11	Yes	1.26E-17	1.04E-09	1.04E-09
vanadium	7440-62-2		8.27E-13		2.34E-18	1.51E-11	1.51E-11	Yes	5.79E-11	Yes	1.64E-16	2.39E-09	2.39E-09
zinc	7440-66-6		2.76E-11		5.79E-18	6.42E-10	6.42E-10		1.93E-09	Yes	4.06E-16	1.00E-07	1.00E-07

a. Exposures to total PCDDs/PCDFs and total coplanar PCBs are presented in units of mg TEQ/(kg-day)

b. Exposures to total PCDDs/PCDFs are presented in units of mg TEQ/(kg-day)

TOTAL COPC UPTAKE FOR EACH EXPOSURE SCENARIO

Infant Subsistence Farmer Exposure Scenario													
		CARCINOGENIC EFFECTS:						NONCARCINOGENIC EFFECTS:					
		Direct Exposure		Indirect Exposure				Direct Exposure		Indirect Exposure			
COPC	CAS Number	Inhalation Cancer Slope Factor?	Inhalation Exposure (mg/kg-day)[a]	Oral Cancer Slope Factor?	Dermal Exposure (mg/kg-day)[a]	Total Ingestion Exposure (mg/kg-day)[a]	Total Indirect Exposure (mg/kg-day)[a]	Inhalation Reference Dose?	Inhalation Exposure (mg/kg-day)[b]	Oral Reference Dose?	Dermal Exposure (mg/kg-day)[b]	Total Ingestion Exposure (mg/kg-day)[b]	Total Indirect Exposure (mg/kg-day)[b]
2-butanone	78-93-3		1.41E-13		6.93E-18	9.84E-13	9.84E-13	Yes	9.88E-12	Yes	4.85E-16	2.06E-10	2.06E-10
2-ethyl 1,3-butadiene	3404-63-5		6.67E-12		6.97E-19	4.73E-13	4.73E-13		4.67E-10		4.88E-17	3.31E-11	3.31E-11
acetone	67-64-1		2.52E-13		3.59E-18	8.47E-13	8.47E-13	Yes	1.77E-11	Yes	2.51E-16	2.13E-10	2.13E-10
benzene	71-43-2	Yes	7.23E-10	Yes	1.41E-16	2.22E-09	2.22E-09	Yes	5.06E-08	Yes	9.87E-15	1.56E-07	1.56E-07
benzyl alcohol	100-51-6		5.29E-13		9.11E-16	2.41E-09	2.41E-09		3.70E-11	Yes	7.17E-14	1.90E-07	1.90E-07
bis(2-ethylhexyl)-phthalate	117-81-7	Yes	3.87E-12	Yes	1.15E-14	8.86E-09	8.86E-09		2.71E-10	Yes	8.21E-13	6.20E-07	6.20E-07
bromodichloromethane	75-27-4	Yes	4.92E-14	Yes	6.12E-19	7.15E-13	7.15E-13		3.44E-12	Yes	4.28E-17	5.00E-11	5.00E-11
carbon disulfide	75-15-0		3.09E-13		7.22E-21	6.49E-15	6.49E-15	Yes	2.16E-11	Yes	5.06E-19	6.49E-11	6.49E-11
carbon tetrachloride	56-23-5	Yes	1.26E-14	Yes	1.15E-21	2.90E-15	2.90E-15	Yes	8.84E-13	Yes	8.08E-20	2.03E-13	2.03E-13
chlorobenzene	108-90-7		1.11E-14		1.66E-20	2.18E-14	2.18E-14	Yes	7.78E-13	Yes	1.16E-18	1.52E-12	1.52E-12
chloroform	67-66-3	Yes	3.27E-14	Yes	5.44E-21	1.00E-13	1.00E-13	Yes	2.29E-12	Yes	3.81E-19	7.03E-12	7.03E-12
chloromethane	74-87-3		2.96E-13		1.28E-20	5.80E-15	5.80E-15	Yes	2.08E-11	Yes	8.97E-19	6.23E-11	6.23E-11
dibromochloromethane	124-48-1	Yes	6.07E-14	Yes	7.45E-18	5.58E-12	5.58E-12		4.25E-12	Yes	5.23E-16	3.92E-10	3.92E-10
dimethyl phthalate	131-11-3		5.25E-13		4.34E-17	1.04E-10	1.04E-10		3.67E-11		3.06E-15	7.29E-09	7.29E-09
di-n-butyl phthalate	84-74-2		1.22E-12		1.63E-14	1.46E-07	1.46E-07		8.56E-11	Yes	1.16E-12	1.02E-05	1.02E-05
ethane	74-84-0		2.95E-09		7.71E-18	1.76E-11	1.76E-11		2.06E-07		5.39E-16	1.23E-09	1.23E-09
ethylbenzene	100-41-4	Yes	9.79E-15	Yes	9.65E-21	3.49E-14	3.49E-14	Yes	6.85E-13	Yes	6.76E-19	2.44E-12	2.44E-12
HD	505-60-2	Yes	3.06E-12	Yes	5.51E-18	4.83E-13	4.83E-13	Yes	2.14E-10	Yes	3.86E-16	3.38E-11	3.38E-11
hexane	110-54-3		2.75E-14		1.85E-21	8.12E-15	8.12E-15	Yes	1.93E-12	Yes	1.30E-19	6.98E-12	6.98E-12
methane	74-82-8		6.67E-08		2.36E-17	9.58E-11	9.58E-11		4.67E-06		1.65E-15	6.71E-09	6.71E-09
methylene chloride	75-09-2	Yes	4.26E-14	Yes	3.69E-21	1.34E-13	1.34E-13	Yes	2.98E-12	Yes	2.58E-19	9.36E-12	9.36E-12
propene	115-07-1		7.23E-10		5.64E-18	4.80E-12	4.80E-12	Yes	5.06E-08		3.95E-16	3.36E-10	3.36E-10
styrene	100-42-5		1.08E-13		7.11E-17	5.55E-11	5.55E-11	Yes	7.59E-12	Yes	4.99E-15	5.30E-09	5.30E-09
tetrachloroethene	127-18-4	Yes	1.15E-14	Yes	2.20E-21	4.12E-14	4.12E-14	Yes	8.05E-13	Yes	1.54E-19	2.88E-12	2.88E-12
toluene	108-88-3		1.22E-10		6.14E-17	1.43E-11	1.43E-11	Yes	8.56E-09	Yes	4.30E-15	2.79E-08	2.79E-08
trichloroethene	79-01-6	Yes	1.46E-14	Yes	4.89E-21	4.54E-14	4.54E-14	Yes	1.02E-12	Yes	3.42E-19	3.18E-12	3.18E-12
vinyl chloride	75-01-4	Yes	2.18E-12	Yes	2.26E-20	1.92E-14	1.92E-14	Yes	1.53E-10	Yes	1.58E-18	1.35E-12	1.35E-12
xylenes	1330-20-7		4.45E-12		2.41E-17	1.30E-12	1.30E-12	Yes	3.11E-10	Yes	1.68E-15	1.16E-09	1.16E-09
3,3',4,4'-TCB (PCB 77)	32598-13-3							Yes	2.55E-20	Yes	3.04E-21	1.86E-15	1.86E-15
2,3',4,4',5-PeCB (PCB 118)	31508-00-6							Yes	1.06E-19	Yes	1.27E-20	7.73E-15	7.73E-15
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4							Yes	5.09E-20	Yes	6.08E-21	3.71E-15	3.71E-15
total coplanar PCBs	NA	Yes	1.04E-25	Yes	6.35E-27	1.88E-16	1.88E-16						
ammonia	7664-41-7		5.56E-12		1.64E-17	1.74E-11	1.74E-11	Yes	3.89E-10		1.15E-15	1.22E-09	1.22E-09
aluminum	7429-90-5		2.11E-11		1.20E-18	7.56E-14	7.56E-14	Yes	1.48E-09	Yes	8.37E-17	4.37E-09	4.37E-09
cadmium	7440-43-9	Yes	1.60E-13		1.75E-20	7.27E-12	7.27E-12	Yes	1.12E-11	Yes	1.22E-18	1.09E-09	1.09E-09
chlorine	7782-50-5		6.67E-11		8.54E-17	1.76E-10	1.76E-10	Yes	4.67E-09	Yes	5.98E-15	4.57E-08	4.57E-08
chromium (3+)	7440-47-3		4.41E-13		5.25E-20	3.79E-11	3.79E-11		3.09E-11	Yes	3.68E-18	4.79E-09	4.79E-09
chromium (6+)	18540-29-9	Yes	4.41E-13	Yes	5.25E-20	6.84E-11	6.84E-11	Yes	3.09E-11	Yes	3.68E-18	4.79E-09	4.79E-09
copper	7440-50-8		1.65E-11		2.61E-17	1.45E-09	1.45E-09		1.16E-09	Yes	1.83E-15	1.88E-07	1.88E-07
hydrogen chloride	7647-01-0		4.24E-10		7.36E-17	8.73E-10	8.73E-10	Yes	2.97E-08		5.15E-15	6.11E-08	6.11E-08
iron	7439-89-6		6.06E-11		1.15E-18	3.49E-09	3.49E-09		4.24E-09	Yes	8.02E-17	5.61E-07	5.61E-07
lead	7439-92-1	Yes	6.63E-13	Yes	1.99E-18	6.88E-11	6.88E-11		4.64E-11		1.39E-16	2.37E-09	2.37E-09
manganese	7439-96-5		7.72E-11		1.56E-17	4.15E-09	4.15E-09	Yes	5.40E-09	Yes	1.09E-15	5.80E-07	5.80E-07
total mercury	NA												
mercuric chloride	7487-94-7		1.09E-17		3.12E-20	9.75E-16	9.75E-16	Yes	7.63E-16	Yes	4.36E-18	1.56E-13	1.56E-13
methyl mercury	22967-92-6		0.00E+00		6.10E-23	2.22E-14	2.22E-14		0.00E+00	Yes	8.41E-21	6.04E-12	6.04E-12
elemental mercury	7439-97-6		0.00E+00		0.00E+00	0.00E+00	0.00E+00	Yes	0.00E+00		0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	Yes	2.59E-13		1.80E-19	1.89E-11	1.89E-11	Yes	1.81E-11	Yes	1.26E-17	2.51E-09	2.51E-09
vanadium	7440-62-2		8.27E-13		2.34E-18	3.78E-11	3.78E-11	Yes	5.79E-11	Yes	1.64E-16	5.72E-09	5.72E-09
zinc	7440-66-6		2.76E-11		5.79E-18	1.31E-09	1.31E-09		1.93E-09	Yes	4.06E-16	1.94E-07	1.94E-07

a. Exposures to total PCDDs/PCDFs and total coplanar PCBs are presented in units of mg TEQ/(kg-day)

b. Exposures to total PCDDs/PCDFs are presented in units of mg TEQ/(kg-day)

MEDIA CONCENTRATIONS OF COPCS

CONCENTRATIONS OF COPCS IN SOIL FOR EACH EXPOSURE SCENARIO

		Soil Loss Constants							Soil Concentrations					
		Due to Leaching	Due to Erosion	Due to Runoff	Due to Degradation	Due to Volatilization	Due to All Processes	Deposition Term	Highest Annual Average Soil Concentration	Soil Concentration Averaged Over 30 Year Exposure Duration	Soil Concentration Averaged Over 40 Year Exposure Duration	Soil Concentration Averaged Over 25 Year Exposure Duration	Soil Concentration Averaged Over 5 Year Exposure Duration	Soil Concentration Averaged Over 1 Year Exposure Duration
		(yr^{-1})	(yr^{-1})	(yr^{-1})	(yr^{-1})	(yr^{-1})	(yr^{-1})	(mg COPC/kg soil-yr)	(mg COPC/kg soil)[a]	(mg COPC/kg soil)	(mg COPC/kg soil)	(mg COPC/kg soil)	(mg COPC/kg soil)	(mg COPC/kg soil)
COPC	CAS No.	ksl	kse	ksr	ksg	ksv	ks	Ds	Cs_{ID}	Cs	Cs	Cs	Cs	Cs
2-butanone	78-93-3	0.00	0	1.00	36.14	819.86	857.00	8.26E-08	9.64E-11	1.61E-11	1.21E-11	1.93E-11	9.64E-11	9.64E-11
2-ethyl 1,3-butadiene	3404-63-5	0.00	0	0.13	0	402,555.36	402,555.49	3.90E-06	9.70E-12	1.62E-12	1.21E-12	1.94E-12	9.70E-12	9.70E-12
acetone	67-64-1	0.00	0	1.92	36.14	2,920.84	2,958.90	1.48E-07	4.99E-11	8.32E-12	6.24E-12	9.98E-12	4.99E-11	4.99E-11
benzene	71-43-2	0.00	0	1.67	15.81	215,789.41	215,806.89	4.23E-04	1.96E-09	3.27E-10	2.45E-10	3.92E-10	1.96E-09	1.96E-09
benzyl alcohol	100-51-6	0.00	0	1.67	0	0.15	1.82	3.10E-07	1.70E-07	2.84E-08	2.13E-08	3.40E-08	1.52E-07	1.52E-07
bis(2-ethylhexyl)-phthalate	117-81-7	0.00	0	0.00	11.04	0.00	11.04	9.90E-07	8.97E-08	1.49E-08	1.12E-08	1.79E-08	8.80E-08	8.80E-08
bromodichloromethane	75-27-4	0.00	0	1.74	0	764.31	766.05	2.88E-08	3.76E-11	6.26E-12	4.70E-12	7.51E-12	3.76E-11	3.76E-11
carbon disulfide	75-15-0	0.00	0	1.89	0	1,801,581.36	1,801,583.25	1.81E-07	1.00E-13	1.67E-14	1.26E-14	2.01E-14	1.00E-13	1.00E-13
carbon tetrachloride	56-23-5	0.00	0	0.88	0.7	351,308.37	351,309.94	7.39E-09	2.10E-14	3.51E-15	2.63E-15	4.21E-15	2.10E-14	2.10E-14
chlorobenzene	108-90-7	0.00	0	0.74	1.69	32,256.15	32,258.58	6.50E-09	2.02E-13	3.36E-14	2.52E-14	4.03E-14	2.02E-13	2.02E-13
chloroform	67-66-3	0.00	0	1.98	1.41	252,746.85	252,750.25	1.91E-08	7.56E-14	1.26E-14	9.45E-15	1.51E-14	7.56E-14	7.56E-14
chloromethane	74-87-3	0.00	0	2.19	9.03	973,259.29	973,270.51	1.73E-07	1.78E-13	2.97E-14	2.23E-14	3.57E-14	1.78E-13	1.78E-13
dibromochloromethane	124-48-1	0.00	0	0.51	1.41	58.78	60.69	3.55E-08	5.85E-10	9.75E-11	7.31E-11	1.17E-10	5.83E-10	5.83E-10
dimethyl phthalate	131-11-3	0.00	0	0.89	36.14	0.92	37.96	3.07E-07	8.09E-09	1.35E-09	1.01E-09	1.62E-09	8.05E-09	8.05E-09
di-n-butyl phthalate	84-74-2	0.00	0	0.00	11	0.00	11.00	7.16E-07	6.51E-08	1.08E-08	8.13E-09	1.30E-08	6.39E-08	6.39E-08
ethane	74-84-0	0.00	0	0.93	0	16,092,250.18	16,092,251.12	1.72E-03	1.07E-10	1.79E-11	1.34E-11	2.14E-11	1.07E-10	1.07E-10
ethylbenzene	100-41-4	0.00	0	0.49	25.29	42,648.74	42,674.52	5.73E-09	1.34E-13	2.24E-14	1.68E-14	2.68E-14	1.34E-13	1.34E-13
HD	505-60-2	0.00	0	0.17	23349	48.17	23,397.34	1.79E-06	7.66E-11	1.28E-11	9.58E-12	1.53E-11	7.66E-11	7.66E-11
hexane	110-54-3	0.00	0	0.03	0	624,969.56	624,969.58	1.61E-08	2.58E-14	4.29E-15	3.22E-15	5.15E-15	2.58E-14	2.58E-14
methane	74-82-8	0.00	0	1.92	0	118,827,923.45	118,827,925.37	3.90E-02	3.29E-10	5.48E-11	4.11E-11	6.57E-11	3.29E-10	3.29E-10
methylene chloride	75-09-2	0.00	0	2.69	9.03	486,489.52	486,501.24	2.49E-08	5.12E-14	8.54E-15	6.40E-15	1.02E-14	5.12E-14	5.12E-14
propene	115-07-1	0.00	0	0.98	9.03	5,389,830.99	5,389,841.00	4.23E-04	7.85E-11	1.31E-11	9.81E-12	1.57E-11	7.85E-11	7.85E-11
styrene	100-42-5	0.00	0	0.00	9.03	83.94	92.98	6.35E-08	6.83E-10	1.14E-10	8.53E-11	1.37E-10	6.81E-10	6.81E-10
tetrachloroethene	127-18-4	0.00	0	0.95	0.7	219,676.70	219,678.35	6.73E-09	3.07E-14	5.11E-15	3.83E-15	6.13E-15	3.07E-14	3.07E-14
toluene	108-88-3	0.00	0	0.86	11.5	83,811.07	83,823.42	7.16E-05	8.54E-10	1.42E-10	1.07E-10	1.71E-10	8.54E-10	8.54E-10
trichloroethene	79-01-6	0.00	0	0.91	0.7	125,792.23	125,793.85	8.55E-09	6.80E-14	1.13E-14	8.50E-15	1.36E-14	6.80E-14	6.80E-14
vinyl chloride	75-01-4	0.00	0	2.49	1.41	4,064,513.63	4,064,517.52	1.28E-06	3.14E-13	5.24E-14	3.93E-14	6.28E-14	3.14E-13	3.14E-13
xylenes	1330-20-7	0.00	0	0.11	9.03	7,772.27	7,781.41	2.60E-06	3.34E-10	5.57E-11	4.18E-11	6.69E-11	3.34E-10	3.34E-10
3,3',4,4'-TCB (PCB 77)	32598-13-3	0.00	0	0.00	0.03	0.00	0.03	9.31E-17	4.32E-16	2.88E-16	2.59E-16	3.03E-16	2.21E-16	2.21E-16
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	0.00	0	0.00	0.03	0.00	0.03	3.88E-16	1.80E-15	1.20E-15	1.08E-15	1.26E-15	9.22E-16	9.22E-16
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	0.00	0	0.00	0.03	0.00	0.03	1.86E-16	8.63E-16	5.76E-16	5.19E-16	6.05E-16	4.43E-16	4.43E-16
total coplanar PCBs	NA													
ammonia	7664-41-7	0.00	0	2.82	0	14,284.38	14,287.20	3.25E-06	2.28E-10	3.80E-11	2.85E-11	4.55E-11	2.28E-10	2.28E-10
aluminum	7429-90-5	0.00	0	0.04	0	27,452.55	27,452.59	1.24E-05	4.50E-10	7.51E-11	5.63E-11	9.01E-11	4.50E-10	4.50E-10
cadmium	7440-43-9	0.00	0	0.01	0	1,683.23	1,683.23	4.09E-08	2.43E-11	4.05E-12	3.04E-12	4.86E-12	2.43E-11	2.43E-11
chlorine	7782-50-5	0.00	0	1.10	0	2,459.16	2,460.26	3.90E-05	1.59E-08	2.64E-09	1.98E-09	3.17E-09	1.59E-08	1.59E-08
chromium (3+)	7440-47-3	0.00	0	0.02	0	8,571.24	8,571.26	1.13E-07	1.32E-11	2.19E-12	1.65E-12	2.63E-12	1.32E-11	1.32E-11
chromium (6+)	18540-29-9	0.00	0	0.02	0	8,571.24	8,571.26	1.13E-07	1.32E-11	2.19E-12	1.65E-12	2.63E-12	1.32E-11	1.32E-11
copper	7440-50-8	0.00	0	0.00	0	357.39	357.39	4.23E-06	1.18E-08	1.97E-09	1.48E-09	2.37E-09	1.18E-08	1.18E-08
hydrogen chloride	7647-01-0	0.00	0	2.56	0	12,667.60	12,670.15	2.48E-04	1.96E-08	3.27E-09	2.45E-09	3.92E-09	1.96E-08	1.96E-08
iron	7439-89-6	0.00	0	0.02	0	6,700.35	6,700.37	1.55E-05	2.32E-09	3.86E-10	2.90E-10	4.63E-10	2.32E-09	2.32E-09
lead	7439-92-1	0.00	0	0.00	0	112.68	112.68	1.70E-07	1.51E-09	2.51E-10	1.88E-10	3.01E-10	1.50E-09	1.50E-09
manganese	7439-96-5	0.00	0	0.01	0	2,603.88	2,603.89	1.98E-05	7.59E-09	1.26E-09	9.48E-10	1.52E-09	7.59E-09	7.59E-09
total mercury	NA													
mercuric chloride	7487-94-7	0.00	0	0.00	0	0.00	0.00	2.73E-12	1.37E-11	1.25E-11	1.28E-11	1.23E-11	6.84E-12	6.84E-12
methyl mercury	22967-92-6	0.00	0	0.00	0	0.02	0.02	5.58E-14	2.66E-13	2.00E-13	1.88E-13	2.05E-13	1.35E-13	1.35E-13
elemental mercury	7439-97-6	0.00	0	0.00	0	4.07	4.07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	0.00	0	0.01	0	1,560.22	1,560.22	6.63E-08	4.25E-11	7.08E-12	5.31E-12	8.50E-12	4.25E-11	4.25E-11
vanadium	7440-62-2	0.00	0	0.00	0	178.00	178.00	2.12E-07	1.19E-09	1.98E-10	1.49E-10	2.38E-10	1.19E-09	1.19E-09
zinc	7440-66-6	0.00	0	0.01	0	1,635.71	1,635.72	7.06E-06	4.32E-09	7.20E-10	5.40E-10	8.63E-10	4.32E-09	4.32E-09

CONCENTRATIONS OF COPCS IN SOIL FOR EACH EXPOSURE SCENARIO (TEQ BASIS)

		Soil Concentrations					
		Highest Annual Average Soil Concentration	Soil Concentration Averaged Over 30 Year Exposure Duration	Soil Concentration Averaged Over 40 Year Exposure Duration	Soil Concentration Averaged Over 25 Year Exposure Duration	Soil Concentration Averaged Over 5 Year Exposure Duration	Soil Concentration Averaged Over 1 Year Exposure Duration
		(mg COPC TEQ/kg soil)[a]	(mg COPC TEQ/kg soil)[a]	(mg COPC TEQ/kg soil)[a]	(mg COPC TEQ/kg soil)[a]	(mg COPC TEQ/kg soil)[a]	(mg COPC TEQ/kg soil)[a]
COPC	CAS No.	Cs_{ID}	Cs	Cs	Cs	Cs	Cs
2-butanone	78-93-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-ethyl 1,3-butadiene	3404-63-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
acetone	67-64-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzene	71-43-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzyl alcohol	100-51-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bis(2-ethylhexyl)-phthalate	117-81-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bromodichloromethane	75-27-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
carbon disulfide	75-15-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
carbon tetrachloride	56-23-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chlorobenzene	108-90-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloroform	67-66-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloromethane	74-87-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dibromochloromethane	124-48-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dimethyl phthalate	131-11-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
di-n-butyl phthalate	84-74-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ethane	74-84-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ethylbenzene	100-41-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
HD	505-60-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
hexane	110-54-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methane	74-82-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methylene chloride	75-09-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
propene	115-07-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
styrene	100-42-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
tetrachloroethene	127-18-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
toluene	108-88-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trichloroethene	79-01-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
vinyl chloride	75-01-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
xylenes	1330-20-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3,3',4,4'-TCB (PCB 77)	32598-13-3	4.32E-20	2.88E-20	2.59E-20	3.03E-20	2.21E-20	2.21E-20
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	5.40E-20	3.60E-20	3.24E-20	3.78E-20	2.77E-20	2.77E-20
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	2.59E-20	1.73E-20	1.56E-20	1.82E-20	1.33E-20	1.33E-20
total coplanar PCBs	NA	1.23E-19	8.21E-20	7.39E-20	8.62E-20	6.31E-20	6.31E-20
ammonia	7664-41-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
aluminum	7429-90-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cadmium	7440-43-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chlorine	7782-50-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (3+)	7440-47-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (6+)	18540-29-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
copper	7440-50-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
hydrogen chloride	7647-01-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
iron	7439-89-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
lead	7439-92-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
manganese	7439-96-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
total mercury	NA						
mercuric chloride	7487-94-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methyl mercury	22967-92-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
vanadium	7440-62-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
zinc	7440-66-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

a. The concentration of individual PCDDs and PCDFs congeners and coplanar PCBs in soil are presented in units of mg COPC TEQ/kg soil. The concentration of total PCDDs and PCDFs as well as the concentration of total coplanar PCBs in soil are presented in units of mg TEQ/kg soil and are calculated as the sum of the concentrations of all individual PCDD and PCDF congeners in soil and the concentrations of all coplanar PCBs in soil, respectively.

CONCENTRATIONS OF COPCS IN PRODUCE FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Adult Resident and Adult Subsistence Fisher Exposure Scenarios								
		Aboveground Produce - Individual Uptake Mechanisms			Exposed Produce	Protected Produce	Belowground Produce	
		Due to Direct Deposition	Due to Air-to-Plant Transfer	Due to Direct Uptake from Soil	Due to All Processes	Due to All Processes	Due to Direct Uptake from Soil	Due to All Processes
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
COPC	CAS Number	Pd	Pv	Pr	P_{ag}	P_p	Pr_{bg}	P_{bg}
2-butanone	78-93-3	0	3.87E-14	1.35E-10	1.35E-10	1.35E-10	3.71E-10	3.71E-10
2-ethyl 1,3-butadiene	3404-63-5	0	3.83E-13	1.05E-12	1.43E-12	1.05E-12	2.69E-11	2.69E-11
acetone	67-64-1	0	2.72E-14	6.97E-11	6.97E-11	6.97E-11	6.18E-10	6.18E-10
benzene	71-43-2	0	1.68E-10	7.74E-10	9.42E-10	7.74E-10	2.62E-08	2.62E-08
benzyl alcohol	100-51-6	0	1.76E-10	2.38E-07	2.38E-07	2.38E-07	1.88E-06	1.88E-06
bis(2-ethylhexyl)-phthalate	117-81-7	2.71079E-07	0.00E+00	6.53E-10	2.72E-07	6.53E-10	1.27E-13	1.27E-13
bromodichloromethane	75-27-4	0	4.00E-14	1.48E-11	1.49E-11	1.48E-11	5.48E-10	5.48E-10
carbon disulfide	75-15-0	0	1.71E-14	3.46E-14	5.18E-14	3.46E-14	2.12E-12	2.12E-12
carbon tetrachloride	56-23-5	0	3.06E-15	3.27E-15	6.32E-15	3.27E-15	3.34E-13	3.34E-13
chlorobenzene	108-90-7	0	2.18E-14	3.13E-14	5.31E-14	3.13E-14	2.54E-12	2.54E-12
chloroform	67-66-3	0	9.01E-15	3.40E-14	4.30E-14	3.40E-14	1.27E-12	1.27E-12
chloromethane	74-87-3	0	2.36E-15	2.49E-13	2.51E-13	2.49E-13	3.70E-12	3.70E-12
dibromochloromethane	124-48-1	0	1.39E-13	1.94E-10	1.94E-10	1.94E-10	1.69E-09	1.69E-09
dimethyl phthalate	131-11-3	0	1.73E-09	6.55E-09	8.28E-09	6.55E-09	3.96E-08	3.96E-08
di-n-butyl phthalate	84-74-2	0	5.21E-09	8.02E-10	6.01E-09	8.02E-10	2.01E-11	2.01E-11
ethane	74-84-0	0	3.77E-12	6.21E-11	6.59E-11	6.21E-11	6.73E-10	6.73E-10
ethylbenzene	100-41-4	0	1.88E-14	1.40E-14	3.28E-14	1.40E-14	1.73E-12	1.73E-12
HD	505-60-2	0	2.58E-10	2.00E-11	2.78E-10	2.00E-11	9.09E-11	9.09E-11
hexane	110-54-3	0	1.64E-15	9.44E-16	2.59E-15	9.44E-16	6.84E-14	6.84E-14
methane	74-82-8	0	1.11E-11	4.97E-10	5.08E-10	4.97E-10	4.98E-09	4.98E-09
methylene chloride	75-09-2	0	3.55E-15	5.86E-14	6.21E-14	5.86E-14	3.07E-12	3.07E-12
propene	115-07-1	0	2.14E-12	4.80E-11	5.01E-11	4.80E-11	5.09E-10	5.09E-10
styrene	100-42-5	0	4.75E-13	8.12E-11	8.17E-11	8.12E-11	4.49E-11	4.49E-11
tetrachloroethene	127-18-4	0	2.02E-14	2.15E-15	2.24E-14	2.15E-15	1.59E-12	1.59E-12
toluene	108-88-3	0	1.05E-10	1.52E-10	2.57E-10	1.52E-10	1.10E-08	1.10E-08
trichloroethene	79-01-6	0	3.97E-15	1.80E-14	2.20E-14	1.80E-14	5.63E-13	5.63E-13
vinyl chloride	75-01-4	0	1.89E-14	3.15E-13	3.34E-13	3.15E-13	1.29E-11	1.29E-11
xylenes	1330-20-7	0	1.17E-11	3.22E-11	4.39E-11	3.22E-11	9.22E-10	9.22E-10
3,3',4,4'-TCB (PCB 77)	32598-13-3	2.55028E-17	0.00E+00	1.95E-18	2.75E-17	1.95E-18	2.76E-18	2.76E-18
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	1.06262E-16	0.00E+00	8.14E-18	1.14E-16	8.14E-18	1.15E-17	1.15E-17
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	5.10056E-17	0.00E+00	3.91E-18	5.49E-17	3.91E-18	5.53E-18	5.53E-18
total coplanar PCBs	NA							
ammonia	7664-41-7	0	0.00E+00	1.08E-09	1.08E-09	1.08E-09	1.49E-08	1.49E-08
aluminum	7429-90-5	0	0.00E+00	8.11E-14	8.11E-14	8.11E-14	4.88E-14	4.88E-14
cadmium	7440-43-9	1.12062E-08	0.00E+00	5.06E-13	1.12E-08	5.06E-13	6.08E-13	6.08E-13
chlorine	7782-50-5	0	0.00E+00	2.22E-08	2.22E-08	2.22E-08	7.79E-08	7.79E-08
chromium (3+)	7440-47-3	3.09136E-08	0.00E+00	1.07E-14	3.09E-08	1.07E-14	9.88E-15	9.88E-15
chromium (6+)	18540-29-9	3.09136E-08	0.00E+00	1.07E-14	3.09E-08	1.07E-14	9.88E-15	9.88E-15
copper	7440-50-8	1.15929E-06	0.00E+00	5.31E-10	1.16E-06	5.31E-10	4.93E-10	4.93E-10
hydrogen chloride	7647-01-0	0	0.00E+00	6.16E-08	6.16E-08	6.16E-08	7.04E-07	7.04E-07
iron	7439-89-6	4.25062E-06	0.00E+00	5.33E-13	4.25E-06	5.33E-13	9.83E-11	9.83E-11
lead	7439-92-1	4.64645E-08	0.00E+00	3.41E-12	4.65E-08	3.41E-12	2.26E-12	2.26E-12
manganese	7439-96-5	5.40988E-06	0.00E+00	9.53E-11	5.41E-06	9.53E-11	6.32E-11	6.32E-11
total mercury	NA			0.00E+00			0.00E+00	
mercuric chloride	7487-94-7	5.9605E-13	0.00E+00	1.82E-13	7.78E-13	1.82E-13	4.51E-13	4.51E-13
methyl mercury	22967-92-6	1.68117E-13	0.00E+00	5.88E-15	1.74E-13	5.88E-15	1.98E-14	1.98E-14
elemental mercury	7439-97-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	1.81617E-08	0.00E+00	6.59E-14	1.82E-08	6.59E-14	4.25E-13	4.25E-13
vanadium	7440-62-2	5.7963E-08	0.00E+00	6.58E-13	5.80E-08	6.58E-13	5.94E-13	5.94E-13
zinc	7440-66-6	1.93405E-06	0.00E+00	6.98E-11	1.93E-06	6.98E-11	6.48E-10	6.48E-10

CONCENTRATIONS OF COPCS IN PRODUCE FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Adult Subsistence Farmer Exposure Scenario								
		Aboveground Produce - Individual Uptake Mechanisms			Exposed Produce	Protected Produce	Belowground Produce	
		Due to Direct Deposition	Due to Air-to-Plant Transfer	Due to Direct Uptake from Soil	Due to All Processes	Due to All Processes	Due to Direct Uptake from Soil	Due to All Processes
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
COPC	CAS Number	Pd	Pv	Pr	P_{ag}	P_p	Pr_{bg}	P_{bg}
2-butanone	78-93-3	0	3.87E-14	1.01E-10	1.01E-10	1.01E-10	2.78E-10	2.78E-10
2-ethyl 1,3-butadiene	3404-63-5	0	3.83E-13	7.88E-13	1.17E-12	7.88E-13	2.02E-11	2.02E-11
acetone	67-64-1	0	2.72E-14	5.23E-11	5.23E-11	5.23E-11	4.63E-10	4.63E-10
benzene	71-43-2	0	1.68E-10	5.81E-10	7.49E-10	5.81E-10	1.96E-08	1.96E-08
benzyl alcohol	100-51-6	0	1.76E-10	1.78E-07	1.78E-07	1.78E-07	1.41E-06	1.41E-06
bis(2-ethylhexyl)-phthalate	117-81-7	2.71079E-07	0.00E+00	4.90E-10	2.72E-07	4.90E-10	9.55E-14	9.55E-14
bromodichloromethane	75-27-4	0	4.00E-14	1.11E-11	1.12E-11	1.11E-11	4.11E-10	4.11E-10
carbon disulfide	75-15-0	0	1.71E-14	2.60E-14	4.31E-14	2.60E-14	1.59E-12	1.59E-12
carbon tetrachloride	56-23-5	0	3.06E-15	2.45E-15	5.51E-15	2.45E-15	2.50E-13	2.50E-13
chlorobenzene	108-90-7	0	2.18E-14	2.35E-14	4.53E-14	2.35E-14	1.91E-12	1.91E-12
chloroform	67-66-3	0	9.01E-15	2.55E-14	3.45E-14	2.55E-14	9.51E-13	9.51E-13
chloromethane	74-87-3	0	2.36E-15	1.87E-13	1.89E-13	1.87E-13	2.77E-12	2.77E-12
dibromochloromethane	124-48-1	0	1.39E-13	1.46E-10	1.46E-10	1.46E-10	1.26E-09	1.26E-09
dimethyl phthalate	131-11-3	0	1.73E-09	4.91E-09	6.64E-09	4.91E-09	2.97E-08	2.97E-08
di-n-butyl phthalate	84-74-2	0	5.21E-09	6.02E-10	5.81E-09	6.02E-10	1.51E-11	1.51E-11
ethane	74-84-0	0	3.77E-12	4.66E-11	5.04E-11	4.66E-11	5.05E-10	5.05E-10
ethylbenzene	100-41-4	0	1.88E-14	1.05E-14	2.93E-14	1.05E-14	1.30E-12	1.30E-12
HD	505-60-2	0	2.58E-10	1.50E-11	2.73E-10	1.50E-11	6.82E-11	6.82E-11
hexane	110-54-3	0	1.64E-15	7.08E-16	2.35E-15	7.08E-16	5.13E-14	5.13E-14
methane	74-82-8	0	1.11E-11	3.73E-10	3.84E-10	3.73E-10	3.73E-09	3.73E-09
methylene chloride	75-09-2	0	3.55E-15	4.39E-14	4.75E-14	4.39E-14	2.31E-12	2.31E-12
propene	115-07-1	0	2.14E-12	3.60E-11	3.81E-11	3.60E-11	3.82E-10	3.82E-10
styrene	100-42-5	0	4.75E-13	6.09E-11	6.14E-11	6.09E-11	3.37E-11	3.37E-11
tetrachloroethene	127-18-4	0	2.02E-14	1.61E-15	2.18E-14	1.61E-15	1.19E-12	1.19E-12
toluene	108-88-3	0	1.05E-10	1.14E-10	2.19E-10	1.14E-10	8.27E-09	8.27E-09
trichloroethene	79-01-6	0	3.97E-15	1.35E-14	1.75E-14	1.35E-14	4.22E-13	4.22E-13
vinyl chloride	75-01-4	0	1.89E-14	2.36E-13	2.55E-13	2.36E-13	9.65E-12	9.65E-12
xylenes	1330-20-7	0	1.17E-11	2.42E-11	3.59E-11	2.42E-11	6.91E-10	6.91E-10
3,3',4,4'-TCB (PCB 77)	32598-13-3	2.55028E-17	0.00E+00	1.76E-18	2.73E-17	1.76E-18	2.49E-18	2.49E-18
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	1.06262E-16	0.00E+00	7.33E-18	1.14E-16	7.33E-18	1.04E-17	1.04E-17
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	5.10056E-17	0.00E+00	3.52E-18	5.45E-17	3.52E-18	4.98E-18	4.98E-18
total coplanar PCBs	NA							
ammonia	7664-41-7	0	0.00E+00	8.12E-10	8.12E-10	8.12E-10	1.12E-08	1.12E-08
aluminum	7429-90-5	0	0.00E+00	6.08E-14	6.08E-14	6.08E-14	3.66E-14	3.66E-14
cadmium	7440-43-9	1.12062E-08	0.00E+00	3.80E-13	1.12E-08	3.80E-13	4.56E-13	4.56E-13
chlorine	7782-50-5	0	0.00E+00	1.66E-08	1.66E-08	1.66E-08	5.84E-08	5.84E-08
chromium (3+)	7440-47-3	3.09136E-08	0.00E+00	8.03E-15	3.09E-08	8.03E-15	7.41E-15	7.41E-15
chromium (6+)	18540-29-9	3.09136E-08	0.00E+00	8.03E-15	3.09E-08	8.03E-15	7.41E-15	7.41E-15
copper	7440-50-8	1.15929E-06	0.00E+00	3.98E-10	1.16E-06	3.98E-10	3.70E-10	3.70E-10
hydrogen chloride	7647-01-0	0	0.00E+00	4.62E-08	4.62E-08	4.62E-08	5.28E-07	5.28E-07
iron	7439-89-6	4.25062E-06	0.00E+00	4.00E-13	4.25E-06	4.00E-13	7.37E-11	7.37E-11
lead	7439-92-1	4.64645E-08	0.00E+00	2.56E-12	4.65E-08	2.56E-12	1.69E-12	1.69E-12
manganese	7439-96-5	5.40988E-06	0.00E+00	7.15E-11	5.41E-06	7.15E-11	4.74E-11	4.74E-11
total mercury	NA			0.00E+00			0.00E+00	
mercuric chloride	7487-94-7	5.9605E-13	0.00E+00	1.86E-13	7.82E-13	1.86E-13	4.61E-13	4.61E-13
methyl mercury	22967-92-6	1.68117E-13	0.00E+00	5.53E-15	1.74E-13	5.53E-15	1.86E-14	1.86E-14
elemental mercury	7439-97-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	1.81617E-08	0.00E+00	4.95E-14	1.82E-08	4.95E-14	3.19E-13	3.19E-13
vanadium	7440-62-2	5.7963E-08	0.00E+00	4.93E-13	5.80E-08	4.93E-13	4.46E-13	4.46E-13
zinc	7440-66-6	1.93405E-06	0.00E+00	5.23E-11	1.93E-06	5.23E-11	4.86E-10	4.86E-10

CONCENTRATIONS OF COPCS IN PRODUCE FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Child Exposure Scenarios								
		Aboveground Produce - Individual Uptake Mechanisms			Exposed Produce	Protected Produce	Belowground Produce	
		Due to Direct Deposition	Due to Air-to-Plant Transfer	Due to Direct Uptake from Soil	Due to All Processes	Due to All Processes	Due to Direct Uptake from Soil	Due to All Processes
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
COPC	CAS Number	Pd	Pv	Pr	P_{ag}	P_p	Pr_{bg}	P_{bg}
2-butanone	78-93-3	0	3.87E-14	8.08E-10	8.08E-10	8.08E-10	2.23E-09	2.23E-09
2-ethyl 1,3-butadiene	3404-63-5	0	3.83E-13	6.30E-12	6.69E-12	6.30E-12	1.61E-10	1.61E-10
acetone	67-64-1	0	2.72E-14	4.18E-10	4.18E-10	4.18E-10	3.71E-09	3.71E-09
benzene	71-43-2	0	1.68E-10	4.64E-09	4.81E-09	4.64E-09	1.57E-07	1.57E-07
benzyl alcohol	100-51-6	0	1.76E-10	1.27E-06	1.27E-06	1.27E-06	1.00E-05	1.00E-05
bis(2-ethylhexyl)-phthalate	117-81-7	2.71079E-07	0.00E+00	3.85E-09	2.75E-07	3.85E-09	7.50E-13	7.50E-13
bromodichloromethane	75-27-4	0	4.00E-14	8.90E-11	8.91E-11	8.90E-11	3.28E-09	3.28E-09
carbon disulfide	75-15-0	0	1.71E-14	2.08E-13	2.25E-13	2.08E-13	1.27E-11	1.27E-11
carbon tetrachloride	56-23-5	0	3.06E-15	1.96E-14	2.27E-14	1.96E-14	2.00E-12	2.00E-12
chlorobenzene	108-90-7	0	2.18E-14	1.88E-13	2.10E-13	1.88E-13	1.53E-11	1.53E-11
chloroform	67-66-3	0	9.01E-15	2.04E-13	2.13E-13	2.04E-13	7.61E-12	7.61E-12
chloromethane	74-87-3	0	2.36E-15	1.49E-12	1.50E-12	1.49E-12	2.22E-11	2.22E-11
dibromochloromethane	124-48-1	0	1.39E-13	1.16E-09	1.16E-09	1.16E-09	1.01E-08	1.01E-08
dimethyl phthalate	131-11-3	0	1.73E-09	3.91E-08	4.08E-08	3.91E-08	2.37E-07	2.37E-07
di-n-butyl phthalate	84-74-2	0	5.21E-09	4.73E-09	9.94E-09	4.73E-09	1.19E-10	1.19E-10
ethane	74-84-0	0	3.77E-12	3.73E-10	3.77E-10	3.73E-10	4.04E-09	4.04E-09
ethylbenzene	100-41-4	0	1.88E-14	8.39E-14	1.03E-13	8.39E-14	1.04E-11	1.04E-11
HD	505-60-2	0	2.58E-10	1.20E-10	3.79E-10	1.20E-10	5.45E-10	5.45E-10
hexane	110-54-3	0	1.64E-15	5.67E-15	7.31E-15	5.67E-15	4.10E-13	4.10E-13
methane	74-82-8	0	1.11E-11	2.98E-09	2.99E-09	2.98E-09	2.99E-08	2.99E-08
methylene chloride	75-09-2	0	3.55E-15	3.52E-13	3.55E-13	3.52E-13	1.84E-11	1.84E-11
propene	115-07-1	0	2.14E-12	2.88E-10	2.90E-10	2.88E-10	3.05E-09	3.05E-09
styrene	100-42-5	0	4.75E-13	4.86E-10	4.87E-10	4.86E-10	2.69E-10	2.69E-10
tetrachloroethene	127-18-4	0	2.02E-14	1.29E-14	3.31E-14	1.29E-14	9.53E-12	9.53E-12
toluene	108-88-3	0	1.05E-10	9.14E-10	1.02E-09	9.14E-10	6.62E-08	6.62E-08
trichloroethene	79-01-6	0	3.97E-15	1.08E-13	1.12E-13	1.08E-13	3.38E-12	3.38E-12
vinyl chloride	75-01-4	0	1.89E-14	1.89E-12	1.91E-12	1.89E-12	7.72E-11	7.72E-11
xylenes	1330-20-7	0	1.17E-11	1.93E-10	2.05E-10	1.93E-10	5.53E-09	5.53E-09
3,3',4,4'-TCB (PCB 77)	32598-13-3	2.55028E-17	0.00E+00	1.50E-18	2.70E-17	1.50E-18	2.12E-18	2.12E-18
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	1.06262E-16	0.00E+00	6.25E-18	1.13E-16	6.25E-18	8.85E-18	8.85E-18
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	5.10056E-17	0.00E+00	3.00E-18	5.40E-17	3.00E-18	4.25E-18	4.25E-18
total coplanar PCBs	NA							
ammonia	7664-41-7	0	0.00E+00	6.49E-09	6.49E-09	6.49E-09	8.92E-08	8.92E-08
aluminum	7429-90-5	0	0.00E+00	4.86E-13	4.86E-13	4.86E-13	2.93E-13	2.93E-13
cadmium	7440-43-9	1.12062E-08	0.00E+00	3.04E-12	1.12E-08	3.04E-12	3.65E-12	3.65E-12
chlorine	7782-50-5	0	0.00E+00	1.33E-07	1.33E-07	1.33E-07	4.67E-07	4.67E-07
chromium (3+)	7440-47-3	3.09136E-08	0.00E+00	6.43E-14	3.09E-08	6.43E-14	5.93E-14	5.93E-14
chromium (6+)	18540-29-9	3.09136E-08	0.00E+00	6.43E-14	3.09E-08	6.43E-14	5.93E-14	5.93E-14
copper	7440-50-8	1.15929E-06	0.00E+00	3.18E-09	1.16E-06	3.18E-09	2.96E-09	2.96E-09
hydrogen chloride	7647-01-0	0	0.00E+00	3.70E-07	3.70E-07	3.70E-07	4.22E-06	4.22E-06
iron	7439-89-6	4.25062E-06	0.00E+00	3.20E-12	4.25E-06	3.20E-12	5.90E-10	5.90E-10
lead	7439-92-1	4.64645E-08	0.00E+00	2.04E-11	4.65E-08	2.04E-11	1.35E-11	1.35E-11
manganese	7439-96-5	5.40988E-06	0.00E+00	5.72E-10	5.41E-06	5.72E-10	3.79E-10	3.79E-10
total mercury	NA			0.00E+00			0.00E+00	
mercuric chloride	7487-94-7	5.9605E-13	0.00E+00	9.91E-14	6.95E-13	9.91E-14	2.46E-13	2.46E-13
methyl mercury	22967-92-6	1.68117E-13	0.00E+00	3.98E-15	1.72E-13	3.98E-15	1.34E-14	1.34E-14
elemental mercury	7439-97-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	1.81617E-08	0.00E+00	3.96E-13	1.82E-08	3.96E-13	2.55E-12	2.55E-12
vanadium	7440-62-2	5.7963E-08	0.00E+00	3.94E-12	5.80E-08	3.94E-12	3.56E-12	3.56E-12
zinc	7440-66-6	1.93405E-06	0.00E+00	4.19E-10	1.93E-06	4.19E-10	3.88E-09	3.88E-09

CONCENTRATIONS OF COPCS IN PRODUCE FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Infant Exposure Scenarios								
		Aboveground Produce - Individual Uptake Mechanisms			Exposed Produce	Protected Produce	Belowground Produce	
		Due to Direct Deposition	Due to Air-to-Plant Transfer	Due to Direct Uptake from Soil	Due to All Processes	Due to All Processes	Due to Direct Uptake from Soil	Due to All Processes
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
COPC	CAS Number	Pd	Pv	Pr	P_{ag}	P_p	Pr_{bg}	P_{bg}
2-butanone	78-93-3	0	3.87E-14	8.08E-10	8.08E-10	8.08E-10	2.23E-09	2.23E-09
2-ethyl 1,3-butadiene	3404-63-5	0	3.83E-13	6.30E-12	6.69E-12	6.30E-12	1.61E-10	1.61E-10
acetone	67-64-1	0	2.72E-14	4.18E-10	4.18E-10	4.18E-10	3.71E-09	3.71E-09
benzene	71-43-2	0	1.68E-10	4.64E-09	4.81E-09	4.64E-09	1.57E-07	1.57E-07
benzyl alcohol	100-51-6	0	1.76E-10	1.27E-06	1.27E-06	1.27E-06	1.00E-05	1.00E-05
bis(2-ethylhexyl)-phthalate	117-81-7	2.71079E-07	0.00E+00	3.85E-09	2.75E-07	3.85E-09	7.50E-13	7.50E-13
bromodichloromethane	75-27-4	0	4.00E-14	8.90E-11	8.91E-11	8.90E-11	3.28E-09	3.28E-09
carbon disulfide	75-15-0	0	1.71E-14	2.08E-13	2.25E-13	2.08E-13	1.27E-11	1.27E-11
carbon tetrachloride	56-23-5	0	3.06E-15	1.96E-14	2.27E-14	1.96E-14	2.00E-12	2.00E-12
chlorobenzene	108-90-7	0	2.18E-14	1.88E-13	2.10E-13	1.88E-13	1.53E-11	1.53E-11
chloroform	67-66-3	0	9.01E-15	2.04E-13	2.13E-13	2.04E-13	7.61E-12	7.61E-12
chloromethane	74-87-3	0	2.36E-15	1.49E-12	1.50E-12	1.49E-12	2.22E-11	2.22E-11
dibromochloromethane	124-48-1	0	1.39E-13	1.16E-09	1.16E-09	1.16E-09	1.01E-08	1.01E-08
dimethyl phthalate	131-11-3	0	1.73E-09	3.91E-08	4.08E-08	3.91E-08	2.37E-07	2.37E-07
di-n-butyl phthalate	84-74-2	0	5.21E-09	4.73E-09	9.94E-09	4.73E-09	1.19E-10	1.19E-10
ethane	74-84-0	0	3.77E-12	3.73E-10	3.77E-10	3.73E-10	4.04E-09	4.04E-09
ethylbenzene	100-41-4	0	1.88E-14	8.39E-14	1.03E-13	8.39E-14	1.04E-11	1.04E-11
HD	505-60-2	0	2.58E-10	1.20E-10	3.79E-10	1.20E-10	5.45E-10	5.45E-10
hexane	110-54-3	0	1.64E-15	5.67E-15	7.31E-15	5.67E-15	4.10E-13	4.10E-13
methane	74-82-8	0	1.11E-11	2.98E-09	2.99E-09	2.98E-09	2.99E-08	2.99E-08
methylene chloride	75-09-2	0	3.55E-15	3.52E-13	3.55E-13	3.52E-13	1.84E-11	1.84E-11
propene	115-07-1	0	2.14E-12	2.88E-10	2.90E-10	2.88E-10	3.05E-09	3.05E-09
styrene	100-42-5	0	4.75E-13	4.86E-10	4.87E-10	4.86E-10	2.69E-10	2.69E-10
tetrachloroethene	127-18-4	0	2.02E-14	1.29E-14	3.31E-14	1.29E-14	9.53E-12	9.53E-12
toluene	108-88-3	0	1.05E-10	9.14E-10	1.02E-09	9.14E-10	6.62E-08	6.62E-08
trichloroethene	79-01-6	0	3.97E-15	1.08E-13	1.12E-13	1.08E-13	3.38E-12	3.38E-12
vinyl chloride	75-01-4	0	1.89E-14	1.89E-12	1.91E-12	1.89E-12	7.72E-11	7.72E-11
xylenes	1330-20-7	0	1.17E-11	1.93E-10	2.05E-10	1.93E-10	5.53E-09	5.53E-09
3,3',4,4'-TCB (PCB 77)	32598-13-3	2.55028E-17	0.00E+00	1.50E-18	2.70E-17	1.50E-18	2.12E-18	2.12E-18
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	1.06262E-16	0.00E+00	6.25E-18	1.13E-16	6.25E-18	8.85E-18	8.85E-18
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	5.10056E-17	0.00E+00	3.00E-18	5.40E-17	3.00E-18	4.25E-18	4.25E-18
total coplanar PCBs	NA							
ammonia	7664-41-7	0	0.00E+00	6.49E-09	6.49E-09	6.49E-09	8.92E-08	8.92E-08
aluminum	7429-90-5	0	0.00E+00	4.86E-13	4.86E-13	4.86E-13	2.93E-13	2.93E-13
cadmium	7440-43-9	1.12062E-08	0.00E+00	3.04E-12	1.12E-08	3.04E-12	3.65E-12	3.65E-12
chlorine	7782-50-5	0	0.00E+00	1.33E-07	1.33E-07	1.33E-07	4.67E-07	4.67E-07
chromium (3+)	7440-47-3	3.09136E-08	0.00E+00	6.43E-14	3.09E-08	6.43E-14	5.93E-14	5.93E-14
chromium (6+)	18540-29-9	3.09136E-08	0.00E+00	6.43E-14	3.09E-08	6.43E-14	5.93E-14	5.93E-14
copper	7440-50-8	1.15929E-06	0.00E+00	3.18E-09	1.16E-06	3.18E-09	2.96E-09	2.96E-09
hydrogen chloride	7647-01-0	0	0.00E+00	3.70E-07	3.70E-07	3.70E-07	4.22E-06	4.22E-06
iron	7439-89-6	4.25062E-06	0.00E+00	3.20E-12	4.25E-06	3.20E-12	5.90E-10	5.90E-10
lead	7439-92-1	4.64645E-08	0.00E+00	2.04E-11	4.65E-08	2.04E-11	1.35E-11	1.35E-11
manganese	7439-96-5	5.40988E-06	0.00E+00	5.72E-10	5.41E-06	5.72E-10	3.79E-10	3.79E-10
total mercury	NA			0.00E+00			0.00E+00	
mercuric chloride	7487-94-7	5.9605E-13	0.00E+00	9.91E-14	6.95E-13	9.91E-14	2.46E-13	2.46E-13
methyl mercury	22967-92-6	1.68117E-13	0.00E+00	3.98E-15	1.72E-13	3.98E-15	1.34E-14	1.34E-14
elemental mercury	7439-97-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	1.81617E-08	0.00E+00	3.96E-13	1.82E-08	3.96E-13	2.55E-12	2.55E-12
vanadium	7440-62-2	5.7963E-08	0.00E+00	3.94E-12	5.80E-08	3.94E-12	3.56E-12	3.56E-12
zinc	7440-66-6	1.93405E-06	0.00E+00	4.19E-10	1.93E-06	4.19E-10	3.88E-09	3.88E-09

CONCENTRATIONS OF COPCS IN PRODUCE FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS: All Exposure Scenarios								
		Aboveground Produce - Individual Uptake Mechanisms			Exposed Produce	Protected Produce	Belowground Produce	
		Due to Direct Deposition	Due to Air-to-Plant Transfer	Due to Direct Uptake from Soil	Due to All Processes	Due to All Processes	Due to Direct Uptake from Soil	Due to All Processes
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
COPC	CAS Number	Pd	Pv	Pr	P_{ag}	P_p	Pr_{bg}	P_{bg}
2-butanone	78-93-3	0	3.87E-14	8.08E-10	8.08E-10	8.08E-10	2.23E-09	2.23E-09
2-ethyl 1,3-butadiene	3404-63-5	0	3.83E-13	6.30E-12	6.69E-12	6.30E-12	1.61E-10	1.61E-10
acetone	67-64-1	0	2.72E-14	4.18E-10	4.18E-10	4.18E-10	3.71E-09	3.71E-09
benzene	71-43-2	0	1.68E-10	4.64E-09	4.81E-09	4.64E-09	1.57E-07	1.57E-07
benzyl alcohol	100-51-6	0	1.76E-10	1.43E-06	1.43E-06	1.43E-06	1.13E-05	1.13E-05
bis(2-ethylhexyl)-phthalate	117-81-7	2.71079E-07	0.00E+00	3.92E-09	2.75E-07	3.92E-09	7.64E-13	7.64E-13
bromodichloromethane	75-27-4	0	4.00E-14	8.90E-11	8.91E-11	8.90E-11	3.29E-09	3.29E-09
carbon disulfide	75-15-0	0	1.71E-14	2.08E-13	2.25E-13	2.08E-13	1.27E-11	1.27E-11
carbon tetrachloride	56-23-5	0	3.06E-15	1.96E-14	2.27E-14	1.96E-14	2.00E-12	2.00E-12
chlorobenzene	108-90-7	0	2.18E-14	1.88E-13	2.10E-13	1.88E-13	1.53E-11	1.53E-11
chloroform	67-66-3	0	9.01E-15	2.04E-13	2.13E-13	2.04E-13	7.61E-12	7.61E-12
chloromethane	74-87-3	0	2.36E-15	1.49E-12	1.50E-12	1.49E-12	2.22E-11	2.22E-11
dibromochloromethane	124-48-1	0	1.39E-13	1.16E-09	1.16E-09	1.16E-09	1.01E-08	1.01E-08
dimethyl phthalate	131-11-3	0	1.73E-09	3.93E-08	4.10E-08	3.93E-08	2.38E-07	2.38E-07
di-n-butyl phthalate	84-74-2	0	5.21E-09	4.81E-09	1.00E-08	4.81E-09	1.21E-10	1.21E-10
ethane	74-84-0	0	3.77E-12	3.73E-10	3.77E-10	3.73E-10	4.04E-09	4.04E-09
ethylbenzene	100-41-4	0	1.88E-14	8.39E-14	1.03E-13	8.39E-14	1.04E-11	1.04E-11
HD	505-60-2	0	2.58E-10	1.20E-10	3.79E-10	1.20E-10	5.45E-10	5.45E-10
hexane	110-54-3	0	1.64E-15	5.67E-15	7.31E-15	5.67E-15	4.10E-13	4.10E-13
methane	74-82-8	0	1.11E-11	2.98E-09	2.99E-09	2.98E-09	2.99E-08	2.99E-08
methylene chloride	75-09-2	0	3.55E-15	3.52E-13	3.55E-13	3.52E-13	1.84E-11	1.84E-11
propene	115-07-1	0	2.14E-12	2.88E-10	2.90E-10	2.88E-10	3.05E-09	3.05E-09
styrene	100-42-5	0	4.75E-13	4.87E-10	4.88E-10	4.87E-10	2.70E-10	2.70E-10
tetrachloroethene	127-18-4	0	2.02E-14	1.29E-14	3.31E-14	1.29E-14	9.53E-12	9.53E-12
toluene	108-88-3	0	1.05E-10	9.14E-10	1.02E-09	9.14E-10	6.62E-08	6.62E-08
trichloroethene	79-01-6	0	3.97E-15	1.08E-13	1.12E-13	1.08E-13	3.38E-12	3.38E-12
vinyl chloride	75-01-4	0	1.89E-14	1.89E-12	1.91E-12	1.89E-12	7.72E-11	7.72E-11
xylenes	1330-20-7	0	1.17E-11	1.93E-10	2.05E-10	1.93E-10	5.53E-09	5.53E-09
3,3',4,4'-TCB (PCB 77)	32598-13-3	2.55028E-17	0.00E+00	2.93E-18	2.84E-17	2.93E-18	4.14E-18	4.14E-18
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	1.06262E-16	0.00E+00	1.22E-17	1.18E-16	1.22E-17	1.73E-17	1.73E-17
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	5.10056E-17	0.00E+00	5.85E-18	5.69E-17	5.85E-18	8.28E-18	8.28E-18
total coplanar PCBs	NA							
ammonia	7664-41-7	0	0.00E+00	6.49E-09	6.49E-09	6.49E-09	8.92E-08	8.92E-08
aluminum	7429-90-5	0	0.00E+00	4.86E-13	4.86E-13	4.86E-13	2.93E-13	2.93E-13
cadmium	7440-43-9	1.12062E-08	0.00E+00	3.04E-12	1.12E-08	3.04E-12	3.65E-12	3.65E-12
chlorine	7782-50-5	0	0.00E+00	1.33E-07	1.33E-07	1.33E-07	4.67E-07	4.67E-07
chromium (3+)	7440-47-3	3.09136E-08	0.00E+00	6.43E-14	3.09E-08	6.43E-14	5.93E-14	5.93E-14
chromium (6+)	18540-29-9	3.09136E-08	0.00E+00	6.43E-14	3.09E-08	6.43E-14	5.93E-14	5.93E-14
copper	7440-50-8	1.15929E-06	0.00E+00	3.19E-09	1.16E-06	3.19E-09	2.96E-09	2.96E-09
hydrogen chloride	7647-01-0	0	0.00E+00	3.70E-07	3.70E-07	3.70E-07	4.22E-06	4.22E-06
iron	7439-89-6	4.25062E-06	0.00E+00	3.20E-12	4.25E-06	3.20E-12	5.90E-10	5.90E-10
lead	7439-92-1	4.64645E-08	0.00E+00	2.05E-11	4.65E-08	2.05E-11	1.35E-11	1.35E-11
manganese	7439-96-5	5.40988E-06	0.00E+00	5.72E-10	5.41E-06	5.72E-10	3.79E-10	3.79E-10
total mercury	NA			0.00E+00			0.00E+00	
mercuric chloride	7487-94-7	5.9605E-13	0.00E+00	1.98E-13	7.94E-13	1.98E-13	4.92E-13	4.92E-13
methyl mercury	22967-92-6	1.68117E-13	0.00E+00	7.83E-15	1.76E-13	7.83E-15	2.64E-14	2.64E-14
elemental mercury	7439-97-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	1.81617E-08	0.00E+00	3.96E-13	1.82E-08	3.96E-13	2.55E-12	2.55E-12
vanadium	7440-62-2	5.7963E-08	0.00E+00	3.95E-12	5.80E-08	3.95E-12	3.57E-12	3.57E-12
zinc	7440-66-6	1.93405E-06	0.00E+00	4.19E-10	1.93E-06	4.19E-10	3.89E-09	3.89E-09

CONCENTRATIONS OF COPCS IN PRODUCE FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS (TEQ BASIS): Adult Resident and Adult Subsistence Fisher Exposure Scenarios								
		Aboveground Produce - Individual Uptake Mechanisms			Exposed Produce	Protected Produce	Belowground Produce	
		Due to Direct Deposition	Due to Air-to-Plant Transfer	Due to Direct Uptake from Soil	Due to All Processes	Due to All Processes	Due to Direct Uptake from Soil	Due to All Processes
		(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]
COPC	CAS Number	Pd	Pv	Pr	Pag	Pp	Prbg	Pbg
2-butanone	78-93-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-ethyl 1,3-butadiene	3404-63-5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
acetone	67-64-1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzene	71-43-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzyl alcohol	100-51-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bis(2-ethylhexyl)-phthalate	117-81-7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bromodichloromethane	75-27-4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
carbon disulfide	75-15-0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
carbon tetrachloride	56-23-5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chlorobenzene	108-90-7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloroform	67-66-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloromethane	74-87-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dibromochloromethane	124-48-1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dimethyl phthalate	131-11-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
di-n-butyl phthalate	84-74-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ethane	74-84-0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ethylbenzene	100-41-4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
HD	505-60-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
hexane	110-54-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methane	74-82-8	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methylene chloride	75-09-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
propene	115-07-1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
styrene	100-42-5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
tetrachloroethene	127-18-4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
toluene	108-88-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trichloroethene	79-01-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
vinyl chloride	75-01-4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
xylenes	1330-20-7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3,3',4,4'-TCB (PCB 77)	32598-13-3	2.55028E-21	0.00E+00	1.95E-22	2.75E-21	1.95E-22	2.76E-22	2.76E-22
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	3.18785E-21	0.00E+00	2.44E-22	3.43E-21	2.44E-22	3.46E-22	3.46E-22
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	1.53017E-21	0.00E+00	1.17E-22	1.65E-21	1.17E-22	1.66E-22	1.66E-22
total coplanar PCBs	NA	7.2683E-21	0.00E+00	5.57E-22	7.83E-21	5.57E-22	7.88E-22	7.88E-22
ammonia	7664-41-7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
aluminum	7429-90-5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cadmium	7440-43-9	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chlorine	7782-50-5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (3+)	7440-47-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (6+)	18540-29-9	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
copper	7440-50-8	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
hydrogen chloride	7647-01-0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
iron	7439-89-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
lead	7439-92-1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
manganese	7439-96-5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
total mercury	NA							
mercuric chloride	7487-94-7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methyl mercury	22967-92-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
elemental mercury	7439-97-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
vanadium	7440-62-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
zinc	7440-66-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

a. The concentration of individual PCDDs and PCDFs congeners and coplanar PCBs in produce are presented in units of mg COPC TEQ/kg. The concentration of total PCDDs and PCDFs as well as the concentration of total coplanar PCBs in produce are presented in units of mg TEQ/kg produce and are calculated as the sum of the concentrations of all individual PCDD and PCDF congeners in produce and the concentrations of all coplanar produce in plants, respectively.

CONCENTRATIONS OF COPCS IN PRODUCE FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS (TEQ BASIS): Adult Subsistence Farmer Exposure Scenario								
		Aboveground Produce - Individual Uptake Mechanisms			Exposed Produce	Protected Produce	Belowground Produce	
		Due to Direct Deposition	Due to Air-to-Plant Transfer	Due to Direct Uptake from Soil	Due to All Processes	Due to All Processes	Due to Direct Uptake from Soil	Due to All Processes
		(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]
COPC	CAS Number	Pd	Pv	Pr	Pag	Pp	Prbg	Pbg
2-butanone	78-93-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-ethyl 1,3-butadiene	3404-63-5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
acetone	67-64-1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzene	71-43-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzyl alcohol	100-51-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bis(2-ethylhexyl)-phthalate	117-81-7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bromodichloromethane	75-27-4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
carbon disulfide	75-15-0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
carbon tetrachloride	56-23-5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chlorobenzene	108-90-7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloroform	67-66-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloromethane	74-87-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dibromochloromethane	124-48-1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dimethyl phthalate	131-11-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
di-n-butyl phthalate	84-74-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ethane	74-84-0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ethylbenzene	100-41-4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
HD	505-60-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
hexane	110-54-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methane	74-82-8	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methylene chloride	75-09-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
propene	115-07-1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
styrene	100-42-5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
tetrachloroethene	127-18-4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
toluene	108-88-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trichloroethene	79-01-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
vinyl chloride	75-01-4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
xylenes	1330-20-7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3,3',4,4'-TCB (PCB 77)	32598-13-3	2.55028E-21	0.00E+00	1.76E-22	2.73E-21	1.76E-22	2.49E-22	2.49E-22
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	3.18785E-21	0.00E+00	2.20E-22	3.41E-21	2.20E-22	3.11E-22	3.11E-22
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	1.53017E-21	0.00E+00	1.06E-22	1.64E-21	1.06E-22	1.49E-22	1.49E-22
total coplanar PCBs	NA	7.2683E-21	0.00E+00	5.01E-22	7.77E-21	5.01E-22	7.09E-22	7.09E-22
ammonia	7664-41-7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
aluminum	7429-90-5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cadmium	7440-43-9	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chlorine	7782-50-5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (3+)	7440-47-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (6+)	18540-29-9	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
copper	7440-50-8	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
hydrogen chloride	7647-01-0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
iron	7439-89-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
lead	7439-92-1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
manganese	7439-96-5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
total mercury	NA							
mercuric chloride	7487-94-7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methyl mercury	22967-92-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
elemental mercury	7439-97-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
vanadium	7440-62-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
zinc	7440-66-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

a. The concentration of individual PCDDs and PCDFs congeners and coplanar PCBs in produce are presented in units of mg COPC TEQ/kg. The concentration of total PCDDs and PCDFs as well as the concentration of total coplanar PCBs in produce are presented in units of mg TEQ/kg produce and are calculated as the sum of the concentrations of all individual PCDD and PCDF congeners in produce and the concentrations of all coplanar produce in plants, respectively.

CONCENTRATIONS OF COPCS IN PRODUCE FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS (TEQ BASIS): Child Exposure Scenarios								
		Aboveground Produce - Individual Uptake Mechanisms			Exposed Produce	Protected Produce	Belowground Produce	
		Due to Direct Deposition	Due to Air-to-Plant Transfer	Due to Direct Uptake from Soil	Due to All Processes	Due to All Processes	Due to Direct Uptake from Soil	Due to All Processes
		(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]
COPC	CAS Number	Pd	Pv	Pr	Pag	Pp	Prbg	Pbg
2-butanone	78-93-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-ethyl 1,3-butadiene	3404-63-5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
acetone	67-64-1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzene	71-43-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzyl alcohol	100-51-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bis(2-ethylhexyl)-phthalate	117-81-7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bromodichloromethane	75-27-4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
carbon disulfide	75-15-0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
carbon tetrachloride	56-23-5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chlorobenzene	108-90-7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloroform	67-66-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloromethane	74-87-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dibromochloromethane	124-48-1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dimethyl phthalate	131-11-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
di-n-butyl phthalate	84-74-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ethane	74-84-0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ethylbenzene	100-41-4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
HD	505-60-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
hexane	110-54-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methane	74-82-8	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methylene chloride	75-09-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
propene	115-07-1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
styrene	100-42-5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
tetrachloroethene	127-18-4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
toluene	108-88-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trichloroethene	79-01-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
vinyl chloride	75-01-4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
xylenes	1330-20-7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3,3',4,4'-TCB (PCB 77)	32598-13-3	2.55028E-21	0.00E+00	1.50E-22	2.70E-21	1.50E-22	2.12E-22	2.12E-22
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	3.18785E-21	0.00E+00	1.88E-22	3.38E-21	1.88E-22	2.65E-22	2.65E-22
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	1.53017E-21	0.00E+00	9.00E-23	1.62E-21	9.00E-23	1.27E-22	1.27E-22
total coplanar PCBs	NA	7.2683E-21	0.00E+00	4.28E-22	7.70E-21	4.28E-22	6.05E-22	6.05E-22
ammonia	7664-41-7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
aluminum	7429-90-5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cadmium	7440-43-9	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chlorine	7782-50-5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (3+)	7440-47-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (6+)	18540-29-9	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
copper	7440-50-8	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
hydrogen chloride	7647-01-0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
iron	7439-89-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
lead	7439-92-1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
manganese	7439-96-5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
total mercury	NA							
mercuric chloride	7487-94-7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methyl mercury	22967-92-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
elemental mercury	7439-97-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
vanadium	7440-62-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
zinc	7440-66-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

a. The concentration of individual PCDDs and PCDFs congeners and coplanar PCBs in produce are presented in units of mg COPC TEQ/kg. The concentration of total PCDDs and PCDFs as well as the concentration of total coplanar PCBs in produce are presented in units of mg TEQ/kg produce and are calculated as the sum of the concentrations of all individual PCDD and PCDF congeners in produce and the concentrations of all coplanar produce in plants, respectively.

CONCENTRATIONS OF COPCS IN PRODUCE FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS (TEQ BASIS): Infant Exposure Scenarios								
		Aboveground Produce - Individual Uptake Mechanisms			Exposed Produce	Protected Produce	Belowground Produce	
		Due to Direct Deposition	Due to Air-to-Plant Transfer	Due to Direct Uptake from Soil	Due to All Processes	Due to All Processes	Due to Direct Uptake from Soil	Due to All Processes
		(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]
COPC	CAS Number	Pd	Pv	Pr	Pag	Pp	Prbg	Pbg
2-butanone	78-93-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-ethyl 1,3-butadiene	3404-63-5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
acetone	67-64-1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzene	71-43-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzyl alcohol	100-51-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bis(2-ethylhexyl)-phthalate	117-81-7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bromodichloromethane	75-27-4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
carbon disulfide	75-15-0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
carbon tetrachloride	56-23-5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chlorobenzene	108-90-7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloroform	67-66-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloromethane	74-87-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dibromochloromethane	124-48-1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dimethyl phthalate	131-11-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
di-n-butyl phthalate	84-74-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ethane	74-84-0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ethylbenzene	100-41-4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
HD	505-60-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
hexane	110-54-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methane	74-82-8	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methylene chloride	75-09-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
propene	115-07-1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
styrene	100-42-5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
tetrachloroethene	127-18-4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
toluene	108-88-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trichloroethene	79-01-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
vinyl chloride	75-01-4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
xylenes	1330-20-7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3,3',4,4'-TCB (PCB 77)	32598-13-3	2.55028E-21	0.00E+00	1.50E-22	2.70E-21	1.50E-22	2.12E-22	2.12E-22
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	3.18785E-21	0.00E+00	1.88E-22	3.38E-21	1.88E-22	2.65E-22	2.65E-22
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	1.53017E-21	0.00E+00	9.00E-23	1.62E-21	9.00E-23	1.27E-22	1.27E-22
total coplanar PCBs	NA	7.2683E-21	0.00E+00	4.28E-22	7.70E-21	4.28E-22	6.05E-22	6.05E-22
ammonia	7664-41-7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
aluminum	7429-90-5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cadmium	7440-43-9	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chlorine	7782-50-5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (3+)	7440-47-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (6+)	18540-29-9	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
copper	7440-50-8	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
hydrogen chloride	7647-01-0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
iron	7439-89-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
lead	7439-92-1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
manganese	7439-96-5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
total mercury	NA							
mercuric chloride	7487-94-7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methyl mercury	22967-92-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
elemental mercury	7439-97-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
vanadium	7440-62-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
zinc	7440-66-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

a. The concentration of individual PCDDs and PCDFs congeners and coplanar PCBs in produce are presented in units of mg COPC TEQ/kg. The concentration of total PCDDs and PCDFs as well as the concentration of total coplanar PCBs in produce are presented in units of mg TEQ/kg produce and are calculated as the sum of the concentrations of all individual PCDD and PCDF congeners in produce and the concentrations of all coplanar produce in plants, respectively.

CONCENTRATIONS OF COPCS IN PRODUCE FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS: All Exposure Scenarios								
		Aboveground Produce - Individual Uptake Mechanisms			Exposed Produce	Protected Produce	Belowground Produce	
		Due to Direct Deposition	Due to Air-to-Plant Transfer	Due to Direct Uptake from Soil	Due to All Processes	Due to All Processes	Due to Direct Uptake from Soil	Due to All Processes
		(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]
COPC	CAS Number	Pd	Pv	Pr	Pag	Pp	Prbg	Pbg
2-butanone	78-93-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-ethyl 1,3-butadiene	3404-63-5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
acetone	67-64-1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzene	71-43-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzyl alcohol	100-51-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bis(2-ethylhexyl)-phthalate	117-81-7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bromodichloromethane	75-27-4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
carbon disulfide	75-15-0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
carbon tetrachloride	56-23-5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chlorobenzene	108-90-7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloroform	67-66-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloromethane	74-87-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dibromochloromethane	124-48-1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dimethyl phthalate	131-11-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
di-n-butyl phthalate	84-74-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ethane	74-84-0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ethylbenzene	100-41-4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
HD	505-60-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
hexane	110-54-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methane	74-82-8	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methylene chloride	75-09-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
propene	115-07-1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
styrene	100-42-5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
tetrachloroethene	127-18-4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
toluene	108-88-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trichloroethene	79-01-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
vinyl chloride	75-01-4	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
xylenes	1330-20-7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3,3',4,4'-TCB (PCB 77)	32598-13-3	2.55028E-21	0.00E+00	2.93E-22	2.84E-21	2.93E-22	4.14E-22	4.14E-22
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	3.18785E-21	0.00E+00	3.66E-22	3.55E-21	3.66E-22	5.18E-22	5.18E-22
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	1.53017E-21	0.00E+00	1.76E-22	1.71E-21	1.76E-22	2.48E-22	2.48E-22
total coplanar PCBs	NA	7.2683E-21	0.00E+00	8.34E-22	8.10E-21	8.34E-22	1.18E-21	1.18E-21
ammonia	7664-41-7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
aluminum	7429-90-5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cadmium	7440-43-9	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chlorine	7782-50-5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (3+)	7440-47-3	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (6+)	18540-29-9	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
copper	7440-50-8	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
hydrogen chloride	7647-01-0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
iron	7439-89-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
lead	7439-92-1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
manganese	7439-96-5	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
total mercury	NA							
mercuric chloride	7487-94-7	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methyl mercury	22967-92-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
elemental mercury	7439-97-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
vanadium	7440-62-2	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
zinc	7440-66-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

a. The concentration of individual PCDDs and PCDFs congeners and coplanar PCBs in produce are presented in units of mg COPC TEQ/kg. The concentration of total PCDDs and PCDFs as well as the concentration of total coplanar PCBs in produce are presented in units of mg TEQ/kg produce and are calculated as the sum of the concentrations of all individual PCDD and PCDF congeners in produce and the concentrations of all coplanar produce in plants, respectively.

CONCENTRATIONS OF COPCS IN ANIMAL FEED FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Adult Resident and Adult Subsistence Fisher Exposure Scenarios									
		Concentration Due to Individual Uptake Mechanisms					Forage	Silage	Grain[1]
		Due to Direct Deposition - Forage	Due to Direct Deposition - Silage	Due to Air-to-Plant Transfer - Forage	Due to Air-to-Plant Transfer - Silage	Due to Direct Uptake from Soil	Due to All Processes	Due to All Processes	Due to All Processes
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
COPC	CAS Number	Pd_{forage}	Pd_{silage}	Pv_{forage}	Pv_{silage}	Pr	P_{forage}	P_{silage}	P_{grain}
2-butanone	78-93-3	0.00E+00	0.00E+00	3.87E-14	1.94E-14	1.35E-10	1.35E-10	1.35E-10	1.35E-10
2-ethyl 1,3-butadiene	3404-63-5	0.00E+00	0.00E+00	3.83E-13	1.92E-13	1.05E-12	1.43E-12	1.24E-12	1.05E-12
acetone	67-64-1	0.00E+00	0.00E+00	2.72E-14	1.36E-14	6.97E-11	6.97E-11	6.97E-11	6.97E-11
benzene	71-43-2	0.00E+00	0.00E+00	1.68E-10	8.40E-11	7.74E-10	9.42E-10	8.58E-10	7.74E-10
benzyl alcohol	100-51-6	0.00E+00	0.00E+00	1.76E-10	8.80E-11	2.38E-07	2.38E-07	2.38E-07	2.38E-07
bis(2-ethylhexyl)-phthalate	117-81-7	3.04E-06	8.95E-07	0.00E+00	0.00E+00	6.53E-10	3.04E-06	8.96E-07	6.53E-10
bromodichloromethane	75-27-4	0.00E+00	0.00E+00	4.00E-14	2.00E-14	1.48E-11	1.49E-11	1.49E-11	1.48E-11
carbon disulfide	75-15-0	0.00E+00	0.00E+00	1.71E-14	8.57E-15	3.46E-14	5.18E-14	4.32E-14	3.46E-14
carbon tetrachloride	56-23-5	0.00E+00	0.00E+00	3.06E-15	1.53E-15	3.27E-15	6.32E-15	4.80E-15	3.27E-15
chlorobenzene	108-90-7	0.00E+00	0.00E+00	2.18E-14	1.09E-14	3.13E-14	5.31E-14	4.22E-14	3.13E-14
chloroform	67-66-3	0.00E+00	0.00E+00	9.01E-15	4.50E-15	3.40E-14	4.30E-14	3.85E-14	3.40E-14
chloromethane	74-87-3	0.00E+00	0.00E+00	2.36E-15	1.18E-15	2.49E-13	2.51E-13	2.50E-13	2.49E-13
dibromochloromethane	124-48-1	0.00E+00	0.00E+00	1.39E-13	6.93E-14	1.94E-10	1.94E-10	1.94E-10	1.94E-10
dimethyl phthalate	131-11-3	0.00E+00	0.00E+00	1.73E-09	8.65E-10	6.55E-09	8.28E-09	7.42E-09	6.55E-09
di-n-butyl phthalate	84-74-2	0.00E+00	0.00E+00	5.21E-07	2.60E-07	8.02E-10	5.22E-07	2.61E-07	8.02E-10
ethane	74-84-0	0.00E+00	0.00E+00	3.77E-12	1.88E-12	6.21E-11	6.59E-11	6.40E-11	6.21E-11
ethylbenzene	100-41-4	0.00E+00	0.00E+00	1.88E-14	9.39E-15	1.40E-14	3.28E-14	2.34E-14	1.40E-14
HD	505-60-2	0.00E+00	0.00E+00	2.58E-10	1.29E-10	2.00E-11	2.78E-10	1.49E-10	2.00E-11
hexane	110-54-3	0.00E+00	0.00E+00	1.64E-15	8.22E-16	9.44E-16	2.59E-15	1.77E-15	9.44E-16
methane	74-82-8	0.00E+00	0.00E+00	1.11E-11	5.55E-12	4.97E-10	5.08E-10	5.03E-10	4.97E-10
methylene chloride	75-09-2	0.00E+00	0.00E+00	3.55E-15	1.77E-15	5.86E-14	6.21E-14	6.04E-14	5.86E-14
propene	115-07-1	0.00E+00	0.00E+00	2.14E-12	1.07E-12	4.80E-11	5.01E-11	4.91E-11	4.80E-11
styrene	100-42-5	0.00E+00	0.00E+00	4.75E-13	2.38E-13	8.12E-11	8.17E-11	8.15E-11	8.12E-11
tetrachloroethene	127-18-4	0.00E+00	0.00E+00	2.02E-14	1.01E-14	2.15E-15	2.24E-14	1.23E-14	2.15E-15
toluene	108-88-3	0.00E+00	0.00E+00	1.05E-10	5.26E-11	1.52E-10	2.57E-10	2.05E-10	1.52E-10
trichloroethene	79-01-6	0.00E+00	0.00E+00	3.97E-15	1.99E-15	1.80E-14	2.20E-14	2.00E-14	1.80E-14
vinyl chloride	75-01-4	0.00E+00	0.00E+00	1.89E-14	9.45E-15	3.15E-13	3.34E-13	3.24E-13	3.15E-13
xylenes	1330-20-7	0.00E+00	0.00E+00	1.17E-11	5.86E-12	3.22E-11	4.39E-11	3.81E-11	3.22E-11
3,3',4,4'-TCB (PCB 77)	32598-13-3	2.86E-16	8.42E-17	0.00E+00	0.00E+00	1.95E-18	2.88E-16	8.62E-17	1.95E-18
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	1.19E-15	3.51E-16	0.00E+00	0.00E+00	8.14E-18	1.20E-15	3.59E-16	8.14E-18
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	5.72E-16	1.68E-16	0.00E+00	0.00E+00	3.91E-18	5.76E-16	1.72E-16	3.91E-18
total coplanar PCBs	NA								
ammonia	7664-41-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.08E-09	1.08E-09	1.08E-09	1.08E-09
aluminum	7429-90-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.11E-14	8.11E-14	8.11E-14	8.11E-14
cadmium	7440-43-9	1.26E-07	3.70E-08	0.00E+00	0.00E+00	5.06E-13	1.26E-07	3.70E-08	5.06E-13
chlorine	7782-50-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.22E-08	2.22E-08	2.22E-08	2.22E-08
chromium (3+)	7440-47-3	3.47E-07	1.02E-07	0.00E+00	0.00E+00	1.07E-14	3.47E-07	1.02E-07	1.07E-14
chromium (6+)	18540-29-9	3.47E-07	1.02E-07	0.00E+00	0.00E+00	1.07E-14	3.47E-07	1.02E-07	1.07E-14
copper	7440-50-8	1.30E-05	3.83E-06	0.00E+00	0.00E+00	5.31E-10	1.30E-05	3.83E-06	5.31E-10
hydrogen chloride	7647-01-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.16E-08	6.16E-08	6.16E-08	6.16E-08
iron	7439-89-6	4.77E-05	1.40E-05	0.00E+00	0.00E+00	5.33E-13	4.77E-05	1.40E-05	5.33E-13
lead	7439-92-1	5.21E-07	1.53E-07	0.00E+00	0.00E+00	3.41E-12	5.21E-07	1.53E-07	3.41E-12
manganese	7439-96-5	6.07E-05	1.79E-05	0.00E+00	0.00E+00	9.53E-11	6.07E-05	1.79E-05	9.53E-11
total mercury	NA								
mercuric chloride	7487-94-7	6.68E-12	1.97E-12	0.00E+00	0.00E+00	1.82E-13	6.87E-12	2.15E-12	1.82E-13
methyl mercury	22967-92-6	1.89E-12	5.55E-13	0.00E+00	0.00E+00	5.88E-15	1.89E-12	5.61E-13	5.88E-15
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	2.04E-07	6.00E-08	0.00E+00	0.00E+00	6.59E-14	2.04E-07	6.00E-08	6.59E-14
vanadium	7440-62-2	6.50E-07	1.91E-07	0.00E+00	0.00E+00	6.58E-13	6.50E-07	1.91E-07	6.58E-13
zinc	7440-66-6	2.17E-05	6.39E-06	0.00E+00	0.00E+00	6.98E-11	2.17E-05	6.39E-06	6.98E-11

1. Grain was assumed grown on untilled land (Zs = 2cm). This causes a higher COPC concentration in grain, rather than using the default tilled soil depth of 20cm.

CONCENTRATIONS OF COPCS IN ANIMAL FEED FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Adult Farmer Exposure Scenario									
		Concentration Due to Individual Uptake Mechanisms					Forage	Silage	Grain[1]
		Due to Direct Deposition - Forage	Due to Direct Deposition - Silage	Due to Air-to-Plant Transfer - Forage	Due to Air-to-Plant Transfer - Silage	Due to Direct Uptake from Soil	Due to All Processes	Due to All Processes	Due to All Processes
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
COPC	CAS Number	Pd_{forage}	Pd_{silage}	Pv_{forage}	Pv_{silage}	Pr	P_{forage}	P_{silage}	P_{grain}
2-butanone	78-93-3	0.00E+00	0.00E+00	3.87E-14	1.94E-14	1.01E-10	1.01E-10	1.01E-10	1.01E-10
2-ethyl 1,3-butadiene	3404-63-5	0.00E+00	0.00E+00	3.83E-13	1.92E-13	7.88E-13	1.17E-12	9.80E-13	7.88E-13
acetone	67-64-1	0.00E+00	0.00E+00	2.72E-14	1.36E-14	5.23E-11	5.23E-11	5.23E-11	5.23E-11
benzene	71-43-2	0.00E+00	0.00E+00	1.68E-10	8.40E-11	5.81E-10	7.49E-10	6.65E-10	5.81E-10
benzyl alcohol	100-51-6	0.00E+00	0.00E+00	1.76E-10	8.80E-11	1.78E-07	1.78E-07	1.78E-07	1.78E-07
bis(2-ethylhexyl)-phthalate	117-81-7	3.04E-06	8.95E-07	0.00E+00	0.00E+00	4.90E-10	3.04E-06	8.96E-07	4.90E-10
bromodichloromethane	75-27-4	0.00E+00	0.00E+00	4.00E-14	2.00E-14	1.11E-11	1.12E-11	1.12E-11	1.11E-11
carbon disulfide	75-15-0	0.00E+00	0.00E+00	1.71E-14	8.57E-15	2.60E-14	4.31E-14	3.46E-14	2.60E-14
carbon tetrachloride	56-23-5	0.00E+00	0.00E+00	3.06E-15	1.53E-15	2.45E-15	5.51E-15	3.98E-15	2.45E-15
chlorobenzene	108-90-7	0.00E+00	0.00E+00	2.18E-14	1.09E-14	2.35E-14	4.53E-14	3.44E-14	2.35E-14
chloroform	67-66-3	0.00E+00	0.00E+00	9.01E-15	4.50E-15	2.55E-14	3.45E-14	3.00E-14	2.55E-14
chloromethane	74-87-3	0.00E+00	0.00E+00	2.36E-15	1.18E-15	1.87E-13	1.89E-13	1.88E-13	1.87E-13
dibromochloromethane	124-48-1	0.00E+00	0.00E+00	1.39E-13	6.93E-14	1.46E-10	1.46E-10	1.46E-10	1.46E-10
dimethyl phthalate	131-11-3	0.00E+00	0.00E+00	1.73E-09	8.65E-10	4.91E-09	6.64E-09	5.78E-09	4.91E-09
di-n-butyl phthalate	84-74-2	0.00E+00	0.00E+00	5.21E-07	2.60E-07	6.02E-10	5.21E-07	2.61E-07	6.02E-10
ethane	74-84-0	0.00E+00	0.00E+00	3.77E-12	1.88E-12	4.66E-11	5.04E-11	4.85E-11	4.66E-11
ethylbenzene	100-41-4	0.00E+00	0.00E+00	1.88E-14	9.39E-15	1.05E-14	2.93E-14	1.99E-14	1.05E-14
HD	505-60-2	0.00E+00	0.00E+00	2.58E-10	1.29E-10	1.50E-11	2.73E-10	1.44E-10	1.50E-11
hexane	110-54-3	0.00E+00	0.00E+00	1.64E-15	8.22E-16	7.08E-16	2.35E-15	1.53E-15	7.08E-16
methane	74-82-8	0.00E+00	0.00E+00	1.11E-11	5.55E-12	3.73E-10	3.84E-10	3.78E-10	3.73E-10
methylene chloride	75-09-2	0.00E+00	0.00E+00	3.55E-15	1.77E-15	4.39E-14	4.75E-14	4.57E-14	4.39E-14
propene	115-07-1	0.00E+00	0.00E+00	2.14E-12	1.07E-12	3.60E-11	3.81E-11	3.71E-11	3.60E-11
styrene	100-42-5	0.00E+00	0.00E+00	4.75E-13	2.38E-13	6.09E-11	6.14E-11	6.12E-11	6.09E-11
tetrachloroethene	127-18-4	0.00E+00	0.00E+00	2.02E-14	1.01E-14	1.61E-15	2.18E-14	1.17E-14	1.61E-15
toluene	108-88-3	0.00E+00	0.00E+00	1.05E-10	5.26E-11	1.14E-10	2.19E-10	1.67E-10	1.14E-10
trichloroethene	79-01-6	0.00E+00	0.00E+00	3.97E-15	1.99E-15	1.35E-14	1.75E-14	1.55E-14	1.35E-14
vinyl chloride	75-01-4	0.00E+00	0.00E+00	1.89E-14	9.45E-15	2.36E-13	2.55E-13	2.45E-13	2.36E-13
xylenes	1330-20-7	0.00E+00	0.00E+00	1.17E-11	5.86E-12	2.42E-11	3.59E-11	3.00E-11	2.42E-11
3,3',4,4'-TCB (PCB 77)	32598-13-3	2.86E-16	8.42E-17	0.00E+00	0.00E+00	1.76E-18	2.88E-16	8.60E-17	1.76E-18
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	1.19E-15	3.51E-16	0.00E+00	0.00E+00	7.33E-18	1.20E-15	3.58E-16	7.33E-18
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	5.72E-16	1.68E-16	0.00E+00	0.00E+00	3.52E-18	5.76E-16	1.72E-16	3.52E-18
total coplanar PCBs	NA								
ammonia	7664-41-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.12E-10	8.12E-10	8.12E-10	8.12E-10
aluminum	7429-90-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.08E-14	6.08E-14	6.08E-14	6.08E-14
cadmium	7440-43-9	1.26E-07	3.70E-08	0.00E+00	0.00E+00	3.80E-13	1.26E-07	3.70E-08	3.80E-13
chlorine	7782-50-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.66E-08	1.66E-08	1.66E-08	1.66E-08
chromium (3+)	7440-47-3	3.47E-07	1.02E-07	0.00E+00	0.00E+00	8.03E-15	3.47E-07	1.02E-07	8.03E-15
chromium (6+)	18540-29-9	3.47E-07	1.02E-07	0.00E+00	0.00E+00	8.03E-15	3.47E-07	1.02E-07	8.03E-15
copper	7440-50-8	1.30E-05	3.83E-06	0.00E+00	0.00E+00	3.98E-10	1.30E-05	3.83E-06	3.98E-10
hydrogen chloride	7647-01-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.62E-08	4.62E-08	4.62E-08	4.62E-08
iron	7439-89-6	4.77E-05	1.40E-05	0.00E+00	0.00E+00	4.00E-13	4.77E-05	1.40E-05	4.00E-13
lead	7439-92-1	5.21E-07	1.53E-07	0.00E+00	0.00E+00	2.56E-12	5.21E-07	1.53E-07	2.56E-12
manganese	7439-96-5	6.07E-05	1.79E-05	0.00E+00	0.00E+00	7.15E-11	6.07E-05	1.79E-05	7.15E-11
total mercury	NA								
mercuric chloride	7487-94-7	6.68E-12	1.97E-12	0.00E+00	0.00E+00	1.86E-13	6.87E-12	2.15E-12	1.86E-13
methyl mercury	22967-92-6	1.89E-12	5.55E-13	0.00E+00	0.00E+00	5.53E-15	1.89E-12	5.61E-13	5.53E-15
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	2.04E-07	6.00E-08	0.00E+00	0.00E+00	4.95E-14	2.04E-07	6.00E-08	4.95E-14
vanadium	7440-62-2	6.50E-07	1.91E-07	0.00E+00	0.00E+00	4.93E-13	6.50E-07	1.91E-07	4.93E-13
zinc	7440-66-6	2.17E-05	6.39E-06	0.00E+00	0.00E+00	5.23E-11	2.17E-05	6.39E-06	5.23E-11

1. Grain was assumed grown on untilled land (Zs = 2cm). This causes a higher COPC concentration in grain, rather than using the default tilled soil depth of 20cm.

CONCENTRATIONS OF COPCS IN ANIMAL FEED FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Child Exposure Scenarios									
		Concentration Due to Individual Uptake Mechanisms					Forage	Silage	Grain[1]
		Due to Direct Deposition - Forage	Due to Direct Deposition - Silage	Due to Air-to-Plant Transfer - Forage	Due to Air-to-Plant Transfer - Silage	Due to Direct Uptake from Soil	Due to All Processes	Due to All Processes	Due to All Processes
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
COPC	CAS Number	Pd_{forage}	Pd_{silage}	Pv_{forage}	Pv_{silage}	Pr	P_{forage}	P_{silage}	P_{grain}
2-butanone	78-93-3	0.00E+00	0.00E+00	3.87E-14	1.94E-14	8.08E-10	8.08E-10	8.08E-10	8.08E-10
2-ethyl 1,3-butadiene	3404-63-5	0.00E+00	0.00E+00	3.83E-13	1.92E-13	6.30E-12	6.69E-12	6.50E-12	6.30E-12
acetone	67-64-1	0.00E+00	0.00E+00	2.72E-14	1.36E-14	4.18E-10	4.18E-10	4.18E-10	4.18E-10
benzene	71-43-2	0.00E+00	0.00E+00	1.68E-10	8.40E-11	4.64E-09	4.81E-09	4.73E-09	4.64E-09
benzyl alcohol	100-51-6	0.00E+00	0.00E+00	1.76E-10	8.80E-11	1.27E-06	1.27E-06	1.27E-06	1.27E-06
bis(2-ethylhexyl)-phthalate	117-81-7	3.04E-06	8.95E-07	0.00E+00	0.00E+00	3.85E-09	3.04E-06	8.99E-07	3.85E-09
bromodichloromethane	75-27-4	0.00E+00	0.00E+00	4.00E-14	2.00E-14	8.90E-11	8.91E-11	8.90E-11	8.90E-11
carbon disulfide	75-15-0	0.00E+00	0.00E+00	1.71E-14	8.57E-15	2.08E-13	2.25E-13	2.16E-13	2.08E-13
carbon tetrachloride	56-23-5	0.00E+00	0.00E+00	3.06E-15	1.53E-15	1.96E-14	2.27E-14	2.11E-14	1.96E-14
chlorobenzene	108-90-7	0.00E+00	0.00E+00	2.18E-14	1.09E-14	1.88E-13	2.10E-13	1.99E-13	1.88E-13
chloroform	67-66-3	0.00E+00	0.00E+00	9.01E-15	4.50E-15	2.04E-13	2.13E-13	2.09E-13	2.04E-13
chloromethane	74-87-3	0.00E+00	0.00E+00	2.36E-15	1.18E-15	1.49E-12	1.50E-12	1.50E-12	1.49E-12
dibromochloromethane	124-48-1	0.00E+00	0.00E+00	1.39E-13	6.93E-14	1.16E-09	1.16E-09	1.16E-09	1.16E-09
dimethyl phthalate	131-11-3	0.00E+00	0.00E+00	1.73E-09	8.65E-10	3.91E-08	4.08E-08	4.00E-08	3.91E-08
di-n-butyl phthalate	84-74-2	0.00E+00	0.00E+00	5.21E-07	2.60E-07	4.73E-09	5.26E-07	2.65E-07	4.73E-09
ethane	74-84-0	0.00E+00	0.00E+00	3.77E-12	1.88E-12	3.73E-10	3.77E-10	3.75E-10	3.73E-10
ethylbenzene	100-41-4	0.00E+00	0.00E+00	1.88E-14	9.39E-15	8.39E-14	1.03E-13	9.33E-14	8.39E-14
HD	505-60-2	0.00E+00	0.00E+00	2.58E-10	1.29E-10	1.20E-10	3.79E-10	2.49E-10	1.20E-10
hexane	110-54-3	0.00E+00	0.00E+00	1.64E-15	8.22E-16	5.67E-15	7.31E-15	6.49E-15	5.67E-15
methane	74-82-8	0.00E+00	0.00E+00	1.11E-11	5.55E-12	2.98E-09	2.99E-09	2.99E-09	2.98E-09
methylene chloride	75-09-2	0.00E+00	0.00E+00	3.55E-15	1.77E-15	3.52E-13	3.55E-13	3.53E-13	3.52E-13
propene	115-07-1	0.00E+00	0.00E+00	2.14E-12	1.07E-12	2.88E-10	2.90E-10	2.89E-10	2.88E-10
styrene	100-42-5	0.00E+00	0.00E+00	4.75E-13	2.38E-13	4.86E-10	4.87E-10	4.87E-10	4.86E-10
tetrachloroethene	127-18-4	0.00E+00	0.00E+00	2.02E-14	1.01E-14	1.29E-14	3.31E-14	2.30E-14	1.29E-14
toluene	108-88-3	0.00E+00	0.00E+00	1.05E-10	5.26E-11	9.14E-10	1.02E-09	9.66E-10	9.14E-10
trichloroethene	79-01-6	0.00E+00	0.00E+00	3.97E-15	1.99E-15	1.08E-13	1.12E-13	1.10E-13	1.08E-13
vinyl chloride	75-01-4	0.00E+00	0.00E+00	1.89E-14	9.45E-15	1.89E-12	1.91E-12	1.90E-12	1.89E-12
xylenes	1330-20-7	0.00E+00	0.00E+00	1.17E-11	5.86E-12	1.93E-10	2.05E-10	1.99E-10	1.93E-10
3,3',4,4'-TCB (PCB 77)	32598-13-3	2.86E-16	8.42E-17	0.00E+00	0.00E+00	1.50E-18	2.88E-16	8.57E-17	1.50E-18
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	1.19E-15	3.51E-16	0.00E+00	0.00E+00	6.25E-18	1.20E-15	3.57E-16	6.25E-18
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	5.72E-16	1.68E-16	0.00E+00	0.00E+00	3.00E-18	5.75E-16	1.71E-16	3.00E-18
total coplanar PCBs	NA								
ammonia	7664-41-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.49E-09	6.49E-09	6.49E-09	6.49E-09
aluminum	7429-90-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.86E-13	4.86E-13	4.86E-13	4.86E-13
cadmium	7440-43-9	1.26E-07	3.70E-08	0.00E+00	0.00E+00	3.04E-12	1.26E-07	3.70E-08	3.04E-12
chlorine	7782-50-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.33E-07	1.33E-07	1.33E-07	1.33E-07
chromium (3+)	7440-47-3	3.47E-07	1.02E-07	0.00E+00	0.00E+00	6.43E-14	3.47E-07	1.02E-07	6.43E-14
chromium (6+)	18540-29-9	3.47E-07	1.02E-07	0.00E+00	0.00E+00	6.43E-14	3.47E-07	1.02E-07	6.43E-14
copper	7440-50-8	1.30E-05	3.83E-06	0.00E+00	0.00E+00	3.18E-09	1.30E-05	3.83E-06	3.18E-09
hydrogen chloride	7647-01-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.70E-07	3.70E-07	3.70E-07	3.70E-07
iron	7439-89-6	4.77E-05	1.40E-05	0.00E+00	0.00E+00	3.20E-12	4.77E-05	1.40E-05	3.20E-12
lead	7439-92-1	5.21E-07	1.53E-07	0.00E+00	0.00E+00	2.04E-11	5.21E-07	1.53E-07	2.04E-11
manganese	7439-96-5	6.07E-05	1.79E-05	0.00E+00	0.00E+00	5.72E-10	6.07E-05	1.79E-05	5.72E-10
total mercury	NA								
mercuric chloride	7487-94-7	6.68E-12	1.97E-12	0.00E+00	0.00E+00	9.91E-14	6.78E-12	2.07E-12	9.91E-14
methyl mercury	22967-92-6	1.89E-12	5.55E-13	0.00E+00	0.00E+00	3.98E-15	1.89E-12	5.59E-13	3.98E-15
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	2.04E-07	6.00E-08	0.00E+00	0.00E+00	3.96E-13	2.04E-07	6.00E-08	3.96E-13
vanadium	7440-62-2	6.50E-07	1.91E-07	0.00E+00	0.00E+00	3.94E-12	6.50E-07	1.91E-07	3.94E-12
zinc	7440-66-6	2.17E-05	6.39E-06	0.00E+00	0.00E+00	4.19E-10	2.17E-05	6.39E-06	4.19E-10

1. Grain was assumed grown on untilled land (Zs = 2cm). This causes a higher COPC concentration in grain, rather than using the default tilled soil depth of 20cm.

CONCENTRATIONS OF COPCS IN ANIMAL FEED FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Infant Exposure Scenarios									
		Concentration Due to Individual Uptake Mechanisms					Forage	Silage	Grain[1]
		Due to Direct Deposition - Forage	Due to Direct Deposition - Silage	Due to Air-to-Plant Transfer - Forage	Due to Air-to-Plant Transfer - Silage	Due to Direct Uptake from Soil	Due to All Processes	Due to All Processes	Due to All Processes
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
COPC	CAS Number	Pd_{forage}	Pd_{silage}	Pv_{forage}	Pv_{silage}	Pr	P_{forage}	P_{silage}	P_{grain}
2-butanone	78-93-3	0.00E+00	0.00E+00	3.87E-14	1.94E-14	8.08E-10	8.08E-10	8.08E-10	8.08E-10
2-ethyl 1,3-butadiene	3404-63-5	0.00E+00	0.00E+00	3.83E-13	1.92E-13	6.30E-12	6.69E-12	6.50E-12	6.30E-12
acetone	67-64-1	0.00E+00	0.00E+00	2.72E-14	1.36E-14	4.18E-10	4.18E-10	4.18E-10	4.18E-10
benzene	71-43-2	0.00E+00	0.00E+00	1.68E-10	8.40E-11	4.64E-09	4.81E-09	4.73E-09	4.64E-09
benzyl alcohol	100-51-6	0.00E+00	0.00E+00	1.76E-10	8.80E-11	1.27E-06	1.27E-06	1.27E-06	1.27E-06
bis(2-ethylhexyl)-phthalate	117-81-7	3.04E-06	8.95E-07	0.00E+00	0.00E+00	3.85E-09	3.04E-06	8.99E-07	3.85E-09
bromodichloromethane	75-27-4	0.00E+00	0.00E+00	4.00E-14	2.00E-14	8.90E-11	8.91E-11	8.90E-11	8.90E-11
carbon disulfide	75-15-0	0.00E+00	0.00E+00	1.71E-14	8.57E-15	2.08E-13	2.25E-13	2.16E-13	2.08E-13
carbon tetrachloride	56-23-5	0.00E+00	0.00E+00	3.06E-15	1.53E-15	1.96E-14	2.27E-14	2.11E-14	1.96E-14
chlorobenzene	108-90-7	0.00E+00	0.00E+00	2.18E-14	1.09E-14	1.88E-13	2.10E-13	1.99E-13	1.88E-13
chloroform	67-66-3	0.00E+00	0.00E+00	9.01E-15	4.50E-15	2.04E-13	2.13E-13	2.09E-13	2.04E-13
chloromethane	74-87-3	0.00E+00	0.00E+00	2.36E-15	1.18E-15	1.49E-12	1.50E-12	1.50E-12	1.49E-12
dibromochloromethane	124-48-1	0.00E+00	0.00E+00	1.39E-13	6.93E-14	1.16E-09	1.16E-09	1.16E-09	1.16E-09
dimethyl phthalate	131-11-3	0.00E+00	0.00E+00	1.73E-09	8.65E-10	3.91E-08	4.08E-08	4.00E-08	3.91E-08
di-n-butyl phthalate	84-74-2	0.00E+00	0.00E+00	5.21E-07	2.60E-07	4.73E-09	5.26E-07	2.65E-07	4.73E-09
ethane	74-84-0	0.00E+00	0.00E+00	3.77E-12	1.88E-12	3.73E-10	3.77E-10	3.75E-10	3.73E-10
ethylbenzene	100-41-4	0.00E+00	0.00E+00	1.88E-14	9.39E-15	8.39E-14	1.03E-13	9.33E-14	8.39E-14
HD	505-60-2	0.00E+00	0.00E+00	2.58E-10	1.29E-10	1.20E-10	3.79E-10	2.49E-10	1.20E-10
hexane	110-54-3	0.00E+00	0.00E+00	1.64E-15	8.22E-16	5.67E-15	7.31E-15	6.49E-15	5.67E-15
methane	74-82-8	0.00E+00	0.00E+00	1.11E-11	5.55E-12	2.98E-09	2.99E-09	2.99E-09	2.98E-09
methylene chloride	75-09-2	0.00E+00	0.00E+00	3.55E-15	1.77E-15	3.52E-13	3.55E-13	3.53E-13	3.52E-13
propene	115-07-1	0.00E+00	0.00E+00	2.14E-12	1.07E-12	2.88E-10	2.90E-10	2.89E-10	2.88E-10
styrene	100-42-5	0.00E+00	0.00E+00	4.75E-13	2.38E-13	4.86E-10	4.87E-10	4.87E-10	4.86E-10
tetrachloroethene	127-18-4	0.00E+00	0.00E+00	2.02E-14	1.01E-14	1.29E-14	3.31E-14	2.30E-14	1.29E-14
toluene	108-88-3	0.00E+00	0.00E+00	1.05E-10	5.26E-11	9.14E-10	1.02E-09	9.66E-10	9.14E-10
trichloroethene	79-01-6	0.00E+00	0.00E+00	3.97E-15	1.99E-15	1.08E-13	1.12E-13	1.10E-13	1.08E-13
vinyl chloride	75-01-4	0.00E+00	0.00E+00	1.89E-14	9.45E-15	1.89E-12	1.91E-12	1.90E-12	1.89E-12
xylenes	1330-20-7	0.00E+00	0.00E+00	1.17E-11	5.86E-12	1.93E-10	2.05E-10	1.99E-10	1.93E-10
3,3',4,4'-TCB (PCB 77)	32598-13-3	2.86E-16	8.42E-17	0.00E+00	0.00E+00	1.50E-18	2.88E-16	8.57E-17	1.50E-18
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	1.19E-15	3.51E-16	0.00E+00	0.00E+00	6.25E-18	1.20E-15	3.57E-16	6.25E-18
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	5.72E-16	1.68E-16	0.00E+00	0.00E+00	3.00E-18	5.75E-16	1.71E-16	3.00E-18
total coplanar PCBs	NA								
ammonia	7664-41-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.49E-09	6.49E-09	6.49E-09	6.49E-09
aluminum	7429-90-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.86E-13	4.86E-13	4.86E-13	4.86E-13
cadmium	7440-43-9	1.26E-07	3.70E-08	0.00E+00	0.00E+00	3.04E-12	1.26E-07	3.70E-08	3.04E-12
chlorine	7782-50-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.33E-07	1.33E-07	1.33E-07	1.33E-07
chromium (3+)	7440-47-3	3.47E-07	1.02E-07	0.00E+00	0.00E+00	6.43E-14	3.47E-07	1.02E-07	6.43E-14
chromium (6+)	18540-29-9	3.47E-07	1.02E-07	0.00E+00	0.00E+00	6.43E-14	3.47E-07	1.02E-07	6.43E-14
copper	7440-50-8	1.30E-05	3.83E-06	0.00E+00	0.00E+00	3.18E-09	1.30E-05	3.83E-06	3.18E-09
hydrogen chloride	7647-01-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.70E-07	3.70E-07	3.70E-07	3.70E-07
iron	7439-89-6	4.77E-05	1.40E-05	0.00E+00	0.00E+00	3.20E-12	4.77E-05	1.40E-05	3.20E-12
lead	7439-92-1	5.21E-07	1.53E-07	0.00E+00	0.00E+00	2.04E-11	5.21E-07	1.53E-07	2.04E-11
manganese	7439-96-5	6.07E-05	1.79E-05	0.00E+00	0.00E+00	5.72E-10	6.07E-05	1.79E-05	5.72E-10
total mercury	NA								
mercuric chloride	7487-94-7	5.68E-12	1.97E-12	0.00E+00	0.00E+00	9.91E-14	5.78E-12	2.07E-12	9.91E-14
methyl mercury	22967-92-6	1.60E-12	5.55E-13	0.00E+00	0.00E+00	3.98E-15	1.61E-12	5.59E-13	3.98E-15
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	2.04E-07	6.00E-08	0.00E+00	0.00E+00	3.96E-13	2.04E-07	6.00E-08	3.96E-13
vanadium	7440-62-2	6.50E-07	1.91E-07	0.00E+00	0.00E+00	3.94E-12	6.50E-07	1.91E-07	3.94E-12
zinc	7440-66-6	2.17E-05	6.39E-06	0.00E+00	0.00E+00	4.19E-10	2.17E-05	6.39E-06	4.19E-10

1. Grain was assumed grown on untilled land (Zs = 2cm). This causes a higher COPC concentration in grain, rather than using the default tilled soil depth of 20cm.

CONCENTRATIONS OF COPCS IN ANIMAL FEED FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS: All Exposure Scenarios									
		Concentration Due to Individual Uptake Mechanisms					Forage	Silage	Grain[1]
		Due to Direct Deposition - Forage	Due to Direct Deposition - Silage	Due to Air-to-Plant Transfer - Forage	Due to Air-to-Plant Transfer - Silage	Due to Direct Uptake from Soil	Due to All Processes	Due to All Processes	Due to All Processes
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
COPC	CAS Number	Pd_{forage}	Pd_{silage}	Pv_{forage}	Pv_{silage}	Pr	P_{forage}	P_{silage}	P_{grain}
2-butanone	78-93-3	0.00E+00	0.00E+00	3.87E-14	1.94E-14	8.08E-10	8.08E-10	8.08E-10	8.08E-10
2-ethyl 1,3-butadiene	3404-63-5	0.00E+00	0.00E+00	3.83E-13	1.92E-13	6.30E-12	6.69E-12	6.50E-12	6.30E-12
acetone	67-64-1	0.00E+00	0.00E+00	2.72E-14	1.36E-14	4.18E-10	4.18E-10	4.18E-10	4.18E-10
benzene	71-43-2	0.00E+00	0.00E+00	1.68E-10	8.40E-11	4.64E-09	4.81E-09	4.73E-09	4.64E-09
benzyl alcohol	100-51-6	0.00E+00	0.00E+00	1.76E-10	8.80E-11	1.43E-06	1.43E-06	1.43E-06	1.43E-06
bis(2-ethylhexyl)-phthalate	117-81-7	3.04E-06	8.95E-07	0.00E+00	0.00E+00	3.92E-09	3.04E-06	8.99E-07	3.92E-09
bromodichloromethane	75-27-4	0.00E+00	0.00E+00	4.00E-14	2.00E-14	8.90E-11	8.91E-11	8.91E-11	8.90E-11
carbon disulfide	75-15-0	0.00E+00	0.00E+00	1.71E-14	8.57E-15	2.08E-13	2.25E-13	2.16E-13	2.08E-13
carbon tetrachloride	56-23-5	0.00E+00	0.00E+00	3.06E-15	1.53E-15	1.96E-14	2.27E-14	2.11E-14	1.96E-14
chlorobenzene	108-90-7	0.00E+00	0.00E+00	2.18E-14	1.09E-14	1.88E-13	2.10E-13	1.99E-13	1.88E-13
chloroform	67-66-3	0.00E+00	0.00E+00	9.01E-15	4.50E-15	2.04E-13	2.13E-13	2.09E-13	2.04E-13
chloromethane	74-87-3	0.00E+00	0.00E+00	2.36E-15	1.18E-15	1.49E-12	1.50E-12	1.50E-12	1.49E-12
dibromochloromethane	124-48-1	0.00E+00	0.00E+00	1.39E-13	6.93E-14	1.16E-09	1.16E-09	1.16E-09	1.16E-09
dimethyl phthalate	131-11-3	0.00E+00	0.00E+00	1.73E-09	8.65E-10	3.93E-08	4.10E-08	4.02E-08	3.93E-08
di-n-butyl phthalate	84-74-2	0.00E+00	0.00E+00	5.21E-07	2.60E-07	4.81E-09	5.26E-07	2.65E-07	4.81E-09
ethane	74-84-0	0.00E+00	0.00E+00	3.77E-12	1.88E-12	3.73E-10	3.77E-10	3.75E-10	3.73E-10
ethylbenzene	100-41-4	0.00E+00	0.00E+00	1.88E-14	9.39E-15	8.39E-14	1.03E-13	9.33E-14	8.39E-14
HD	505-60-2	0.00E+00	0.00E+00	2.58E-10	1.29E-10	1.20E-10	3.79E-10	2.49E-10	1.20E-10
hexane	110-54-3	0.00E+00	0.00E+00	1.64E-15	8.22E-16	5.67E-15	7.31E-15	6.49E-15	5.67E-15
methane	74-82-8	0.00E+00	0.00E+00	1.11E-11	5.55E-12	2.98E-09	2.99E-09	2.99E-09	2.98E-09
methylene chloride	75-09-2	0.00E+00	0.00E+00	3.55E-15	1.77E-15	3.52E-13	3.55E-13	3.53E-13	3.52E-13
propene	115-07-1	0.00E+00	0.00E+00	2.14E-12	1.07E-12	2.88E-10	2.90E-10	2.89E-10	2.88E-10
styrene	100-42-5	0.00E+00	0.00E+00	4.75E-13	2.38E-13	4.87E-10	4.88E-10	4.88E-10	4.87E-10
tetrachloroethene	127-18-4	0.00E+00	0.00E+00	2.02E-14	1.01E-14	1.29E-14	3.31E-14	2.30E-14	1.29E-14
toluene	108-88-3	0.00E+00	0.00E+00	1.05E-10	5.26E-11	9.14E-10	1.02E-09	9.66E-10	9.14E-10
trichloroethene	79-01-6	0.00E+00	0.00E+00	3.97E-15	1.99E-15	1.08E-13	1.12E-13	1.10E-13	1.08E-13
vinyl chloride	75-01-4	0.00E+00	0.00E+00	1.89E-14	9.45E-15	1.89E-12	1.91E-12	1.90E-12	1.89E-12
xylenes	1330-20-7	0.00E+00	0.00E+00	1.17E-11	5.86E-12	1.93E-10	2.05E-10	1.99E-10	1.93E-10
3,3',4,4'-TCB (PCB 77)	32598-13-3	2.86E-16	8.42E-17	0.00E+00	0.00E+00	2.93E-18	2.89E-16	8.72E-17	2.93E-18
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	1.19E-15	3.51E-16	0.00E+00	0.00E+00	1.22E-17	1.20E-15	3.63E-16	1.22E-17
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	5.72E-16	1.68E-16	0.00E+00	0.00E+00	5.85E-18	5.78E-16	1.74E-16	5.85E-18
total coplanar PCBs	NA								
ammonia	7664-41-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.49E-09	6.49E-09	6.49E-09	6.49E-09
aluminum	7429-90-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.86E-13	4.86E-13	4.86E-13	4.86E-13
cadmium	7440-43-9	1.26E-07	3.70E-08	0.00E+00	0.00E+00	3.04E-12	1.26E-07	3.70E-08	3.04E-12
chlorine	7782-50-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.33E-07	1.33E-07	1.33E-07	1.33E-07
chromium (3+)	7440-47-3	3.47E-07	1.02E-07	0.00E+00	0.00E+00	6.43E-14	3.47E-07	1.02E-07	6.43E-14
chromium (6+)	18540-29-9	3.47E-07	1.02E-07	0.00E+00	0.00E+00	6.43E-14	3.47E-07	1.02E-07	6.43E-14
copper	7440-50-8	1.30E-05	3.83E-06	0.00E+00	0.00E+00	3.19E-09	1.30E-05	3.83E-06	3.19E-09
hydrogen chloride	7647-01-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.70E-07	3.70E-07	3.70E-07	3.70E-07
iron	7439-89-6	4.77E-05	1.40E-05	0.00E+00	0.00E+00	3.20E-12	4.77E-05	1.40E-05	3.20E-12
lead	7439-92-1	5.21E-07	1.53E-07	0.00E+00	0.00E+00	2.05E-11	5.21E-07	1.53E-07	2.05E-11
manganese	7439-96-5	6.07E-05	1.79E-05	0.00E+00	0.00E+00	5.72E-10	6.07E-05	1.79E-05	5.72E-10
total mercury	NA								
mercuric chloride	7487-94-7	6.68E-12	1.97E-12	0.00E+00	0.00E+00	1.98E-13	6.88E-12	2.17E-12	1.98E-13
methyl mercury	22967-92-6	1.89E-12	5.55E-13	0.00E+00	0.00E+00	7.83E-15	1.89E-12	5.63E-13	7.83E-15
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	2.04E-07	6.00E-08	0.00E+00	0.00E+00	3.96E-13	2.04E-07	6.00E-08	3.96E-13
vanadium	7440-62-2	6.50E-07	1.91E-07	0.00E+00	0.00E+00	3.95E-12	6.50E-07	1.91E-07	3.95E-12
zinc	7440-66-6	2.17E-05	6.39E-06	0.00E+00	0.00E+00	4.19E-10	2.17E-05	6.39E-06	4.19E-10

1. Grain was assumed grown on untilled land (Zs = 2cm). This causes a higher COPC concentration in grain, rather than using the default tilled soil depth of 20cm.

CONCENTRATIONS OF COPCS IN ANIMAL PRODUCTS FOR EACH EXPOSURE SCENARIC

CARCINOGENIC EFFECTS: Adult Resident and Adult Subsistence Fisher Exposure Scenarios						
		Beef Concentration (mg/kg)	Pork Concentration (mg/kg)	Poultry Concentration (mg/kg)	Egg Concentration (mg/kg)	Milk Concentration (mg/kg)
COPC	CAS Number	A_{beef}	A_{pork}	$A_{poultry}$	A_{egg}	A_{milk}
2-butanone	78-93-3	1.67E-13	8.11E-14	2.11E-15	1.21E-15	6.06E-14
2-ethyl 1,3-butadiene	3404-63-5	2.01E-13	8.24E-14	2.13E-15	1.22E-15	6.90E-14
acetone	67-64-1	2.36E-14	1.14E-14	2.98E-16	1.70E-16	8.54E-15
benzene	71-43-2	3.71E-11	1.59E-11	4.03E-13	2.30E-13	1.31E-11
benzyl alcohol	100-51-6	1.68E-09	8.16E-10	2.12E-11	1.21E-11	6.10E-10
bis(2-ethylhexyl)-phthalate	117-81-7	1.16E-06	6.09E-08	1.35E-09	7.71E-10	3.68E-06
bromodichloromethane	75-27-4	6.03E-10	2.95E-10	7.74E-12	4.42E-12	2.17E-13
carbon disulfide	75-15-0	2.31E-15	8.60E-16	2.11E-17	1.20E-17	8.02E-16
carbon tetrachloride	56-23-5	6.16E-13	1.98E-14	4.67E-15	2.67E-15	2.09E-13
chlorobenzene	108-90-7	5.24E-12	1.84E-13	4.48E-14	2.56E-14	1.79E-12
chloroform	67-66-3	1.44E-15	6.00E-16	1.52E-17	8.64E-18	5.09E-16
chloromethane	74-87-3	1.21E-15	5.84E-16	1.51E-17	8.68E-18	4.38E-16
dibromochloromethane	124-48-1	9.56E-09	4.70E-09	1.24E-10	7.07E-11	3.43E-12
dimethyl phthalate	131-11-3	1.34E-07	5.52E-08	1.39E-09	7.92E-13	4.72E-11
di-n-butyl phthalate	84-74-2	1.91E-05	1.64E-06	1.07E-11	6.11E-10	6.10E-05
ethane	74-84-0	1.67E-12	7.80E-13	2.03E-14	1.16E-14	5.98E-13
ethylbenzene	100-41-4	4.41E-15	1.28E-15	2.94E-17	1.68E-17	1.48E-15
HD	505-60-2	1.50E-11	1.79E-12	1.67E-14	9.52E-15	4.83E-12
hexane	110-54-3	7.24E-16	2.11E-16	5.07E-18	2.89E-18	2.35E-16
methane	74-82-8	3.50E-12	6.05E-14	1.57E-15	8.96E-16	4.58E-14
methylene chloride	75-09-2	6.39E-16	2.98E-16	7.68E-18	4.39E-18	2.29E-16
propene	115-07-1	1.19E-12	5.64E-13	1.46E-14	8.35E-15	4.27E-13
styrene	100-42-5	1.11E-09	5.60E-10	1.51E-10	8.61E-11	3.91E-09
tetrachloroethene	127-18-4	3.77E-15	5.15E-16	6.50E-18	3.71E-18	1.21E-15
toluene	108-88-3	2.25E-11	7.84E-12	1.90E-13	1.09E-13	7.70E-12
trichloroethene	79-01-6	1.34E-15	5.77E-16	1.48E-17	8.44E-18	4.74E-16
vinyl chloride	75-01-4	4.12E-15	1.93E-15	4.97E-17	2.85E-17	1.49E-15
xylenes	1330-20-7	6.77E-12	2.81E-12	7.30E-14	4.17E-14	2.33E-12
3,3',4,4'-TCB (PCB 77)	32598-13-3	8.97E-17	8.76E-18	1.54E-19	8.78E-20	2.79E-17
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	3.74E-16	3.65E-17	6.40E-19	3.66E-19	1.16E-16
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	1.79E-16	1.75E-17	3.07E-19	1.76E-19	5.58E-17
total coplanar PCBs	NA					
ammonia	7664-41-7	1.16E-12	5.61E-13	1.46E-14	8.34E-15	4.22E-13
aluminum	7429-90-5	5.77E-14	0.00E+00	0.00E+00	0.00E+00	6.33E-15
cadmium	7440-43-9	1.44E-10	9.90E-12	2.02E-14	4.76E-16	1.18E-11
chlorine	7782-50-5	9.44E-11	4.58E-11	1.19E-12	6.83E-13	3.42E-11
chromium (3+)	7440-47-3	1.82E-08	0.00E+00	0.00E+00	0.00E+00	7.49E-09
chromium (6+)	18540-29-9	1.82E-08	0.00E+00	0.00E+00	0.00E+00	7.49E-09
copper	7440-50-8	1.24E-06	0.00E+00	0.00E+00	0.00E+00	2.81E-07
hydrogen chloride	7647-01-0	3.80E-11	1.84E-11	4.79E-13	2.73E-13	1.38E-11
iron	7439-89-6	9.09E-06	0.00E+00	0.00E+00	0.00E+00	1.72E-07
lead	7439-92-1	1.49E-09	0.00E+00	0.00E+00	0.00E+00	1.88E-09
manganese	7439-96-5	2.31E-07	0.00E+00	0.00E+00	0.00E+00	3.06E-07
total mercury	NA					
mercuric chloride	7487-94-7	3.77E-13	2.80E-16	7.46E-15	7.46E-15	2.38E-13
methyl mercury	22967-92-6	1.42E-14	4.46E-18	1.99E-17	1.99E-17	9.25E-15
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	1.17E-08	0.00E+00	0.00E+00	0.00E+00	2.93E-09
vanadium	7440-62-2	1.55E-08	0.00E+00	0.00E+00	0.00E+00	1.87E-10
zinc	7440-66-6	1.86E-08	1.14E-09	2.61E-13	2.61E-13	1.02E-08

CONCENTRATIONS OF COPCS IN ANIMAL PRODUCTS FOR EACH EXPOSURE SCENARIC

CARCINOGENIC EFFECTS: Adult Subsistence Farmer Exposure Scenario						
		Beef Concentration (mg/kg)	Pork Concentration (mg/kg)	Poultry Concentration (mg/kg)	Egg Concentration (mg/kg)	Milk Concentration (mg/kg)
COPC	CAS Number	A_{beef}	A_{pork}	$A_{poultry}$	A_{egg}	A_{milk}
2-butanone	78-93-3	1.25E-13	6.08E-14	1.58E-15	9.04E-16	4.54E-14
2-ethyl 1,3-butadiene	3404-63-5	1.62E-13	6.28E-14	1.60E-15	9.12E-16	5.54E-14
acetone	67-64-1	1.77E-14	8.58E-15	2.24E-16	1.27E-16	6.41E-15
benzene	71-43-2	2.92E-11	1.20E-11	3.03E-13	1.73E-13	1.03E-11
benzyl alcohol	100-51-6	1.26E-09	6.12E-10	1.59E-11	9.07E-12	4.58E-10
bis(2-ethylhexyl)-phthalate	117-81-7	1.16E-06	6.08E-08	1.01E-09	5.78E-10	3.68E-06
bromodichloromethane	75-27-4	4.52E-10	2.21E-10	5.80E-12	3.32E-12	1.63E-13
carbon disulfide	75-15-0	1.90E-15	6.59E-16	1.58E-17	9.03E-18	6.56E-16
carbon tetrachloride	56-23-5	5.29E-13	1.54E-14	3.51E-15	2.00E-15	1.78E-13
chlorobenzene	108-90-7	4.41E-12	1.42E-13	3.36E-14	1.92E-14	1.50E-12
chloroform	67-66-3	1.15E-15	4.56E-16	1.14E-17	6.48E-18	4.03E-16
chloromethane	74-87-3	9.11E-16	4.38E-16	1.14E-17	6.51E-18	3.29E-16
dibromochloromethane	124-48-1	7.17E-09	3.53E-09	9.27E-11	5.30E-11	2.58E-12
dimethyl phthalate	131-11-3	1.06E-07	4.19E-08	1.04E-09	5.94E-13	3.73E-11
di-n-butyl phthalate	84-74-2	1.91E-05	1.63E-06	8.02E-12	4.58E-10	6.09E-05
ethane	74-84-0	1.27E-12	5.87E-13	1.52E-14	8.68E-15	4.55E-13
ethylbenzene	100-41-4	3.88E-15	1.01E-15	2.21E-17	1.26E-17	1.30E-15
HD	505-60-2	1.47E-11	1.63E-12	1.25E-14	7.14E-15	4.72E-12
hexane	110-54-3	6.43E-16	1.67E-16	3.80E-18	2.17E-18	2.09E-16
methane	74-82-8	2.64E-12	4.55E-14	1.18E-15	6.72E-16	3.45E-14
methylene chloride	75-09-2	4.87E-16	2.24E-16	5.76E-18	3.29E-18	1.75E-16
propene	115-07-1	9.05E-13	4.24E-13	1.10E-14	6.27E-15	3.24E-13
styrene	100-42-5	8.34E-10	4.20E-10	1.13E-10	6.46E-11	2.94E-09
tetrachloroethene	127-18-4	3.65E-15	4.56E-16	4.87E-18	2.79E-18	1.18E-15
toluene	108-88-3	1.89E-11	6.05E-12	1.43E-13	8.16E-14	6.42E-12
trichloroethene	79-01-6	1.06E-15	4.37E-16	1.11E-17	6.33E-18	3.72E-16
vinyl chloride	75-01-4	3.14E-15	1.46E-15	3.73E-17	2.13E-17	1.13E-15
xylenes	1330-20-7	5.46E-12	2.14E-12	5.48E-14	3.13E-14	1.87E-12
3,3',4,4'-TCB (PCB 77)	32598-13-3	8.91E-17	8.33E-18	1.38E-19	7.90E-20	2.78E-17
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	3.71E-16	3.47E-17	5.76E-19	3.29E-19	1.16E-16
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	1.78E-16	1.67E-17	2.77E-19	1.58E-19	5.56E-17
total coplanar PCBs	NA					
ammonia	7664-41-7	8.72E-13	4.21E-13	1.09E-14	6.26E-15	3.17E-13
aluminum	7429-90-5	4.33E-14	0.00E+00	0.00E+00	0.00E+00	4.75E-15
cadmium	7440-43-9	1.44E-10	9.90E-12	1.52E-14	3.57E-16	1.18E-11
chlorine	7782-50-5	7.08E-11	3.44E-11	8.96E-13	5.12E-13	2.57E-11
chromium (3+)	7440-47-3	1.82E-08	0.00E+00	0.00E+00	0.00E+00	7.49E-09
chromium (6+)	18540-29-9	1.82E-08	0.00E+00	0.00E+00	0.00E+00	7.49E-09
copper	7440-50-8	1.24E-06	0.00E+00	0.00E+00	0.00E+00	2.81E-07
hydrogen chloride	7647-01-0	2.85E-11	1.38E-11	3.59E-13	2.05E-13	1.03E-11
iron	7439-89-6	9.09E-06	0.00E+00	0.00E+00	0.00E+00	1.72E-07
lead	7439-92-1	1.49E-09	0.00E+00	0.00E+00	0.00E+00	1.88E-09
manganese	7439-96-5	2.31E-07	0.00E+00	0.00E+00	0.00E+00	3.06E-07
total mercury	NA					
mercuric chloride	7487-94-7	3.78E-13	2.84E-16	7.63E-15	7.63E-15	2.38E-13
methyl mercury	22967-92-6	1.41E-14	4.43E-18	1.87E-17	1.87E-17	9.25E-15
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	1.17E-08	0.00E+00	0.00E+00	0.00E+00	2.93E-09
vanadium	7440-62-2	1.55E-08	0.00E+00	0.00E+00	0.00E+00	1.87E-10
zinc	7440-66-6	1.86E-08	1.14E-09	1.95E-13	1.95E-13	1.02E-08

CONCENTRATIONS OF COPCS IN ANIMAL PRODUCTS FOR EACH EXPOSURE SCENARIC

CARCINOGENIC EFFECTS: Child Exposure Scenarios						
		Beef Concentration (mg/kg)	Pork Concentration (mg/kg)	Poultry Concentration (mg/kg)	Egg Concentration (mg/kg)	Milk Concentration (mg/kg)
COPC	CAS Number	A_{beef}	A_{pork}	$A_{poultry}$	A_{egg}	A_{milk}
2-butanone	78-93-3	1.00E-12	4.87E-13	1.27E-14	7.23E-15	3.63E-13
2-ethyl 1,3-butadiene	3404-63-5	9.78E-13	4.75E-13	1.28E-14	7.30E-15	3.41E-13
acetone	67-64-1	1.42E-13	6.87E-14	1.79E-15	1.02E-15	5.12E-14
benzene	71-43-2	1.94E-10	9.27E-11	2.42E-12	1.38E-12	6.95E-11
benzyl alcohol	100-51-6	8.97E-09	4.36E-09	1.13E-10	6.46E-11	3.26E-09
bis(2-ethylhexyl)-phthalate	117-81-7	1.16E-06	6.30E-08	7.95E-09	4.54E-09	3.69E-06
bromodichloromethane	75-27-4	3.61E-09	1.77E-09	4.64E-11	2.65E-11	1.30E-12
carbon disulfide	75-15-0	1.05E-14	4.87E-15	1.27E-16	7.22E-17	3.73E-15
carbon tetrachloride	56-23-5	2.36E-12	1.07E-13	2.80E-14	1.60E-14	8.28E-13
chlorobenzene	108-90-7	2.20E-11	1.02E-12	2.69E-13	1.54E-13	7.72E-12
chloroform	67-66-3	7.34E-15	3.49E-15	9.10E-17	5.19E-17	2.64E-15
chloromethane	74-87-3	7.22E-15	3.50E-15	9.08E-17	5.21E-17	2.61E-15
dibromochloromethane	124-48-1	5.72E-08	2.81E-08	7.39E-10	4.23E-10	2.05E-11
dimethyl phthalate	131-11-3	6.76E-07	3.19E-07	8.27E-09	4.73E-12	2.43E-10
di-n-butyl phthalate	84-74-2	1.94E-05	1.81E-06	6.30E-11	3.60E-09	6.18E-05
ethane	74-84-0	9.59E-12	4.65E-12	1.22E-13	6.95E-14	3.46E-12
ethylbenzene	100-41-4	1.50E-14	6.72E-15	1.77E-16	1.01E-16	5.23E-15
HD	505-60-2	2.14E-11	4.95E-12	1.00E-13	5.71E-14	7.12E-12
hexane	110-54-3	2.34E-15	1.10E-15	3.04E-17	1.73E-17	7.70E-16
methane	74-82-8	2.07E-11	3.62E-13	9.42E-15	5.37E-15	2.71E-13
methylene chloride	75-09-2	3.68E-15	1.77E-15	4.61E-17	2.64E-17	1.33E-15
propene	115-07-1	6.94E-12	3.36E-12	8.78E-14	5.01E-14	2.49E-12
styrene	100-42-5	6.62E-09	3.35E-09	9.02E-10	5.16E-10	2.33E-08
tetrachloroethene	127-18-4	6.03E-15	1.69E-15	3.90E-17	2.23E-17	2.00E-15
toluene	108-88-3	9.41E-11	4.36E-11	1.14E-12	6.53E-13	3.32E-11
trichloroethene	79-01-6	7.01E-15	3.38E-15	8.88E-17	5.06E-17	2.51E-15
vinyl chloride	75-01-4	2.37E-14	1.15E-14	2.98E-16	1.71E-16	8.60E-15
xylenes	1330-20-7	3.30E-11	1.62E-11	4.38E-13	2.50E-13	1.15E-11
3,3',4,4'-TCB (PCB 77)	32598-13-3	8.85E-17	7.76E-18	1.18E-19	6.74E-20	2.76E-17
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	3.69E-16	3.23E-17	4.92E-19	2.81E-19	1.15E-16
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	1.77E-16	1.55E-17	2.36E-19	1.35E-19	5.53E-17
total coplanar PCBs	NA					
ammonia	7664-41-7	6.97E-12	3.37E-12	8.75E-14	5.01E-14	2.53E-12
aluminum	7429-90-5	3.46E-13	0.00E+00	0.00E+00	0.00E+00	3.80E-14
cadmium	7440-43-9	1.44E-10	9.90E-12	1.21E-13	2.86E-15	1.18E-11
chlorine	7782-50-5	5.66E-10	2.75E-10	7.17E-12	4.10E-12	2.05E-10
chromium (3+)	7440-47-3	1.82E-08	0.00E+00	0.00E+00	0.00E+00	7.49E-09
chromium (6+)	18540-29-9	1.82E-08	0.00E+00	0.00E+00	0.00E+00	7.49E-09
copper	7440-50-8	1.24E-06	0.00E+00	0.00E+00	0.00E+00	2.81E-07
hydrogen chloride	7647-01-0	2.28E-10	1.10E-10	2.87E-12	1.64E-12	8.27E-11
iron	7439-89-6	9.09E-06	0.00E+00	0.00E+00	0.00E+00	1.72E-07
lead	7439-92-1	1.49E-09	0.00E+00	0.00E+00	0.00E+00	1.88E-09
manganese	7439-96-5	2.31E-07	0.00E+00	0.00E+00	0.00E+00	3.06E-07
total mercury	NA					
mercuric chloride	7487-94-7	3.57E-13	1.95E-16	4.07E-15	4.07E-15	2.29E-13
methyl mercury	22967-92-6	1.41E-14	4.29E-18	1.35E-17	1.35E-17	9.23E-15
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	1.17E-08	0.00E+00	0.00E+00	0.00E+00	2.93E-09
vanadium	7440-62-2	1.55E-08	0.00E+00	0.00E+00	0.00E+00	1.87E-10
zinc	7440-66-6	1.86E-08	1.15E-09	1.56E-12	1.56E-12	1.02E-08

CONCENTRATIONS OF COPCS IN ANIMAL PRODUCTS FOR EACH EXPOSURE SCENARIC

CARCINOGENIC EFFECTS: Infant Exposure Scenarios						
		Beef Concentration (mg/kg)	Pork Concentration (mg/kg)	Poultry Concentration (mg/kg)	Egg Concentration (mg/kg)	Milk Concentration (mg/kg)
COPC	CAS Number	A_{beef}	A_{pork}	$A_{poultry}$	A_{egg}	A_{milk}
2-butanone	78-93-3	1.00E-12	4.87E-13	1.27E-14	7.23E-15	3.63E-13
2-ethyl 1,3-butadiene	3404-63-5	9.78E-13	4.75E-13	1.28E-14	7.30E-15	3.41E-13
acetone	67-64-1	1.42E-13	6.87E-14	1.79E-15	1.02E-15	5.12E-14
benzene	71-43-2	1.94E-10	9.27E-11	2.42E-12	1.38E-12	6.95E-11
benzyl alcohol	100-51-6	8.97E-09	4.36E-09	1.13E-10	6.46E-11	3.26E-09
bis(2-ethylhexyl)-phthalate	117-81-7	1.16E-06	6.30E-08	7.95E-09	4.54E-09	3.69E-06
bromodichloromethane	75-27-4	3.61E-09	1.77E-09	4.64E-11	2.65E-11	1.30E-12
carbon disulfide	75-15-0	1.05E-14	4.87E-15	1.27E-16	7.22E-17	3.73E-15
carbon tetrachloride	56-23-5	2.36E-12	1.07E-13	2.80E-14	1.60E-14	8.28E-13
chlorobenzene	108-90-7	2.20E-11	1.02E-12	2.69E-13	1.54E-13	7.72E-12
chloroform	67-66-3	7.34E-15	3.49E-15	9.10E-17	5.19E-17	2.64E-15
chloromethane	74-87-3	7.22E-15	3.50E-15	9.08E-17	5.21E-17	2.61E-15
dibromochloromethane	124-48-1	5.72E-08	2.81E-08	7.39E-10	4.23E-10	2.05E-11
dimethyl phthalate	131-11-3	6.76E-07	3.19E-07	8.27E-09	4.73E-12	2.43E-10
di-n-butyl phthalate	84-74-2	1.94E-05	1.81E-06	6.30E-11	3.60E-09	6.18E-05
ethane	74-84-0	9.59E-12	4.65E-12	1.22E-13	6.95E-14	3.46E-12
ethylbenzene	100-41-4	1.50E-14	6.72E-15	1.77E-16	1.01E-16	5.23E-15
HD	505-60-2	2.14E-11	4.95E-12	1.00E-13	5.71E-14	7.12E-12
hexane	110-54-3	2.34E-15	1.10E-15	3.04E-17	1.73E-17	7.70E-16
methane	74-82-8	2.07E-11	3.62E-13	9.42E-15	5.37E-15	2.71E-13
methylene chloride	75-09-2	3.68E-15	1.77E-15	4.61E-17	2.64E-17	1.33E-15
propene	115-07-1	6.94E-12	3.36E-12	8.78E-14	5.01E-14	2.49E-12
styrene	100-42-5	6.62E-09	3.35E-09	9.02E-10	5.16E-10	2.33E-08
tetrachloroethene	127-18-4	6.03E-15	1.69E-15	3.90E-17	2.23E-17	2.00E-15
toluene	108-88-3	9.41E-11	4.36E-11	1.14E-12	6.53E-13	3.32E-11
trichloroethene	79-01-6	7.01E-15	3.38E-15	8.88E-17	5.06E-17	2.51E-15
vinyl chloride	75-01-4	2.37E-14	1.15E-14	2.98E-16	1.71E-16	8.60E-15
xylenes	1330-20-7	3.30E-11	1.62E-11	4.38E-13	2.50E-13	1.15E-11
3,3',4,4'-TCB (PCB 77)	32598-13-3	8.85E-17	7.76E-18	1.18E-19	6.74E-20	2.76E-17
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	3.69E-16	3.23E-17	4.92E-19	2.81E-19	1.15E-16
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	1.77E-16	1.55E-17	2.36E-19	1.35E-19	5.53E-17
total coplanar PCBs	NA					
ammonia	7664-41-7	6.97E-12	3.37E-12	8.75E-14	5.01E-14	2.53E-12
aluminum	7429-90-5	3.46E-13	0.00E+00	0.00E+00	0.00E+00	3.80E-14
cadmium	7440-43-9	1.44E-10	9.90E-12	1.21E-13	2.86E-15	1.18E-11
chlorine	7782-50-5	5.66E-10	2.75E-10	7.17E-12	4.10E-12	2.05E-10
chromium (3+)	7440-47-3	1.82E-08	0.00E+00	0.00E+00	0.00E+00	7.49E-09
chromium (6+)	18540-29-9	1.82E-08	0.00E+00	0.00E+00	0.00E+00	7.49E-09
copper	7440-50-8	1.24E-06	0.00E+00	0.00E+00	0.00E+00	2.81E-07
hydrogen chloride	7647-01-0	2.28E-10	1.10E-10	2.87E-12	1.64E-12	8.27E-11
iron	7439-89-6	9.09E-06	0.00E+00	0.00E+00	0.00E+00	1.72E-07
lead	7439-92-1	1.49E-09	0.00E+00	0.00E+00	0.00E+00	1.88E-09
manganese	7439-96-5	2.31E-07	0.00E+00	0.00E+00	0.00E+00	3.06E-07
total mercury	NA					
mercuric chloride	7487-94-7	3.11E-13	1.95E-16	4.07E-15	4.07E-15	1.99E-13
methyl mercury	22967-92-6	1.22E-14	4.29E-18	1.35E-17	1.35E-17	7.97E-15
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	1.17E-08	0.00E+00	0.00E+00	0.00E+00	2.93E-09
vanadium	7440-62-2	1.55E-08	0.00E+00	0.00E+00	0.00E+00	1.87E-10
zinc	7440-66-6	1.86E-08	1.15E-09	1.56E-12	1.56E-12	1.02E-08

CONCENTRATIONS OF COPCS IN ANIMAL PRODUCTS FOR EACH EXPOSURE SCENARIC

NONCARCINOGENIC EFFECTS: All Exposure Scenarios						
		Beef Concentration (mg/kg)	Pork Concentration (mg/kg)	Poultry Concentration (mg/kg)	Egg Concentration (mg/kg)	Milk Concentration (mg/kg)
COPC	CAS Number	A_{beef}	A_{pork}	$A_{poultry}$	A_{egg}	A_{milk}
2-butanone	78-93-3	1.00E-12	4.87E-13	1.27E-14	7.24E-15	3.63E-13
2-ethyl 1,3-butadiene	3404-63-5	9.78E-13	4.75E-13	1.28E-14	7.30E-15	3.41E-13
acetone	67-64-1	1.42E-13	6.87E-14	1.79E-15	1.02E-15	5.12E-14
benzene	71-43-2	1.94E-10	9.27E-11	2.42E-12	1.38E-12	6.95E-11
benzyl alcohol	100-51-6	1.01E-08	4.89E-09	1.27E-10	7.25E-11	3.66E-09
bis(2-ethylhexyl)-phthalate	117-81-7	1.16E-06	6.30E-08	8.10E-09	4.63E-09	3.69E-06
bromodichloromethane	75-27-4	3.61E-09	1.77E-09	4.64E-11	2.65E-11	1.30E-12
carbon disulfide	75-15-0	1.05E-14	4.87E-15	1.27E-16	7.22E-17	3.73E-15
carbon tetrachloride	56-23-5	2.36E-12	1.07E-13	2.80E-14	1.60E-14	8.28E-13
chlorobenzene	108-90-7	2.20E-11	1.02E-12	2.69E-13	1.54E-13	7.72E-12
chloroform	67-66-3	7.34E-15	3.49E-15	9.10E-17	5.19E-17	2.64E-15
chloromethane	74-87-3	7.22E-15	3.50E-15	9.08E-17	5.21E-17	2.61E-15
dibromochloromethane	124-48-1	5.73E-08	2.82E-08	7.42E-10	4.24E-10	2.06E-11
dimethyl phthalate	131-11-3	6.79E-07	3.21E-07	8.31E-09	4.75E-12	2.44E-10
di-n-butyl phthalate	84-74-2	1.94E-05	1.81E-06	6.42E-11	3.67E-09	6.18E-05
ethane	74-84-0	9.59E-12	4.65E-12	1.22E-13	6.95E-14	3.46E-12
ethylbenzene	100-41-4	1.50E-14	6.72E-15	1.77E-16	1.01E-16	5.23E-15
HD	505-60-2	2.14E-11	4.95E-12	1.00E-13	5.71E-14	7.12E-12
hexane	110-54-3	2.34E-15	1.10E-15	3.04E-17	1.73E-17	7.70E-16
methane	74-82-8	2.07E-11	3.62E-13	9.42E-15	5.37E-15	2.71E-13
methylene chloride	75-09-2	3.68E-15	1.77E-15	4.61E-17	2.64E-17	1.33E-15
propene	115-07-1	6.94E-12	3.36E-12	8.78E-14	5.01E-14	2.49E-12
styrene	100-42-5	6.63E-09	3.36E-09	9.04E-10	5.17E-10	2.34E-08
tetrachloroethene	127-18-4	6.03E-15	1.69E-15	3.90E-17	2.23E-17	2.00E-15
toluene	108-88-3	9.41E-11	4.36E-11	1.14E-12	6.53E-13	3.32E-11
trichloroethene	79-01-6	7.01E-15	3.38E-15	8.88E-17	5.06E-17	2.51E-15
vinyl chloride	75-01-4	2.37E-14	1.15E-14	2.98E-16	1.71E-16	8.60E-15
xylenes	1330-20-7	3.30E-11	1.62E-11	4.38E-13	2.50E-13	1.15E-11
3,3',4,4'-TCB (PCB 77)	32598-13-3	9.22E-17	1.09E-17	2.30E-19	1.31E-19	2.84E-17
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	3.84E-16	4.55E-17	9.59E-19	5.48E-19	1.18E-16
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	1.84E-16	2.19E-17	4.60E-19	2.63E-19	5.68E-17
total coplanar PCBs	NA					
ammonia	7664-41-7	6.97E-12	3.37E-12	8.75E-14	5.01E-14	2.53E-12
aluminum	7429-90-5	3.46E-13	0.00E+00	0.00E+00	0.00E+00	3.80E-14
cadmium	7440-43-9	1.44E-10	9.90E-12	1.21E-13	2.86E-15	1.18E-11
chlorine	7782-50-5	5.66E-10	2.75E-10	7.17E-12	4.10E-12	2.05E-10
chromium (3+)	7440-47-3	1.82E-08	0.00E+00	0.00E+00	0.00E+00	7.49E-09
chromium (6+)	18540-29-9	1.82E-08	0.00E+00	0.00E+00	0.00E+00	7.49E-09
copper	7440-50-8	1.24E-06	0.00E+00	0.00E+00	0.00E+00	2.81E-07
hydrogen chloride	7647-01-0	2.28E-10	1.10E-10	2.87E-12	1.64E-12	8.27E-11
iron	7439-89-6	9.09E-06	0.00E+00	0.00E+00	0.00E+00	1.72E-07
lead	7439-92-1	1.49E-09	0.00E+00	0.00E+00	0.00E+00	1.88E-09
manganese	7439-96-5	2.31E-07	0.00E+00	0.00E+00	0.00E+00	3.06E-07
total mercury	NA					
mercuric chloride	7487-94-7	3.81E-13	2.96E-16	8.14E-15	8.14E-15	2.39E-13
methyl mercury	22967-92-6	1.42E-14	4.63E-18	2.65E-17	2.65E-17	9.27E-15
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	1.17E-08	0.00E+00	0.00E+00	0.00E+00	2.93E-09
vanadium	7440-62-2	1.55E-08	0.00E+00	0.00E+00	0.00E+00	1.87E-10
zinc	7440-66-6	1.86E-08	1.15E-09	1.56E-12	1.56E-12	1.02E-08

CONCENTRATIONS OF COPCS IN ANIMAL PRODUCTS FOR EACH EXPOSURE SCENARIC

CARCINOGENIC EFFECTS (TEQ BASIS): Adult Resident and Adult Subsistence Fisher Exposure Scenarios						
COPC	CAS Number	Beef Concentration (mg TEQ/kg)[a] A_{beef}	Pork Concentration (mg TEQ/kg)[a] A_{pork}	Poultry Concentration (mg TEQ/kg)[a] $A_{poultry}$	Egg Concentration (mg TEQ/kg)[a] A_{egg}	Milk Concentration (mg TEQ/kg)[a] A_{milk}
2-butanone	78-93-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-ethyl 1,3-butadiene	3404-63-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
acetone	67-64-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzene	71-43-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzyl alcohol	100-51-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bis(2-ethylhexyl)-phthalate	117-81-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bromodichloromethane	75-27-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
carbon disulfide	75-15-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
carbon tetrachloride	56-23-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chlorobenzene	108-90-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloroform	67-66-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloromethane	74-87-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dibromochloromethane	124-48-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dimethyl phthalate	131-11-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
di-n-butyl phthalate	84-74-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ethane	74-84-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ethylbenzene	100-41-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
HD	505-60-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
hexane	110-54-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methane	74-82-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methylene chloride	75-09-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
propene	115-07-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
styrene	100-42-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
tetrachloroethene	127-18-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
toluene	108-88-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trichloroethene	79-01-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
vinyl chloride	75-01-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
xylenes	1330-20-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3,3',4,4'-TCB (PCB 77)	32598-13-3	8.97E-21	8.76E-22	1.54E-23	8.78E-24	2.79E-21
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	1.12E-20	1.10E-21	1.92E-23	1.10E-23	3.49E-21
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	5.38E-21	5.26E-22	9.22E-24	5.27E-24	1.67E-21
total coplanar PCBs	NA	2.56E-20	2.50E-21	4.38E-23	2.50E-23	7.95E-21
ammonia	7664-41-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
aluminum	7429-90-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cadmium	7440-43-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chlorine	7782-50-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (3+)	7440-47-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (6+)	18540-29-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
copper	7440-50-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
hydrogen chloride	7647-01-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
iron	7439-89-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
lead	7439-92-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
manganese	7439-96-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
total mercury	NA					
mercuric chloride	7487-94-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methyl mercury	22967-92-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
vanadium	7440-62-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
zinc	7440-66-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

a. The concentration of individual PCDDs and PCDFs congeners and coplanar PCBs in animal products are presented in units of mg COPC TEQ/kg. The concentration of total PCDDs and PCDFs as well as the concentration of total coplanar PCBs in animal products are presented in units of mg TEQ/kg produce and are calculated as the sum of the concentrations of all individual PCDD and PCDF congeners in animal products and the concentrations of all coplanar produce in animal products, respectively.

CONCENTRATIONS OF COPCS IN ANIMAL PRODUCTS FOR EACH EXPOSURE SCENARIC

CARCINOGENIC EFFECTS (TEQ BASIS): Adult Subsistence Farmer Exposure Scenario						
COPC	CAS Number	Beef Concentration (mg TEQ/kg)[a] A_{beef}	Pork Concentration (mg TEQ/kg)[a] A_{pork}	Poultry Concentration (mg TEQ/kg)[a] $A_{poultry}$	Egg Concentration (mg TEQ/kg)[a] A_{egg}	Milk Concentration (mg TEQ/kg)[a] A_{milk}
2-butanone	78-93-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-ethyl 1,3-butadiene	3404-63-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
acetone	67-64-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzene	71-43-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzyl alcohol	100-51-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bis(2-ethylhexyl)-phthalate	117-81-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bromodichloromethane	75-27-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
carbon disulfide	75-15-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
carbon tetrachloride	56-23-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chlorobenzene	108-90-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloroform	67-66-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloromethane	74-87-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dibromochloromethane	124-48-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dimethyl phthalate	131-11-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
di-n-butyl phthalate	84-74-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ethane	74-84-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ethylbenzene	100-41-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
HD	505-60-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
hexane	110-54-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methane	74-82-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methylene chloride	75-09-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
propene	115-07-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
styrene	100-42-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
tetrachloroethene	127-18-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
toluene	108-88-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trichloroethene	79-01-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
vinyl chloride	75-01-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
xylenes	1330-20-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3,3',4,4'-TCB (PCB 77)	32598-13-3	8.91E-21	8.33E-22	1.38E-23	7.90E-24	2.78E-21
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	1.11E-20	1.04E-21	1.73E-23	9.88E-24	3.47E-21
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	5.35E-21	5.00E-22	8.30E-24	4.74E-24	1.67E-21
total coplanar PCBs	NA	2.54E-20	2.37E-21	3.94E-23	2.25E-23	7.92E-21
ammonia	7664-41-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
aluminum	7429-90-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cadmium	7440-43-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chlorine	7782-50-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (3+)	7440-47-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (6+)	18540-29-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
copper	7440-50-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
hydrogen chloride	7647-01-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
iron	7439-89-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
lead	7439-92-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
manganese	7439-96-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
total mercury	NA					
mercuric chloride	7487-94-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methyl mercury	22967-92-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
vanadium	7440-62-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
zinc	7440-66-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

a. The concentration of individual PCDDs and PCDFs congeners and coplanar PCBs in animal products are presented in units of mg COPC TEQ/kg. The concentration of total PCDDs and PCDFs as well as the concentration of total coplanar PCBs in animal products are presented in units of mg TEQ/kg produce and are calculated as the sum of the concentrations of all individual PCDD and PCDF congeners in animal products and the concentrations of all coplanar produce in animal products, respectively.

CONCENTRATIONS OF COPCS IN ANIMAL PRODUCTS FOR EACH EXPOSURE SCENARIC

CARCINOGENIC EFFECTS (TEQ BASIS): Child Exposure Scenarios						
COPC	CAS Number	Beef Concentration (mg TEQ/kg)[a] A_{beef}	Pork Concentration (mg TEQ/kg)[a] A_{pork}	Poultry Concentration (mg TEQ/kg)[a] $A_{poultry}$	Egg Concentration (mg TEQ/kg)[a] A_{egg}	Milk Concentration (mg TEQ/kg)[a] A_{milk}
2-butanone	78-93-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-ethyl 1,3-butadiene	3404-63-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
acetone	67-64-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzene	71-43-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzyl alcohol	100-51-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bis(2-ethylhexyl)-phthalate	117-81-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bromodichloromethane	75-27-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
carbon disulfide	75-15-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
carbon tetrachloride	56-23-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chlorobenzene	108-90-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloroform	67-66-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloromethane	74-87-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dibromochloromethane	124-48-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dimethyl phthalate	131-11-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
di-n-butyl phthalate	84-74-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ethane	74-84-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ethylbenzene	100-41-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
HD	505-60-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
hexane	110-54-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methane	74-82-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methylene chloride	75-09-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
propene	115-07-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
styrene	100-42-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
tetrachloroethene	127-18-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
toluene	108-88-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trichloroethene	79-01-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
vinyl chloride	75-01-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
xylenes	1330-20-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3,3',4,4'-TCB (PCB 77)	32598-13-3	8.85E-21	7.76E-22	1.18E-23	6.74E-24	2.76E-21
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	1.11E-20	9.70E-22	1.47E-23	8.43E-24	3.46E-21
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	5.31E-21	4.65E-22	7.08E-24	4.05E-24	1.66E-21
total coplanar PCBs	NA	2.52E-20	2.21E-21	3.36E-23	1.92E-23	7.88E-21
ammonia	7664-41-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
aluminum	7429-90-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cadmium	7440-43-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chlorine	7782-50-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (3+)	7440-47-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (6+)	18540-29-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
copper	7440-50-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
hydrogen chloride	7647-01-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
iron	7439-89-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
lead	7439-92-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
manganese	7439-96-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
total mercury	NA					
mercuric chloride	7487-94-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methyl mercury	22967-92-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
vanadium	7440-62-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
zinc	7440-66-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

a. The concentration of individual PCDDs and PCDFs congeners and coplanar PCBs in animal products are presented in units of mg COPC TEQ/kg. The concentration of total PCDDs and PCDFs as well as the concentration of total coplanar PCBs in animal products are presented in units of mg TEQ/kg produce and are calculated as the sum of the concentrations of all individual PCDD and PCDF congeners in animal products and the concentrations of all coplanar produce in animal products, respectively.

CONCENTRATIONS OF COPCS IN ANIMAL PRODUCTS FOR EACH EXPOSURE SCENARIC

CARCINOGENIC EFFECTS (TEQ BASIS): Infant Exposure Scenarios						
COPC	CAS Number	Beef Concentration (mg TEQ/kg)[a] A_{beef}	Pork Concentration (mg TEQ/kg)[a] A_{pork}	Poultry Concentration (mg TEQ/kg)[a] $A_{poultry}$	Egg Concentration (mg TEQ/kg)[a] A_{egg}	Milk Concentration (mg TEQ/kg)[a] A_{milk}
2-butanone	78-93-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-ethyl 1,3-butadiene	3404-63-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
acetone	67-64-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzene	71-43-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzyl alcohol	100-51-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bis(2-ethylhexyl)-phthalate	117-81-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bromodichloromethane	75-27-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
carbon disulfide	75-15-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
carbon tetrachloride	56-23-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chlorobenzene	108-90-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloroform	67-66-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloromethane	74-87-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dibromochloromethane	124-48-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dimethyl phthalate	131-11-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
di-n-butyl phthalate	84-74-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ethane	74-84-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ethylbenzene	100-41-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
HD	505-60-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
hexane	110-54-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methane	74-82-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methylene chloride	75-09-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
propene	115-07-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
styrene	100-42-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
tetrachloroethene	127-18-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
toluene	108-88-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trichloroethene	79-01-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
vinyl chloride	75-01-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
xylenes	1330-20-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3,3',4,4'-TCB (PCB 77)	32598-13-3	8.85E-21	7.76E-22	1.18E-23	6.74E-24	2.76E-21
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	1.11E-20	9.70E-22	1.47E-23	8.43E-24	3.46E-21
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	5.31E-21	4.65E-22	7.08E-24	4.05E-24	1.66E-21
total coplanar PCBs	NA	2.52E-20	2.21E-21	3.36E-23	1.92E-23	7.88E-21
ammonia	7664-41-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
aluminum	7429-90-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cadmium	7440-43-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chlorine	7782-50-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (3+)	7440-47-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (6+)	18540-29-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
copper	7440-50-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
hydrogen chloride	7647-01-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
iron	7439-89-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
lead	7439-92-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
manganese	7439-96-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
total mercury	NA					
mercuric chloride	7487-94-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methyl mercury	22967-92-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
vanadium	7440-62-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
zinc	7440-66-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

a. The concentration of individual PCDDs and PCDFs congeners and coplanar PCBs in animal products are presented in units of mg COPC TEQ/kg. The concentration of total PCDDs and PCDFs as well as the concentration of total coplanar PCBs in animal products are presented in units of mg TEQ/kg produce and are calculated as the sum of the concentrations of all individual PCDD and PCDF congeners in animal products and the concentrations of all coplanar produce in animal products, respectively.

CONCENTRATIONS OF COPCS IN ANIMAL PRODUCTS FOR EACH EXPOSURE SCENARIC

NONCARCINOGENIC EFFECTS (TEQ BASIS): All Exposure Scenarios						
COPC	CAS Number	Beef Concentration (mg TEQ/kg)[a] A_{beef}	Pork Concentration (mg TEQ/kg)[a] A_{pork}	Poultry Concentration (mg TEQ/kg)[a] $A_{poultry}$	Egg Concentration (mg TEQ/kg)[a] A_{egg}	Milk Concentration (mg TEQ/kg)[a] A_{milk}
2-butanone	78-93-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-ethyl 1,3-butadiene	3404-63-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
acetone	67-64-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzene	71-43-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzyl alcohol	100-51-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bis(2-ethylhexyl)-phthalate	117-81-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bromodichloromethane	75-27-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
carbon disulfide	75-15-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
carbon tetrachloride	56-23-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chlorobenzene	108-90-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloroform	67-66-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloromethane	74-87-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dibromochloromethane	124-48-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dimethyl phthalate	131-11-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
di-n-butyl phthalate	84-74-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ethane	74-84-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ethylbenzene	100-41-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
HD	505-60-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
hexane	110-54-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methane	74-82-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methylene chloride	75-09-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
propene	115-07-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
styrene	100-42-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
tetrachloroethene	127-18-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
toluene	108-88-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trichloroethene	79-01-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
vinyl chloride	75-01-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
xylenes	1330-20-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3,3',4,4'-TCB (PCB 77)	32598-13-3	9.22E-21	1.09E-21	2.30E-23	1.31E-23	2.84E-21
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	1.15E-20	1.37E-21	2.88E-23	1.64E-23	3.55E-21
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	5.53E-21	6.56E-22	1.38E-23	7.89E-24	1.70E-21
total coplanar PCBs	NA	2.63E-20	3.11E-21	6.56E-23	3.75E-23	8.09E-21
ammonia	7664-41-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
aluminum	7429-90-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cadmium	7440-43-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chlorine	7782-50-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (3+)	7440-47-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (6+)	18540-29-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
copper	7440-50-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
hydrogen chloride	7647-01-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
iron	7439-89-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
lead	7439-92-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
manganese	7439-96-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
total mercury	NA					
mercuric chloride	7487-94-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methyl mercury	22967-92-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
vanadium	7440-62-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
zinc	7440-66-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

a. The concentration of individual PCDDs and PCDFs congeners and coplanar PCBs in animal products are presented in units of mg COPC TEQ/kg. The concentration of total PCDDs and PCDFs as well as the concentration of total coplanar PCBs in animal products are presented in units of mg TEQ/kg produce and are calculated as the sum of the concentrations of all individual PCDD and PCDF congeners in animal products and the concentrations of all coplanar produce in animal products, respectively.

CONCENTRATIONS OF COPCS IN SURFACE WATER AND FISH FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Adult Resident and Adult Subsistence Fisher Exposure Scenarios												
		Diffusive Mass Transfer Coefficient			Erosion Loading Supporting Calculation		Contaminant Load To The Waterbody					
		Liquid Phase Transfer Coefficient	Gas Phase Transfer Coefficient	Overall Transfer Rate	Unit Soil Loss	Watershed Sediment Delivery Ratio	Due to Direct Deposition	Due to Impervious Runoff	Due to Pervious Runoff	Due to Erosion	Due to Diffusion	Due to All Processes
		(m/yr)	(m/yr)	(m/yr)	(kg/m^2-yr)	(dimensionless)	(g/yr)	(g/yr)	(g/yr)	(g/yr)	(g/yr)	(g/yr)
COPC	CAS Number	K_L	K_G	K_v	X_s	SD	L_{Dep}	L_{RI}	L_R	L_E	L_{Dif}	L_T
2-butanone	78-93-3	1.77E+02	4.96E+05	1.74E+02	3.86E-01	3.59E-01	6.12E-06	7.54E-06	2.91E-07	2.76E-09	6.57E-06	2.05E-05
2-ethyl 1,3-butadiene	3404-63-5	1.98E+02	5.76E+05	2.25E+02	3.86E-01	3.59E-01	2.89E-04	3.56E-04	3.68E-09	3.89E-10	9.19E-08	6.46E-04
acetone	67-64-1	1.96E+02	6.61E+05	1.88E+02	3.86E-01	3.59E-01	1.09E-05	1.35E-05	2.89E-07	8.24E-10	1.82E-05	4.29E-05
benzene	71-43-2	1.82E+02	5.25E+05	2.07E+02	3.86E-01	3.59E-01	3.13E-02	3.86E-02	9.89E-06	3.88E-08	3.99E-04	7.04E-02
benzyl alcohol	100-51-6	1.80E+02	2.62E+04	4.09E-01	3.86E-01	3.59E-01	2.29E-05	2.83E-05	8.59E-04	3.37E-06	9.61E-06	9.23E-04
bis(2-ethylhexyl)-phthalate	117-81-7	9.15E+01	2.84E+05	1.30E+00	3.86E-01	3.59E-01	1.09E-04	1.35E-04	4.98E-11	3.75E-06	0.00E+00	2.48E-04
bromodichloromethane	75-27-4	1.80E+02	2.62E+04	1.85E+02	3.86E-01	3.59E-01	2.13E-06	2.63E-06	1.97E-07	7.10E-10	8.50E-08	5.04E-06
carbon disulfide	75-15-0	1.80E+02	5.87E+05	2.04E+02	3.86E-01	3.59E-01	1.34E-05	1.65E-05	5.72E-10	1.70E-12	3.15E-08	3.00E-05
carbon tetrachloride	56-23-5	1.65E+02	4.85E+05	1.87E+02	3.86E-01	3.59E-01	5.48E-07	6.75E-07	5.56E-11	6.37E-13	1.18E-09	1.22E-06
chlorobenzene	108-90-7	1.64E+02	4.63E+05	1.85E+02	3.86E-01	3.59E-01	4.82E-07	5.93E-07	4.49E-10	6.46E-12	8.34E-09	1.08E-06
chloroform	67-66-3	1.80E+02	5.87E+05	2.04E+02	3.86E-01	3.59E-01	1.42E-06	1.75E-06	4.53E-10	1.19E-12	2.69E-08	3.19E-06
chloromethane	74-87-3	1.35E+02	6.68E+05	1.53E+02	3.86E-01	3.59E-01	1.29E-05	1.58E-05	1.18E-09	2.31E-12	7.69E-08	2.88E-05
dibromochloromethane	124-48-1	1.80E+02	2.62E+04	1.68E+02	3.86E-01	3.59E-01	2.63E-06	3.24E-06	8.97E-07	2.05E-08	1.95E-07	6.98E-06
dimethyl phthalate	131-11-3	1.32E+02	3.92E+05	1.89E+00	3.86E-01	3.59E-01	2.27E-05	2.80E-05	2.18E-05	2.43E-07	1.41E-04	2.14E-04
di-n-butyl phthalate	84-74-2	1.53E+02	3.29E+05	2.38E+01	3.86E-01	3.59E-01	5.30E-05	6.53E-05	1.60E-08	2.72E-06	2.42E-04	3.63E-04
ethane	74-84-0	3.12E+02	8.98E+05	3.55E+02	3.86E-01	3.59E-01	1.28E-01	1.57E-01	3.02E-07	3.16E-09	3.13E-05	2.85E-01
ethylbenzene	100-41-4	1.52E+02	4.72E+05	1.73E+02	3.86E-01	3.59E-01	4.24E-07	5.23E-07	1.99E-10	4.74E-12	3.20E-09	9.51E-07
HD	505-60-2	1.48E+02	4.29E+05	1.34E+02	3.86E-01	3.59E-01	1.33E-04	1.64E-04	3.96E-08	3.03E-09	1.86E-04	4.83E-04
hexane	110-54-3	1.95E+02	5.61E+05	2.22E+02	3.86E-01	3.59E-01	1.19E-06	1.47E-06	2.22E-12	1.07E-12	5.07E-11	2.66E-06
methane	74-82-8	4.12E+02	1.19E+06	4.69E+02	3.86E-01	3.59E-01	2.89E+00	3.56E+00	1.91E-06	5.42E-09	7.12E-04	6.46E+00
methylene chloride	75-09-2	1.99E+02	5.76E+05	2.26E+02	3.86E-01	3.59E-01	1.85E-06	2.28E-06	4.16E-10	3.27E-13	6.55E-08	4.19E-06
propene	115-07-1	2.68E+02	7.74E+05	3.05E+02	3.86E-01	3.59E-01	3.13E-02	3.86E-02	2.31E-07	2.27E-09	1.68E-05	7.00E-02
styrene	100-42-5	1.55E+02	4.55E+05	1.75E+02	3.86E-01	3.59E-01	4.70E-06	5.79E-06	7.26E-09	2.85E-08	1.05E-07	1.06E-05
tetrachloroethene	127-18-4	1.57E+02	4.59E+05	1.79E+02	3.86E-01	3.59E-01	4.99E-07	6.15E-07	8.83E-11	8.96E-13	1.71E-09	1.12E-06
toluene	108-88-3	1.62E+02	5.21E+05	1.84E+02	3.86E-01	3.59E-01	5.30E-03	6.53E-03	2.21E-06	2.60E-08	5.11E-05	1.19E-02
trichloroethene	79-01-6	1.69E+02	4.89E+05	1.91E+02	3.86E-01	3.59E-01	6.34E-07	7.81E-07	1.87E-10	2.02E-12	4.19E-09	1.42E-06
vinyl chloride	75-01-4	2.06E+02	5.95E+05	2.34E+02	3.86E-01	3.59E-01	9.46E-05	1.17E-04	2.36E-09	2.85E-12	2.84E-07	2.11E-04
xylenes	1330-20-7	1.77E+02	5.13E+05	2.01E+02	3.86E-01	3.59E-01	1.93E-04	2.38E-04	1.08E-07	1.35E-08	2.02E-06	4.33E-04
3,3',4,4'-TCB (PCB 77)	32598-13-3	1.80E+02	2.62E+04	1.28E+02	3.86E-01	3.59E-01	1.03E-14	1.27E-14	9.02E-17	7.23E-14	0.00E+00	9.53E-14
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	1.80E+02	2.62E+04	1.28E+02	3.86E-01	3.59E-01	4.28E-14	5.28E-14	3.76E-16	3.01E-13	0.00E+00	3.97E-13
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	1.80E+02	2.62E+04	1.28E+02	3.86E-01	3.59E-01	2.06E-14	2.53E-14	1.80E-16	1.45E-13	0.00E+00	1.91E-13
total coplanar PCBs	NA											
ammonia	7664-41-7	4.02E+02	1.16E+06	2.99E+02	3.86E-01	3.59E-01	2.41E-04	2.97E-04	1.94E-06	1.08E-09	1.55E-03	2.09E-03
aluminum	7429-90-5	3.27E+02	9.44E+05	3.71E+02	3.86E-01	3.59E-01	9.16E-04	1.13E-03	5.74E-08	1.86E-08	4.79E-06	2.05E-03
cadmium	7440-43-9	1.74E+02	4.82E+05	1.98E+02	3.86E-01	3.59E-01	4.52E-06	5.57E-06	4.13E-10	1.01E-09	0.00E+00	1.01E-05
chlorine	7782-50-5	1.80E+02	2.62E+04	2.01E+02	3.86E-01	3.59E-01	2.89E-03	3.56E-03	5.29E-05	4.32E-07	1.72E-05	6.53E-03
chromium (3+)	7440-47-3	2.26E+02	6.70E+05	2.57E+02	3.86E-01	3.59E-01	1.25E-05	1.54E-05	8.79E-10	5.46E-10	0.00E+00	2.78E-05
chromium (6+)	18540-29-9	2.26E+02	6.70E+05	2.57E+02	3.86E-01	3.59E-01	1.25E-05	1.54E-05	8.79E-10	5.46E-10	0.00E+00	2.78E-05
copper	7440-50-8	2.23E+02	6.44E+05	2.53E+02	3.86E-01	3.59E-01	4.67E-04	5.76E-04	3.52E-08	4.95E-07	0.00E+00	1.04E-03
hydrogen chloride	7647-01-0	1.80E+02	2.62E+04	2.00E+02	3.86E-01	3.59E-01	1.84E-02	2.27E-02	1.51E-04	1.59E-07	1.64E-04	4.14E-02
iron	7439-89-6	2.36E+02	6.83E+05	2.68E+02	3.86E-01	3.59E-01	1.71E-03	2.11E-03	1.18E-07	9.63E-08	0.00E+00	3.83E-03
lead	7439-92-1	1.74E+02	4.81E+05	1.98E+02	3.86E-01	3.59E-01	1.87E-05	2.31E-05	2.14E-09	6.29E-08	0.00E+00	4.19E-05
manganese	7439-96-5	2.38E+02	6.87E+05	2.70E+02	3.86E-01	3.59E-01	2.18E-03	2.69E-03	1.49E-07	3.16E-07	0.00E+00	4.87E-03
total mercury	NA	1.17E+02	7.37E+06	2.43E-01	3.86E-01	3.59E-01	3.08E-10	3.80E-10			0.00E+00	3.88E-09
mercuric chloride	7487-94-7	1.17E+02	7.37E+06	2.43E-01	3.86E-01	3.59E-01	0.00E+00	0.00E+00	1.66E-12	3.14E-09	0.00E+00	0.00E+00
methyl mercury	22967-92-6	1.29E+02	8.16E+06	8.05E+01	3.86E-01	3.59E-01	0.00E+00	0.00E+00	2.19E-13	5.01E-11	0.00E+00	0.00E+00
elemental mercury	7439-97-6	3.76E+02	1.30E+05	4.23E+02	3.86E-01	3.59E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	1.74E+02	4.81E+05	1.98E+02	3.86E-01	3.59E-01	7.32E-06	9.02E-06	8.34E-10	1.77E-09	0.00E+00	1.63E-05
vanadium	7440-62-2	2.46E+02	7.11E+05	2.80E+02	3.86E-01	3.59E-01	2.34E-05	2.88E-05	1.52E-09	4.97E-08	0.00E+00	5.22E-05
zinc	7440-66-6	1.74E+02	4.81E+05	1.98E+02	3.86E-01	3.59E-01	7.80E-04	9.61E-04	8.88E-08	1.80E-07	0.00E+00	1.74E-03

CONCENTRATIONS OF COPCS IN SURFACE WATER AND FISH FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS:
Adult Resident and Adult Subsistence Fisher Exposure Scenarios

			Waterbody Dissipation Rate Constant					Concentration in Water				Concentration in Fish
COPC	CAS Number	Oral Cancer Slope Factor?	Fraction in Water Column (dimensionless) f_{wc}	Fraction in Benthic Sediment (dimensionless) f_{bs}	Water Column Volatilization Rate Constant (yr^{-1}) k_v	Benthic Burial Rate Constant (yr^{-1}) k_b	Overall Total Waterbody Dissipation Rate Constant (yr^{-1}) k_{wt}	Total Waterbody Concentration Including Water Column and Bed Sediment (mg/ℓ) C_{wtot}	Total Concentration in Water Column (mg/ℓ) C_{wctot}	Dissolved Phase Water Concentration (mg/ℓ) C_{dw}	Concentration Sorbed to Bed Sediment (mg/kg) C_{sb}	Fish Concentration (mg/kg) C_{fish}
2-butanone	78-93-3		9.96E-01	4.06E-03	3.46E+01	1.95E-01	3.45E+01	4.66E-12	4.67E-12	4.67E-12		1.48E-11
2-ethyl 1,3-butadiene	3404-63-5		9.25E-01	7.51E-02	4.48E+01	1.95E-01	4.15E+01	1.41E-10	1.32E-10	1.32E-10		6.07E-09
acetone	67-64-1		9.96E-01	3.71E-03	3.74E+01	1.95E-01	3.72E+01	9.45E-12	9.47E-12	9.47E-12		2.99E-11
benzene	71-43-2	Yes	9.82E-01	1.81E-02	4.11E+01	1.95E-01	4.03E+01	1.51E-08	1.49E-08	1.49E-08		1.23E-07
benzyl alcohol	100-51-6		9.94E-01	6.44E-03	8.13E-02	1.95E-01	8.21E-02	3.46E-10	3.46E-10	3.46E-10		1.09E-10
bis(2-ethylhexyl)-phthalate	117-81-7	Yes	3.91E-02	9.61E-01	2.39E-01	1.95E-01	1.97E-01	2.16E-09	8.49E-11	7.84E-11		1.52E-08
bromodichloromethane	75-27-4	Yes	9.83E-01	1.66E-02	3.67E+01	1.95E-01	3.61E+01	1.13E-12	1.12E-12	1.12E-12		9.25E-12
carbon disulfide	75-15-0		9.81E-01	1.91E-02	4.06E+01	1.95E-01	3.98E+01	6.47E-12	6.38E-12	6.38E-12		6.29E-11
carbon tetrachloride	56-23-5	Yes	9.61E-01	3.85E-02	3.72E+01	1.95E-01	3.58E+01	2.79E-13	2.70E-13	2.70E-13		7.73E-12
chlorobenzene	108-90-7		9.46E-01	5.42E-02	3.69E+01	1.95E-01	3.49E+01	2.53E-13	2.40E-13	2.40E-13		6.87E-12
chloroform	67-66-3	Yes	9.84E-01	1.59E-02	4.05E+01	1.95E-01	3.98E+01	6.87E-13	6.80E-13	6.80E-13		4.71E-12
chloromethane	74-87-3		9.95E-01	5.07E-03	3.04E+01	1.95E-01	3.02E+01	6.87E-12	6.88E-12	6.88E-12		2.17E-11
dibromochloromethane	124-48-1	Yes	9.80E-01	2.00E-02	3.34E+01	1.95E-01	3.27E+01	1.63E-12	1.61E-12	1.61E-12		1.68E-11
dimethyl phthalate	131-11-3		9.88E-01	1.17E-02	3.75E-01	1.95E-01	3.73E-01	8.02E-11	7.98E-11	7.98E-11		2.53E-10
di-n-butyl phthalate	84-74-2		7.25E-01	2.75E-01	4.72E+00	1.95E-01	3.48E+00	1.71E-10	1.25E-10	1.25E-10		2.25E-07
ethane	74-84-0		9.89E-01	1.13E-02	7.05E+01	1.95E-01	6.97E+01	4.63E-08	4.61E-08	4.61E-08		2.28E-07
ethylbenzene	100-41-4	Yes	9.50E-01	4.99E-02	3.43E+01	1.95E-01	3.26E+01	2.27E-13	2.17E-13	2.17E-13		1.05E-11
HD	505-60-2	Yes	9.44E-01	5.64E-02	2.66E+01	1.95E-01	2.51E+01	1.27E-10	1.21E-10	1.21E-10		1.73E-09
hexane	110-54-3		7.38E-01	2.62E-01	4.40E+01	1.95E-01	3.25E+01	7.37E-13	5.47E-13	5.46E-13		1.10E-10
methane	74-82-8		9.94E-01	5.67E-03	9.32E+01	1.95E-01	9.27E+01	8.81E-07	8.82E-07	8.82E-07		1.22E-06
methylene chloride	75-09-2	Yes	9.94E-01	5.96E-03	4.49E+01	1.95E-01	4.46E+01	8.53E-13	8.53E-13	8.53E-13		1.71E-12
propene	115-07-1		9.89E-01	1.07E-02	6.06E+01	1.95E-01	6.00E+01	1.23E-08	1.23E-08	1.23E-08		5.65E-08
styrene	100-42-5		8.18E-01	1.82E-01	3.48E+01	1.95E-01	2.85E+01	2.93E-12	2.41E-12	2.41E-12		9.82E-11
tetrachloroethene	127-18-4	Yes	9.37E-01	6.30E-02	3.55E+01	1.95E-01	3.33E+01	2.66E-13	2.51E-13	2.51E-13		2.08E-11
toluene	108-88-3		9.64E-01	3.59E-02	3.66E+01	1.95E-01	3.53E+01	2.73E-09	2.64E-09	2.64E-09		6.32E-08
trichloroethene	79-01-6	Yes	9.74E-01	2.55E-02	3.81E+01	1.95E-01	3.71E+01	3.17E-13	3.11E-13	3.11E-13		4.38E-12
vinyl chloride	75-01-4	Yes	9.93E-01	7.27E-03	4.66E+01	1.95E-01	4.63E+01	4.24E-11	4.23E-11	4.23E-11		1.01E-10
xylenes	1330-20-7		9.13E-01	8.68E-02	4.00E+01	1.95E-01	3.65E+01	1.01E-10	9.27E-11	9.27E-11		5.02E-09
3,3',4,4'-TCB (PCB 77)	32598-13-3		4.80E-03	9.95E-01	8.97E+00	1.95E-01	2.37E-01	3.84E-18	1.86E-20	6.54E-21	6.41E-16	2.24E-15
2,3',4,4',5-PeCB (PCB 118)	31508-00-6		4.80E-03	9.95E-01	8.97E+00	1.95E-01	2.37E-01	1.60E-17	7.74E-20	2.72E-20	2.67E-15	9.35E-15
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4		4.80E-03	9.95E-01	8.97E+00	1.95E-01	2.37E-01	7.69E-18	3.71E-20	1.31E-20	1.28E-15	4.49E-15
total coplanar PCBs	NA	Yes										
ammonia	7664-41-7		9.96E-01	4.02E-03	5.95E+01	1.95E-01	5.93E+01	3.69E-10	3.70E-10	3.70E-10		1.17E-09
aluminum	7429-90-5		9.41E-01	5.93E-02	7.38E+01	1.95E-01	6.95E+01	3.41E-10	3.22E-10	3.22E-10		1.02E-09
cadmium	7440-43-9		6.88E-01	3.12E-01	3.94E+01	1.95E-01	2.71E+01	3.14E-12	2.18E-12	2.17E-12		1.97E-09
chlorine	7782-50-5		9.95E-01	5.07E-03	4.00E+01	1.95E-01	3.98E+01	1.40E-09	1.40E-09	1.40E-09		4.42E-09
chromium (3+)	7440-47-3		8.95E-01	1.05E-01	5.11E+01	1.95E-01	4.57E+01	5.92E-12	5.33E-12	5.33E-12		1.68E-11
chromium (6+)	18540-29-9	Yes	8.95E-01	1.05E-01	5.11E+01	1.95E-01	4.57E+01	5.92E-12	5.33E-12	5.33E-12		1.68E-11
copper	7440-50-8		2.80E-01	7.20E-01	5.02E+01	1.95E-01	1.42E+01	7.13E-10	2.01E-10	2.00E-10		6.32E-10
hydrogen chloride	7647-01-0		9.96E-01	4.35E-03	3.97E+01	1.95E-01	3.95E+01	8.88E-09	8.90E-09	8.90E-09		2.81E-08
iron	7439-89-6		8.67E-01	1.33E-01	5.34E+01	1.95E-01	4.63E+01	8.22E-10	7.17E-10	7.17E-10		2.27E-09
lead	7439-92-1	Yes	1.57E-01	8.43E-01	3.90E+01	1.95E-01	6.31E+00	5.67E-11	8.97E-12	8.89E-12		8.00E-13
manganese	7439-96-5		7.18E-01	2.82E-01	5.37E+01	1.95E-01	3.86E+01	1.26E-09	9.09E-10	9.09E-10		2.87E-09
total mercury	NA		6.62E-03	9.93E-01	2.41E-02	1.95E-01	1.94E-01	1.41E-13	9.40E-16	0.00E+00		
mercuric chloride	7487-94-7		6.62E-03	9.93E-01	2.41E-02	1.95E-01	1.94E-01	0.00E+00	0.00E+00	4.00E-16		0.00E+00
methyl mercury	22967-92-6		1.00E-01	9.00E-01	8.00E+00	1.95E-01	9.75E-01	0.00E+00	0.00E+00	7.05E-17		4.80E-10
elemental mercury	7439-97-6		5.31E-02	9.47E-01	8.32E+01	1.95E-01	4.61E+00	0.00E+00	0.00E+00	0.00E+00		0.00E+00
nickel	7440-02-0		7.18E-01	2.82E-01	3.94E+01	1.95E-01	2.83E+01	4.88E-12	3.53E-12	3.52E-12		2.75E-10
vanadium	7440-62-2		1.44E-01	8.56E-01	5.50E+01	1.95E-01	8.09E+00	6.58E-11	9.54E-12	9.44E-12		2.99E-11
zinc	7440-66-6		7.27E-01	2.73E-01	3.94E+01	1.95E-01	2.87E+01	5.13E-10	3.75E-10	3.75E-10		7.73E-07

CONCENTRATIONS OF COPCS IN SURFACE WATER AND FISH FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS (TEQ BASIS):
Adult Resident and Adult Subsistence Fisher Exposure Scenarios

		Concentration in Water				Concentration in Fish
		Total Waterbody Concentration Including Water Column and Bed Sediment	Total Concentration in Water Column	Dissolved Phase Water Concentration	Concentration Sorbed to Bed Sediment	Fish Concentration
		(mg TEQ/ℓ)[a]	(mg TEQ/ℓ)[a]	(mg TEQ/ℓ)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]
COPC	CAS Number	C_{wtot}	C_{wctot}	C_{dw}	C_{sb}	C_{fish}
2-butanone	78-93-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-ethyl 1,3-butadiene	3404-63-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
acetone	67-64-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzene	71-43-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzyl alcohol	100-51-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bis(2-ethylhexyl)-phthalate	117-81-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bromodichloromethane	75-27-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
carbon disulfide	75-15-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
carbon tetrachloride	56-23-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chlorobenzene	108-90-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloroform	67-66-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloromethane	74-87-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dibromochloromethane	124-48-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dimethyl phthalate	131-11-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
di-n-butyl phthalate	84-74-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ethane	74-84-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ethylbenzene	100-41-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
HD	505-60-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
hexane	110-54-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methane	74-82-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methylene chloride	75-09-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
propene	115-07-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
styrene	100-42-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
tetrachloroethene	127-18-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
toluene	108-88-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trichloroethene	79-01-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
vinyl chloride	75-01-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
xylenes	1330-20-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3,3',4,4'-TCB (PCB 77)	32598-13-3	3.84E-22	1.86E-24	6.54E-25	6.41E-20	2.24E-19
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	4.80E-22	2.32E-24	8.17E-25	8.02E-20	2.81E-19
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	2.31E-22	1.11E-24	3.92E-25	3.85E-20	1.35E-19
total coplanar PCBs	NA	1.10E-21	5.29E-24	1.86E-24	1.83E-19	6.40E-19
ammonia	7664-41-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
aluminum	7429-90-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cadmium	7440-43-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chlorine	7782-50-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (3+)	7440-47-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (6+)	18540-29-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
copper	7440-50-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
hydrogen chloride	7647-01-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
iron	7439-89-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
lead	7439-92-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
manganese	7439-96-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
total mercury	NA					
mercuric chloride	7487-94-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methyl mercury	22967-92-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
vanadium	7440-62-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
zinc	7440-66-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

a. The concentration of individual PCDDs and PCDFs congeners and coplanar PCBs in water and fish are presented in units of mg COPC TEQ/kg. The concentration of total PCDDs and PCDFs as well as the concentration of total coplanar PCBs in water and fish are presented in units of mg TEQ/kg produce and are calculated as the sum of the concentrations of all individual PCDD and PCDF congeners in water or fish and the concentrations of all coplanar produce in water and fish, respectively.

CONCENTRATIONS OF COPCS IN SURFACE WATER AND FISH FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS:
Adult Subsistence Farmer Exposure Scenario

		Diffusive Mass Transfer Coefficient			Erosion Loading Supporting Calculation		Contaminant Load To The Waterbody					
		Liquid Phase Transfer Coefficient	Gas Phase Transfer Coefficient	Overall Transfer Rate	Unit Soil Loss	Watershed Sediment Delivery Ratio	Due to Direct Deposition	Due to Impervious Runoff	Due to Pervious Runoff	Due to Erosion	Due to Diffusion	Due to All Processes
		(m/yr)	(m/yr)	(m/yr)	(kg/m^2-yr)	(dimensionless)	(g/yr)	(g/yr)	(g/yr)	(g/yr)	(g/yr)	(g/yr)
COPC	CAS Number	K_L	K_G	K_v	X_e	SD	L_{Dep}	L_{RI}	L_R	L_E	L_{Dif}	L_T
2-butanone	78-93-3	177.10	496089.19	174.20	0.39	0.36	6.12E-06	7.54E-06	2.18E-07	2.07E-09	6.57E-06	2.05E-05
2-ethyl 1,3-butadiene	3404-63-5	198.28	576088.85	225.43	0.39	0.36	2.89E-04	3.56E-04	2.76E-09	2.92E-10	9.19E-08	6.46E-04
acetone	67-64-1	195.98	660977.51	187.89	0.39	0.36	1.09E-05	1.35E-05	2.17E-07	6.18E-10	1.82E-05	4.28E-05
benzene	71-43-2	181.91	525288.08	206.51	0.39	0.36	3.13E-02	3.86E-02	7.41E-06	2.91E-08	3.99E-04	7.04E-02
benzyl alcohol	100-51-6	179.51	26157.37	0.41	0.39	0.36	2.29E-05	2.83E-05	6.44E-04	2.53E-06	9.61E-06	7.07E-04
bis(2-ethylhexyl)-phthalate	117-81-7	91.54	283759.18	1.30	0.39	0.36	1.09E-04	1.35E-04	3.74E-11	2.81E-06	0.00E+00	2.47E-04
bromodichloromethane	75-27-4	179.51	26157.37	184.72	0.39	0.36	2.13E-06	2.63E-06	1.48E-07	5.32E-10	8.50E-08	4.99E-06
carbon disulfide	75-15-0	179.51	587498.13	204.04	0.39	0.36	1.34E-05	1.65E-05	4.29E-10	1.28E-12	3.15E-08	3.00E-05
carbon tetrachloride	56-23-5	164.78	484504.19	187.29	0.39	0.36	5.48E-07	6.75E-07	4.17E-11	4.77E-13	1.18E-09	1.22E-06
chlorobenzene	108-90-7	163.52	463468.76	185.48	0.39	0.36	4.82E-07	5.93E-07	3.37E-10	4.85E-12	8.34E-09	1.08E-06
chloroform	67-66-3	179.51	587498.13	203.68	0.39	0.36	1.42E-06	1.75E-06	3.40E-10	8.89E-13	2.69E-08	3.19E-06
chloromethane	74-87-3	134.51	668101.45	152.84	0.39	0.36	1.29E-05	1.58E-05	8.84E-10	1.73E-12	7.69E-08	2.88E-05
dibromochloromethane	124-48-1	179.51	26157.37	168.07	0.39	0.36	2.63E-06	3.24E-06	6.73E-07	1.54E-08	1.95E-07	6.75E-06
dimethyl phthalate	131-11-3	131.58	391748.68	1.89	0.39	0.36	2.27E-05	2.80E-05	1.64E-05	1.82E-07	1.41E-04	2.09E-04
di-n-butyl phthalate	84-74-2	152.77	329140.86	23.78	0.39	0.36	5.30E-05	6.53E-05	1.20E-08	2.04E-06	2.42E-04	3.62E-04
ethane	74-84-0	311.82	898267.57	354.52	0.39	0.36	1.28E-01	1.57E-01	2.27E-07	2.37E-09	3.13E-05	2.85E-01
ethylbenzene	100-41-4	151.98	471938.27	172.62	0.39	0.36	4.24E-07	5.23E-07	1.49E-10	3.56E-12	3.20E-09	9.51E-07
HD	505-60-2	147.91	428791.43	133.93	0.39	0.36	1.33E-04	1.64E-04	2.97E-08	2.27E-09	1.86E-04	4.83E-04
hexane	110-54-3	194.83	560700.85	221.51	0.39	0.36	1.19E-06	1.47E-06	1.67E-12	8.00E-13	5.07E-11	2.66E-06
methane	74-82-8	412.36	1192048.29	468.82	0.39	0.36	2.89E+00	3.56E+00	1.43E-06	4.07E-09	7.12E-04	6.46E+00
methylene chloride	75-09-2	199.42	576088.85	225.86	0.39	0.36	1.85E-06	2.28E-06	3.12E-10	2.45E-13	6.55E-08	4.19E-06
propene	115-07-1	268.13	774188.86	304.83	0.39	0.36	3.13E-02	3.86E-02	1.74E-07	1.70E-09	1.68E-05	7.00E-02
styrene	100-42-5	154.58	454922.32	175.21	0.39	0.36	4.70E-06	5.79E-06	5.45E-09	2.14E-08	1.05E-07	1.06E-05
tetrachloroethene	127-18-4	157.16	459205.33	178.60	0.39	0.36	4.99E-07	6.15E-07	6.63E-11	6.72E-13	1.71E-09	1.12E-06
toluene	108-88-3	162.26	521281.19	184.27	0.39	0.36	5.30E-03	6.53E-03	1.66E-06	1.95E-08	5.11E-05	1.19E-02
trichloroethene	79-01-6	168.52	488657.20	191.44	0.39	0.36	6.34E-07	7.81E-07	1.41E-10	1.52E-12	4.19E-09	1.42E-06
vinyl chloride	75-01-4	206.22	595044.00	234.39	0.39	0.36	9.46E-05	1.17E-04	1.77E-09	2.14E-12	2.84E-07	2.11E-04
xylenes	1330-20-7	177.22	513221.49	201.23	0.39	0.36	1.93E-04	2.38E-04	8.13E-08	1.01E-08	2.02E-06	4.33E-04
3,3',4,4'-TCB (PCB 77)	32598-13-3	179.51	26157.37	128.12	0.39	0.36	1.03E-14	1.27E-14	8.12E-17	6.50E-14	0.00E+00	8.81E-14
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	179.51	26157.37	128.12	0.39	0.36	4.28E-14	5.28E-14	3.38E-16	2.71E-13	0.00E+00	3.67E-13
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	179.51	26157.37	128.12	0.39	0.36	2.06E-14	2.53E-14	1.62E-16	1.30E-13	0.00E+00	1.76E-13
total coplanar PCBs	NA											
ammonia	7664-41-7	401.91	1159889.25	299.40	0.39	0.36	2.41E-04	2.97E-04	1.45E-06	8.07E-10	1.55E-03	2.09E-03
aluminum	7429-90-5	326.72	944096.93	371.33	0.39	0.36	9.16E-04	1.13E-03	4.30E-08	1.39E-08	4.79E-06	2.05E-03
cadmium	7440-43-9	174.30	482421.10	198.12	0.39	0.36	4.52E-06	5.57E-06	3.10E-10	7.60E-10	0.00E+00	1.01E-05
chlorine	7782-50-5	179.51	26157.37	201.21	0.39	0.36	2.89E-03	3.56E-03	3.97E-05	3.24E-07	1.72E-05	6.51E-03
chromium (3+)	7440-47-3	225.98	669876.60	256.84	0.39	0.36	1.25E-05	1.54E-05	6.60E-10	4.10E-10	0.00E+00	2.78E-05
chromium (6+)	18540-29-9	225.98	669876.60	256.84	0.39	0.36	1.25E-05	1.54E-05	6.60E-10	4.10E-10	0.00E+00	2.78E-05
copper	7440-50-8	222.99	644347.48	253.43	0.39	0.36	4.67E-04	5.76E-04	2.64E-08	3.71E-07	0.00E+00	1.04E-03
hydrogen chloride	7647-01-0	179.51	26157.37	199.76	0.39	0.36	1.84E-02	2.27E-02	1.14E-04	1.19E-07	1.64E-04	4.13E-02
iron	7439-89-6	236.24	682646.38	268.50	0.39	0.36	1.71E-03	2.11E-03	8.83E-08	7.22E-08	0.00E+00	3.83E-03
lead	7439-92-1	174.30	481169.11	198.10	0.39	0.36	1.87E-05	2.31E-05	1.60E-09	4.72E-08	0.00E+00	4.19E-05
manganese	7439-96-5	237.88	687398.85	270.37	0.39	0.36	2.18E-03	2.69E-03	1.12E-07	2.37E-07	0.00E+00	4.87E-03
total mercury	NA	116.57	7366494.52	0.24	0.39	0.36	3.08E-10	3.80E-10			0.00E+00	3.95E-09
mercuric chloride	7487-94-7	116.57	7366494.52	0.24	0.39	0.36	0.00E+00	0.00E+00	1.69E-12	3.21E-09	0.00E+00	0.00E+00
methyl mercury	22967-92-6	129.05	8159012.80	80.49	0.39	0.36	0.00E+00	0.00E+00	2.06E-13	4.71E-11	0.00E+00	0.00E+00
elemental mercury	7439-97-6	375.61	129619.37	422.82	0.39	0.36	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	174.30	481169.11	198.10	0.39	0.36	7.32E-06	9.02E-06	6.25E-10	1.33E-09	0.00E+00	1.63E-05
vanadium	7440-62-2	246.05	711005.14	279.65	0.39	0.36	2.34E-05	2.88E-05	1.14E-09	3.73E-08	0.00E+00	5.22E-05
zinc	7440-66-6	174.30	481169.11	198.10	0.39	0.36	7.80E-04	9.61E-04	6.66E-08	1.35E-07	0.00E+00	1.74E-03

CONCENTRATIONS OF COPCS IN SURFACE WATER AND FISH FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS:
Adult Subsistence Farmer Exposure Scenario

			Waterbody Dissipation Rate Constant					Concentration in Water				Concentration in Fish
COPC	CAS Number	Oral Cancer Slope Factor?	Fraction in Water Column (dimensionless) f_{wc}	Fraction in Benthic Sediment (dimensionless) f_{bs}	Water Column Volatilization Rate Constant (yr^{-1}) k_v	Benthic Burial Rate Constant (yr^{-1}) k_b	Overall Total Waterbody Dissipation Rate Constant (yr^{-1}) k_{wt}	Total Waterbody Concentration Including Water Column and Bed Sediment (mg/ℓ) C_{wtot}	Total Concentration in Water Column (mg/ℓ) C_{wctot}	Dissolved Phase Water Concentration (mg/ℓ) C_{dw}	Concentration Sorbed to Bed Sediment (mg/kg) C_{sb}	Fish Concentration (mg/kg) C_{fish}
2-butanone	78-93-3		9.96E-01	4.06E-03	34.63	1.95E-01	3.45E+01	4.64E-12	4.65E-12	4.65E-12		1.47E-11
2-ethyl 1,3-butadiene	3404-63-5		9.25E-01	7.51E-02	44.81	1.95E-01	4.15E+01	1.41E-10	1.32E-10	1.32E-10		6.07E-09
acetone	67-64-1		9.96E-01	3.71E-03	37.35	1.95E-01	3.72E+01	9.43E-12	9.45E-12	9.45E-12		2.99E-11
benzene	71-43-2	Yes	9.82E-01	1.81E-02	41.05	1.95E-01	4.03E+01	1.51E-08	1.49E-08	1.49E-08		1.23E-07
benzyl alcohol	100-51-6		9.94E-01	6.44E-03	0.08	1.95E-01	8.21E-02	2.65E-10	2.65E-10	2.65E-10		8.32E-11
bis(2-ethylhexyl)-phthalate	117-81-7	Yes	3.91E-02	9.61E-01	0.24	1.95E-01	1.97E-01	2.15E-09	8.46E-11	7.81E-11		1.52E-08
bromodichloromethane	75-27-4	Yes	9.83E-01	1.66E-02	36.72	1.95E-01	3.61E+01	1.12E-12	1.11E-12	1.11E-12		9.16E-12
carbon disulfide	75-15-0		9.81E-01	1.91E-02	40.56	1.95E-01	3.98E+01	6.47E-12	6.38E-12	6.38E-12		6.29E-11
carbon tetrachloride	56-23-5	Yes	9.61E-01	3.85E-02	37.23	1.95E-01	3.58E+01	2.79E-13	2.70E-13	2.70E-13		7.73E-12
chlorobenzene	108-90-7		9.46E-01	5.42E-02	36.87	1.95E-01	3.49E+01	2.53E-13	2.40E-13	2.40E-13		6.87E-12
chloroform	67-66-3	Yes	9.84E-01	1.59E-02	40.49	1.95E-01	3.98E+01	6.87E-13	6.80E-13	6.80E-13		4.71E-12
chloromethane	74-87-3		9.95E-01	5.07E-03	30.39	1.95E-01	3.02E+01	6.87E-12	6.88E-12	6.88E-12		2.17E-11
dibromochloromethane	124-48-1	Yes	9.80E-01	2.00E-02	33.41	1.95E-01	3.27E+01	1.58E-12	1.56E-12	1.56E-12		1.62E-11
dimethyl phthalate	131-11-3		9.88E-01	1.17E-02	0.38	1.95E-01	3.73E-01	7.82E-11	7.77E-11	7.77E-11		2.46E-10
di-n-butyl phthalate	84-74-2		7.25E-01	2.75E-01	4.72	1.95E-01	3.48E+00	1.71E-10	1.25E-10	1.25E-10		2.24E-07
ethane	74-84-0		9.89E-01	1.13E-02	70.48	1.95E-01	6.97E+01	4.63E-08	4.61E-08	4.61E-08		2.28E-07
ethylbenzene	100-41-4	Yes	9.50E-01	4.99E-02	34.31	1.95E-01	3.26E+01	2.27E-13	2.17E-13	2.17E-13		1.05E-11
HD	505-60-2	Yes	9.44E-01	5.64E-02	26.62	1.95E-01	2.51E+01	1.27E-10	1.21E-10	1.21E-10		1.73E-09
hexane	110-54-3		7.38E-01	2.62E-01	43.99	1.95E-01	3.25E+01	7.37E-13	5.47E-13	5.46E-13		1.10E-10
methane	74-82-8		9.94E-01	5.67E-03	93.20	1.95E-01	9.27E+01	8.81E-07	8.82E-07	8.82E-07		1.22E-06
methylene chloride	75-09-2	Yes	9.94E-01	5.96E-03	44.90	1.95E-01	4.46E+01	8.53E-13	8.53E-13	8.53E-13		1.71E-12
propene	115-07-1		9.89E-01	1.07E-02	60.60	1.95E-01	6.00E+01	1.23E-08	1.23E-08	1.23E-08		5.65E-08
styrene	100-42-5		8.18E-01	1.82E-01	34.81	1.95E-01	2.85E+01	2.93E-12	2.41E-12	2.41E-12		9.81E-11
tetrachloroethene	127-18-4	Yes	9.37E-01	6.30E-02	35.50	1.95E-01	3.33E+01	2.66E-13	2.51E-13	2.51E-13		2.08E-11
toluene	108-88-3		9.64E-01	3.59E-02	36.63	1.95E-01	3.53E+01	2.73E-09	2.64E-09	2.64E-09		6.32E-08
trichloroethene	79-01-6	Yes	9.74E-01	2.55E-02	38.06	1.95E-01	3.71E+01	3.17E-13	3.11E-13	3.11E-13		4.38E-12
vinyl chloride	75-01-4	Yes	9.93E-01	7.27E-03	46.60	1.95E-01	4.63E+01	4.24E-11	4.23E-11	4.23E-11		1.01E-10
xylenes	1330-20-7		9.13E-01	8.68E-02	39.99	1.95E-01	3.65E+01	1.01E-10	9.27E-11	9.27E-11		5.01E-09
3,3',4,4'-TCB (PCB 77)	32598-13-3		4.80E-03	9.95E-01	8.97	1.95E-01	2.37E-01	3.55E-18	1.72E-20	6.04E-21	5.93E-16	2.07E-15
2,3',4,4',5-PeCB (PCB 118)	31508-00-6		4.80E-03	9.95E-01	8.97	1.95E-01	2.37E-01	1.48E-17	7.15E-20	2.52E-20	2.47E-15	8.64E-15
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4		4.80E-03	9.95E-01	8.97	1.95E-01	2.37E-01	7.10E-18	3.43E-20	1.21E-20	1.19E-15	4.15E-15
total coplanar PCBs	NA	Yes										
ammonia	7664-41-7		9.96E-01	4.02E-03	59.52	1.95E-01	5.93E+01	3.69E-10	3.70E-10	3.70E-10		1.17E-09
aluminum	7429-90-5		9.41E-01	5.93E-02	73.82	1.95E-01	6.95E+01	3.41E-10	3.22E-10	3.22E-10		1.02E-09
cadmium	7440-43-9		6.88E-01	3.12E-01	39.36	1.95E-01	2.71E+01	3.14E-12	2.18E-12	2.17E-12		1.97E-09
chlorine	7782-50-5		9.95E-01	5.07E-03	40.00	1.95E-01	3.98E+01	1.40E-09	1.40E-09	1.40E-09		4.41E-09
chromium (3+)	7440-47-3		8.95E-01	1.05E-01	51.05	1.95E-01	4.57E+01	5.92E-12	5.33E-12	5.33E-12		1.68E-11
chromium (6+)	18540-29-9	Yes	8.95E-01	1.05E-01	51.05	1.95E-01	4.57E+01	5.92E-12	5.33E-12	5.33E-12		1.68E-11
copper	7440-50-8		2.80E-01	7.20E-01	50.17	1.95E-01	1.42E+01	7.13E-10	2.01E-10	2.00E-10		6.32E-10
hydrogen chloride	7647-01-0		9.96E-01	4.35E-03	39.71	1.95E-01	3.95E+01	8.87E-09	8.89E-09	8.89E-09		2.81E-08
iron	7439-89-6		8.67E-01	1.33E-01	53.37	1.95E-01	4.63E+01	8.22E-10	7.17E-10	7.17E-10		2.27E-09
lead	7439-92-1	Yes	1.57E-01	8.43E-01	39.03	1.95E-01	6.31E+00	5.67E-11	8.97E-12	8.89E-12		8.00E-13
manganese	7439-96-5		7.18E-01	2.82E-01	53.72	1.95E-01	3.86E+01	1.26E-09	9.09E-10	9.09E-10		2.87E-09
total mercury	NA		6.62E-03	9.93E-01	0.02	1.95E-01	1.94E-01	1.44E-13	9.57E-16	0.00E+00		
mercuric chloride	7487-94-7		6.62E-03	9.93E-01	0.02	1.95E-01	1.94E-01	0.00E+00	0.00E+00	4.07E-16		0.00E+00
methyl mercury	22967-92-6		1.00E-01	9.00E-01	8.00	1.95E-01	9.75E-01	0.00E+00	0.00E+00	7.18E-17		4.88E-10
elemental mercury	7439-97-6		5.31E-02	9.47E-01	83.23	1.95E-01	4.61E+00	0.00E+00	0.00E+00	0.00E+00		0.00E+00
nickel	7440-02-0		7.18E-01	2.82E-01	39.36	1.95E-01	2.83E+01	4.88E-12	3.53E-12	3.52E-12		2.75E-10
vanadium	7440-62-2		1.44E-01	8.56E-01	55.05	1.95E-01	8.09E+00	6.58E-11	9.53E-12	9.44E-12		2.99E-11
zinc	7440-66-6		7.27E-01	2.73E-01	39.36	1.95E-01	2.87E+01	5.13E-10	3.75E-10	3.75E-10		7.73E-07

CONCENTRATIONS OF COPCS IN SURFACE WATER AND FISH FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS (TEQ BASIS):
Adult Subsistence Farmer Exposure Scenario

COPC	CAS Number	Concentration in Water				Concentration in Fish
		Total Waterbody Concentration Including Water Column and Bed Sediment	Total Concentration in Water Column	Dissolved Phase Water Concentration	Concentration Sorbed to Bed Sediment	Fish Concentration
		(mg TEQ/ℓ)[a]	(mg TEQ/ℓ)[a]	(mg TEQ/ℓ)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]
		C_{wtot}	C_{wctot}	C_{dw}	C_{sb}	C_{fish}
2-butanone	78-93-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-ethyl 1,3-butadiene	3404-63-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
acetone	67-64-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzene	71-43-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzyl alcohol	100-51-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bis(2-ethylhexyl)-phthalate	117-81-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bromodichloromethane	75-27-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
carbon disulfide	75-15-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
carbon tetrachloride	56-23-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chlorobenzene	108-90-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloroform	67-66-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloromethane	74-87-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dibromochloromethane	124-48-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dimethyl phthalate	131-11-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
di-n-butyl phthalate	84-74-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ethane	74-84-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ethylbenzene	100-41-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
HD	505-60-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
hexane	110-54-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methane	74-82-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methylene chloride	75-09-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
propene	115-07-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
styrene	100-42-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
tetrachloroethene	127-18-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
toluene	108-88-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trichloroethene	79-01-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
vinyl chloride	75-01-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
xylenes	1330-20-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3,3',4,4'-TCB (PCB 77)	32598-13-3	3.55E-22	1.72E-24	6.04E-25	5.93E-20	2.07E-19
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	4.44E-22	2.14E-24	7.55E-25	7.41E-20	2.59E-19
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	2.13E-22	1.03E-24	3.63E-25	3.56E-20	1.24E-19
total coplanar PCBs	NA	1.01E-21	4.89E-24	1.72E-24	1.69E-19	5.91E-19
ammonia	7664-41-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
aluminum	7429-90-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cadmium	7440-43-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chlorine	7782-50-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (3+)	7440-47-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (6+)	18540-29-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
copper	7440-50-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
hydrogen chloride	7647-01-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
iron	7439-89-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
lead	7439-92-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
manganese	7439-96-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
total mercury	NA					
mercuric chloride	7487-94-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methyl mercury	22967-92-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
vanadium	7440-62-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
zinc	7440-66-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

a. The concentration of individual PCDDs and PCDFs congeners and coplanar PCBs in water and fish are presented in units of mg COPC TEQ/kg. The concentration of total PCDDs and PCDFs as well as the concentration of total coplanar PCBs in water and fish are presented in units of mg TEQ/kg produce and are calculated as the sum of the concentrations of all individual PCDD and PCDF congeners in water or fish and the concentrations of all coplanar produce in water and fish, respectively.

CONCENTRATIONS OF COPCS IN SURFACE WATER AND FISH FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS:
Child Exposure Scenarios

		Diffusive Mass Transfer Coefficient			Erosion Loading Supporting Calculation		Contaminant Load To The Waterbody					
		Liquid Phase Transfer Coefficient	Gas Phase Transfer Coefficient	Overall Transfer Rate	Unit Soil Loss	Watershed Sediment Delivery Ratio	Due to Direct Deposition	Due to Impervious Runoff	Due to Pervious Runoff	Due to Erosion	Due to Diffusion	Due to All Processes
		(m/yr)	(m/yr)	(m/yr)	(kg/m^2-yr)	(dimensionless)	(g/yr)	(g/yr)	(g/yr)	(g/yr)	(g/yr)	(g/yr)
COPC	CAS Number	K_L	K_G	K_v	X_e	SD	L_{Dep}	L_{RI}	L_R	L_E	L_{Dif}	L_T
2-butanone	78-93-3	177.10	496089.19	174.20	0.39	0.36	6.12E-06	7.54E-06	1.75E-06	1.66E-08	6.57E-06	2.20E-05
2-ethyl 1,3-butadiene	3404-63-5	198.28	576088.85	225.43	0.39	0.36	2.89E-04	3.56E-04	2.21E-08	2.34E-09	9.19E-08	6.46E-04
acetone	67-64-1	195.98	660977.51	187.89	0.39	0.36	1.09E-05	1.35E-05	1.74E-06	4.94E-09	1.82E-05	4.44E-05
benzene	71-43-2	181.91	525288.08	206.51	0.39	0.36	3.13E-02	3.86E-02	5.93E-05	2.33E-07	3.99E-04	7.04E-02
benzyl alcohol	100-51-6	179.51	26157.37	0.41	0.39	0.36	2.29E-05	2.83E-05	4.59E-03	1.80E-05	9.61E-06	4.66E-03
bis(2-ethylhexyl)-phthalate	117-81-7	91.54	283759.18	1.30	0.39	0.36	1.09E-04	1.35E-04	2.93E-10	2.21E-05	0.00E+00	2.66E-04
bromodichloromethane	75-27-4	179.51	26157.37	184.72	0.39	0.36	2.13E-06	2.63E-06	1.18E-06	4.26E-09	8.50E-08	6.03E-06
carbon disulfide	75-15-0	179.51	587498.13	204.04	0.39	0.36	1.34E-05	1.65E-05	3.43E-09	1.02E-11	3.15E-08	3.00E-05
carbon tetrachloride	56-23-5	164.78	484504.19	187.29	0.39	0.36	5.48E-07	6.75E-07	3.34E-10	3.82E-12	1.18E-09	1.22E-06
chlorobenzene	108-90-7	163.52	463468.76	185.48	0.39	0.36	4.82E-07	5.93E-07	2.69E-09	3.88E-11	8.34E-09	1.09E-06
chloroform	67-66-3	179.51	587498.13	203.68	0.39	0.36	1.42E-06	1.75E-06	2.72E-09	7.11E-12	2.69E-08	3.19E-06
chloromethane	74-87-3	134.51	668101.45	152.84	0.39	0.36	1.29E-05	1.58E-05	7.07E-09	1.39E-11	7.69E-08	2.88E-05
dibromochloromethane	124-48-1	179.51	26157.37	168.07	0.39	0.36	2.63E-06	3.24E-06	5.36E-06	1.23E-07	1.95E-07	1.16E-05
dimethyl phthalate	131-11-3	131.58	391748.68	1.89	0.39	0.36	2.27E-05	2.80E-05	1.30E-04	1.45E-06	1.41E-04	3.24E-04
di-n-butyl phthalate	84-74-2	152.77	329140.86	23.78	0.39	0.36	5.30E-05	6.53E-05	9.42E-08	1.60E-05	2.42E-04	3.76E-04
ethane	74-84-0	311.82	898267.57	354.52	0.39	0.36	1.28E-01	1.57E-01	1.81E-06	1.90E-08	3.13E-05	2.85E-01
ethylbenzene	100-41-4	151.98	471938.27	172.62	0.39	0.36	4.24E-07	5.23E-07	1.19E-09	2.85E-11	3.20E-09	9.52E-07
HD	505-60-2	147.91	428791.43	133.93	0.39	0.36	1.33E-04	1.64E-04	2.37E-07	1.82E-08	1.86E-04	4.83E-04
hexane	110-54-3	194.83	560700.85	221.51	0.39	0.36	1.19E-06	1.47E-06	1.33E-11	6.40E-12	5.07E-11	2.66E-06
methane	74-82-8	412.36	1192048.29	468.82	0.39	0.36	2.89E+00	3.56E+00	1.14E-05	3.25E-08	7.12E-04	6.46E+00
methylene chloride	75-09-2	199.42	576088.85	225.86	0.39	0.36	1.85E-06	2.28E-06	2.50E-09	1.96E-12	6.55E-08	4.19E-06
propene	115-07-1	268.13	774188.86	304.83	0.39	0.36	3.13E-02	3.86E-02	1.39E-06	1.36E-08	1.68E-05	7.00E-02
styrene	100-42-5	154.58	454922.32	175.21	0.39	0.36	4.70E-06	5.79E-06	4.35E-08	1.71E-07	1.05E-07	1.08E-05
tetrachloroethene	127-18-4	157.16	459205.33	178.60	0.39	0.36	4.99E-07	6.15E-07	5.30E-10	5.37E-12	1.71E-09	1.12E-06
toluene	108-88-3	162.26	521281.19	184.27	0.39	0.36	5.30E-03	6.53E-03	1.33E-05	1.56E-07	5.11E-05	1.19E-02
trichloroethene	79-01-6	168.52	488657.20	191.44	0.39	0.36	6.34E-07	7.81E-07	1.12E-09	1.21E-11	4.19E-09	1.42E-06
vinyl chloride	75-01-4	206.22	595044.00	234.39	0.39	0.36	9.46E-05	1.17E-04	1.41E-08	1.71E-11	2.84E-07	2.11E-04
xylenes	1330-20-7	177.22	513221.49	201.23	0.39	0.36	1.93E-04	2.38E-04	6.50E-07	8.10E-08	2.02E-06	4.33E-04
3,3',4,4'-TCB (PCB 77)	32598-13-3	179.51	26157.37	128.12	0.39	0.36	1.03E-14	1.27E-14	6.93E-17	5.55E-14	0.00E+00	7.85E-14
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	179.51	26157.37	128.12	0.39	0.36	4.28E-14	5.28E-14	2.89E-16	2.31E-13	0.00E+00	3.27E-13
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	179.51	26157.37	128.12	0.39	0.36	2.06E-14	2.53E-14	1.39E-16	1.11E-13	0.00E+00	1.57E-13
total coplanar PCBs	NA											
ammonia	7664-41-7	401.91	1159889.25	299.40	0.39	0.36	2.41E-04	2.97E-04	1.16E-05	6.46E-09	1.55E-03	2.10E-03
aluminum	7429-90-5	326.72	944096.93	371.33	0.39	0.36	9.16E-04	1.13E-03	3.44E-07	1.11E-07	4.79E-06	2.05E-03
cadmium	7440-43-9	174.30	482421.10	198.12	0.39	0.36	4.52E-06	5.57E-06	2.48E-09	6.08E-09	0.00E+00	1.01E-05
chlorine	7782-50-5	179.51	26157.37	201.21	0.39	0.36	2.89E-03	3.56E-03	3.17E-04	2.59E-06	1.72E-05	6.79E-03
chromium (3+)	7440-47-3	225.98	669876.60	256.84	0.39	0.36	1.25E-05	1.54E-05	5.28E-09	3.28E-09	0.00E+00	2.78E-05
chromium (6+)	18540-29-9	225.98	669876.60	256.84	0.39	0.36	1.25E-05	1.54E-05	5.28E-09	3.28E-09	0.00E+00	2.78E-05
copper	7440-50-8	222.99	644347.48	253.43	0.39	0.36	4.67E-04	5.76E-04	2.11E-07	2.97E-06	0.00E+00	1.05E-03
hydrogen chloride	7647-01-0	179.51	26157.37	199.76	0.39	0.36	1.84E-02	2.27E-02	9.08E-04	9.52E-07	1.64E-04	4.21E-02
iron	7439-89-6	236.24	682646.38	268.50	0.39	0.36	1.71E-03	2.11E-03	7.07E-07	5.78E-07	0.00E+00	3.83E-03
lead	7439-92-1	174.30	481169.11	198.10	0.39	0.36	1.87E-05	2.31E-05	1.28E-08	3.77E-07	0.00E+00	4.22E-05
manganese	7439-96-5	237.88	687398.85	270.37	0.39	0.36	2.18E-03	2.69E-03	8.93E-07	1.90E-06	0.00E+00	4.87E-03
total mercury	NA	116.57	7366494.52	0.24	0.39	0.36	3.08E-10	3.80E-10			0.00E+00	2.44E-09
mercuric chloride	7487-94-7	116.57	7366494.52	0.24	0.39	0.36	0.00E+00	0.00E+00	9.04E-13	1.71E-09	0.00E+00	0.00E+00
methyl mercury	22967-92-6	129.05	8159012.80	80.49	0.39	0.36	0.00E+00	0.00E+00	1.48E-13	3.39E-11	0.00E+00	0.00E+00
elemental mercury	7439-97-6	375.61	129619.37	422.82	0.39	0.36	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	174.30	481169.11	198.10	0.39	0.36	7.32E-06	9.02E-06	5.00E-09	1.06E-08	0.00E+00	1.64E-05
vanadium	7440-62-2	246.05	711005.14	279.65	0.39	0.36	2.34E-05	2.88E-05	9.10E-09	2.98E-07	0.00E+00	5.25E-05
zinc	7440-66-6	174.30	481169.11	198.10	0.39	0.36	7.80E-04	9.61E-04	5.33E-07	1.08E-06	0.00E+00	1.74E-03

CONCENTRATIONS OF COPCS IN SURFACE WATER AND FISH FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS:
Child Exposure Scenarios

COPC	CAS Number	Oral Cancer Slope Factor?	Waterbody Dissipation Rate Constant: Fraction in Water Column (dimensionless) f_{wc}	Fraction in Benthic Sediment (dimensionless) f_{bs}	Water Column Volatilization Rate Constant (yr^{-1}) k_v	Benthic Burial Rate Constant (yr^{-1}) k_b	Overall Total Waterbody Dissipation Rate Constant (yr^{-1}) k_{wt}	Concentration in Water: Total Waterbody Concentration Including Water Column and Bed Sediment (mg/ℓ) C_{wtot}	Total Concentration in Water Column (mg/ℓ) C_{wctot}	Dissolved Phase Water Concentration (mg/ℓ) C_{dw}	Concentration Sorbed to Bed Sediment (mg/kg) C_{sb}	Concentration in Fish: Fish Concentration (mg/kg) C_{fish}
2-butanone	78-93-3		9.96E-01	4.06E-03	34.63	1.95E-01	3.45E+01	4.99E-12	5.00E-12	5.00E-12		1.58E-11
2-ethyl 1,3-butadiene	3404-63-5		9.25E-01	7.51E-02	44.81	1.95E-01	4.15E+01	1.41E-10	1.32E-10	1.32E-10		6.07E-09
acetone	67-64-1		9.96E-01	3.71E-03	37.35	1.95E-01	3.72E+01	9.77E-12	9.79E-12	9.79E-12		3.09E-11
benzene	71-43-2	Yes	9.82E-01	1.81E-02	41.05	1.95E-01	4.03E+01	1.51E-08	1.49E-08	1.49E-08		1.23E-07
benzyl alcohol	100-51-6		9.94E-01	6.44E-03	0.08	1.95E-01	8.21E-02	1.75E-09	1.75E-09	1.75E-09		5.49E-10
bis(2-ethylhexyl)-phthalate	117-81-7	Yes	3.91E-02	9.61E-01	0.24	1.95E-01	1.97E-01	2.32E-09	9.12E-11	8.42E-11		1.64E-08
bromodichloromethane	75-27-4	Yes	9.83E-01	1.66E-02	36.72	1.95E-01	3.61E+01	1.35E-12	1.34E-12	1.34E-12		1.11E-11
carbon disulfide	75-15-0		9.81E-01	1.91E-02	40.56	1.95E-01	3.98E+01	6.47E-12	6.38E-12	6.38E-12		6.29E-11
carbon tetrachloride	56-23-5	Yes	9.61E-01	3.85E-02	37.23	1.95E-01	3.58E+01	2.80E-13	2.70E-13	2.70E-13		7.73E-12
chlorobenzene	108-90-7		9.46E-01	5.42E-02	36.87	1.95E-01	3.49E+01	2.53E-13	2.41E-13	2.41E-13		6.89E-12
chloroform	67-66-3	Yes	9.84E-01	1.59E-02	40.49	1.95E-01	3.98E+01	6.87E-13	6.81E-13	6.80E-13		4.71E-12
chloromethane	74-87-3		9.95E-01	5.07E-03	30.39	1.95E-01	3.02E+01	6.87E-12	6.88E-12	6.88E-12		2.17E-11
dibromochloromethane	124-48-1	Yes	9.80E-01	2.00E-02	33.41	1.95E-01	3.27E+01	2.70E-12	2.66E-12	2.66E-12		2.77E-11
dimethyl phthalate	131-11-3		9.88E-01	1.17E-02	0.38	1.95E-01	3.73E-01	1.21E-10	1.21E-10	1.21E-10		3.82E-10
di-n-butyl phthalate	84-74-2		7.25E-01	2.75E-01	4.72	1.95E-01	3.48E+00	1.78E-10	1.30E-10	1.29E-10		2.33E-07
ethane	74-84-0		9.89E-01	1.13E-02	70.48	1.95E-01	6.97E+01	4.63E-08	4.61E-08	4.61E-08		2.28E-07
ethylbenzene	100-41-4	Yes	9.50E-01	4.99E-02	34.31	1.95E-01	3.26E+01	2.27E-13	2.17E-13	2.17E-13		1.06E-11
HD	505-60-2	Yes	9.44E-01	5.64E-02	26.62	1.95E-01	2.51E+01	1.27E-10	1.21E-10	1.21E-10		1.73E-09
hexane	110-54-3		7.38E-01	2.62E-01	43.99	1.95E-01	3.25E+01	7.37E-13	5.47E-13	5.46E-13		1.10E-10
methane	74-82-8		9.94E-01	5.67E-03	93.20	1.95E-01	9.27E+01	8.81E-07	8.82E-07	8.82E-07		1.22E-06
methylene chloride	75-09-2	Yes	9.94E-01	5.96E-03	44.90	1.95E-01	4.46E+01	8.53E-13	8.53E-13	8.53E-13		1.71E-12
propene	115-07-1		9.89E-01	1.07E-02	60.60	1.95E-01	6.00E+01	1.23E-08	1.23E-08	1.23E-08		5.65E-08
styrene	100-42-5		8.18E-01	1.82E-01	34.81	1.95E-01	2.85E+01	2.98E-12	2.45E-12	2.45E-12		9.98E-11
tetrachloroethene	127-18-4	Yes	9.37E-01	6.30E-02	35.50	1.95E-01	3.33E+01	2.67E-13	2.51E-13	2.51E-13		2.08E-11
toluene	108-88-3		9.64E-01	3.59E-02	36.63	1.95E-01	3.53E+01	2.73E-09	2.65E-09	2.65E-09		6.33E-08
trichloroethene	79-01-6	Yes	9.74E-01	2.55E-02	38.06	1.95E-01	3.71E+01	3.17E-13	3.11E-13	3.11E-13		4.38E-12
vinyl chloride	75-01-4	Yes	9.93E-01	7.27E-03	46.60	1.95E-01	4.63E+01	4.24E-11	4.23E-11	4.23E-11		1.01E-10
xylenes	1330-20-7		9.13E-01	8.68E-02	39.99	1.95E-01	3.65E+01	1.01E-10	9.29E-11	9.28E-11		5.02E-09
3,3',4,4'-TCB (PCB 77)	32598-13-3		4.80E-03	9.95E-01	8.97	1.95E-01	2.37E-01	3.17E-18	1.53E-20	5.39E-21	5.28E-16	1.85E-15
2,3',4,4',5-PeCB (PCB 118)	31508-00-6		4.80E-03	9.95E-01	8.97	1.95E-01	2.37E-01	1.32E-17	6.37E-20	2.24E-20	2.20E-15	7.71E-15
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4		4.80E-03	9.95E-01	8.97	1.95E-01	2.37E-01	6.33E-18	3.06E-20	1.08E-20	1.06E-15	3.70E-15
total coplanar PCBs	NA	Yes										
ammonia	7664-41-7		9.96E-01	4.02E-03	59.52	1.95E-01	5.93E+01	3.71E-10	3.72E-10	3.72E-10		1.18E-09
aluminum	7429-90-5		9.41E-01	5.93E-02	73.82	1.95E-01	6.95E+01	3.41E-10	3.23E-10	3.22E-10		1.02E-09
cadmium	7440-43-9		6.88E-01	3.12E-01	39.36	1.95E-01	2.71E+01	3.14E-12	2.18E-12	2.18E-12		1.97E-09
chlorine	7782-50-5		9.95E-01	5.07E-03	40.00	1.95E-01	3.98E+01	1.46E-09	1.46E-09	1.46E-09		4.60E-09
chromium (3+)	7440-47-3		8.95E-01	1.05E-01	51.05	1.95E-01	4.57E+01	5.92E-12	5.33E-12	5.33E-12		1.68E-11
chromium (6+)	18540-29-9	Yes	8.95E-01	1.05E-01	51.05	1.95E-01	4.57E+01	5.92E-12	5.33E-12	5.33E-12		1.68E-11
copper	7440-50-8		2.80E-01	7.20E-01	50.17	1.95E-01	1.42E+01	7.15E-10	2.01E-10	2.00E-10		6.34E-10
hydrogen chloride	7647-01-0		9.96E-01	4.35E-03	39.71	1.95E-01	3.95E+01	9.04E-09	9.06E-09	9.06E-09		2.86E-08
iron	7439-89-6		8.67E-01	1.33E-01	53.37	1.95E-01	4.63E+01	8.23E-10	7.17E-10	7.17E-10		2.27E-09
lead	7439-92-1	Yes	1.57E-01	8.43E-01	39.03	1.95E-01	6.31E+00	5.71E-11	9.04E-12	8.96E-12		8.06E-13
manganese	7439-96-5		7.18E-01	2.82E-01	53.72	1.95E-01	3.86E+01	1.26E-09	9.10E-10	9.09E-10		2.88E-09
total mercury	NA		6.62E-03	9.93E-01	0.02	1.95E-01	1.94E-01	8.86E-14	5.90E-16	0.00E+00		
mercuric chloride	7487-94-7		6.62E-03	9.93E-01	0.02	1.95E-01	1.94E-01	0.00E+00	0.00E+00	2.51E-16		0.00E+00
methyl mercury	22967-92-6		1.00E-01	9.00E-01	8.00	1.95E-01	9.75E-01	0.00E+00	0.00E+00	4.43E-17		3.01E-10
elemental mercury	7439-97-6		5.31E-02	9.47E-01	83.23	1.95E-01	4.61E+00	0.00E+00	0.00E+00	0.00E+00		0.00E+00
nickel	7440-02-0		7.18E-01	2.82E-01	39.36	1.95E-01	2.83E+01	4.89E-12	3.53E-12	3.53E-12		2.75E-10
vanadium	7440-62-2		1.44E-01	8.56E-01	55.05	1.95E-01	8.09E+00	6.62E-11	9.58E-12	9.49E-12		3.00E-11
zinc	7440-66-6		7.27E-01	2.73E-01	39.36	1.95E-01	2.87E+01	5.14E-10	3.76E-10	3.76E-10		7.74E-07

CONCENTRATIONS OF COPCS IN SURFACE WATER AND FISH FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS (TEQ BASIS):
Child Exposure Scenarios

		Concentration in Water				Concentration in Fish
		Total Waterbody Concentration Including Water Column and Bed Sediment	Total Concentration in Water Column	Dissolved Phase Water Concentration	Concentration Sorbed to Bed Sediment	Fish Concentration
		(mg TEQ/ℓ)[a]	(mg TEQ/ℓ)[a]	(mg TEQ/ℓ)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]
COPC	CAS Number	C_{wtot}	C_{wctot}	C_{dw}	C_{sb}	C_{fish}
2-butanone	78-93-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-ethyl 1,3-butadiene	3404-63-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
acetone	67-64-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzene	71-43-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzyl alcohol	100-51-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bis(2-ethylhexyl)-phthalate	117-81-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bromodichloromethane	75-27-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
carbon disulfide	75-15-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
carbon tetrachloride	56-23-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chlorobenzene	108-90-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloroform	67-66-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloromethane	74-87-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dibromochloromethane	124-48-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dimethyl phthalate	131-11-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
di-n-butyl phthalate	84-74-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ethane	74-84-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ethylbenzene	100-41-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
HD	505-60-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
hexane	110-54-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methane	74-82-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methylene chloride	75-09-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
propene	115-07-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
styrene	100-42-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
tetrachloroethene	127-18-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
toluene	108-88-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trichloroethene	79-01-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
vinyl chloride	75-01-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
xylenes	1330-20-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3,3',4,4'-TCB (PCB 77)	32598-13-3	3.17E-22	1.53E-24	5.39E-25	5.28E-20	1.85E-19
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	3.96E-22	1.91E-24	6.73E-25	6.60E-20	2.31E-19
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	1.90E-22	9.18E-25	3.23E-25	3.17E-20	1.11E-19
total coplanar PCBs	NA	9.02E-22	4.36E-24	1.54E-24	1.51E-19	5.27E-19
ammonia	7664-41-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
aluminum	7429-90-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cadmium	7440-43-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chlorine	7782-50-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (3+)	7440-47-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (6+)	18540-29-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
copper	7440-50-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
hydrogen chloride	7647-01-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
iron	7439-89-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
lead	7439-92-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
manganese	7439-96-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
total mercury	NA					
mercuric chloride	7487-94-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methyl mercury	22967-92-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
vanadium	7440-62-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
zinc	7440-66-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

a. The concentration of individual PCDDs and PCDFs congeners and coplanar PCBs in water and fish are presented in units of mg COPC TEQ/kg. The concentration of total PCDDs and PCDFs as well as the concentration of total coplanar PCBs in water and fish are presented in units of mg TEQ/kg produce and are calculated as the sum of the concentrations of all individual PCDD and PCDF congeners in water or fish and the concentrations of all coplanar produce in water and fish, respectively.

CONCENTRATIONS OF COPCS IN SURFACE WATER AND FISH FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Infant Exposure Scenarios												
		Diffusive Mass Transfer Coefficient			Erosion Loading Supporting Calculation		Contaminant Load To The Waterbody					
		Liquid Phase Transfer Coefficient	Gas Phase Transfer Coefficient	Overall Transfer Rate	Unit Soil Loss	Watershed Sediment Delivery Ratio	Due to Direct Deposition	Due to Impervious Runoff	Due to Pervious Runoff	Due to Erosion	Due to Diffusion	Due to All Processes
		(m/yr)	(m/yr)	(m/yr)	(kg/m^2-yr)	(dimensionless)	(g/yr)	(g/yr)	(g/yr)	(g/yr)	(g/yr)	(g/yr)
COPC	CAS Number	K_L	K_G	K_v	X_e	SD	L_{Dep}	L_{RI}	L_R	L_E	L_{Dif}	L_T
2-butanone	78-93-3	177.10	496089.19	174.20	0.39	0.36	6.12E-06	7.54E-06	1.75E-06	1.66E-08	6.57E-06	2.20E-05
2-ethyl 1,3-butadiene	3404-63-5	198.28	576088.85	225.43	0.39	0.36	2.89E-04	3.56E-04	2.21E-08	2.34E-09	9.19E-08	6.46E-04
acetone	67-64-1	195.98	660977.51	187.89	0.39	0.36	1.09E-05	1.35E-05	1.74E-06	4.94E-09	1.82E-05	4.44E-05
benzene	71-43-2	181.91	525288.08	206.51	0.39	0.36	3.13E-02	3.86E-02	5.93E-05	2.33E-07	3.99E-04	7.04E-02
benzyl alcohol	100-51-6	179.51	26157.37	0.41	0.39	0.36	2.29E-05	2.83E-05	4.59E-03	1.80E-05	9.61E-06	4.66E-03
bis(2-ethylhexyl)-phthalate	117-81-7	91.54	283759.18	1.30	0.39	0.36	1.09E-04	1.35E-04	2.93E-10	2.21E-05	0.00E+00	2.66E-04
bromodichloromethane	75-27-4	179.51	26157.37	184.72	0.39	0.36	2.13E-06	2.63E-06	1.18E-06	4.26E-09	8.50E-08	6.03E-06
carbon disulfide	75-15-0	179.51	587498.13	204.04	0.39	0.36	1.34E-05	1.65E-05	3.43E-09	1.02E-11	3.15E-08	3.00E-05
carbon tetrachloride	56-23-5	164.78	484504.19	187.29	0.39	0.36	5.48E-07	6.75E-07	3.34E-10	3.82E-12	1.18E-09	1.22E-06
chlorobenzene	108-90-7	163.52	463468.76	185.48	0.39	0.36	4.82E-07	5.93E-07	2.69E-09	3.88E-11	8.34E-09	1.09E-06
chloroform	67-66-3	179.51	587498.13	203.68	0.39	0.36	1.42E-06	1.75E-06	2.72E-09	7.11E-12	2.69E-08	3.19E-06
chloromethane	74-87-3	134.51	668101.45	152.84	0.39	0.36	1.29E-05	1.58E-05	7.07E-09	1.39E-11	7.69E-08	2.88E-05
dibromochloromethane	124-48-1	179.51	26157.37	168.07	0.39	0.36	2.63E-06	3.24E-06	5.36E-06	1.23E-07	1.95E-07	1.16E-05
dimethyl phthalate	131-11-3	131.58	391748.68	1.89	0.39	0.36	2.27E-05	2.80E-05	1.30E-04	1.45E-06	1.41E-04	3.24E-04
di-n-butyl phthalate	84-74-2	152.77	329140.86	23.78	0.39	0.36	5.30E-05	6.53E-05	9.42E-08	1.60E-05	2.42E-04	3.76E-04
ethane	74-84-0	311.82	898267.57	354.52	0.39	0.36	1.28E-01	1.57E-01	1.81E-06	1.90E-08	3.13E-05	2.85E-01
ethylbenzene	100-41-4	151.98	471938.27	172.62	0.39	0.36	4.24E-07	5.23E-07	1.19E-09	2.85E-11	3.20E-09	9.52E-07
HD	505-60-2	147.91	428791.43	133.93	0.39	0.36	1.33E-04	1.64E-04	2.37E-07	1.82E-08	1.86E-04	4.83E-04
hexane	110-54-3	194.83	560700.85	221.51	0.39	0.36	1.19E-06	1.47E-06	1.33E-11	6.40E-12	5.07E-11	2.66E-06
methane	74-82-8	412.36	1192048.29	468.82	0.39	0.36	2.89E+00	3.56E+00	1.14E-05	3.25E-08	7.12E-04	6.46E+00
methylene chloride	75-09-2	199.42	576088.85	225.86	0.39	0.36	1.85E-06	2.28E-06	2.50E-09	1.96E-12	6.55E-08	4.19E-06
propene	115-07-1	268.13	774188.86	304.83	0.39	0.36	3.13E-02	3.86E-02	1.39E-06	1.36E-08	1.68E-05	7.00E-02
styrene	100-42-5	154.58	454922.32	175.21	0.39	0.36	4.70E-06	5.79E-06	4.35E-08	1.71E-07	1.05E-07	1.08E-05
tetrachloroethene	127-18-4	157.16	459205.33	178.60	0.39	0.36	4.99E-07	6.15E-07	5.30E-10	5.37E-12	1.71E-09	1.12E-06
toluene	108-88-3	162.26	521281.19	184.27	0.39	0.36	5.30E-03	6.53E-03	1.33E-05	1.56E-07	5.11E-05	1.19E-02
trichloroethene	79-01-6	168.52	488657.20	191.44	0.39	0.36	6.34E-07	7.81E-07	1.12E-09	1.21E-11	4.19E-09	1.42E-06
vinyl chloride	75-01-4	206.22	595044.00	234.39	0.39	0.36	9.46E-05	1.17E-04	1.41E-08	1.71E-11	2.84E-07	2.11E-04
xylenes	1330-20-7	177.22	513221.49	201.23	0.39	0.36	1.93E-04	2.38E-04	6.50E-07	8.10E-08	2.02E-06	4.33E-04
3,3',4,4'-TCB (PCB 77)	32598-13-3	179.51	26157.37	128.12	0.39	0.36	1.03E-14	1.27E-14	6.93E-17	5.55E-14	0.00E+00	7.85E-14
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	179.51	26157.37	128.12	0.39	0.36	4.28E-14	5.28E-14	2.89E-16	2.31E-13	0.00E+00	3.27E-13
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	179.51	26157.37	128.12	0.39	0.36	2.06E-14	2.53E-14	1.39E-16	1.11E-13	0.00E+00	1.57E-13
total coplanar PCBs	NA											
ammonia	7664-41-7	401.91	1159889.25	299.40	0.39	0.36	2.41E-04	2.97E-04	1.16E-05	6.46E-09	1.55E-03	2.10E-03
aluminum	7429-90-5	326.72	944096.93	371.33	0.39	0.36	9.16E-04	1.13E-03	3.44E-07	1.11E-07	4.79E-06	2.05E-03
cadmium	7440-43-9	174.30	482421.10	198.12	0.39	0.36	4.52E-06	5.57E-06	2.48E-09	6.08E-09	0.00E+00	1.01E-05
chlorine	7782-50-5	179.51	26157.37	201.21	0.39	0.36	2.89E-03	3.56E-03	3.17E-04	2.59E-06	1.72E-05	6.79E-03
chromium (3+)	7440-47-3	225.98	669876.60	256.84	0.39	0.36	1.25E-05	1.54E-05	5.28E-09	3.28E-09	0.00E+00	2.78E-05
chromium (6+)	18540-29-9	225.98	669876.60	256.84	0.39	0.36	1.25E-05	1.54E-05	5.28E-09	3.28E-09	0.00E+00	2.78E-05
copper	7440-50-8	222.99	644347.48	253.43	0.39	0.36	4.67E-04	5.76E-04	2.11E-07	2.97E-06	0.00E+00	1.05E-03
hydrogen chloride	7647-01-0	179.51	26157.37	199.76	0.39	0.36	1.84E-02	2.27E-02	9.08E-04	9.52E-07	1.64E-04	4.21E-02
iron	7439-89-6	236.24	682646.38	268.50	0.39	0.36	1.71E-03	2.11E-03	7.07E-07	5.78E-07	0.00E+00	3.83E-03
lead	7439-92-1	174.30	481169.11	198.10	0.39	0.36	1.87E-05	2.31E-05	1.28E-08	3.77E-07	0.00E+00	4.22E-05
manganese	7439-96-5	237.88	687398.85	270.37	0.39	0.36	2.18E-03	2.69E-03	8.93E-07	1.90E-06	0.00E+00	4.87E-03
total mercury	NA	116.57	7366494.52	0.24	0.39	0.36	3.08E-10	3.80E-10			0.00E+00	2.44E-09
mercuric chloride	7487-94-7	116.57	7366494.52	0.24	0.39	0.36	0.00E+00	0.00E+00	9.04E-13	1.71E-09	0.00E+00	0.00E+00
methyl mercury	22967-92-6	129.05	8159012.80	80.49	0.39	0.36	0.00E+00	0.00E+00	1.48E-13	3.39E-11	0.00E+00	0.00E+00
elemental mercury	7439-97-6	375.61	129619.37	422.82	0.39	0.36	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	174.30	481169.11	198.10	0.39	0.36	7.32E-06	9.02E-06	5.00E-09	1.06E-08	0.00E+00	1.64E-05
vanadium	7440-62-2	246.05	711005.14	279.65	0.39	0.36	2.34E-05	2.88E-05	9.10E-09	2.98E-07	0.00E+00	5.25E-05
zinc	7440-66-6	174.30	481169.11	198.10	0.39	0.36	7.80E-04	9.61E-04	5.33E-07	1.08E-06	0.00E+00	1.74E-03

CONCENTRATIONS OF COPCS IN SURFACE WATER AND FISH FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS:
Infant Exposure Scenarios

			Waterbody Dissipation Rate Constant					Concentration in Water				Concentration in Fish
COPC	CAS Number	Oral Cancer Slope Factor?	Fraction in Water Column	Fraction in Benthic Sediment	Water Column Volatilization Rate Constant	Benthic Burial Rate Constant	Overall Total Waterbody Dissipation Rate Constant	Total Waterbody Concentration Including Water Column and Bed Sediment	Total Concentration in Water Column	Dissolved Phase Water Concentration	Concentration Sorbed to Bed Sediment	Fish Concentration
			(dimensionless)	(dimensionless)	(yr^{-1})	(yr^{-1})	(yr^{-1})	(mg/ℓ)	(mg/ℓ)	(mg/ℓ)	(mg/kg)	(mg/kg)
			f_{wc}	f_{bs}	k_v	k_b	k_{wt}	C_{wtot}	C_{wctot}	C_{dw}	C_{sb}	C_{fish}
2-butanone	78-93-3		9.96E-01	4.06E-03	34.63	1.95E-01	3.45E+01	4.99E-12	5.00E-12	5.00E-12		1.58E-11
2-ethyl 1,3-butadiene	3404-63-5		9.25E-01	7.51E-02	44.81	1.95E-01	4.15E+01	1.41E-10	1.32E-10	1.32E-10		6.07E-09
acetone	67-64-1		9.96E-01	3.71E-03	37.35	1.95E-01	3.72E+01	9.77E-12	9.79E-12	9.79E-12		3.09E-11
benzene	71-43-2	Yes	9.82E-01	1.81E-02	41.05	1.95E-01	4.03E+01	1.51E-08	1.49E-08	1.49E-08		1.23E-07
benzyl alcohol	100-51-6		9.94E-01	6.44E-03	0.08	1.95E-01	8.21E-02	1.75E-09	1.75E-09	1.75E-09		5.49E-10
bis(2-ethylhexyl)-phthalate	117-81-7	Yes	3.91E-02	9.61E-01	0.24	1.95E-01	1.97E-01	2.32E-09	9.12E-11	8.42E-11		1.64E-08
bromodichloromethane	75-27-4	Yes	9.83E-01	1.66E-02	36.72	1.95E-01	3.61E+01	1.35E-12	1.34E-12	1.34E-12		1.11E-11
carbon disulfide	75-15-0		9.81E-01	1.91E-02	40.56	1.95E-01	3.98E+01	6.47E-12	6.38E-12	6.38E-12		6.29E-11
carbon tetrachloride	56-23-5	Yes	9.61E-01	3.85E-02	37.23	1.95E-01	3.58E+01	2.80E-13	2.70E-13	2.70E-13		7.73E-12
chlorobenzene	108-90-7		9.46E-01	5.42E-02	36.87	1.95E-01	3.49E+01	2.53E-13	2.41E-13	2.41E-13		6.89E-12
chloroform	67-66-3	Yes	9.84E-01	1.59E-02	40.49	1.95E-01	3.98E+01	6.87E-13	6.81E-13	6.80E-13		4.71E-12
chloromethane	74-87-3		9.95E-01	5.07E-03	30.39	1.95E-01	3.02E+01	6.87E-12	6.88E-12	6.88E-12		2.17E-11
dibromochloromethane	124-48-1	Yes	9.80E-01	2.00E-02	33.41	1.95E-01	3.27E+01	2.70E-12	2.66E-12	2.66E-12		2.77E-11
dimethyl phthalate	131-11-3		9.88E-01	1.17E-02	0.38	1.95E-01	3.73E-01	1.21E-10	1.21E-10	1.21E-10		3.82E-10
di-n-butyl phthalate	84-74-2		7.25E-01	2.75E-01	4.72	1.95E-01	3.48E+00	1.78E-10	1.30E-10	1.29E-10		2.33E-07
ethane	74-84-0		9.89E-01	1.13E-02	70.48	1.95E-01	6.97E+01	4.63E-08	4.61E-08	4.61E-08		2.28E-07
ethylbenzene	100-41-4	Yes	9.50E-01	4.99E-02	34.31	1.95E-01	3.26E+01	2.27E-13	2.17E-13	2.17E-13		1.06E-11
HD	505-60-2	Yes	9.44E-01	5.64E-02	26.62	1.95E-01	2.51E+01	1.27E-10	1.21E-10	1.21E-10		1.73E-09
hexane	110-54-3		7.38E-01	2.62E-01	43.99	1.95E-01	3.25E+01	7.37E-13	5.47E-13	5.46E-13		1.10E-10
methane	74-82-8		9.94E-01	5.67E-03	93.20	1.95E-01	9.27E+01	8.81E-07	8.82E-07	8.82E-07		1.22E-06
methylene chloride	75-09-2	Yes	9.94E-01	5.96E-03	44.90	1.95E-01	4.46E+01	8.53E-13	8.53E-13	8.53E-13		1.71E-12
propene	115-07-1		9.89E-01	1.07E-02	60.60	1.95E-01	6.00E+01	1.23E-08	1.23E-08	1.23E-08		5.65E-08
styrene	100-42-5		8.18E-01	1.82E-01	34.81	1.95E-01	2.85E+01	2.98E-12	2.45E-12	2.45E-12		9.98E-11
tetrachloroethene	127-18-4	Yes	9.37E-01	6.30E-02	35.50	1.95E-01	3.33E+01	2.67E-13	2.51E-13	2.51E-13		2.08E-11
toluene	108-88-3		9.64E-01	3.59E-02	36.63	1.95E-01	3.53E+01	2.73E-09	2.65E-09	2.65E-09		6.33E-08
trichloroethene	79-01-6	Yes	9.74E-01	2.55E-02	38.06	1.95E-01	3.71E+01	3.17E-13	3.11E-13	3.11E-13		4.38E-12
vinyl chloride	75-01-4	Yes	9.93E-01	7.27E-03	46.60	1.95E-01	4.63E+01	4.24E-11	4.23E-11	4.23E-11		1.01E-10
xylenes	1330-20-7		9.13E-01	8.68E-02	39.99	1.95E-01	3.65E+01	1.01E-10	9.29E-11	9.28E-11		5.02E-09
3,3',4,4'-TCB (PCB 77)	32598-13-3		4.80E-03	9.95E-01	8.97	1.95E-01	2.37E-01	3.17E-18	1.53E-20	5.39E-21	5.28E-16	1.85E-15
2,3',4,4',5-PeCB (PCB 118)	31508-00-6		4.80E-03	9.95E-01	8.97	1.95E-01	2.37E-01	1.32E-17	6.37E-20	2.24E-20	2.20E-15	7.71E-15
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4		4.80E-03	9.95E-01	8.97	1.95E-01	2.37E-01	6.33E-18	3.06E-20	1.08E-20	1.06E-15	3.70E-15
total coplanar PCBs	NA	Yes										
ammonia	7664-41-7		9.96E-01	4.02E-03	59.52	1.95E-01	5.93E+01	3.71E-10	3.72E-10	3.72E-10		1.18E-09
aluminum	7429-90-5		9.41E-01	5.93E-02	73.82	1.95E-01	6.95E+01	3.41E-10	3.23E-10	3.22E-10		1.02E-09
cadmium	7440-43-9		6.88E-01	3.12E-01	39.36	1.95E-01	2.71E+01	3.14E-12	2.18E-12	2.18E-12		1.97E-09
chlorine	7782-50-5		9.95E-01	5.07E-03	40.00	1.95E-01	3.98E+01	1.46E-09	1.46E-09	1.46E-09		4.60E-09
chromium (3+)	7440-47-3		8.95E-01	1.05E-01	51.05	1.95E-01	4.57E+01	5.92E-12	5.33E-12	5.33E-12		1.68E-11
chromium (6+)	18540-29-9	Yes	8.95E-01	1.05E-01	51.05	1.95E-01	4.57E+01	5.92E-12	5.33E-12	5.33E-12		1.68E-11
copper	7440-50-8		2.80E-01	7.20E-01	50.17	1.95E-01	1.42E+01	7.15E-10	2.01E-10	2.00E-10		6.34E-10
hydrogen chloride	7647-01-0		9.96E-01	4.35E-03	39.71	1.95E-01	3.95E+01	9.04E-09	9.06E-09	9.06E-09		2.86E-08
iron	7439-89-6		8.67E-01	1.33E-01	53.37	1.95E-01	4.63E+01	8.23E-10	7.17E-10	7.17E-10		2.27E-09
lead	7439-92-1	Yes	1.57E-01	8.43E-01	39.03	1.95E-01	6.31E+00	5.71E-11	9.04E-12	8.96E-12		8.06E-13
manganese	7439-96-5		7.18E-01	2.82E-01	53.72	1.95E-01	3.86E+01	1.26E-09	9.10E-10	9.09E-10		2.88E-09
total mercury	NA		6.62E-03	9.93E-01	0.02	1.95E-01	1.94E-01	8.86E-14	5.90E-16	0.00E+00		
mercuric chloride	7487-94-7		6.62E-03	9.93E-01	0.02	1.95E-01	1.94E-01	0.00E+00	0.00E+00	2.51E-16		0.00E+00
methyl mercury	22967-92-6		1.00E-01	9.00E-01	8.00	1.95E-01	9.75E-01	0.00E+00	0.00E+00	4.43E-17		3.01E-10
elemental mercury	7439-97-6		5.31E-02	9.47E-01	83.23	1.95E-01	4.61E+00	0.00E+00	0.00E+00	0.00E+00		0.00E+00
nickel	7440-02-0		7.18E-01	2.82E-01	39.36	1.95E-01	2.83E+01	4.89E-12	3.53E-12	3.53E-12		2.75E-10
vanadium	7440-62-2		1.44E-01	8.56E-01	55.05	1.95E-01	8.09E+00	6.62E-11	9.58E-12	9.49E-12		3.00E-11
zinc	7440-66-6		7.27E-01	2.73E-01	39.36	1.95E-01	2.87E+01	5.14E-10	3.76E-10	3.76E-10		7.74E-07

CONCENTRATIONS OF COPCS IN SURFACE WATER AND FISH FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS (TEQ BASIS):
Infant Exposure Scenarios

COPC	CAS Number	Concentration in Water				Concentration in Fish
		Total Waterbody Concentration Including Water Column and Bed Sediment	Total Concentration in Water Column	Dissolved Phase Water Concentration	Concentration Sorbed to Bed Sediment	Fish Concentration
		(mg TEQ/ℓ)[a]	(mg TEQ/ℓ)[a]	(mg TEQ/ℓ)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]
		C_{wtot}	C_{wctot}	C_{dw}	C_{sb}	C_{fish}
2-butanone	78-93-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-ethyl 1,3-butadiene	3404-63-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
acetone	67-64-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzene	71-43-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzyl alcohol	100-51-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bis(2-ethylhexyl)-phthalate	117-81-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bromodichloromethane	75-27-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
carbon disulfide	75-15-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
carbon tetrachloride	56-23-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chlorobenzene	108-90-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloroform	67-66-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloromethane	74-87-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dibromochloromethane	124-48-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dimethyl phthalate	131-11-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
di-n-butyl phthalate	84-74-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ethane	74-84-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ethylbenzene	100-41-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
HD	505-60-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
hexane	110-54-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methane	74-82-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methylene chloride	75-09-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
propene	115-07-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
styrene	100-42-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
tetrachloroethene	127-18-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
toluene	108-88-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trichloroethene	79-01-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
vinyl chloride	75-01-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
xylenes	1330-20-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3,3',4,4'-TCB (PCB 77)	32598-13-3	3.17E-22	1.53E-24	5.39E-25	5.28E-20	1.85E-19
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	3.96E-22	1.91E-24	6.73E-25	6.60E-20	2.31E-19
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	1.90E-22	9.18E-25	3.23E-25	3.17E-20	1.11E-19
total coplanar PCBs	NA	9.02E-22	4.36E-24	1.54E-24	1.51E-19	5.27E-19
ammonia	7664-41-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
aluminum	7429-90-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cadmium	7440-43-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chlorine	7782-50-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (3+)	7440-47-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (6+)	18540-29-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
copper	7440-50-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
hydrogen chloride	7647-01-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
iron	7439-89-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
lead	7439-92-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
manganese	7439-96-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
total mercury	NA					
mercuric chloride	7487-94-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methyl mercury	22967-92-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
vanadium	7440-62-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
zinc	7440-66-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

a. The concentration of individual PCDDs and PCDFs congeners and coplanar PCBs in water and fish are presented in units of mg COPC TEQ/kg. The concentration of total PCDDs and PCDFs as well as the concentration of total coplanar PCBs in water and fish are presented in units of mg TEQ/kg produce and are calculated as the sum of the concentrations of all individual PCDD and PCDF congeners in water or fish and the concentrations of all coplanar produce in water and fish, respectively.

CONCENTRATIONS OF COPCS IN SURFACE WATER AND FISH FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS: All Exposure Scenarios												
		Diffusive Mass Transfer Coefficient			Erosion Loading Supporting Calculation		Contaminant Load To The Waterbody					
		Liquid Phase Transfer Coefficient	Gas Phase Transfer Coefficient	Overall Transfer Rate	Unit Soil Loss	Watershed Sediment Delivery Ratio	Due to Direct Deposition	Due to Impervious Runoff	Due to Pervious Runoff	Due to Erosion	Due to Diffusion	Due to All Processes
		(m/yr)	(m/yr)	(m/yr)	(kg/m^2-yr)	(dimensionless)	(g/yr)	(g/yr)	(g/yr)	(g/yr)	(g/yr)	(g/yr)
COPC	CAS Number	K_L	K_G	K_d	X_s	SD	L_{Dep}	L_{RI}	L_R	L_E	L_{Dif}	L_T
2-butanone	78-93-3	177.10	496089.19	174.20	0.39	0.36	6.12E-06	7.54E-06	1.75E-06	1.66E-08	6.57E-06	2.20E-05
2-ethyl 1,3-butadiene	3404-63-5	198.28	576088.85	225.43	0.39	0.36	2.89E-04	3.56E-04	2.21E-08	2.34E-09	9.19E-08	6.46E-04
acetone	67-64-1	195.98	660977.51	187.89	0.39	0.36	1.09E-05	1.35E-05	1.74E-06	4.94E-09	1.82E-05	4.44E-05
benzene	71-43-2	181.91	525288.08	206.51	0.39	0.36	3.13E-02	3.86E-02	5.93E-05	2.33E-07	3.99E-04	7.04E-02
benzyl alcohol	100-51-6	179.51	26157.37	0.41	0.39	0.36	2.29E-05	2.83E-05	5.15E-03	2.02E-05	9.61E-06	5.23E-03
bis(2-ethylhexyl)-phthalate	117-81-7	91.54	283759.18	1.30	0.39	0.36	1.09E-04	1.35E-04	2.99E-10	2.25E-05	0.00E+00	2.66E-04
bromodichloromethane	75-27-4	179.51	26157.37	184.72	0.39	0.36	2.13E-06	2.63E-06	1.18E-06	4.26E-09	8.50E-08	6.03E-06
carbon disulfide	75-15-0	179.51	587498.13	204.04	0.39	0.36	1.34E-05	1.65E-05	3.43E-09	1.02E-11	3.15E-08	3.00E-05
carbon tetrachloride	56-23-5	164.78	484504.19	187.29	0.39	0.36	5.48E-07	6.75E-07	3.34E-10	3.82E-12	1.18E-09	1.22E-06
chlorobenzene	108-90-7	163.52	463468.76	185.48	0.39	0.36	4.82E-07	5.93E-07	2.69E-09	3.88E-11	8.34E-09	1.09E-06
chloroform	67-66-3	179.51	587498.13	203.68	0.39	0.36	1.42E-06	1.75E-06	2.72E-09	7.11E-12	2.69E-08	3.19E-06
chloromethane	74-87-3	134.51	668101.45	152.84	0.39	0.36	1.29E-05	1.58E-05	7.07E-09	1.39E-11	7.69E-08	2.88E-05
dibromochloromethane	124-48-1	179.51	26157.37	168.07	0.39	0.36	2.63E-06	3.24E-06	5.38E-06	1.23E-07	1.95E-07	1.16E-05
dimethyl phthalate	131-11-3	131.58	391748.68	1.89	0.39	0.36	2.27E-05	2.80E-05	1.31E-04	1.46E-06	1.41E-04	3.24E-04
di-n-butyl phthalate	84-74-2	152.77	329140.86	23.78	0.39	0.36	5.30E-05	6.53E-05	9.59E-08	1.63E-05	2.42E-04	3.77E-04
ethane	74-84-0	311.82	898267.57	354.52	0.39	0.36	1.28E-01	1.57E-01	1.81E-06	1.90E-08	3.13E-05	2.85E-01
ethylbenzene	100-41-4	151.98	471938.27	172.62	0.39	0.36	4.24E-07	5.23E-07	1.19E-09	2.85E-11	3.20E-09	9.52E-07
HD	505-60-2	147.91	428791.43	133.93	0.39	0.36	1.33E-04	1.64E-04	2.37E-07	1.82E-08	1.86E-04	4.83E-04
hexane	110-54-3	194.83	560700.85	221.51	0.39	0.36	1.19E-06	1.47E-06	1.33E-11	6.40E-12	5.07E-11	2.66E-06
methane	74-82-8	412.36	1192048.29	468.82	0.39	0.36	2.89E+00	3.56E+00	1.14E-05	3.25E-08	7.12E-04	6.46E+00
methylene chloride	75-09-2	199.42	576088.85	225.86	0.39	0.36	1.85E-06	2.28E-06	2.50E-09	1.96E-12	6.55E-08	4.19E-06
propene	115-07-1	268.13	774188.86	304.83	0.39	0.36	3.13E-02	3.86E-02	1.39E-06	1.36E-08	1.68E-05	7.00E-02
styrene	100-42-5	154.58	454922.32	175.21	0.39	0.36	4.70E-06	5.79E-06	4.36E-08	1.71E-07	1.05E-07	1.08E-05
tetrachloroethene	127-18-4	157.16	459205.33	178.60	0.39	0.36	4.99E-07	6.15E-07	5.30E-10	5.37E-12	1.71E-09	1.12E-06
toluene	108-88-3	162.26	521281.19	184.27	0.39	0.36	5.30E-03	6.53E-03	1.33E-05	1.56E-07	5.11E-05	1.19E-02
trichloroethene	79-01-6	168.52	488657.20	191.44	0.39	0.36	6.34E-07	7.81E-07	1.12E-09	1.21E-11	4.19E-09	1.42E-06
vinyl chloride	75-01-4	206.22	595044.00	234.39	0.39	0.36	9.46E-05	1.17E-04	1.41E-08	1.71E-11	2.84E-07	2.11E-04
xylenes	1330-20-7	177.22	513221.49	201.23	0.39	0.36	1.93E-04	2.38E-04	6.50E-07	8.10E-08	2.02E-06	4.33E-04
3,3',4,4'-TCB (PCB 77)	32598-13-3	179.51	26157.37	128.12	0.39	0.36	1.03E-14	1.27E-14	1.35E-16	1.08E-13	0.00E+00	1.31E-13
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	179.51	26157.37	128.12	0.39	0.36	4.28E-14	5.28E-14	5.63E-16	4.51E-13	0.00E+00	5.47E-13
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	179.51	26157.37	128.12	0.39	0.36	2.06E-14	2.53E-14	2.70E-16	2.16E-13	0.00E+00	2.63E-13
total coplanar PCBs	NA											
ammonia	7664-41-7	401.91	1159889.25	299.40	0.39	0.36	2.41E-04	2.97E-04	1.16E-05	6.46E-09	1.55E-03	2.10E-03
aluminum	7429-90-5	326.72	944096.93	371.33	0.39	0.36	9.16E-04	1.13E-03	3.44E-07	1.11E-07	4.79E-06	2.05E-03
cadmium	7440-43-9	174.30	482421.10	198.12	0.39	0.36	4.52E-06	5.57E-06	2.48E-09	6.08E-09	0.00E+00	1.01E-05
chlorine	7782-50-5	179.51	26157.37	201.21	0.39	0.36	2.89E-03	3.56E-03	3.17E-04	2.59E-06	1.72E-05	6.79E-03
chromium (3+)	7440-47-3	225.98	669876.60	256.84	0.39	0.36	1.25E-05	1.54E-05	5.28E-09	3.28E-09	0.00E+00	2.78E-05
chromium (6+)	18540-29-9	225.98	669876.60	256.84	0.39	0.36	1.25E-05	1.54E-05	5.28E-09	3.28E-09	0.00E+00	2.78E-05
copper	7440-50-8	222.99	644347.48	253.43	0.39	0.36	4.67E-04	5.76E-04	2.11E-07	2.97E-06	0.00E+00	1.05E-03
hydrogen chloride	7647-01-0	179.51	26157.37	199.76	0.39	0.36	1.84E-02	2.27E-02	9.08E-04	9.52E-07	1.64E-04	4.21E-02
iron	7439-89-6	236.24	682646.38	268.50	0.39	0.36	1.71E-03	2.11E-03	7.07E-07	5.78E-07	0.00E+00	3.83E-03
lead	7439-92-1	174.30	481169.11	198.10	0.39	0.36	1.87E-05	2.31E-05	1.28E-08	3.77E-07	0.00E+00	4.22E-05
manganese	7439-96-5	237.88	687398.85	270.37	0.39	0.36	2.18E-03	2.69E-03	8.93E-07	1.90E-06	0.00E+00	4.87E-03
total mercury	NA	116.57	7366494.52	0.24	0.39	0.36	3.08E-10	3.80E-10			0.00E+00	4.18E-09
mercuric chloride	7487-94-7	116.57	7366494.52	0.24	0.39	0.36	0.00E+00	0.00E+00	1.81E-12	3.43E-09	0.00E+00	0.00E+00
methyl mercury	22967-92-6	129.05	8159012.80	80.49	0.39	0.36	0.00E+00	0.00E+00	2.92E-13	6.68E-11	0.00E+00	0.00E+00
elemental mercury	7439-97-6	375.61	129619.37	422.82	0.39	0.36	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	174.30	481169.11	198.10	0.39	0.36	7.32E-06	9.02E-06	5.00E-09	1.06E-08	0.00E+00	1.64E-05
vanadium	7440-62-2	246.05	711005.14	279.65	0.39	0.36	2.34E-05	2.88E-05	9.11E-09	2.98E-07	0.00E+00	5.25E-05
zinc	7440-66-6	174.30	481169.11	198.10	0.39	0.36	7.80E-04	9.61E-04	5.33E-07	1.08E-06	0.00E+00	1.74E-03

CONCENTRATIONS OF COPCS IN SURFACE WATER AND FISH FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS:
All Exposure Scenarios

COPC	CAS Number	Oral Cancer Slope Factor?	Waterbody Dissipation Rate Constant: Fraction in Water Column (dimensionless) f_{wc}	Fraction in Benthic Sediment (dimensionless) f_{bs}	Water Column Volatilization Rate Constant (yr^{-1}) k_v	Benthic Burial Rate Constant (yr^{-1}) k_b	Overall Total Waterbody Dissipation Rate Constant (yr^{-1}) k_{wt}	Concentration in Water: Total Waterbody Concentration Including Water Column and Bed Sediment (mg/ℓ) C_{wtot}	Total Concentration in Water Column (mg/ℓ) C_{wctot}	Dissolved Phase Water Concentration (mg/ℓ) C_{dw}	Concentration Sorbed to Bed Sediment (mg/kg) C_{sb}	Concentration in Fish: Fish Concentration (mg/kg) C_{fish}
2-butanone	78-93-3	Yes	9.96E-01	4.06E-03	34.63	1.95E-01	3.45E+01	4.99E-12	5.00E-12	5.00E-12		1.58E-11
2-ethyl 1,3-butadiene	3404-63-5		9.25E-01	7.51E-02	44.81	1.95E-01	4.15E+01	1.41E-10	1.32E-10	1.32E-10		6.07E-09
acetone	67-64-1	Yes	9.96E-01	3.71E-03	37.35	1.95E-01	3.72E+01	9.77E-12	9.79E-12	9.79E-12		3.09E-11
benzene	71-43-2	Yes	9.82E-01	1.81E-02	41.05	1.95E-01	4.03E+01	1.51E-08	1.49E-08	1.49E-08		1.23E-07
benzyl alcohol	100-51-6	Yes	9.94E-01	6.44E-03	0.08	1.95E-01	8.21E-02	1.96E-09	1.96E-09	1.96E-09		6.16E-10
bis(2-ethylhexyl)-phthalate	117-81-7	Yes	3.91E-02	9.61E-01	0.24	1.95E-01	1.97E-01	2.32E-09	9.14E-11	8.43E-11		1.64E-08
bromodichloromethane	75-27-4	Yes	9.83E-01	1.66E-02	36.72	1.95E-01	3.61E+01	1.35E-12	1.34E-12	1.34E-12		1.11E-11
carbon disulfide	75-15-0	Yes	9.81E-01	1.91E-02	40.56	1.95E-01	3.98E+01	6.47E-12	6.38E-12	6.38E-12		6.29E-11
carbon tetrachloride	56-23-5	Yes	9.61E-01	3.85E-02	37.23	1.95E-01	3.58E+01	2.80E-13	2.70E-13	2.70E-13		7.73E-12
chlorobenzene	108-90-7	Yes	9.46E-01	5.42E-02	36.87	1.95E-01	3.49E+01	2.53E-13	2.41E-13	2.41E-13		6.89E-12
chloroform	67-66-3	Yes	9.84E-01	1.59E-02	40.49	1.95E-01	3.98E+01	6.87E-13	6.81E-13	6.80E-13		4.71E-12
chloromethane	74-87-3	Yes	9.95E-01	5.07E-03	30.39	1.95E-01	3.02E+01	6.87E-12	6.88E-12	6.88E-12		2.17E-11
dibromochloromethane	124-48-1	Yes	9.80E-01	2.00E-02	33.41	1.95E-01	3.27E+01	2.71E-12	2.67E-12	2.67E-12		2.78E-11
dimethyl phthalate	131-11-3		9.88E-01	1.17E-02	0.38	1.95E-01	3.73E-01	1.22E-10	1.21E-10	1.21E-10		3.83E-10
di-n-butyl phthalate	84-74-2	Yes	7.25E-01	2.75E-01	4.72	1.95E-01	3.48E+00	1.78E-10	1.30E-10	1.30E-10		2.33E-07
ethane	74-84-0		9.89E-01	1.13E-02	70.48	1.95E-01	6.97E+01	4.63E-08	4.61E-08	4.61E-08		2.28E-07
ethylbenzene	100-41-4	Yes	9.50E-01	4.99E-02	34.31	1.95E-01	3.26E+01	2.27E-13	2.17E-13	2.17E-13		1.06E-11
HD	505-60-2	Yes	9.44E-01	5.64E-02	26.62	1.95E-01	2.51E+01	1.27E-10	1.21E-10	1.21E-10		1.73E-09
hexane	110-54-3	Yes	7.38E-01	2.62E-01	43.99	1.95E-01	3.25E+01	7.37E-13	5.47E-13	5.46E-13		1.10E-10
methane	74-82-8		9.94E-01	5.67E-03	93.20	1.95E-01	9.27E+01	8.81E-07	8.82E-07	8.82E-07		1.22E-06
methylene chloride	75-09-2	Yes	9.94E-01	5.96E-03	44.90	1.95E-01	4.46E+01	8.53E-13	8.53E-13	8.53E-13		1.71E-12
propene	115-07-1		9.89E-01	1.07E-02	60.60	1.95E-01	6.00E+01	1.23E-08	1.23E-08	1.23E-08		5.65E-08
styrene	100-42-5	Yes	8.18E-01	1.82E-01	34.81	1.95E-01	2.85E+01	2.98E-12	2.45E-12	2.45E-12		9.98E-11
tetrachloroethene	127-18-4	Yes	9.37E-01	6.30E-02	35.50	1.95E-01	3.33E+01	2.67E-13	2.51E-13	2.51E-13		2.08E-11
toluene	108-88-3	Yes	9.64E-01	3.59E-02	36.63	1.95E-01	3.53E+01	2.73E-09	2.65E-09	2.65E-09		6.33E-08
trichloroethene	79-01-6	Yes	9.74E-01	2.55E-02	38.06	1.95E-01	3.71E+01	3.17E-13	3.11E-13	3.11E-13		4.38E-12
vinyl chloride	75-01-4	Yes	9.93E-01	7.27E-03	46.60	1.95E-01	4.63E+01	4.24E-11	4.23E-11	4.23E-11		1.01E-10
xylenes	1330-20-7	Yes	9.13E-01	8.68E-02	39.99	1.95E-01	3.65E+01	1.01E-10	9.29E-11	9.28E-11		5.02E-09
3,3',4,4'-TCB (PCB 77)	32598-13-3	Yes	4.80E-03	9.95E-01	8.97	1.95E-01	2.37E-01	5.30E-18	2.56E-20	9.01E-21	8.84E-16	3.09E-15
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	Yes	4.80E-03	9.95E-01	8.97	1.95E-01	2.37E-01	2.21E-17	1.07E-19	3.75E-20	3.68E-15	1.29E-14
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	Yes	4.80E-03	9.95E-01	8.97	1.95E-01	2.37E-01	1.06E-17	5.12E-20	1.80E-20	1.77E-15	6.19E-15
total coplanar PCBs	NA											
ammonia	7664-41-7		9.96E-01	4.02E-03	59.52	1.95E-01	5.93E+01	3.71E-10	3.72E-10	3.72E-10		1.18E-09
aluminum	7429-90-5	Yes	9.41E-01	5.93E-02	73.82	1.95E-01	6.95E+01	3.41E-10	3.23E-10	3.22E-10		1.02E-09
cadmium	7440-43-9	Yes	6.88E-01	3.12E-01	39.36	1.95E-01	2.71E+01	3.14E-12	2.18E-12	2.18E-12		1.97E-09
chlorine	7782-50-5	Yes	9.95E-01	5.07E-03	40.00	1.95E-01	3.98E+01	1.46E-09	1.46E-09	1.46E-09		4.60E-09
chromium (3+)	7440-47-3	Yes	8.95E-01	1.05E-01	51.05	1.95E-01	4.57E+01	5.92E-12	5.33E-12	5.33E-12		1.68E-11
chromium (6+)	18540-29-9	Yes	8.95E-01	1.05E-01	51.05	1.95E-01	4.57E+01	5.92E-12	5.33E-12	5.33E-12		1.68E-11
copper	7440-50-8	Yes	2.80E-01	7.20E-01	50.17	1.95E-01	1.42E+01	7.15E-10	2.01E-10	2.00E-10		6.34E-10
hydrogen chloride	7647-01-0		9.96E-01	4.35E-03	39.71	1.95E-01	3.95E+01	9.04E-09	9.06E-09	9.06E-09		2.86E-08
iron	7439-89-6	Yes	8.67E-01	1.33E-01	53.37	1.95E-01	4.63E+01	8.23E-10	7.17E-10	7.17E-10		2.27E-09
lead	7439-92-1		1.57E-01	8.43E-01	39.03	1.95E-01	6.31E+00	5.71E-11	9.04E-12	8.96E-12		8.06E-13
manganese	7439-96-5	Yes	7.18E-01	2.82E-01	53.72	1.95E-01	3.86E+01	1.26E-09	9.10E-10	9.09E-10		2.88E-09
total mercury	NA		6.62E-03	9.93E-01	0.02	1.95E-01	1.94E-01	1.52E-13	1.01E-15	0.00E+00		
mercuric chloride	7487-94-7	Yes	6.62E-03	9.93E-01	0.02	1.95E-01	1.94E-01	0.00E+00	0.00E+00	4.31E-16		0.00E+00
methyl mercury	22967-92-6	Yes	1.00E-01	9.00E-01	8.00	1.95E-01	9.75E-01	0.00E+00	0.00E+00	7.60E-17		5.17E-10
elemental mercury	7439-97-6		5.31E-02	9.47E-01	83.23	1.95E-01	4.61E+00	0.00E+00	0.00E+00	0.00E+00		0.00E+00
nickel	7440-02-0	Yes	7.18E-01	2.82E-01	39.36	1.95E-01	2.83E+01	4.89E-12	3.53E-12	3.53E-12		2.75E-10
vanadium	7440-62-2	Yes	1.44E-01	8.56E-01	55.05	1.95E-01	8.09E+00	6.62E-11	9.58E-12	9.49E-12		3.00E-11
zinc	7440-66-6	Yes	7.27E-01	2.73E-01	39.36	1.95E-01	2.87E+01	5.14E-10	3.76E-10	3.76E-10		7.74E-07

CONCENTRATIONS OF COPCS IN SURFACE WATER AND FISH FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS (TEQ BASIS):
All Exposure Scenarios

COPC	CAS Number	Concentration in Water				Concentration in Fish
		Total Waterbody Concentration Including Water Column and Bed Sediment	Total Concentration in Water Column	Dissolved Phase Water Concentration	Concentration Sorbed to Bed Sediment	Fish Concentration
		(mg TEQ/ℓ)[a]	(mg TEQ/ℓ)[a]	(mg TEQ/ℓ)[a]	(mg TEQ/kg)[a]	(mg TEQ/kg)[a]
		C_{wtot}	C_{wctot}	C_{dw}	C_{sb}	C_{fish}
2-butanone	78-93-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-ethyl 1,3-butadiene	3404-63-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
acetone	67-64-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzene	71-43-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzyl alcohol	100-51-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bis(2-ethylhexyl)-phthalate	117-81-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bromodichloromethane	75-27-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
carbon disulfide	75-15-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
carbon tetrachloride	56-23-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chlorobenzene	108-90-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloroform	67-66-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloromethane	74-87-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dibromochloromethane	124-48-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dimethyl phthalate	131-11-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
di-n-butyl phthalate	84-74-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ethane	74-84-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ethylbenzene	100-41-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
HD	505-60-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
hexane	110-54-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methane	74-82-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methylene chloride	75-09-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
propene	115-07-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
styrene	100-42-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
tetrachloroethene	127-18-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
toluene	108-88-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
trichloroethene	79-01-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
vinyl chloride	75-01-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
xylenes	1330-20-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3,3',4,4'-TCB (PCB 77)	32598-13-3	5.30E-22	2.56E-24	9.01E-25	8.84E-20	3.09E-19
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	6.62E-22	3.20E-24	1.13E-24	1.10E-19	3.87E-19
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	3.18E-22	1.54E-24	5.40E-25	5.30E-20	1.86E-19
total coplanar PCBs	NA	1.51E-21	7.29E-24	2.57E-24	2.52E-19	8.81E-19
ammonia	7664-41-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
aluminum	7429-90-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cadmium	7440-43-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chlorine	7782-50-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (3+)	7440-47-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium (6+)	18540-29-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
copper	7440-50-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
hydrogen chloride	7647-01-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
iron	7439-89-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
lead	7439-92-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
manganese	7439-96-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
total mercury	NA					
mercuric chloride	7487-94-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methyl mercury	22967-92-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
vanadium	7440-62-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
zinc	7440-66-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

a. The concentration of individual PCDDs and PCDFs congeners and coplanar PCBs in water and fish are presented in units of mg COPC TEQ/kg. The concentration of total PCDDs and PCDFs as well as the concentration of total coplanar PCBs in water and fish are presented in units of mg TEQ/kg produce and are calculated as the sum of the concentrations of all individual PCDD and PCDF congeners in water or fish and the concentrations of all coplanar produce in water and fish, respectively.

CONCENTRATIONS OF COPCS IN BREAST MILK FOR INFANT EXPOSURE SCENARIOS

CARCINOGENIC EFFECTS: Infant Resident Exposure Scenario										
COPC	CAS Number	Fraction Stored in Maternal Fat (dimensionless) f_1	Biological Half-Life (days) h	Concentration in Milk Fat (mg/kg) $C_{milkfat}$	Fraction Stored in Whole Blood (dimensionless) f_{bl}	Red Blood Cells-Blood Plasma Partition Coefficient (dimensionless) Pc_{RBC}	Fraction Stored in Blood Plasma (dimensionless) f_{pl}	Blood Plasma-Breast Milk Partition Coefficient (dimensionless) Pc_{bm}	Concentration in Milk Aqueous Phase (mg/kg) $C_{aqueous}$	Concentration in Milk (mg/kg) C_{milk}
2-butanone	78-93-3									
2-ethyl 1,3-butadiene	3404-63-5									
acetone	67-64-1									
benzene	71-43-2	0.5000	5.0000	3.92E-07	0.5000	1	0.325	1	1.66E-06	1.61E-06
benzyl alcohol	100-51-6									
bis(2-ethylhexyl)-phthalate	117-81-7									
bromodichloromethane	75-27-4									
carbon disulfide	75-15-0									
carbon tetrachloride	56-23-5									
chlorobenzene	108-90-7									
chloroform	67-66-3	0.5000	5.0000	1.77E-11	0.5000	1	0.325	1	7.50E-11	7.27E-11
chloromethane	74-87-3									
dibromochloromethane	124-48-1									
dimethyl phthalate	131-11-3									
di-n-butyl phthalate	84-74-2									
ethane	74-84-0									
ethylbenzene	100-41-4	0.5000	5.0000	5.61E-12	0.5000	1	0.325	1	2.38E-11	2.31E-11
HD	505-60-2									
hexane	110-54-3									
methane	74-82-8									
methylene chloride	75-09-2	0.5000	5.0000	2.32E-11	0.5000	1	0.325	1	9.82E-11	9.52E-11
propene	115-07-1									
styrene	100-42-5									
tetrachloroethene	127-18-4	0.5000	5.0000	6.68E-12	0.5000	1	0.325	1	2.83E-11	2.75E-11
toluene	108-88-3									
trichloroethene	79-01-6	0.5000	5.0000	7.96E-12	0.5000	1	0.325	1	3.37E-11	3.27E-11
vinyl chloride	75-01-4									
xylenes	1330-20-7									
3,3',4,4'-TCB (PCB 77)	32598-13-3									
2,3',4,4',5-PeCB (PCB 118)	31508-00-6									
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4									
total coplanar PCBs	NA									
ammonia	7664-41-7									
aluminum	7429-90-5									
cadmium	7440-43-9									
chlorine	7782-50-5									
chromium (3+)	7440-47-3									
chromium (6+)	18540-29-9	0.5000	5.0000	2.35E-09	0.5000	1	0.325	1	9.97E-09	9.67E-09
copper	7440-50-8									
hydrogen chloride	7647-01-0									
iron	7439-89-6									
lead	7439-92-1	0.5000	5.0000	2.74E-09	0.5000	1	0.325	1	1.16E-08	1.13E-08
manganese	7439-96-5									
total mercury	NA									
mercuric chloride	7487-94-7									
methyl mercury	22967-92-6									
elemental mercury	7439-97-6									
nickel	7440-02-0									
vanadium	7440-62-2									
zinc	7440-66-6									

CONCENTRATIONS OF COPCS IN BREAST MILK FOR INFANT EXPOSURE SCENARIOS

CARCINOGENIC EFFECTS: Infant Subsistence Farmer Exposure Scenario										
COPC	CAS Number	Fraction Stored in Maternal Fat (dimensionless) f_1	Biological Half-Life (days) h	Concentration in Milk Fat (mg/kg) $C_{milkfat}$	Fraction Stored in Whole Blood (dimensionless) f_{bl}	Red Blood Cells-Blood Plasma Partition Coefficient (dimensionless) PC_{RBC}	Fraction Stored in Blood Plasma (dimensionless) f_{pl}	Blood Plasma-Breast Milk Partition Coefficient (dimensionless) PC_{bm}	Concentration in Milk Aqueous Phase (mg/kg) $C_{aqueous}$	Concentration in Milk (mg/kg) C_{milk}
2-butanone	78-93-3									
2-ethyl 1,3-butadiene	3404-63-5									
acetone	67-64-1									
benzene	71-43-2	0.5000	5.0000	3.97E-07	0.5000	1	0.325	1	1.68E-06	1.63E-06
benzyl alcohol	100-51-6									
bis(2-ethylhexyl)-phthalate	117-81-7									
bromodichloromethane	75-27-4									
carbon disulfide	75-15-0									
carbon tetrachloride	56-23-5									
chlorobenzene	108-90-7									
chloroform	67-66-3	0.5000	5.0000	1.79E-11	0.5000	1	0.325	1	7.60E-11	7.37E-11
chloromethane	74-87-3									
dibromochloromethane	124-48-1									
dimethyl phthalate	131-11-3									
di-n-butyl phthalate	84-74-2									
ethane	74-84-0									
ethylbenzene	100-41-4	0.5000	5.0000	5.92E-12	0.5000	1	0.325	1	2.51E-11	2.43E-11
HD	505-60-2									
hexane	110-54-3									
methane	74-82-8									
methylene chloride	75-09-2	0.5000	5.0000	2.37E-11	0.5000	1	0.325	1	1.01E-10	9.75E-11
propene	115-07-1									
styrene	100-42-5									
tetrachloroethene	127-18-4	0.5000	5.0000	6.95E-12	0.5000	1	0.325	1	2.95E-11	2.86E-11
toluene	108-88-3									
trichloroethene	79-01-6	0.5000	5.0000	8.07E-12	0.5000	1	0.325	1	3.42E-11	3.31E-11
vinyl chloride	75-01-4									
xylenes	1330-20-7									
3,3',4,4'-TCB (PCB 77)	32598-13-3									
2,3',4,4',5-PeCB (PCB 118)	31508-00-6									
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4									
total coplanar PCBs	NA									
ammonia	7664-41-7									
aluminum	7429-90-5									
cadmium	7440-43-9									
chlorine	7782-50-5									
chromium (3+)	7440-47-3									
chromium (6+)	18540-29-9	0.5000	5.0000	5.53E-09	0.5000	1	0.325	1	2.34E-08	2.27E-08
copper	7440-50-8									
hydrogen chloride	7647-01-0									
iron	7439-89-6									
lead	7439-92-1	0.5000	5.0000	6.33E-09	0.5000	1	0.325	1	2.68E-08	2.60E-08
manganese	7439-96-5									
total mercury	NA									
mercuric chloride	7487-94-7									
methyl mercury	22967-92-6									
elemental mercury	7439-97-6									
nickel	7440-02-0									
vanadium	7440-62-2									
zinc	7440-66-6									

CONCENTRATIONS OF COPCS IN BREAST MILK FOR INFANT EXPOSURE SCENARIOS

CARCINOGENIC EFFECTS: Infant Subsistence Fisher Exposure Scenario										
COPC	CAS Number	Fraction Stored in Maternal Fat (dimensionless) f_1	Biological Half-Life (days) h	Concentration in Milk Fat (mg/kg) $C_{milkfat}$	Fraction Stored in Whole Blood (dimensionless) f_{bl}	Red Blood Cells-Blood Plasma Partition Coefficient (dimensionless) Pc_{RBC}	Fraction Stored in Blood Plasma (dimensionless) f_{pl}	Blood Plasma-Breast Milk Partition Coefficient (dimensionless) Pc_{bm}	Concentration in Milk Aqueous Phase (mg/kg) $C_{aqueous}$	Concentration in Milk (mg/kg) C_{milk}
2-butanone	78-93-3									
2-ethyl 1,3-butadiene	3404-63-5									
acetone	67-64-1									
benzene	71-43-2	0.5000	5.0000	3.95E-07	0.5000	1	0.325	1	1.67E-06	1.62E-06
benzyl alcohol	100-51-6									
bis(2-ethylhexyl)-phthalate	117-81-7									
bromodichloromethane	75-27-4									
carbon disulfide	75-15-0									
carbon tetrachloride	56-23-5									
chlorobenzene	108-90-7									
chloroform	67-66-3	0.5000	5.0000	1.78E-11	0.5000	1	0.325	1	7.55E-11	7.32E-11
chloromethane	74-87-3									
dibromochloromethane	124-48-1									
dimethyl phthalate	131-11-3									
di-n-butyl phthalate	84-74-2									
ethane	74-84-0									
ethylbenzene	100-41-4	0.5000	5.0000	5.88E-12	0.5000	1	0.325	1	2.49E-11	2.42E-11
HD	505-60-2									
hexane	110-54-3									
methane	74-82-8									
methylene chloride	75-09-2	0.5000	5.0000	2.32E-11	0.5000	1	0.325	1	9.84E-11	9.54E-11
propene	115-07-1									
styrene	100-42-5									
tetrachloroethene	127-18-4	0.5000	5.0000	7.21E-12	0.5000	1	0.325	1	3.06E-11	2.96E-11
toluene	108-88-3									
trichloroethene	79-01-6	0.5000	5.0000	8.07E-12	0.5000	1	0.325	1	3.42E-11	3.32E-11
vinyl chloride	75-01-4									
xylenes	1330-20-7									
3,3',4,4'-TCB (PCB 77)	32598-13-3									
2,3',4,4',5-PeCB (PCB 118)	31508-00-6									
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4									
total coplanar PCBs	NA									
ammonia	7664-41-7									
aluminum	7429-90-5									
cadmium	7440-43-9									
chlorine	7782-50-5									
chromium (3+)	7440-47-3									
chromium (6+)	18540-29-9	0.5000	5.0000	2.35E-09	0.5000	1	0.325	1	9.98E-09	9.67E-09
copper	7440-50-8									
hydrogen chloride	7647-01-0									
iron	7439-89-6									
lead	7439-92-1	0.5000	5.0000	2.74E-09	0.5000	1	0.325	1	1.16E-08	1.13E-08
manganese	7439-96-5									
total mercury	NA									
mercuric chloride	7487-94-7									
methyl mercury	22967-92-6									
elemental mercury	7439-97-6									
nickel	7440-02-0									
vanadium	7440-62-2									
zinc	7440-66-6									

CONCENTRATIONS OF COPCS IN BREAST MILK FOR INFANT EXPOSURE SCENARIOS

CARCINOGENIC EFFECTS (TEQ BASIS): Infant Resident Exposure Scenario										
COPC	CAS Number	Fraction Stored in Maternal Fat (dimensionless) f_f	Biological Half-Life (days) h	Concentration in Milk Fat (mg/kg) $C_{milkfat}$	Fraction Stored in Whole Blood (dimensionless) f_{bl}	Red Blood Cells-Blood Plasma Partition Coefficient (dimensionless) Pc_{RBC}	Fraction Stored in Blood Plasma (dimensionless) f_{pl}	Blood Plasma-Breast Milk Partition Coefficient (dimensionless) Pc_{bm}	Concentration in Milk Aqueous Phase (mg/kg) $C_{aqueous}$	Concentration in Milk (mg TEQ/kg)[A] C_{milk}
2-butanone	78-93-3									
2-ethyl 1,3-butadiene	3404-63-5									
acetone	67-64-1									
benzene	71-43-2									
benzyl alcohol	100-51-6									
bis(2-ethylhexyl)-phthalate	117-81-7									
bromodichloromethane	75-27-4									
carbon disulfide	75-15-0									
carbon tetrachloride	56-23-5									
chlorobenzene	108-90-7									
chloroform	67-66-3									
chloromethane	74-87-3									
dibromochloromethane	124-48-1									
dimethyl phthalate	131-11-3									
di-n-butyl phthalate	84-74-2									
ethane	74-84-0									
ethylbenzene	100-41-4									
HD	505-60-2									
hexane	110-54-3									
methane	74-82-8									
methylene chloride	75-09-2									
propene	115-07-1									
styrene	100-42-5									
tetrachloroethene	127-18-4									
toluene	108-88-3									
trichloroethene	79-01-6									
vinyl chloride	75-01-4									
xylenes	1330-20-7									
3,3',4,4'-TCB (PCB 77)	32598-13-3	0.9000	1752.0000	3.57E-14	0.1000	1	0.065	1	1.68E-14	1.76E-14
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	0.9000	1752.0000	1.49E-13	0.1000	1	0.065	1	7.00E-14	7.32E-14
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	0.9000	1752.0000	7.14E-14	0.1000	1	0.065	1	3.36E-14	3.51E-14
total coplanar PCBs	NA	0.9000	1752.0000	2.56E-13	0.1000	1	0.065	1	1.20E-13	1.26E-13
ammonia	7664-41-7									
aluminum	7429-90-5									
cadmium	7440-43-9									
chlorine	7782-50-5									
chromium (3+)	7440-47-3									
chromium (6+)	18540-29-9									
copper	7440-50-8									
hydrogen chloride	7647-01-0									
iron	7439-89-6									
lead	7439-92-1									
manganese	7439-96-5									
total mercury	NA									
mercuric chloride	7487-94-7									
methyl mercury	22967-92-6									
elemental mercury	7439-97-6									
nickel	7440-02-0									
vanadium	7440-62-2									
zinc	7440-66-6									

a. The concentration of individual PCDDs and PCDFs congeners and coplanar PCBs in breast milk are presented in units of mg COPC TEQ/kg. The concentration of total PCDDs and PCDFs as well as the concentration of total coplanar PCBs in breast milk are presented in units of mg TEQ/kg produce and are calculated as the sum of the concentrations of all individual PCDD and PCDF congeners in breast milk and the concentrations of all coplanar produce in breast milk, respectively.

CONCENTRATIONS OF COPCS IN BREAST MILK FOR INFANT EXPOSURE SCENARIOS

CARCINOGENIC EFFECTS (TEQ BASIS): Infant Subsistence Farmer Exposure Scenario										
COPC	CAS Number	Fraction Stored in Maternal Fat (dimensionless) f_f	Biological Half-Life (days) h	Concentration in Milk Fat (mg/kg) $C_{milkfat}$	Fraction Stored in Whole Blood (dimensionless) f_{bl}	Red Blood Cells-Blood Plasma Partition Coefficient (dimensionless) Pc_{RBC}	Fraction Stored in Blood Plasma (dimensionless) f_{pl}	Blood Plasma-Breast Milk Partition Coefficient (dimensionless) Pc_{bm}	Concentration in Milk Aqueous Phase (mg/kg) $C_{aqueous}$	Concentration in Milk (mg/kg) C_{milk}
2-butanone	78-93-3									
2-ethyl 1,3-butadiene	3404-63-5									
acetone	67-64-1									
benzene	71-43-2									
benzyl alcohol	100-51-6									
bis(2-ethylhexyl)-phthalate	117-81-7									
bromodichloromethane	75-27-4									
carbon disulfide	75-15-0									
carbon tetrachloride	56-23-5									
chlorobenzene	108-90-7									
chloroform	67-66-3									
chloromethane	74-87-3									
dibromochloromethane	124-48-1									
dimethyl phthalate	131-11-3									
di-n-butyl phthalate	84-74-2									
ethane	74-84-0									
ethylbenzene	100-41-4									
HD	505-60-2									
hexane	110-54-3									
methane	74-82-8									
methylene chloride	75-09-2									
propene	115-07-1									
styrene	100-42-5									
tetrachloroethene	127-18-4									
toluene	108-88-3									
trichloroethene	79-01-6									
vinyl chloride	75-01-4									
xylenes	1330-20-7									
3,3',4,4'-TCB (PCB 77)	32598-13-3	0.9000	1752.0000	3.96E-14	0.1000	1	0.065	1	1.87E-14	1.95E-14
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	0.9000	1752.0000	1.65E-13	0.1000	1	0.065	1	7.78E-14	8.13E-14
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	0.9000	1752.0000	7.93E-14	0.1000	1	0.065	1	3.73E-14	3.90E-14
total coplanar PCBs	NA	0.9000	1752.0000	2.84E-13	0.1000	1	0.065	1	1.34E-13	1.40E-13
ammonia	7664-41-7									
aluminum	7429-90-5									
cadmium	7440-43-9									
chlorine	7782-50-5									
chromium (3+)	7440-47-3									
chromium (6+)	18540-29-9									
copper	7440-50-8									
hydrogen chloride	7647-01-0									
iron	7439-89-6									
lead	7439-92-1									
manganese	7439-96-5									
total mercury	NA									
mercuric chloride	7487-94-7									
methyl mercury	22967-92-6									
elemental mercury	7439-97-6									
nickel	7440-02-0									
vanadium	7440-62-2									
zinc	7440-66-6									

a. The concentration of individual PCDDs and PCDFs congeners and coplanar PCBs in breast milk are presented in units of mg COPC TEQ/kg. The concentration of total PCDDs and PCDFs as well as the concentration of total coplanar PCBs in breast milk are presented in units of mg TEQ/kg produce and are calculated as the sum of the concentrations of all individual PCDD and PCDF congeners in breast milk and the concentrations of all coplanar produce in breast milk, respectively.

CONCENTRATIONS OF COPCS IN BREAST MILK FOR INFANT EXPOSURE SCENARIOS

CARCINOGENIC EFFECTS (TEQ BASIS): Infant Subsistence Fisher Exposure Scenario										
COPC	CAS Number	Fraction Stored in Maternal Fat (dimensionless) f_f	Biological Half-Life (days) h	Concentration in Milk Fat (mg/kg) $C_{milkfat}$	Fraction Stored in Whole Blood (dimensionless) f_{bl}	Red Blood Cells-Blood Plasma Partition Coefficient (dimensionless) Pc_{RBC}	Fraction Stored in Blood Plasma (dimensionless) f_{pl}	Blood Plasma-Breast Milk Partition Coefficient (dimensionless) Pc_{bm}	Concentration in Milk Aqueous Phase (mg/kg) $C_{aqueous}$	Concentration in Milk (mg/kg) C_{milk}
2-butanone	78-93-3									
2-ethyl 1,3-butadiene	3404-63-5									
acetone	67-64-1									
benzene	71-43-2									
benzyl alcohol	100-51-6									
bis(2-ethylhexyl)-phthalate	117-81-7									
bromodichloromethane	75-27-4									
carbon disulfide	75-15-0									
carbon tetrachloride	56-23-5									
chlorobenzene	108-90-7									
chloroform	67-66-3									
chloromethane	74-87-3									
dibromochloromethane	124-48-1									
dimethyl phthalate	131-11-3									
di-n-butyl phthalate	84-74-2									
ethane	74-84-0									
ethylbenzene	100-41-4									
HD	505-60-2									
hexane	110-54-3									
methane	74-82-8									
methylene chloride	75-09-2									
propene	115-07-1									
styrene	100-42-5									
tetrachloroethene	127-18-4									
toluene	108-88-3									
trichloroethene	79-01-6									
vinyl chloride	75-01-4									
xylenes	1330-20-7									
3,3',4,4'-TCB (PCB 77)	32598-13-3	0.9000	1752.0000	8.50E-14	0.1000	1	0.065	1	4.00E-14	4.18E-14
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	0.9000	1752.0000	3.54E-13	0.1000	1	0.065	1	1.67E-13	1.74E-13
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	0.9000	1752.0000	1.70E-13	0.1000	1	0.065	1	8.01E-14	8.37E-14
total coplanar PCBs	NA	0.9000	1752.0000	6.09E-13	0.1000	1	0.065	1	2.87E-13	3.00E-13
ammonia	7664-41-7									
aluminum	7429-90-5									
cadmium	7440-43-9									
chlorine	7782-50-5									
chromium (3+)	7440-47-3									
chromium (6+)	18540-29-9									
copper	7440-50-8									
hydrogen chloride	7647-01-0									
iron	7439-89-6									
lead	7439-92-1									
manganese	7439-96-5									
total mercury	NA									
mercuric chloride	7487-94-7									
methyl mercury	22967-92-6									
elemental mercury	7439-97-6									
nickel	7440-02-0									
vanadium	7440-62-2									
zinc	7440-66-6									

a. The concentration of individual PCDDs and PCDFs congeners and coplanar PCBs in breast milk are presented in units of mg COPC TEQ/kg. The concentration of total PCDDs and PCDFs as well as the concentration of total coplanar PCBs in breast milk are presented in units of mg TEQ/kg produce and are calculated as the sum of the concentrations of all individual PCDD and PCDF congeners in breast milk and the concentrations of all coplanar produce in breast milk, respectively.

CONCENTRATIONS OF COPCS IN BREAST MILK FOR INFANT EXPOSURE SCENARIOS

NONCARCINOGENIC EFFECTS: Infant Resident Exposure Scenario										
COPC	CAS Number	Fraction Stored in Maternal Fat (dimensionless) f_f	Biological Half-Life (days) h	Concentration in Milk Fat (mg/kg) $C_{milkfat}$	Fraction Stored in Whole Blood (dimensionless) f_{bl}	Red Blood Cells-Blood Plasma Partition Coefficient (dimensionless) Pc_{RBC}	Fraction Stored in Blood Plasma (dimensionless) f_{pl}	Blood Plasma-Breast Milk Partition Coefficient (dimensionless) Pc_{bm}	Concentration in Milk Aqueous Phase (mg/kg) $C_{aqueous}$	Concentration in Milk (mg/kg) C_{milk}
2-butanone	78-93-3	0.5000	5.0000	1.88E-10	0.5000	1	0.325	1	7.96E-10	7.71E-10
2-ethyl 1,3-butadiene	3404-63-5									
acetone	67-64-1	0.5000	5.0000	2.41E-10	0.5000	1	0.325	1	1.02E-09	9.90E-10
benzene	71-43-2	0.5000	5.0000	3.92E-07	0.5000	1	0.325	1	1.66E-06	1.61E-06
benzyl alcohol	100-51-6									
bis(2-ethylhexyl)-phthalate	117-81-7									
bromodichloromethane	75-27-4									
carbon disulfide	75-15-0	0.5000	5.0000	1.67E-10	0.5000	1	0.325	1	7.06E-10	6.84E-10
carbon tetrachloride	56-23-5									
chlorobenzene	108-90-7									
chloroform	67-66-3	0.5000	5.0000	1.77E-11	0.5000	1	0.325	1	7.50E-11	7.27E-11
chloromethane	74-87-3	0.5000	5.0000	1.59E-10	0.5000	1	0.325	1	6.75E-10	6.55E-10
dibromochloromethane	124-48-1									
dimethyl phthalate	131-11-3									
di-n-butyl phthalate	84-74-2									
ethane	74-84-0									
ethylbenzene	100-41-4	0.5000	5.0000	5.61E-12	0.5000	1	0.325	1	2.38E-11	2.31E-11
HD	505-60-2									
hexane	110-54-3	0.5000	5.0000	1.66E-11	0.5000	1	0.325	1	7.03E-11	6.82E-11
methane	74-82-8									
methylene chloride	75-09-2	0.5000	5.0000	2.32E-11	0.5000	1	0.325	1	9.82E-11	9.52E-11
propene	115-07-1									
styrene	100-42-5	0.5000	5.0000	1.49E-09	0.5000	1	0.325	1	6.34E-09	6.14E-09
tetrachloroethene	127-18-4	0.5000	5.0000	6.68E-12	0.5000	1	0.325	1	2.83E-11	2.75E-11
toluene	108-88-3	0.5000	5.0000	6.78E-08	0.5000	1	0.325	1	2.87E-07	2.79E-07
trichloroethene	79-01-6	0.5000	5.0000	7.96E-12	0.5000	1	0.325	1	3.37E-11	3.27E-11
vinyl chloride	75-01-4									
xylenes	1330-20-7	0.5000	5.0000	2.58E-09	0.5000	1	0.325	1	1.10E-08	1.06E-08
3,3',4,4'-TCB (PCB 77)	32598-13-3	0.9000	1752.0000	3.57E-14	0.1000	1	0.065	1	1.68E-14	1.76E-14
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	0.9000	1752.0000	1.49E-13	0.1000	1	0.065	1	7.00E-14	7.32E-14
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	0.9000	1752.0000	7.14E-14	0.1000	1	0.065	1	3.36E-14	3.51E-14
total coplanar PCBs	NA									
ammonia	7664-41-7									
aluminum	7429-90-5	0.5000	5.0000	1.13E-08	0.5000	1	0.325	1	4.79E-08	4.65E-08
cadmium	7440-43-9	0.5000	5.0000	6.68E-10	0.5000	1	0.325	1	2.83E-09	2.75E-09
chlorine	7782-50-5	0.5000	5.0000	5.60E-08	0.5000	1	0.325	1	2.38E-07	2.30E-07
chromium (3+)	7440-47-3	0.5000	5.0000	2.35E-09	0.5000	1	0.325	1	9.97E-09	9.67E-09
chromium (6+)	18540-29-9	0.5000	5.0000	2.35E-09	0.5000	1	0.325	1	9.97E-09	9.67E-09
copper	7440-50-8	0.5000	5.0000	9.46E-08	0.5000	1	0.325	1	4.01E-07	3.89E-07
hydrogen chloride	7647-01-0									
iron	7439-89-6	0.5000	5.0000	3.47E-07	0.5000	1	0.325	1	1.47E-06	1.43E-06
lead	7439-92-1									
manganese	7439-96-5	0.5000	5.0000	3.25E-07	0.5000	1	0.325	1	1.38E-06	1.33E-06
total mercury	NA									
mercuric chloride	7487-94-7	0.5000	5.0000	7.90E-14	0.5000	1	0.325	1	3.35E-13	3.25E-13
methyl mercury	22967-92-6	0.5000	5.0000	8.73E-12	0.5000	1	0.325	1	3.70E-11	3.59E-11
elemental mercury	7439-97-6									
nickel	7440-02-0	0.5000	5.0000	1.32E-09	0.5000	1	0.325	1	5.58E-09	5.41E-09
vanadium	7440-62-2	0.5000	5.0000	3.45E-09	0.5000	1	0.325	1	1.46E-08	1.42E-08
zinc	7440-66-6	0.5000	5.0000	1.23E-07	0.5000	1	0.325	1	5.22E-07	5.06E-07

CONCENTRATIONS OF COPCS IN BREAST MILK FOR INFANT EXPOSURE SCENARIOS

NONCARCINOGENIC EFFECTS: Infant Subsistence Farmer Exposure Scenario										
COPC	CAS Number	Fraction Stored in Maternal Fat (dimensionless) f_f	Biological Half-Life (days) h	Concentration in Milk Fat (mg/kg) $C_{milkfat}$	Fraction Stored in Whole Blood (dimensionless) f_{bl}	Red Blood Cells-Blood Plasma Partition Coefficient (dimensionless) Pc_{RBC}	Fraction Stored in Blood Plasma (dimensionless) f_{pl}	Blood Plasma-Breast Milk Partition Coefficient (dimensionless) Pc_{bm}	Concentration in Milk Aqueous Phase (mg/kg) $C_{aqueous}$	Concentration in Milk (mg/kg) C_{milk}
2-butanone	78-93-3	0.5000	5.0000	3.56E-10	0.5000	1	0.325	1	1.51E-09	1.46E-09
2-ethyl 1,3-butadiene	3404-63-5									
acetone	67-64-1	0.5000	5.0000	3.99E-10	0.5000	1	0.325	1	1.69E-09	1.64E-09
benzene	71-43-2	0.5000	5.0000	3.97E-07	0.5000	1	0.325	1	1.68E-06	1.63E-06
benzyl alcohol	100-51-6									
bis(2-ethylhexyl)-phthalate	117-81-7									
bromodichloromethane	75-27-4									
carbon disulfide	75-15-0	0.5000	5.0000	1.67E-10	0.5000	1	0.325	1	7.08E-10	6.86E-10
carbon tetrachloride	56-23-5									
chlorobenzene	108-90-7									
chloroform	67-66-3	0.5000	5.0000	1.79E-11	0.5000	1	0.325	1	7.60E-11	7.37E-11
chloromethane	74-87-3	0.5000	5.0000	1.60E-10	0.5000	1	0.325	1	6.79E-10	6.58E-10
dibromochloromethane	124-48-1									
dimethyl phthalate	131-11-3									
di-n-butyl phthalate	84-74-2									
ethane	74-84-0									
ethylbenzene	100-41-4	0.5000	5.0000	5.92E-12	0.5000	1	0.325	1	2.51E-11	2.43E-11
HD	505-60-2									
hexane	110-54-3	0.5000	5.0000	1.66E-11	0.5000	1	0.325	1	7.04E-11	6.82E-11
methane	74-82-8									
methylene chloride	75-09-2	0.5000	5.0000	2.37E-11	0.5000	1	0.325	1	1.01E-10	9.75E-11
propene	115-07-1									
styrene	100-42-5	0.5000	5.0000	3.65E-09	0.5000	1	0.325	1	1.55E-08	1.50E-08
tetrachloroethene	127-18-4	0.5000	5.0000	6.95E-12	0.5000	1	0.325	1	2.95E-11	2.86E-11
toluene	108-88-3	0.5000	5.0000	6.97E-08	0.5000	1	0.325	1	2.96E-07	2.87E-07
trichloroethene	79-01-6	0.5000	5.0000	8.07E-12	0.5000	1	0.325	1	3.42E-11	3.31E-11
vinyl chloride	75-01-4									
xylenes	1330-20-7	0.5000	5.0000	2.77E-09	0.5000	1	0.325	1	1.17E-08	1.14E-08
3,3',4,4'-TCB (PCB 77)	32598-13-3	0.9000	1752.0000	3.96E-14	0.1000	1	0.065	1	1.87E-14	1.95E-14
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	0.9000	1752.0000	1.65E-13	0.1000	1	0.065	1	7.78E-14	8.13E-14
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	0.9000	1752.0000	7.93E-14	0.1000	1	0.065	1	3.73E-14	3.90E-14
total coplanar PCBs	NA									
ammonia	7664-41-7									
aluminum	7429-90-5	0.5000	5.0000	1.13E-08	0.5000	1	0.325	1	4.79E-08	4.65E-08
cadmium	7440-43-9	0.5000	5.0000	1.49E-09	0.5000	1	0.325	1	6.33E-09	6.13E-09
chlorine	7782-50-5	0.5000	5.0000	8.65E-08	0.5000	1	0.325	1	3.67E-07	3.56E-07
chromium (3+)	7440-47-3	0.5000	5.0000	5.53E-09	0.5000	1	0.325	1	2.34E-08	2.27E-08
chromium (6+)	18540-29-9	0.5000	5.0000	5.53E-09	0.5000	1	0.325	1	2.34E-08	2.27E-08
copper	7440-50-8	0.5000	5.0000	2.23E-07	0.5000	1	0.325	1	9.46E-07	9.17E-07
hydrogen chloride	7647-01-0									
iron	7439-89-6	0.5000	5.0000	8.19E-07	0.5000	1	0.325	1	3.47E-06	3.37E-06
lead	7439-92-1									
manganese	7439-96-5	0.5000	5.0000	7.50E-07	0.5000	1	0.325	1	3.18E-06	3.08E-06
total mercury	NA									
mercuric chloride	7487-94-7	0.5000	5.0000	1.88E-13	0.5000	1	0.325	1	7.99E-13	7.74E-13
methyl mercury	22967-92-6	0.5000	5.0000	8.74E-12	0.5000	1	0.325	1	3.71E-11	3.59E-11
elemental mercury	7439-97-6									
nickel	7440-02-0	0.5000	5.0000	3.08E-09	0.5000	1	0.325	1	1.30E-08	1.26E-08
vanadium	7440-62-2	0.5000	5.0000	7.96E-09	0.5000	1	0.325	1	3.37E-08	3.27E-08
zinc	7440-66-6	0.5000	5.0000	2.66E-07	0.5000	1	0.325	1	1.13E-06	1.09E-06

CONCENTRATIONS OF COPCS IN BREAST MILK FOR INFANT EXPOSURE SCENARIOS

NONCARCINOGENIC EFFECTS: Infant Subsistence Fisher Exposure Scenario										
COPC	CAS Number	Fraction Stored in Maternal Fat (dimensionless) f_f	Biological Half-Life (days) h	Concentration in Milk Fat (mg/kg) $C_{milkfat}$	Fraction Stored in Whole Blood (dimensionless) f_{bl}	Red Blood Cells-Blood Plasma Partition Coefficient (dimensionless) Pc_{RBC}	Fraction Stored in Blood Plasma (dimensionless) f_{pl}	Blood Plasma-Breast Milk Partition Coefficient (dimensionless) Pc_{bm}	Concentration in Milk Aqueous Phase (mg/kg) $C_{aqueous}$	Concentration in Milk (mg/kg) C_{milk}
2-butanone	78-93-3	0.5000	5.0000	1.88E-10	0.5000	1	0.325	1	7.97E-10	7.73E-10
2-ethyl 1,3-butadiene	3404-63-5									
acetone	67-64-1	0.5000	5.0000	2.42E-10	0.5000	1	0.325	1	1.02E-09	9.93E-10
benzene	71-43-2	0.5000	5.0000	3.95E-07	0.5000	1	0.325	1	1.67E-06	1.62E-06
benzyl alcohol	100-51-6									
bis(2-ethylhexyl)-phthalate	117-81-7									
bromodichloromethane	75-27-4									
carbon disulfide	75-15-0	0.5000	5.0000	1.68E-10	0.5000	1	0.325	1	7.13E-10	6.91E-10
carbon tetrachloride	56-23-5									
chlorobenzene	108-90-7									
chloroform	67-66-3	0.5000	5.0000	1.78E-11	0.5000	1	0.325	1	7.55E-11	7.32E-11
chloromethane	74-87-3	0.5000	5.0000	1.60E-10	0.5000	1	0.325	1	6.78E-10	6.57E-10
dibromochloromethane	124-48-1									
dimethyl phthalate	131-11-3									
di-n-butyl phthalate	84-74-2									
ethane	74-84-0									
ethylbenzene	100-41-4	0.5000	5.0000	5.88E-12	0.5000	1	0.325	1	2.49E-11	2.42E-11
HD	505-60-2									
hexane	110-54-3	0.5000	5.0000	1.94E-11	0.5000	1	0.325	1	8.21E-11	7.96E-11
methane	74-82-8									
methylene chloride	75-09-2	0.5000	5.0000	2.32E-11	0.5000	1	0.325	1	9.84E-11	9.54E-11
propene	115-07-1									
styrene	100-42-5	0.5000	5.0000	1.50E-09	0.5000	1	0.325	1	6.35E-09	6.15E-09
tetrachloroethene	127-18-4	0.5000	5.0000	7.21E-12	0.5000	1	0.325	1	3.06E-11	2.96E-11
toluene	108-88-3	0.5000	5.0000	6.94E-08	0.5000	1	0.325	1	2.94E-07	2.85E-07
trichloroethene	79-01-6	0.5000	5.0000	8.07E-12	0.5000	1	0.325	1	3.42E-11	3.32E-11
vinyl chloride	75-01-4									
xylenes	1330-20-7	0.5000	5.0000	2.71E-09	0.5000	1	0.325	1	1.15E-08	1.11E-08
3,3',4,4'-TCB (PCB 77)	32598-13-3	0.9000	1752.0000	8.50E-14	0.1000	1	0.065	1	4.00E-14	4.18E-14
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	0.9000	1752.0000	3.54E-13	0.1000	1	0.065	1	1.67E-13	1.74E-13
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	0.9000	1752.0000	1.70E-13	0.1000	1	0.065	1	8.01E-14	8.37E-14
total coplanar PCBs	NA									
ammonia	7664-41-7									
aluminum	7429-90-5	0.5000	5.0000	1.13E-08	0.5000	1	0.325	1	4.80E-08	4.66E-08
cadmium	7440-43-9	0.5000	5.0000	7.18E-10	0.5000	1	0.325	1	3.04E-09	2.95E-09
chlorine	7782-50-5	0.5000	5.0000	5.62E-08	0.5000	1	0.325	1	2.38E-07	2.31E-07
chromium (3+)	7440-47-3	0.5000	5.0000	2.35E-09	0.5000	1	0.325	1	9.98E-09	9.67E-09
chromium (6+)	18540-29-9	0.5000	5.0000	2.35E-09	0.5000	1	0.325	1	9.98E-09	9.67E-09
copper	7440-50-8	0.5000	5.0000	9.46E-08	0.5000	1	0.325	1	4.01E-07	3.89E-07
hydrogen chloride	7647-01-0									
iron	7439-89-6	0.5000	5.0000	3.47E-07	0.5000	1	0.325	1	1.47E-06	1.43E-06
lead	7439-92-1									
manganese	7439-96-5	0.5000	5.0000	3.25E-07	0.5000	1	0.325	1	1.38E-06	1.33E-06
total mercury	NA									
mercuric chloride	7487-94-7	0.5000	5.0000	7.90E-14	0.5000	1	0.325	1	3.35E-13	3.25E-13
methyl mercury	22967-92-6	0.5000	5.0000	2.18E-11	0.5000	1	0.325	1	9.24E-11	8.96E-11
elemental mercury	7439-97-6									
nickel	7440-02-0	0.5000	5.0000	1.32E-09	0.5000	1	0.325	1	5.61E-09	5.44E-09
vanadium	7440-62-2	0.5000	5.0000	3.45E-09	0.5000	1	0.325	1	1.46E-08	1.42E-08
zinc	7440-66-6	0.5000	5.0000	1.43E-07	0.5000	1	0.325	1	6.05E-07	5.86E-07

CONCENTRATIONS OF COPCS IN BREAST MILK FOR INFANT EXPOSURE SCENARIOS

NONCARCINOGENIC EFFECTS (TEQ BASIS): Infant Resident Exposure Scenario										
COPC	CAS Number	Fraction Stored in Maternal Fat (dimensionless) f_f	Biological Half-Life (days) h	Concentration in Milk Fat (mg/kg) $C_{milkfat}$	Fraction Stored in Whole Blood (dimensionless) f_{bl}	Red Blood Cells-Blood Plasma Partition Coefficient (dimensionless) Pc_{RBC}	Fraction Stored in Blood Plasma (dimensionless) f_{pl}	Blood Plasma-Breast Milk Partition Coefficient (dimensionless) Pc_{bm}	Concentration in Milk Aqueous Phase (mg/kg) $C_{aqueous}$	Concentration in Milk (mg/kg) C_{milk}
2-butanone	78-93-3									
2-ethyl 1,3-butadiene	3404-63-5									
acetone	67-64-1									
benzene	71-43-2									
benzyl alcohol	100-51-6									
bis(2-ethylhexyl)-phthalate	117-81-7									
bromodichloromethane	75-27-4									
carbon disulfide	75-15-0									
carbon tetrachloride	56-23-5									
chlorobenzene	108-90-7									
chloroform	67-66-3									
chloromethane	74-87-3									
dibromochloromethane	124-48-1									
dimethyl phthalate	131-11-3									
di-n-butyl phthalate	84-74-2									
ethane	74-84-0									
ethylbenzene	100-41-4									
HD	505-60-2									
hexane	110-54-3									
methane	74-82-8									
methylene chloride	75-09-2									
propene	115-07-1									
styrene	100-42-5									
tetrachloroethene	127-18-4									
toluene	108-88-3									
trichloroethene	79-01-6									
vinyl chloride	75-01-4									
xylenes	1330-20-7									
3,3',4,4'-TCB (PCB 77)	32598-13-3									
2,3',4,4',5-PeCB (PCB 118)	31508-00-6									
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4									
total coplanar PCBs	NA									
ammonia	7664-41-7									
aluminum	7429-90-5									
cadmium	7440-43-9									
chlorine	7782-50-5									
chromium (3+)	7440-47-3									
chromium (6+)	18540-29-9									
copper	7440-50-8									
hydrogen chloride	7647-01-0									
iron	7439-89-6									
lead	7439-92-1									
manganese	7439-96-5									
total mercury	NA									
mercuric chloride	7487-94-7									
methyl mercury	22967-92-6									
elemental mercury	7439-97-6									
nickel	7440-02-0									
vanadium	7440-62-2									
zinc	7440-66-6									

a. The concentration of individual PCDDs and PCDFs congeners and coplanar PCBs in breast milk are presented in units of mg COPC TEQ/kg. The concentration of total PCDDs and PCDFs as well as the concentration of total coplanar PCBs in breast milk are presented in units of mg TEQ/kg produce and are calculated as the sum of the concentrations of all individual PCDD and PCDF congeners in breast milk and the concentrations of all coplanar produce in breast milk, respectively.

CONCENTRATIONS OF COPCS IN BREAST MILK FOR INFANT EXPOSURE SCENARIOS

NONCARCINOGENIC EFFECTS (TEQ BASIS): Infant Subsistence Farmer Exposure Scenario										
COPC	CAS Number	Fraction Stored in Maternal Fat (dimensionless) f_f	Biological Half-Life (days) h	Concentration in Milk Fat (mg/kg) $C_{milkfat}$	Fraction Stored in Whole Blood (dimensionless) f_{bl}	Red Blood Cells-Blood Plasma Partition Coefficient (dimensionless) Pc_{RBC}	Fraction Stored in Blood Plasma (dimensionless) f_{pl}	Blood Plasma-Breast Milk Partition Coefficient (dimensionless) Pc_{bm}	Concentration in Milk Aqueous Phase (mg/kg) $C_{aqueous}$	Concentration in Milk (mg/kg) C_{milk}
2-butanone	78-93-3									
2-ethyl 1,3-butadiene	3404-63-5									
acetone	67-64-1									
benzene	71-43-2									
benzyl alcohol	100-51-6									
bis(2-ethylhexyl)-phthalate	117-81-7									
bromodichloromethane	75-27-4									
carbon disulfide	75-15-0									
carbon tetrachloride	56-23-5									
chlorobenzene	108-90-7									
chloroform	67-66-3									
chloromethane	74-87-3									
dibromochloromethane	124-48-1									
dimethyl phthalate	131-11-3									
di-n-butyl phthalate	84-74-2									
ethane	74-84-0									
ethylbenzene	100-41-4									
HD	505-60-2									
hexane	110-54-3									
methane	74-82-8									
methylene chloride	75-09-2									
propene	115-07-1									
styrene	100-42-5									
tetrachloroethene	127-18-4									
toluene	108-88-3									
trichloroethene	79-01-6									
vinyl chloride	75-01-4									
xylenes	1330-20-7									
3,3',4,4'-TCB (PCB 77)	32598-13-3									
2,3',4,4',5-PeCB (PCB 118)	31508-00-6									
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4									
total coplanar PCBs	NA									
ammonia	7664-41-7									
aluminum	7429-90-5									
cadmium	7440-43-9									
chlorine	7782-50-5									
chromium (3+)	7440-47-3									
chromium (6+)	18540-29-9									
copper	7440-50-8									
hydrogen chloride	7647-01-0									
iron	7439-89-6									
lead	7439-92-1									
manganese	7439-96-5									
total mercury	NA									
mercuric chloride	7487-94-7									
methyl mercury	22967-92-6									
elemental mercury	7439-97-6									
nickel	7440-02-0									
vanadium	7440-62-2									
zinc	7440-66-6									

a. The concentration of individual PCDDs and PCDFs congeners and coplanar PCBs in breast milk are presented in units of mg COPC TEQ/kg. The concentration of total PCDDs and PCDFs as well as the concentration of total coplanar PCBs in breast milk are presented in units of mg TEQ/kg produce and are calculated as the sum of the concentrations of all individual PCDD and PCDF congeners in breast milk and the concentrations of all coplanar produce in breast milk, respectively.

CONCENTRATIONS OF COPCS IN BREAST MILK FOR INFANT EXPOSURE SCENARIOS

NONCARCINOGENIC EFFECTS (TEQ BASIS): Infant Subsistence Fisher Exposure Scenario										
COPC	CAS Number	Fraction Stored in Maternal Fat (dimensionless) f_f	Biological Half-Life (days) h	Concentration in Milk Fat (mg/kg) $C_{milkfat}$	Fraction Stored in Whole Blood (dimensionless) f_{bl}	Red Blood Cells-Blood Plasma Partition Coefficient (dimensionless) Pc_{RBC}	Fraction Stored in Blood Plasma (dimensionless) f_{pl}	Blood Plasma-Breast Milk Partition Coefficient (dimensionless) Pc_{bm}	Concentration in Milk Aqueous Phase (mg/kg) $C_{aqueous}$	Concentration in Milk (mg/kg) C_{milk}
2-butanone	78-93-3									
2-ethyl 1,3-butadiene	3404-63-5									
acetone	67-64-1									
benzene	71-43-2									
benzyl alcohol	100-51-6									
bis(2-ethylhexyl)-phthalate	117-81-7									
bromodichloromethane	75-27-4									
carbon disulfide	75-15-0									
carbon tetrachloride	56-23-5									
chlorobenzene	108-90-7									
chloroform	67-66-3									
chloromethane	74-87-3									
dibromochloromethane	124-48-1									
dimethyl phthalate	131-11-3									
di-n-butyl phthalate	84-74-2									
ethane	74-84-0									
ethylbenzene	100-41-4									
HD	505-60-2									
hexane	110-54-3									
methane	74-82-8									
methylene chloride	75-09-2									
propene	115-07-1									
styrene	100-42-5									
tetrachloroethene	127-18-4									
toluene	108-88-3									
trichloroethene	79-01-6									
vinyl chloride	75-01-4									
xylenes	1330-20-7									
3,3',4,4'-TCB (PCB 77)	32598-13-3									
2,3',4,4',5-PeCB (PCB 118)	31508-00-6									
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4									
total coplanar PCBs	NA									
ammonia	7664-41-7									
aluminum	7429-90-5									
cadmium	7440-43-9									
chlorine	7782-50-5									
chromium (3+)	7440-47-3									
chromium (6+)	18540-29-9									
copper	7440-50-8									
hydrogen chloride	7647-01-0									
iron	7439-89-6									
lead	7439-92-1									
manganese	7439-96-5									
total mercury	NA									
mercuric chloride	7487-94-7									
methyl mercury	22967-92-6									
elemental mercury	7439-97-6									
nickel	7440-02-0									
vanadium	7440-62-2									
zinc	7440-66-6									

a. The concentration of individual PCDDs and PCDFs congeners and coplanar PCBs in breast milk are presented in units of mg COPC TEQ/kg. The concentration of total PCDDs and PCDFs as well as the concentration of total coplanar PCBs in breast milk are presented in units of mg TEQ/kg produce and are calculated as the sum of the concentrations of all individual PCDD and PCDF congeners in breast milk and the concentrations of all coplanar produce in breast milk, respectively.

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APPENDIX F

OUTPUT TABLES FROM THE CHRONIC RISK CALCULATOR SPREADSHEETS FOR EDS

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OVERVIEW OF RECEPTOR-PATHWAY CARCINOGENIC RISK AND NONCARCINOGENIC HEALTH HAZARD

OVERVIEW OF RECEPTOR-PATHWAY CARCINOGENIC RISK AND NONCARCINOGENIC HEALTH HAZARDS

Carcinogenic Risks from Receptor-Pathway Combinations										
	Pathway									
Receptor	Inhalation	Dermal Contact with Surface Water	Dermal Contact with Soil	Incidental Ingestion of Soil	Incidental Ingestion of Surface Water	Ingestion of Produce	Ingestion of Terrestrial Animal Products	Ingestion of Fish	Ingestion of Breast Milk	All Pathways
Adult Resident	4.38E-10	2.26E-13	8.33E-17	2.09E-16	8.72E-14	1.46E-11	3.90E-13	2.54E-11	n/a	4.78E-10
Adult Subsistence Fisher	4.38E-10	2.26E-13	8.33E-17	2.09E-16	8.72E-14	1.46E-11	3.90E-13	6.35E-11	n/a	5.17E-10
Adult Subsistence Farmer	4.38E-10	3.01E-13	8.33E-17	2.09E-16	1.16E-13	4.57E-11	1.26E-12	3.38E-11	n/a	5.19E-10
Adult Worker	1.04E-10	n/a	9.85E-17	7.46E-17	n/a	n/a	n/a	n/a	n/a	1.04E-10
Child Resident	1.24E-09	8.46E-14	5.48E-16	1.96E-15	9.08E-14	1.58E-11	3.10E-13	1.09E-11	n/a	1.26E-09
Child Subsistence Fisher	1.24E-09	8.46E-14	5.48E-16	1.96E-15	9.08E-14	1.58E-11	3.10E-13	2.73E-11	n/a	1.28E-09
Child Subsistence Farmer	1.24E-09	8.46E-14	5.48E-16	1.96E-15	9.08E-14	3.94E-11	7.76E-13	1.09E-11	n/a	1.29E-09
Infant Resident	1.43E-10	n/a	1.57E-16	5.96E-16	n/a	4.19E-12	1.85E-13	4.00E-12	8.62E-15	1.52E-10
Infant Subsistence Fisher	1.43E-10	n/a	1.57E-16	5.96E-16	n/a	4.19E-12	1.85E-13	9.99E-12	8.80E-15	1.58E-10
Infant Subsistence Farmer	1.43E-10	n/a	1.57E-16	5.96E-16	n/a	1.05E-11	4.63E-13	4.00E-12	8.78E-15	1.58E-10
Resident Lifetime (I)[1]	1.12E-09	2.65E-13	7.69E-16	2.71E-15	1.61E-13	3.11E-11	8.07E-13	3.46E-11	8.62E-15	1.19E-09
Resident Lifetime (II)[2]	1.24E-09	2.73E-13	6.17E-16	2.13E-15	1.63E-13	2.79E-11	6.35E-13	3.21E-11	n/a	1.30E-09
Subsistence Fisher Lifetime (I)[1]	1.12E-09	2.65E-13	7.69E-16	2.71E-15	1.61E-13	3.11E-11	8.07E-13	8.66E-11	8.80E-15	1.24E-09
Subsistence Fisher Lifetime (II)[2]	1.24E-09	2.73E-13	6.17E-16	2.13E-15	1.63E-13	2.79E-11	6.35E-13	8.02E-11	n/a	1.34E-09
Subsistence Farmer Lifetime (I)[3]	1.12E-09	3.41E-13	7.73E-16	2.72E-15	1.90E-13	8.74E-11	2.31E-12	4.31E-11	8.78E-15	1.26E-09
Subsistence Farmer Lifetime (II)[4]	1.24E-09	3.48E-13	6.21E-16	2.14E-15	1.93E-13	7.94E-11	1.88E-12	4.05E-11	n/a	1.36E-09

1. Lifetime exposure consists of: 1 year of inhalation exposure as an infant and 4 years of inhalation exposure as a child (5 years of total inhalation exposure); 1 year of indirect exposure as an infant, 5 years of indirect exposure as a child, and 24 years of indirect exposure as an adult (30 years of total indirect exposure)

2. Lifetime exposure consists of: 5 years of inhalation exposure as a child (5 years of total inhalation exposure); 5 years of indirect exposure as a child and 25 years of indirect exposure as an adult (30 years of total indirect exposure)

3. Lifetime exposure consists of: 1 year of inhalation exposure as an infant and 4 years of inhalation exposure as a child (5 years of total inhalation exposure); 1 year of indirect exposure as an infant, 5 years of indirect exposure as a child, and 34 years of indirect exposure as an adult (40 years of total indirect exposure)

4. Lifetime exposure consists of: 5 years of inhalation exposure as a child (5 years of total inhalation exposure); 5 years of indirect exposure as a child and 35 years of indirect exposure as an adult (40 years of total indirect exposure)

OVERVIEW OF RECEPTOR-PATHWAY CARCINOGENIC RISK AND NONCARCINOGENIC HEALTH HAZARDS

Noncarcinogenic Hazards from Receptor-Pathway Combinations										
	Pathway									
Receptor	Inhalation	Dermal Contact with Surface Water	Dermal Contact with Soil	Incidental Ingestion of Soil	Incidental Ingestion of Surface Water	Ingestion of Produce	Ingestion of Terrestrial Animal Products	Ingestion of Fish	Ingestion of Breast Milk	All Pathways
Adult Resident	1.66E-04	9.94E-09	2.27E-11	5.70E-11	4.87E-09	7.56E-06	2.69E-08	1.17E-06	n/a	1.74E-04
Adult Subsistence Fisher	1.66E-04	9.94E-09	2.27E-11	5.70E-11	4.87E-09	7.56E-06	2.69E-08	2.93E-06	n/a	1.76E-04
Adult Subsistence Farmer	1.66E-04	9.94E-09	2.27E-11	5.70E-11	4.87E-09	1.89E-05	6.72E-08	1.17E-06	n/a	1.86E-04
Adult Worker	3.94E-05	n/a	3.22E-11	2.44E-11	n/a	n/a	n/a	n/a	n/a	3.94E-05
Child Resident	4.64E-04	1.70E-08	1.49E-10	5.32E-10	2.27E-08	2.41E-05	8.32E-08	2.86E-06	n/a	4.91E-04
Child Subsistence Fisher	4.64E-04	1.70E-08	1.49E-10	5.32E-10	2.27E-08	2.41E-05	8.32E-08	7.16E-06	n/a	4.95E-04
Child Subsistence Farmer	4.64E-04	1.70E-08	1.49E-10	5.32E-10	2.27E-08	6.03E-05	2.08E-07	2.86E-06	n/a	5.27E-04
Infant Resident	2.61E-04	n/a	2.09E-10	7.98E-10	n/a	2.84E-05	2.47E-07	4.30E-06	4.46E-09	2.94E-04
Infant Subsistence Fisher	2.61E-04	n/a	2.09E-10	7.98E-10	n/a	2.84E-05	2.47E-07	1.07E-05	4.52E-09	3.00E-04
Infant Subsistence Farmer	2.61E-04	n/a	2.09E-10	7.98E-10	n/a	7.10E-05	6.18E-07	4.30E-06	4.53E-09	3.37E-04
Resident Lifetime (I)[1]	6.32E-04	2.69E-08	3.81E-10	1.39E-09	2.76E-08	6.01E-05	3.57E-07	8.33E-06	4.46E-09	7.01E-04
Resident Lifetime (II)[2]	4.64E-04	2.69E-08	1.72E-10	5.89E-10	2.76E-08	3.17E-05	1.10E-07	4.04E-06	n/a	5.00E-04
Subsistence Fisher Lifetime (I)[1]	6.32E-04	2.69E-08	3.81E-10	1.39E-09	2.76E-08	6.01E-05	3.57E-07	2.08E-05	4.52E-09	7.13E-04
Subsistence Fisher Lifetime (II)[2]	4.64E-04	2.69E-08	1.72E-10	5.89E-10	2.76E-08	3.17E-05	1.10E-07	1.01E-05	n/a	5.06E-04
Subsistence Farmer Lifetime (I)[3]	6.32E-04	2.69E-08	3.81E-10	1.39E-09	2.76E-08	1.50E-04	8.93E-07	8.33E-06	4.53E-09	7.91E-04
Subsistence Farmer Lifetime (II)[4]	4.64E-04	2.69E-08	1.72E-10	5.89E-10	2.76E-08	7.92E-05	2.75E-07	4.04E-06	n/a	5.47E-04

1. Lifetime exposure consists of: 1 year of inhalation exposure as an infant and 4 years of inhalation exposure as a child (5 years of total inhalation exposure); 1 year of indirect exposure as an infant, 5 years of indirect exposure as a child, and 24 years of indirect exposure as an adult (30 years of total indirect exposure)

2. Lifetime exposure consists of: 5 years of inhalation exposure as a child (5 years of total inhalation exposure); 5 years of indirect exposure as a child and 25 years of indirect exposure as an adult (30 years of total indirect exposure)

3. Lifetime exposure consists of: 1 year of inhalation exposure as an infant and 4 years of inhalation exposure as a child (5 years of total inhalation exposure); 1 year of indirect exposure as an infant, 5 years of indirect exposure as a child, and 34 years of indirect exposure as an adult (40 years of total indirect exposure)

4. Lifetime exposure consists of: 5 years of inhalation exposure as a child (5 years of total inhalation exposure); 5 years of indirect exposure as a child and 35 years of indirect exposure as an adult (40 years of total indirect exposure)

PARAMETERS USED IN THE MULTIPLE PATHWAY HEALTH RISK ASSESSMENT

MODELED VALUES:

During Years of PCAPP Operation (0 to tD)																	
					Air Modeling Results						Watershed Modeling						
			Stack emissions	Fraction of air conc. that is in the vapor phase	Adjusted Vapor Phase Air Concentration	Adjusted Particle Phase Air Concentration	Adjusted Dry Deposition from Vapor Phase	Adjusted Wet Deposition from Vapor Phase	Adjusted Dry Deposition from Particle Phase	Adjusted Wet Deposition from Particle Phase	Adjusted Vapor Phase Air Concentration	Adjusted Particle Phase Air Concentration	Adjusted Dry Deposition from Vapor Phase	Adjusted Wet Deposition from Vapor Phase	Adjusted Dry Deposition from Particle Phase	Adjusted Wet Deposition from Particle Phase
			(g/sec)	*(unitless)*	($\mu g/m^3$)	($\mu g/m^3$)	(g/m^2)	(g/m^2)	(g/m^2)	(g/m^2)	($\mu g/m^3$)	($\mu g/m^3$)	(g/m^2)	(g/m^2)	(g/m^2)	(g/m^2)
COPC	**CAS No.**	**Carcinogen?**	Q	F_v	**Cyv**	**Cyp**	**Dydv**	**Dywv**	**Dydp**	**Dywp**	**Cywv**	**Cywp**	**Dydv**	**Dywwv**	**Dywdp**	**Dywwp**
1,1-dichloroethene	75-35-4	No data	1	1	8.48E-10	0.00E+00	1.03E-10	7.48E-13	0.00E+00	0.00E+00	2.95E-10	0.00E+00	2.29E-11	2.39E-13	0.00E+00	0.00E+00
1,2-dichloroethane	107-06-2	Yes	1	1	2.58E-13	0.00E+00	3.12E-14	2.28E-16	0.00E+00	0.00E+00	8.98E-14	0.00E+00	6.98E-15	7.29E-17	0.00E+00	0.00E+00
1,4-dichlorobenzene	106-46-7	Yes	1	1	2.10E-12	0.00E+00	2.54E-13	1.86E-15	0.00E+00	0.00E+00	7.31E-13	0.00E+00	5.68E-14	5.94E-16	0.00E+00	0.00E+00
1,4-dithiane	505-29-3	Not a known carc.	1	1	2.38E-10	0.00E+00	2.88E-11	2.10E-13	0.00E+00	0.00E+00	8.28E-11	0.00E+00	6.44E-12	6.73E-14	0.00E+00	0.00E+00
1,4-oxathiane	15980-15-1	No toxicity data avail.	1	1	5.03E-10	0.00E+00	6.09E-11	4.44E-13	0.00E+00	0.00E+00	1.75E-10	0.00E+00	1.36E-11	1.42E-13	0.00E+00	0.00E+00
2,4-dinitrotoluene	121-14-2	Yes	1	0.999	3.08E-14	0.00E+00	3.72E-15	2.72E-17	0.00E+00	0.00E+00	1.07E-14	0.00E+00	8.33E-16	8.70E-18	0.00E+00	0.00E+00
2-butanone	78-93-3	Not a known carc.	1	1	4.38E-10	0.00E+00	5.30E-11	3.87E-13	0.00E+00	0.00E+00	1.52E-10	0.00E+00	1.18E-11	1.24E-13	0.00E+00	0.00E+00
acetylene	74-86-2	No data	1	1	2.55E-04	0.00E+00	3.09E-05	2.25E-07	0.00E+00	0.00E+00	8.87E-05	0.00E+00	6.90E-06	7.21E-08	0.00E+00	0.00E+00
benzene	71-43-2	Yes	1	1	2.54E-12	0.00E+00	3.07E-13	2.24E-15	0.00E+00	0.00E+00	8.83E-13	0.00E+00	6.87E-14	7.18E-16	0.00E+00	0.00E+00
chlorobenzene	108-90-7	No data	1	1	3.54E-12	0.00E+00	4.28E-13	3.13E-15	0.00E+00	0.00E+00	1.23E-12	0.00E+00	9.58E-14	1.00E-15	0.00E+00	0.00E+00
chloroform	67-66-3	Yes	1	1	3.32E-10	0.00E+00	4.01E-11	2.93E-13	0.00E+00	0.00E+00	1.15E-10	0.00E+00	8.97E-12	9.37E-14	0.00E+00	0.00E+00
ethane	74-84-0	No toxicity data avail.	1	1	1.13E-05	0.00E+00	1.37E-06	1.00E-08	0.00E+00	0.00E+00	3.94E-06	0.00E+00	3.06E-07	3.20E-09	0.00E+00	0.00E+00
HD	505-60-2	Yes	1	1	1.60E-06	0.00E+00	1.93E-07	1.41E-09	0.00E+00	0.00E+00	5.55E-07	0.00E+00	4.32E-08	4.51E-10	0.00E+00	0.00E+00
methane	74-82-8	No toxicity data avail.	1	1	1.25E-04	0.00E+00	1.51E-05	1.10E-07	0.00E+00	0.00E+00	4.33E-05	0.00E+00	3.37E-06	3.52E-08	0.00E+00	0.00E+00
monoethanolamine	141-43-5	No data	1	1	1.01E-06	0.00E+00	1.22E-07	8.90E-10	0.00E+00	0.00E+00	3.50E-07	0.00E+00	2.73E-08	2.85E-10	0.00E+00	0.00E+00
nitrobenzene	98-95-3	Yes	1	1	6.02E-14	0.00E+00	7.29E-15	5.32E-17	0.00E+00	0.00E+00	2.09E-14	0.00E+00	1.63E-15	1.70E-17	0.00E+00	0.00E+00
tetrachloroethene	127-18-4	Yes	1	1	8.23E-11	0.00E+00	9.96E-12	7.27E-14	0.00E+00	0.00E+00	2.86E-11	0.00E+00	2.23E-12	2.33E-14	0.00E+00	0.00E+00
trichloroethene	79-01-6	Yes	1	1	1.02E-09	0.00E+00	1.23E-10	8.98E-13	0.00E+00	0.00E+00	3.54E-10	0.00E+00	2.75E-11	2.87E-13	0.00E+00	0.00E+00
vinyl chloride	75-01-4	Yes	1	1	8.27E-07	0.00E+00	1.00E-07	7.30E-10	0.00E+00	0.00E+00	2.87E-07	0.00E+00	2.24E-08	2.34E-10	0.00E+00	0.00E+00
ammonia	7664-41-7	Not a known carc.	1	1	1.08E-04	0.00E+00	1.30E-05	9.51E-08	0.00E+00	0.00E+00	3.74E-05	0.00E+00	2.91E-06	3.04E-08	0.00E+00	0.00E+00
hydrogen cyanide	74-90-8	No data	1	1	7.69E-05	0.00E+00	9.30E-06	6.79E-08	0.00E+00	0.00E+00	2.67E-05	0.00E+00	2.08E-06	2.17E-08	0.00E+00	0.00E+00
total mercury	NA		1	0.85	0.00E+00	1.54E-19	0.00E+00	0.00E+00	7.97E-21	5.43E-24	0.00E+00	5.35E-20	0.00E+00	0.00E+00	2.73E-21	2.72E-24
mercuric chloride	7487-94-7	No data	1	0.85	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methyl mercury	22967-92-6	No data	1	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
elemental mercury	7439-97-6	No data	1	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

DEFAULT AND SITE-SPECIFIC VALUES

Parameter	Variable	Value	Units	Type	References
Average annual precipitation	P	31.5	cm/yr	Site-specific	NOAA, 2004
Average annual irrigation	I	0	cm/yr	Site-specific	na
Average annual runoff	RO	1.27	cm/yr	Site-specific	Miller, 1963
Average annual evapo-transpiration	E_v	121.9	cm/yr	Site-specific	Miller, 1963
Soil volumetric water content	θ_{sw}	0.2	mℓ water/cm^3 soil	Default	USEPA, 2005
Soil mixing depth	Z_s	2	cm	Default	USEPA, 2005
Soil bulk density	BD	1.5	g soil/cm^3 soil	Default	USEPA, 2005
Loss constant due to erosion	kse	0	yr^{-1}	Default	USEPA, 2005
Universal gas constant	R	8.205E-05	atm m^3/mol K	Default	USEPA, 2005
Ambient air temperature	T_a	298	K	Default	USEPA, 2005
Solids particulate density	ρ_{soil}	2.7	g/cm^3	Default	USEPA, 2005
Time period over which deposition occurs	tD	5	yr	Site-specific	na
Density of air	ρ_a	0.0012	g/cm^3	Default	USEPA, 2005
Fraction of chemical wet deposition that adheres to plant surfaces	Fw	0.6	dimensionless	Default	USEPA, 2005
Interception fraction of the edible portion of plant	Rp	0.39	dimensionless	Default	USEPA, 2005
Plant surface loss coefficient	kp	18	yr^{-1}	Default	USEPA, 2005
Length of plant exposure to deposition per harvest of edible portion of plant	Tp	0.16	yr	Default	USEPA, 2005
Yield or standing crop biomass of edible portion of plant	Yp	2.24	kg dry weight/m^2	Default	USEPA, 2005
Interception fraction of the edible portion of plant for forage	Rp_{forage}	0.5	dimensionless	Default	USEPA, 2005
Interception fraction of the edible portio nof plant for silage	Rp_{silage}	0.46	dimensionless	Default	USEPA, 2005
Length of plant exposure to deposition per harvest of edible portion of plant for forage	Tp_{forage}	0.12	yr	Default	USEPA, 2005
Length of plant exposure to deposition per harvest of edible portion of plant for silage	Tp_{silage}	0.16	yr	Default	USEPA, 2005
Yield or standing crop biomass of edible portion of plant for forage	Yp_{forage}	0.24	kg dry weight/m^2	Default	USEPA, 2005
Yield or standing crop biomass of edible portion of plant for silage	Yp_{silage}	0.8	kg dry weight/m^2	Default	USEPA, 2005
Empirical correction factor for forage	VG_{forage}	1	dimensionless	Default	USEPA, 2005
Empirical correction factor for silage	VG_{silage}	0.5	dimensionless	Default	USEPA, 2005
Beef cattle consumption rate of forage	$Qp_{forage(beef)}$	8.8	kg/day	Default	USEPA, 2005
Beef cattle consumption rate of silage	$Qp_{silage(beef)}$	2.5	kg/day	Default	USEPA, 2005
Beef cattle consumption rate of grain	$Qp_{grain(beef)}$	0.47	kg/day	Default	USEPA, 2005
Beef cattle consumption rate of soil	Qs_{beef}	0.5	kg/day	Default	USEPA, 2005
Dairy cattle consumption rate of forage	$Qp_{forage(dairy)}$	13.2	kg/day	Default	USEPA, 2005
Dairy cattle consumption rate of silage	$Qp_{silage(dairy)}$	4.1	kg/day	Default	USEPA, 2005
Dairy cattle consumption rate of grain	$Qp_{grain(dairy)}$	3	kg/day	Default	USEPA, 2005
Dairy cattle consumption rate of soil	Qs_{dairy}	0.4	kg/day	Default	USEPA, 2005
Swine consumption rate of forage	$Qp_{forage(pork)}$	0	kg/day	Default	USEPA, 2005
Swine consumption rate of silage	$Qp_{silage(pork)}$	1.4	kg/day	Default	USEPA, 2005
Swine consumption rate of grain	$Qp_{grain(pork)}$	3.3	kg/day	Default	USEPA, 2005
Swine consumption rate of soil	Qs_{pork}	0.37	kg/day	Default	USEPA, 2005
Poultry consumption rate of forage	$Qp_{forage(poultry)}$	0	kg/day	Default	USEPA, 2005
Poultry consumption rate of silage	$Qp_{silage(poultry)}$	0	kg/day	Default	USEPA, 2005
Poultry consumption rate of grain	$Qp_{grain(poultry)}$	0.2	kg/day	Default	USEPA, 2005
Poultry consumption rate of soil	$Qs_{poultry}$	0.022	kg/day	Default	USEPA, 2005
Fraction of plant that is grown on contaminated soil	F	1	dimensionless	Default	USEPA, 2005
Soil bioavailability factor	Bs	1	dimensionless	Default	USEPA, 2005
Total waterbody depth	d_z	5.03	m	Site-specific	na
Depth of water column	d_{wc}	5	m	Site-specific	na
Depth of upper benthic layer	d_{bs}	0.03	m	Default	USEPA, 2005
Drag coefficient	C_d	0.0011	dimensionless	Default	USEPA, 2005
Wind speed	W	3.9	m/s	Default	USEPA, 2005
Density of water	ρ_w	1	g/cm^3	Default	USEPA, 2005
von Karman's constant	k	0.4	dimensionless	Default	USEPA, 2005
Dimensionless viscous sublayer thickness	λ_z	4	dimensionless	Default	USEPA, 2005
Viscosity of water corresponding to water temperature	μ_w	0.0169	g/cm-s	Default	USEPA, 2005
Viscosity of air corresponding to air temperature	μ_a	0.000181	g/cm-s	Default	USEPA, 2005
Water body temperature	T_{wk}	298	K	Default	USEPA, 2005
Temperature correction factor	θ	1.026	dimensionless	Default	USEPA, 2005
Water body surface area	A_w	10,000	m^2	Site-specific	USGS
Impervious watershed area receiving chemical deposition	A_i	12,320	m^2	Site-specific	USGS
Total watershed area receiving chemical deposition	A_L	616,000	m^2	Site-specific	USGS
USLE rainfall factor	RF	31	yr^{-1}	Site-specific	NRCS, 2006
USLE erodibility factor	K	0.37	ton/acre	Site-specific	NRCS, 2006
USLE length-slope factor	LS	1.5	dimensionless	Default	USEPA, 2005
USLE cover management factor	C	0.1	dimensionless	Default	USEPA, 2005
USLE supporting practice factor	PF	1	dimensionless	Default	USEPA, 2005
Empirical intercept coefficient	a	1.9	dimensionless	Default	USEPA, 2005
Empirical slope coefficient	b	0.125	dimensionless	Default	USEPA, 2005
Soil enrichment ratio	ER	3	dimensionless	Default	USEPA, 2005
Total suspended solids	TSS	10	mg/ℓ	Default	USEPA, 2005
Bed sediment porosity	θ_{bs}	0.6	ℓwater/ℓsediment	Default	USEPA, 2005
Bed sediment concentration	C_{BS}	1	g/cm^3	Default	USEPA, 2005
Average volumetric flow rate through water body	Vf_x	2,680,560	m^3/yr	Calculated	USEPA, 2005
Fish lipid content	f_{lipid}	0.07	dimensionless	Default	USEPA, 2005
Fraction of organic content in bottom sediment	OC_{sed}	0.04	dimensionless	Default	USEPA, 2005
Thickness of stratum corneum	l_{sc}	0.001	cm	Default	USEPA, 2004
Duration of swimming event	t_{event}	3	hr	Site-specific	na

na Not available. These site-specific values are further discussed in Section F.2 of Appendix F.

EXPOSURE SCENARIO-SPECIFIC VALUES

Parameter	Variable	Adult Exposure Scenarios				Child Exposure Scenarios			Infant Exposure Scenarios		
		Resident	Subsistence Fisher	Subsistence Farmer	Worker	Resident	Subsistence Fisher	Subsistence Farmer	Resident	Subsistence Fisher	Subsistence Farmer
Body weight (kg)	BW	70	70	70	70	15	15	15	10	10	10
Body surface area exposed during swimming (cm^2)	SA	18,000	18,000	18,000	18,000	6,600	6,600	6,600			
Body surface area exposed to soil (cm^2)	SA	5,700	5,700	5,700	3,300	2,800	2,800	2,800	2,625	2,625	2,625
Soil adherence factor (mg/cm^2-event)	AF	0.07	0.07	0.07	0.20	0.20	0.20	0.20	0.20	0.20	0.20
Exposure duration for indirect pathways (yr)	Ed_{ind} (T_2)	30	30	40	25	5	5	5	1	1	1
Exposure duration for direct pathways (yr)	ED_{dir}	5	5	5	5	5	5	5	1	1	1
Exposure frequency (day/yr)	EF	350	350	350	250	350	350	350	350	350	350
Exposure frequency - dermal (day/yr)	EF_{dermal}	12	12	12	0	12	12	12	0	0	0
Event Frequency - dermal (events/day)	EV_{dermal}	1	1	1	1	1	1	1	1	1	1
Duration of swimming event (hrs/day)	t_{event}	3	3	3	3	3	3	3	3	3	3
Exposure time (hr/day)	ET	24	24	24	8	24	24	24	24	24	24
Averaging time for carcinogenic effects (yr)	AT_{carc}	70	70	70	70	70	70	70	70	70	70
Averaging time for noncarcinogenic direct pathways (yr)	$AT_{non\ carc,\ direct}$	5	5	5	5	5	5	5	1	1	1
Averaging time for noncarcinogenic indirect pathways (yr)	$AT_{noncarc,\ indirect}$	30	30	40	25	5	5	5	1	1	1
Consumption rate:											
soil (kg/day)	CR_{soil}	0.0001	0.0001	0.0001	0.00005	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
exposed fruit (kg/day)	$CR_{exposed\ fruit}$	0.425	0.425	0.425	n/a	0.434	0.434	0.434	0.388	0.388	0.388
protected fruit (kg/day)	$CR_{protected\ fruit}$	0.47	0.47	0.47	n/a	0.299	0.299	0.299	0.083	0.083	0.083
exposed vegetables (kg/day)	$CR_{exposed\ veg}$	0.316	0.316	0.316	n/a	0.109	0.109	0.109	0.074	0.074	0.074
protected vegetables (kg/day)	$CR_{protect\ veg}$	0.115	0.115	0.115	n/a	0.091	0.091	0.091	0.078	0.078	0.078
below-ground vegetables (kg/day)	CR_{bg}	0.282	0.282	0.282	n/a	0.114	0.114	0.114	0.096	0.096	0.096
beef (kg/day)	CR_{beef}	0.163	0.163	0.163	n/a	0.054	0.054	0.054	0.032	0.032	0.032
milk (kg/day)	CR_{milk}	0.836	0.836	0.836	n/a	0.728	0.728	0.728	1.709	1.709	1.709
eggs (kg/day)	CR_{egg}	0.1	0.1	0.1	n/a	0.061	0.061	0.061	0.033	0.033	0.033
poultry (kg/day)	$Cr_{poultry}$	0.142	0.142	0.142	n/a	0.057	0.057	0.057	0.035	0.035	0.035
pork (kg/day)	CR_{pork}	0.08	0.08	0.08	n/a	0.037	0.037	0.037	0.017	0.017	0.017
fish (kg/day)	CR_{fish}	0.256	0.256	0.256	n/a	0.134	0.134	0.134	0.134	0.134	0.134
breast milk (kg/day)	IR_{milk}	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.98	0.98	0.98
incidental surface water (mℓ/hr)	CR_{sw}	50	50	50	n/a	50	50	50	n/a	n/a	n/a
Inhalation Rate (m3/hr)	IR	0.83	0.83	0.83	0.83	0.5	0.5	0.5	0.1875	0.1875	0.1875
Soil Fraction Contaminated	F_{soil}	1	1	1	1	1	1	1	1	1	1
Produce Fraction Contaminated	F_p	0.4	0.4	1	n/a	0.4	0.4	1	0.4	0.4	1
Beef Fraction Contaminated	F_{beef}	0.4	0.4	1	n/a	0.4	0.4	1	0.4	0.4	1
Poultry Fraction Contaminated	$F_{poultry}$	0.4	0.4	1	n/a	0.4	0.4	1	0.4	0.4	1
Egg Fraction Contaminated	F_{egg}	0.4	0.4	1	n/a	0.4	0.4	1	0.4	0.4	1
Milk Fraction Contaminated	F_{milk}	0.4	0.4	1	n/a	0.4	0.4	1	0.4	0.4	1
Pork Fraction Contaminated	F_{pork}	0.4	0.4	1	n/a	0.4	0.4	1	0.4	0.4	1
Fish Fraction Contaminated	F_{fish}	0.4	1	0.4	n/a	0.4	1	0.4	0.4	1	0.4

n/a not applicable. The value is not applicable to this exposure scenario.

CHEMICAL-SPECIFIC VALUES

COPC	CAS Number	Chemical/Physical Properties								
		Molecular Weight	Loss Constant Due To Degradation	Soil-Water Partition Coefficient	Bed Sediment/ Sediment Pore Water Partition Coefficient	Suspended Sediment/ Surface Water Partition Coefficient	Log Octanol-Water Partition Coefficient	Henry's Law Constant	Diffusivity of Chemical in Air	Diffusivity of Chemical in Water
		(g/mol)	(yr^{-1})	(cm^3 water/g soil)	(cm^3/g/kg)	(ℓ/kg)	(dimensionless)	(atm-m^3/mol)	(cm^2/s)	(cm^2/s)
		MW	ksg	Kd_s	Kd_{bs}	Kd_{sw}	log K_{ow}	H	D_a	D_w
1,1-dichloroethene	75-35-4	98.96	1.41 [c]	0.12 [c]	2.6 [c]	4.88 [c]	2.1 [c]	0.02600 [c]	0.09 [c]	0.0000104 [c]
1,2-dichloroethane	107-06-2	98.9596	1.41 [c]	0.035 [c]	1.52 [c]	2.85 [c]	1.5 [c]	0.00098 [c]	0.104 [c]	0.0000099 [c]
1,4-dichlorobenzene	106-46-7	147.004	1.41 [c]	1.2 [c]	24.64 [c]	46.20 [c]	3.5 [c]	0.00240 [c]	0.069 [c]	0.0000079 [c]
1,4-dithiane	505-29-3	120.2272	0 [b]	0.23 [e]	0.91 [e]	1.71 [e]	1.4 [f]	0.00000 [g]	0.078 [e]	0.0000090 [e]
1,4-oxathiane	15980-15-1	104.1666	0 [b]	0.03 [e]	0.13 [e]	0.25 [e]	0.5 [f]	0.00001 [f]	0.086 [e]	0.0000099 [e]
2,4-dinitrotoluene	121-14-2	182.15	1.41 [c]	0.88 [c]	3.54 [c]	6.63 [c]	2.0 [c]	0.00000 [c]	0.203 [c]	0.0000071 [c]
2-butanone	78-93-3	72.1066	36.14 [c]	0.29 [c]	0.08 [c]	0.14 [c]	0.3 [c]	0.00006 [c]	0.0808 [c]	0.0000098 [c]
acetylene	74-86-2	26.04	0 [b]	0.02 [e]	0.09 [e]	0.18 [e]	0.4 [f]	0.02170 [f]	0.2163 [e]	0.0000250 [e]
benzene	71-43-2	78.1134	15.81 [c]	0.12 [c]	2.47 [c]	4.63 [c]	2.1 [c]	0.00560 [c]	0.088 [c]	0.0000102 [c]
chlorobenzene	108-90-7	112.56	1.69 [c]	0.44 [c]	8.96 [c]	16.80 [c]	2.8 [c]	0.00370 [c]	0.073 [c]	0.0000087 [c]
chloroform	67-66-3	119.3779	1.41 [c]	0.08 [c]	2.1 [c]	3.94 [c]	2.0 [c]	0.00370 [c]	0.104 [c]	0.0000100 [c]
ethane	74-84-0	30.0694	0 [b]	0.32 [e]	1.3 [e]	2.44 [e]	1.8 [f]	0.50000 [f]	0.196 [e]	0.0000228 [e]
HD	505-60-2	159.0732	23349 [a, e]	2.34 [e]	9.36 [e]	17.55 [e]	2.4 [f]	0.00003 [h]	0.065 [e]	0.0000075 [e]
methane	74-82-8	16.0426	0 [b]	0.087 [e]	0.35 [e]	0.66 [e]	1.1 [f]	0.65800 [f]	0.299 [e]	0.0000346 [e]
monoethanolamine	141-43-5	61.08	0 [b]	5.2E-04 [e]	2.1E-03 [e]	3.9E-03 [e]	-1.3 [f]	3.25E-08 [f]	0.1225 [e]	0.0000142 [e]
nitrobenzene	98-95-3	123.06	1.28 [c]	1.19 [c]	4.76 [c]	8.93 [c]	1.9 [c]	0.00002 [c]	0.076 [c]	0.0000086 [c]
tetrachloroethene	127-18-4	165.834	0.7 [c]	0.31 [c]	10.6 [c]	19.88 [c]	3.4 [c]	0.01800 [c]	0.072 [c]	0.0000082 [c]
trichloroethene	79-01-6	131.3889	0.7 [c]	0.33 [c]	3.77 [c]	7.07 [c]	2.4 [c]	0.01000 [c]	0.079 [c]	0.0000091 [c]
vinyl chloride	75-01-4	62.4987	1.41 [c]	0.037 [c]	0.62 [c]	1.15 [c]	1.4 [c]	0.02700 [c]	0.106 [c]	0.0000123 [c]
ammonia	7664-41-7	17	0 [b]	0.017 [e]	0.07287809 [e]	0.13 [e]	0.2 [f]	0.00002 [f]	0.287041 [e]	0.0000333 [e]
hydrogen cyanide	74-90-8	27.03	0 [b]	0.0057 [e]	0.02273 [e]	0.04262 [e]	-0.25 [f]	0.00013 [f]	0.2100 [e]	0.0000244 [e]
total mercury	NA	200.59	0 [c]	58000 [c]	50000 [c]	100000.00 [c]	0.2 [c]	0.00000 [c]	4.53126 [c]	0.0000053 [c]
mercuric chloride	7487-94-7	271.5	0 [c]	58000 [c]	50000 [c]	100000.00 [c]	0.2 [c]	0.00000 [c]	4.53126 [c]	0.0000053 [c]
methyl mercury	22967-92-6	215.63	0 [c]	7000 [c]	3000 [c]	100000.00 [c]	0.1 [k]	0.00000 [c]	5.2778 [c]	0.0000061 [c]
elemental mercury	7439-97-6	200.59	0 [c]	1000 [c]	3000 [c]	1000.00 [c]	0.6 [c]	0.00710 [c]	0.0109 [c]	0.0000301 [c]

NA No data available

a. Howard, P.H. et al., 1991. *Handbook of Environmental Degradation Rates* . Lewis Publishers. Chelsea, Michigan.

b. No data available, ksg set to 0 as a conservative assumption.

c. Human Health Risk Assessment Protocol for Hazardous Waste Combustion Facilities, Companion Database. USEPA, 2005.

d. Human Health Risk Assessment Protocol for Hazardous Waste Combustion Facilities. USEPA, 2005.

e. Calculated using guidance from Human Health Risk Assessment Protocol for Hazardous Waste Combustion Facilities, Appendix A-2. USEPA, 2005.

f. PHYSPROP Database. Syracuse Research Corporation.

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h. CHEMFATE Database. Syracuse Research Corporation.

i. http://www.inchem.org/documents/icsc/icsc/eics0163.htm

j. CRC Handbook of Chemistry and Physics

k. EPI Software Program. Syracuse Research Corporation.

l. Measured value from RAGS Part E. USEPA, 2004.

m. Estimated value from RAGS Part E. USEPA, 2004.

n. Calculated using guidance provided in RAGS Part E. USEPA, 2004.

o. http://www.atsdr.cdc.gov/toxprofiles/tp11-c4.pdf

p. Baes, C.F. et al. 1984. "Review and Analysis of Parameters and Assessing Transport of Environmentally Released Radionuclides through Agriculture." Oak Ridge National Laboratory. Oak Ridge, Tennessee

q. No data. Value set equal to zero

CHEMICAL-SPECIFIC VALUES

COPC	CAS Number	Biotransfer Factors				
		Air-to-Plant Biotransfer Factor	Plant-to-Soil Bioconcentration Factor for Aboveground Produce	Root Concentration Factor	Biotransfer Factor for Beef	Biotransfer Factor for Milk
		(mg/kg)/(µg/g)	(mg/kg)/(µg/g)	(dimensionless)	(day/kg)	(day/kg)
		Bv_{ag}	Br_{ag}	RCF	Ba_{beef}	Ba_{milk}
1,1-dichloroethene	75-35-4	0.000371 [c]	2.37 [c]	9.62 [c]	3.38192 [c]	0.0007 [c]
1,2-dichloroethane	107-06-2	0.00226 [c]	5.26 [c]	9.63 [c]	0.00126 [c]	0.0003 [c]
1,4-dichlorobenzene	106-46-7	0.124 [c]	0.367 [c]	115 [c]	0.01782 [c]	0.01782 [c]
1,4-dithiane	505-29-3	0.336 [e]	6.17 [e]	8.99 [e]	0.00102 [e]	0.00021 [e]
1,4-oxathiane	15980-15-1	0.0381 [e]	19.13 [e]	6.9 [e]	0.00018 [e]	0.00004 [e]
2,4-dinitrotoluene	121-14-2	77.5 [c]	2.78 [c]	14.1 [c]	2.81340 [c]	0.00059 [c]
2-butanone	78-93-3	0.00203 [c]	8.38 [c]	6.7 [c]	0.00011 [c]	0.00002 [c]
acetylene	74-86-2	0.001 [e]	8.38 [e]	0.88 [e]	0.00013 [e]	0.00003 [e]
benzene	71-43-2	0.00172 [c]	2.37 [c]	9.62 [c]	0.00338 [c]	0.00071 [c]
chlorobenzene	108-90-7	0.0145 [c]	0.932 [c]	33.3 [c]	8.68150 [c]	1.82770 [c]
chloroform	67-66-3	0.00204 [c]	2.7 [c]	8.05 [c]	0.00290 [c]	0.00061 [c]
ethane	74-84-0	0.00000946 [e]	3.48 [e]	12.06 [e]	0.00214 [e]	0.00045 [e]
HD	505-60-2	0.624 [e]	1.57 [e]	16.66 [e]	0.00528 [e]	0.00111 [e]
methane	74-82-8	0.000 [e]	9.08 [e]	7.91 [e]	0.00059 [e]	0.00000 [e]
monoethanolamine	141-43-5	1.185 [e]	8.38 [e]	0.83 [e]	0.00001 [e]	1.9E-06 [e]
nitrobenzene	98-95-3	0.217 [c]	3.3 [c]	12.50 [c]	0.00229 [c]	0.00229 [c]
tetrachloroethene	127-18-4	0.013 [c]	0.42 [c]	96.4 [c]	0.01630 [c]	0.00343 [c]
trichloroethene	79-01-6	0.00201 [c]	1.59 [c]	16.4 [c]	0.00521 [c]	0.00110 [c]
vinyl chloride	75-01-4	0.0000641 [c]	6.01 [c]	9.09 [c]	0.00105 [c]	0.00022 [c]
ammonia	7664-41-7	0 [d, q]	28.51412177 [e]	6.66 [e]	0.00009 [e]	0.00002 [e]
hydrogen cyanide	74-90-8	8.228 [e]	147.72 [e]	0.84 [e]	0.00003 [e]	0.00001 [e]
total mercury	NA					
mercuric chloride	7487-94-7	1800 [c]	0.0145 [c]	2088 [c, e]	0.00522 [c]	0.0023 [c]
methyl mercury	22967-92-6	0 [c]	0.0294 [c]	693 [c, e]	0.00078 [c]	0.0003 [c]
elemental mercury	7439-97-6	0 [c]	0 [c, q]	0 [c, q]	0.00000 [c]	0.0000 [c]

NA No data available

a. Howard, P.H. et al., 1991. Handbook of Environmental Degradation Rates. Lewis Publishers. Chelsea, Michigan.

b. No data available, ksg set to 0 as a conservative assumption.

c. Human Health Risk Assessment Protocol for Hazardous Waste Combustion Facilities, Companion Database. USEPA, 2005.

d. Human Health Risk Assessment Protocol for Hazardous Waste Combustion Facilities. USEPA, 2005.

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f. PHYSPROP Database. Syracuse Research Corporation.

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h. CHEMFATE Database. Syracuse Research Corporation.

i. http://www.inchem.org/documents/icsc/icsc/eics0163.htm

j. CRC Handbook of Chemistry and Physics

k. EPI Software Program. Syracuse Research Corporation.

l. Measured value from RAGS Part E. USEPA, 2004.

m. Estimated value from RAGS Part E. USEPA, 2004.

n. Calculated using guidance provided in RAGS Part E. USEPA, 2004.

o. http://www.atsdr.cdc.gov/toxprofiles/tp11-c4.pdf

p. Baes, C.F. et al. 1984. "Review and Analysis of Parameters and Assessing Transport of Environmentally Released Radionuclides through Agriculture." Oak Ridge National Laboratory. Oak Ridge, Tennessee

q. No data. Value set equal to zero

CHEMICAL-SPECIFIC VALUES

		Biotransfer Factors (continued)							Dermal	
		Biotransfer Factor for Eggs	Biotransfer Factor for Pork	Biotransfer Factor for Chicken	Metabolism Factor	Bio-Concentration Factor	Bio-Accumulation Factor	Biota-to Sediment Accumulation Factor	Dermal Permeability Coefficient from Water	Dermal Absorption Fraction
		(day/kg)	(day/kg)	(day/kg)	(dimensionless)	(ℓ/kg)	(ℓ/kg)	(ℓ/kg)	(cm/hr)	(dimensionless)
COPC	CAS Number	Ba_{egg}	Ba_{pork}	$Ba_{poultry}$	MF	BCF_{fish}	BAF_{fish}	$BSAF_{fish}$	K_p	ABS_d
1,1-dichloroethene	75-35-4	1.42400 [c]	4.0939 [c]	2.49190 [c]	1 [d]	8.26 [c]	NA	NA	0.012 [m]	0.0
1,2-dichloroethane	107-06-2	0.00053 [c]	0.0015 [c]	0.00093 [c]	1 [d]	2.85 [c]	NA	NA	0.0042 [m]	0.1
1,4-dichlorobenzene	106-46-7	0.00750 [c]	0.0216 [c]	0.01313 [c]	1 [d]	98.9 [c]	NA	NA	4.20E-02 [m]	0.1
1,4-dithiane	505-29-3	0.00043 [e]	0.0012 [e]	0.00075 [e]	1 [d]	2.3 [e]	NA	NA	0.002738594 [n]	0.1
1,4-oxathiane	15980-15-1	0.00008 [e]	0.0002 [e]	0.00013 [e]	1 [d]	3.16 [e]	NA	NA	0.000925693 [n]	0.1
2,4-dinitrotoluene	121-14-2	1.18460 [c]	3.4057 [c]	2.07304 [c]	1 [d]	6.68 [c]	NA	NA	0.0031 [m]	0.0
2-butanone	78-93-3	0.00004 [c]	0.0001 [c]	0.00008 [c]	1 [d]	3.16 [c]	NA	NA	0.00096 [m]	0.1
acetylene	74-86-2	0.00005 [e]	0.00015 [e]	0.00009 [e]	1 [d]	3.16 [e]	NA	NA	1.99E-03 [n]	0.1
benzene	71-43-2	0.00142 [c]	0.0041 [c]	0.00249 [c]	1 [d]	8.26 [c]	NA	NA	0.015 [m]	0.1
chlorobenzene	108-90-7	3.65540 [c]	1.0509 [c]	6.39690 [c]	1 [d]	28.6 [c]	NA	NA	0.028 [m]	0.1
chloroform	67-66-3	0.00122 [c]	0.0035 [c]	0.00214 [c]	1 [d]	6.92 [c]	NA	NA	0.0068 [m]	0.1
ethane	74-84-0	0.00090 [e]	0.0026 [e]	0.00158 [e]	1 [d]	4.94 [e]	NA	NA	0.016834932 [n]	0.1
HD	505-60-2	0.00222 [e]	0.0064 [e]	0.00389 [e]	1 [d]	14.31 [e]	NA	NA	0.0045 [m]	0.1
methane	74-82-8	0.00001 [e]	0.0000 [e]	0.00002 [e]	1 [d]	1.38 [e]	NA	NA	0.00675 [o]	0.1
monoethanolamine	141-43-5	0.00000 [e]	0.00001 [e]	0.00001 [e]	1 [d]	3.16 [e]	NA	NA	9.85E-05 [n]	0.1
nitrobenzene	98-95-3	0.00096 [c]	0.0028 [c]	0.00169 [c]	1 [d]	5.3 [c]	NA	NA	5.39E-03 [n]	0.1
tetrachloroethene	127-18-4	0.00686 [c]	0.0197 [c]	0.01200 [c]	1 [d]	82.8 [c]	NA	NA	0.033 [m]	0.1
trichloroethene	79-01-6	0.00219 [c]	0.0063 [c]	0.00384 [c]	1 [d]	14.1 [c]	NA	NA	0.012 [m]	0.1
vinyl chloride	75-01-4	0.00044 [c]	0.0013 [c]	0.00078 [c]	1 [d]	2.39 [c]	NA	NA	0.0056 [m]	0.1
ammonia	7664-41-7	0.00004 [e]	0.0001 [e]	0.00007 [e]	1 [d]	3.16227766 [e]	NA	NA	0.00180551 [n]	0.1
hydrogen cyanide	74-90-8	0.00001 [e]	0.00003 [e]	0.00002 [e]	1 [d]	3.16 [e]	NA	NA	7.65E-04 [n]	0.1
total mercury	NA				1 [d]					
mercuric chloride	7487-94-7	0.02393 [c]	0.0000 [c]	0.02393 [c]	1 [d]	3.16 [e]	0	NA	0.001 [l]	0.0063
methyl mercury	22967-92-6	0.00358 [c]	0.0000 [c]	0.00358 [c]	1 [d]	3.16 [e]	6.80E+06	NA	0.000110987 [n]	0.0006
elemental mercury	7439-97-6	0.00000 [c]	0.0000 [c]	0.00000 [c]	1 [d]	3.16 [e]	NA	NA	0.001 [l]	0.0054

NA No data available

a. Howard, P.H. et al., 1991. Handbook of Environmental Degradation Rates. Lewis Publishers. Chelsea, Michigan.

b. No data available, ksg set to 0 as a conservative assumption.

c. Human Health Risk Assessment Protocol for Hazardous Waste Combustion Facilities, Companion Database. USEPA, 2005.

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q. No data. Value set equal to zero

CHEMICAL-SPECIFIC VALUES

COPC	CAS Number	Breast Milk Pathway Data: Fraction Stored in Maternal Fat (dimensionless) f_1	Biological Half-Life (days) h	Red Blood Cells-Blood Plasma Partition Coefficient (dimensionless) Pc_{RBC}	Blood Plasma-Breast Milk Partition Coefficient (dimensionless) Pc_{bm}	Toxicity Data: Early-Life Sensitivity	Cancer Slope Factor: Inhalation (mg/kg/day)$^{-1}$	Inhalation Reference	Oral (mg/kg/day)$^{-1}$	Oral Reference	Reference Dose: Inhalation (mg/kg/day)	Inhalation Reference	Oral (mg/kg/day)	Oral Reference
1,1-dichloroethene	75-35-4	0.5 [0]	5 [0]	1 [0]	1 [0]	n/a	No data	No data	No data	No data	5.71E-02	RSL	5.00E-02	IRIS
1,2-dichloroethane	107-06-2	0.5 [0]	5 [0]	1 [0]	1 [0]	n/a	9.10E-02	IRIS	9.10E-02	IRIS	1.40E-03	Reg. 9 PRG	2.00E-02	Reg. 9 PRG
1,4-dichlorobenzene	106-46-7	0.5 [0]	5 [0]	1 [0]	1 [0]	n/a	1.30E+02	RSL	5.40E-03	RSL	6.00E-02	ASTDR	7.00E-02	ASTDR
1,4-dithiane	505-29-3	0.5 [0]	5 [0]	1 [0]	1 [0]	n/a	not a known carc.		not a known carc.		0.01	Reg. 9 PRG	0.01	IRIS
1,4-oxathiane	15980-15-1	0.5 [0]	5 [0]	1 [0]	1 [0]	n/a	no toxicity data available							
2,4-dinitrotoluene	121-14-2	0.5 [0]	5 [0]	1 [0]	1 [0]	n/a	0.312	RSL	0.31	RSL	No data	No data	0.002	IRIS
2-butanone	78-93-3	0.5 [0]	5 [0]	1 [0]	1 [0]	n/a	not a known carc.		not a known carc.		1.4	IRIS	0.6	IRIS
acetylene	74-86-2	0.5 [0]	5 [0]	1 [0]	1 [0]	n/a	No data	No data	No data	No data	No data	No data	No data	No data
benzene	71-43-2	0.5 [0]	5 [0]	1 [0]	1 [0]	n/a	2.70E-02	IRIS	5.50E-02	IRIS	8.60E-03	IRIS	4.00E-03	IRIS
chlorobenzene	108-90-7	0.5 [0]	5 [0]	1 [0]	1 [0]	n/a	No data	No data	No data	No data	0.014285714	RSL	0.02	IRIS
chloroform	67-66-3	0.5 [0]	5 [0]	1 [0]	1 [0]	n/a	8.10E-02	IRIS	3.10E-02	Cal/EPA	1.40E-02	Reg. 9 PRG	1.00E-02	IRIS
ethane	74-84-0	0.5 [0]	5 [0]	1 [0]	1 [0]	n/a	no toxicity data available							
HD	505-60-2	0.5 [0]	5 [0]	1 [0]	1 [0]	n/a	1.40E+01	CHPPM	7.70E+00	CHPPM	6.00E-06	CHPPM	7.00E-06	CHPPM
methane	74-82-8	0.5 [0]	5 [0]	1 [0]	1 [0]	n/a	no toxicity data available							
monoethanolamine	141-43-5	0.5 [0]	5 [0]	1 [0]	1 [0]	n/a	No data	No data	No data	No data	No data	No data	No data	No data
nitrobenzene	98-95-3	0.5 [0]	5 [0]	1 [0]	1 [0]	n/a	1.40E-01	IRIS	No data	No data	2.57E-03	IRIS	2.00E-03	IRIS
tetrachloroethene	127-18-4	0.5 [0]	5 [0]	1 [0]	1 [0]	n/a	2.10E-02	Reg. 9 PRG	5.40E-01	Reg. 9 PRG	1.00E-02	Reg. 9 PRG	1.00E-02	IRIS
trichloroethene	79-01-6	0.5 [0]	5 [0]	1 [0]	1 [0]	n/a	4.00E-01	Reg. 9 PRG	4.00E-01	Reg. 9 PRG	1.00E-02	Reg. 9 PRG	3.00E-04	Reg. 9 PRG
vinyl chloride	75-01-4	0.5 [0]	5 [0]	1 [0]	1 [0]	Yes	1.50E-02	IRIS	7.20E-01	IRIS	2.90E-02	IRIS	3.00E-03	IRIS
ammonia	7664-41-7	0.5 [0]	5 [0]	1 [0]	1 [0]	n/a	not a known carc.		not a known carc.		2.86E-02	IRIS	no data	0.00E+00
hydrogen cyanide	74-90-8	0.5 [0]	5 [0]	1 [0]	1 [0]	n/a	No data	No data	No data	No data	2.30E-04	RSL	6.00E-04	IRIS
total mercury	NA	0.5 [0]	5 [0]	1 [0]	1 [0]	n/a								
mercuric chloride	7487-94-7	0.5 [0]	5 [0]	1 [0]	1 [0]	n/a	No data	No data	No data	No data	8.57E-06	RSL	3.00E-04	IRIS
methyl mercury	22967-92-6	0.5 [0]	5 [0]	1 [0]	1 [0]	n/a	No data	No data	No data	No data	No data	No data	1.00E-04	IRIS
elemental mercury	7439-97-6	0.5 [0]	5 [0]	1 [0]	1 [0]	n/a	No data	No data	No data	No data	8.57E-06	IRIS	No data	No data

a. From the EPA Region 9 Preliminary Remediation Goals (PRG) table, http://www.epa.gov/region09/waste/sfund/prg/files/04prgtable.pdf.

b. From the on-line EPA Integrated Risk Information System (IRIS) Database, http://www.epa.gov/iris.

c. From the US EPA document entitled "Upper-Bound Quantitative Cancer Risk Estimate for Populations Adjacent to Sulfur Mustard Incineration Facilities", 1991.

CHEMICAL-SPECIFIC VALUES

COPC	CAS Number	Chemical Types and Breast Milk Pathway Identifiers							
		Inorganic Compound Identifier (Y/N)	PCDD and PCDF Group Identifier (Y/N)	PCDD and PCDF Compound Identifier (Y/N)	Coplanar PCB Group Identifier (Y/N)	Coplanar PCB Compound Identifier (Y/N)	Non-coplanar PCB Compound Identifier (Y/N)	Evaluate Compound in Breast Milk Pathway for Infant ?	
								Carcinogenic (Y/N)	Noncarcinogenic (Y/N)
1,1-dichloroethene	75-35-4	N	N	N	N	N	N	N	N
1,2-dichloroethane	107-06-2	N	N	N	N	N	N	Y	Y
1,4-dichlorobenzene	106-46-7	N	N	N	N	N	N	Y	Y
1,4-dithiane	505-29-3	N	N	N	N	N	N	N	N
1,4-oxathiane	15980-15-1	N	N	N	N	N	N	N	N
2,4-dinitrotoluene	121-14-2	N	N	N	N	N	N	N	N
2-butanone	78-93-3	N	N	N	N	N	N	N	Y
acetylene	74-86-2	N	N	N	N	N	N	N	N
benzene	71-43-2	N	N	N	N	N	N	Y	Y
chlorobenzene	108-90-7	N	N	N	N	N	N	N	N
chloroform	67-66-3	N	N	N	N	N	N	Y	Y
ethane	74-84-0	N	N	N	N	N	N	N	N
HD	505-60-2	N	N	N	N	N	N	N	N
methane	74-82-8	N	N	N	N	N	N	N	N
monoethanolamine	141-43-5	N	N	N	N	N	N	N	N
nitrobenzene	98-95-3	N	N	N	N	N	N	N	N
tetrachloroethene	127-18-4	N	N	N	N	N	N	Y	Y
trichloroethene	79-01-6	N	N	N	N	N	N	Y	Y
vinyl chloride	75-01-4	N	N	N	N	N	N	N	N
ammonia	7664-41-7	Y	N	N	N	N	N	N	N
hydrogen cyanide	74-90-8	N	N	N	N	N	N	N	N
total mercury	NA	Y	N	N	N	N	N	N	N
mercuric chloride	7487-94-7	Y	N	N	N	N	N	N	Y
methyl mercury	22967-92-6	Y	N	N	N	N	N	N	Y
elemental mercury	7439-97-6	Y	N	N	N	N	N	N	N

RISK AND HAZARD FROM DIRECT AND INDIRECT COPC EXPOSURE

OVERVIEW OF DIRECT AND INDIRECT CARCINOGENIC RISK AND NONCARCINOGENIC HEALTH HAZARD FOR RESIDENT EXPOSURE SCENARIOS

Resident Exposure Scenarios - Carcinogenic Effects							
		Adult		Child		Infant	
COPC	CAS Number	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)
1,1-dichloroethene	75-35-4						
1,2-dichloroethane	107-06-2	4.60E-19	2.64E-20	1.29E-18	4.37E-20	1.45E-19	4.58E-19
1,4-dichlorobenzene	106-46-7	5.35E-15	1.67E-19	1.50E-14	1.73E-19	1.68E-15	3.31E-19
1,4-dithiane	505-29-3						
1,4-oxathiane	15980-15-1						
2,4-dinitrotoluene	121-14-2	1.88E-19	1.49E-16	5.26E-19	2.55E-16	5.92E-20	4.85E-17
2-butanone	78-93-3						
acetylene	74-86-2						
benzene	71-43-2	1.34E-18	1.21E-19	3.76E-18	9.30E-20	4.23E-19	2.60E-18
chlorobenzene	108-90-7						
chloroform	67-66-3	5.26E-16	7.88E-18	1.47E-15	6.60E-18	1.66E-16	1.91E-16
ethane	74-84-0						
HD	505-60-2	4.38E-10	4.05E-11	1.23E-09	2.60E-11	1.38E-10	6.84E-12
methane	74-82-8						
monoethanolamine	141-43-5						
nitrobenzene	98-95-3	1.65E-19		4.62E-19		5.20E-20	
tetrachloroethene	127-18-4	3.38E-17	3.37E-16	9.48E-17	1.79E-16	1.07E-17	9.33E-16
trichloroethene	79-01-6	7.96E-15	5.57E-16	2.23E-14	3.65E-16	2.51E-15	7.64E-15
vinyl chloride	75-01-4	2.43E-13	1.30E-13	6.79E-13	8.22E-14	7.64E-14	2.17E-14
ammonia	7664-41-7						
hydrogen cyanide	74-90-8						
total mercury	NA						
mercuric chloride	7487-94-7						
methyl mercury	22967-92-6						
elemental mercury	7439-97-6						
Total Cancer Risk - Pathway (dimensionless)		4.38E-10	4.06E-11	1.23E-09	2.60E-11	1.38E-10	6.87E-12
Overall excess lifetime cancer risk via all routes of exposure (dimensionless)		**4.78E-10**		**1.25E-09**		**1.45E-10**	

OVERVIEW OF DIRECT AND INDIRECT CARCINOGENIC RISK AND NONCARCINOGENIC HEALTH HAZARD FOR RESIDENT EXPOSURE SCENARIOS

Resident Exposure Scenarios - Noncarcinogenic Effects							
		Adult		Child		Infant	
COPC	CAS Number	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)
1,1-dichloroethene	75-35-4	4.06E-12	4.31E-14	1.14E-11	9.58E-14	6.40E-12	1.27E-13
1,2-dichloroethane	107-06-2	5.05E-14	1.66E-16	1.41E-13	3.36E-16	7.96E-14	1.76E-14
1,4-dichlorobenzene	106-46-7	9.60E-15	3.16E-15	2.69E-14	6.40E-15	1.51E-14	6.14E-14
1,4-dithiane	505-29-3	6.53E-12	1.15E-10	1.83E-11	2.86E-10	1.03E-11	3.20E-10
1,4-oxathiane	15980-15-1						
2,4-dinitrotoluene	121-14-2		3.20E-12		6.17E-12		5.87E-12
2-butanone	78-93-3	8.57E-14	3.35E-13	2.40E-13	9.27E-13	1.35E-13	3.47E-12
acetylene	74-86-2						
benzene	71-43-2	8.10E-14	2.69E-15	2.27E-13	5.92E-15	1.28E-13	8.28E-13
chlorobenzene	108-90-7	6.79E-14	9.87E-15	1.90E-13	2.71E-14	1.07E-13	6.89E-14
chloroform	67-66-3	6.49E-12	1.37E-13	1.82E-11	2.98E-13	1.02E-11	4.32E-11
ethane	74-84-0						
HD	505-60-2	7.29E-05	2.50E-06	2.04E-04	6.74E-06	1.15E-04	8.88E-06
methane	74-82-8						
monoethanolamine	141-43-5						
nitrobenzene	98-95-3	6.42E-15	6.12E-14	1.80E-14	1.68E-13	1.01E-14	1.91E-13
tetrachloroethene	127-18-4	2.26E-12	2.07E-13	6.32E-12	4.65E-13	3.55E-12	1.21E-11
trichloroethene	79-01-6	2.79E-11	1.89E-11	7.80E-11	4.26E-11	4.39E-11	4.46E-09
vinyl chloride	75-01-4	7.81E-09	2.37E-10	2.19E-08	5.33E-10	1.23E-08	7.03E-10
ammonia	7664-41-7	1.03E-06		2.89E-06		1.63E-06	
hydrogen cyanide	74-90-8	9.16E-05	6.27E-06	2.57E-04	2.04E-05	1.44E-04	2.41E-05
total mercury	NA						
mercuric chloride	7487-94-7	3.54E-19	1.39E-19	9.92E-19	4.49E-19	5.58E-19	1.46E-18
methyl mercury	22967-92-6		4.92E-17		1.20E-16		4.09E-16
elemental mercury	7439-97-6	0.00E+00		0.00E+00		0.00E+00	
Total Hazard Quotient - Pathway (dimensionless)		1.66E-04	8.77E-06	4.64E-04	2.71E-05	2.61E-04	3.30E-05
Total Hazard Index (dimensionless)		**1.74E-04**		**4.91E-04**		**2.94E-04**	

OVERVIEW OF DIRECT AND INDIRECT CARCINOGENIC RISK AND NONCARCINOGENIC HEALTH HAZARD FOR SUBSISTENCE FISHER EXPOSURE SCENARIOS

Subsistence Fisher Exposure Scenarios - Carcinogenic Effects							
		Adult		Child		Infant	
COPC	CAS Number	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)
1,1-dichloroethene	75-35-4						
1,2-dichloroethane	107-06-2	4.60E-19	3.45E-20	1.29E-18	4.70E-20	1.45E-19	4.60E-19
1,4-dichlorobenzene	106-46-7	5.35E-15	3.09E-19	1.50E-14	2.31E-19	1.68E-15	3.71E-19
1,4-dithiane	505-29-3						
1,4-oxathiane	15980-15-1						
2,4-dinitrotoluene	121-14-2	1.88E-19	1.49E-16	5.26E-19	2.55E-16	5.92E-20	4.85E-17
2-butanone	78-93-3						
acetylene	74-86-2						
benzene	71-43-2	1.34E-18	2.56E-19	3.76E-18	1.48E-19	4.23E-19	2.64E-18
chlorobenzene	108-90-7						
chloroform	67-66-3	5.26E-16	1.63E-17	1.47E-15	1.00E-17	1.66E-16	1.94E-16
ethane	74-84-0						
HD	505-60-2	4.38E-10	7.84E-11	1.23E-09	4.14E-11	1.38E-10	1.15E-11
methane	74-82-8						
monoethanolamine	141-43-5						
nitrobenzene	98-95-3	1.65E-19		4.62E-19		5.20E-20	
tetrachloroethene	127-18-4	3.38E-17	7.94E-16	9.48E-17	3.66E-16	1.07E-17	1.06E-15
trichloroethene	79-01-6	7.96E-15	1.25E-15	2.23E-14	6.47E-16	2.51E-15	7.83E-15
vinyl chloride	75-01-4	2.43E-13	2.87E-13	6.79E-13	1.46E-13	7.64E-14	4.09E-14
ammonia	7664-41-7						
hydrogen cyanide	74-90-8						
total mercury	NA						
mercuric chloride	7487-94-7						
methyl mercury	22967-92-6						
elemental mercury	7439-97-6						
Total Cancer Risk - Pathway (dimensionless)		4.38E-10	7.87E-11	1.23E-09	4.15E-11	1.38E-10	1.15E-11
Overall excess lifetime cancer risk via all routes of exposure (dimensionless)		**5.17E-10**		**1.27E-09**		**1.49E-10**	

OVERVIEW OF DIRECT AND INDIRECT CARCINOGENIC RISK AND NONCARCINOGENIC HEALTH HAZARD FOR SUBSISTENCE FISHER EXPOSURE SCENARIOS

Subsistence Fisher Exposure Scenarios - Noncarcinogenic Effects							
		Adult		Child		Infant	
COPC	CAS Number	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)
1,1-dichloroethene	75-35-4	4.06E-12	8.11E-14	1.14E-11	1.88E-13	6.40E-12	2.66E-13
1,2-dichloroethane	107-06-2	5.05E-14	1.77E-16	1.41E-13	3.62E-16	7.96E-14	1.77E-14
1,4-dichlorobenzene	106-46-7	9.60E-15	4.04E-15	2.69E-14	8.55E-15	1.51E-14	6.87E-14
1,4-dithiane	505-29-3	6.53E-12	1.15E-10	1.83E-11	2.86E-10	1.03E-11	3.21E-10
1,4-oxathiane	15980-15-1						
2,4-dinitrotoluene	121-14-2		3.21E-12		6.17E-12		5.88E-12
2-butanone	78-93-3	8.57E-14	3.36E-13	2.40E-13	9.29E-13	1.35E-13	3.48E-12
acetylene	74-86-2						
benzene	71-43-2	8.10E-14	4.13E-15	2.27E-13	9.43E-15	1.28E-13	8.40E-13
chlorobenzene	108-90-7	6.79E-14	1.13E-14	1.90E-13	3.07E-14	1.07E-13	7.43E-14
chloroform	67-66-3	6.49E-12	2.01E-13	1.82E-11	4.53E-13	1.02E-11	4.37E-11
ethane	74-84-0						
HD	505-60-2	7.29E-05	4.15E-06	2.04E-04	1.08E-05	1.15E-04	1.49E-05
methane	74-82-8						
monoethanolamine	141-43-5						
nitrobenzene	98-95-3	6.42E-15	6.13E-14	1.80E-14	1.68E-13	1.01E-14	1.91E-13
tetrachloroethene	127-18-4	2.26E-12	4.05E-13	6.32E-12	9.48E-13	3.55E-12	1.37E-11
trichloroethene	79-01-6	2.79E-11	3.24E-11	7.80E-11	7.55E-11	4.39E-11	4.57E-09
vinyl chloride	75-01-4	7.81E-09	4.07E-10	2.19E-08	9.47E-10	1.23E-08	1.32E-09
ammonia	7664-41-7	1.03E-06		2.89E-06		1.63E-06	
hydrogen cyanide	74-90-8	9.16E-05	6.39E-06	2.57E-04	2.07E-05	1.44E-04	2.45E-05
total mercury	NA						
mercuric chloride	7487-94-7	3.54E-19	1.39E-19	9.92E-19	4.49E-19	5.58E-19	1.46E-18
methyl mercury	22967-92-6		1.23E-16		3.01E-16		1.02E-15
elemental mercury	7439-97-6	0.00E+00		0.00E+00		0.00E+00	
Total Hazard Quotient - Pathway (dimensionless)		1.66E-04	1.05E-05	4.64E-04	3.14E-05	2.61E-04	3.94E-05
Total Hazard Index (dimensionless)		**1.76E-04**		**4.95E-04**		**3.00E-04**	

OVERVIEW OF DIRECT AND INDIRECT CARCINOGENIC RISK AND NONCARCINOGENIC HEALTH HAZARD FOR SUBSISTENCE FARMER EXPOSURE SCENARIOS

Subsistence Farmer Exposure Scenarios - Carcinogenic Effects							
		Adult		Child		Infant	
COPC	CAS Number	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)
1,1-dichloroethene	75-35-4						
1,2-dichloroethane	107-06-2	4.60E-19	5.95E-20	1.29E-18	1.06E-19	1.45E-19	5.02E-19
1,4-dichlorobenzene	106-46-7	5.35E-15	3.09E-19	1.50E-14	3.73E-19	1.68E-15	4.79E-19
1,4-dithiane	505-29-3						
1,4-oxathiane	15980-15-1						
2,4-dinitrotoluene	121-14-2	1.88E-19	3.78E-16	5.26E-19	6.37E-16	5.92E-20	1.21E-16
2-butanone	78-93-3						
acetylene	74-86-2						
benzene	71-43-2	1.34E-18	1.93E-19	3.76E-18	1.75E-19	4.23E-19	2.66E-18
chlorobenzene	108-90-7						
chloroform	67-66-3	5.26E-16	1.30E-17	1.47E-15	1.30E-17	1.66E-16	1.96E-16
ethane	74-84-0						
HD	505-60-2	4.38E-10	8.10E-11	1.23E-09	4.92E-11	1.38E-10	1.25E-11
methane	74-82-8						
monoethanolamine	141-43-5						
nitrobenzene	98-95-3	1.65E-19		4.62E-19		5.20E-20	
tetrachloroethene	127-18-4	3.38E-17	4.85E-16	9.48E-17	2.61E-16	1.07E-17	9.94E-16
trichloroethene	79-01-6	7.96E-15	8.43E-16	2.23E-14	6.25E-16	2.51E-15	7.82E-15
vinyl chloride	75-01-4	2.43E-13	1.94E-13	6.79E-13	1.37E-13	7.64E-14	3.51E-14
ammonia	7664-41-7						
hydrogen cyanide	74-90-8						
total mercury	NA						
mercuric chloride	7487-94-7						
methyl mercury	22967-92-6						
elemental mercury	7439-97-6						
Total Cancer Risk - Pathway (dimensionless)		4.38E-10	8.12E-11	1.23E-09	4.94E-11	1.38E-10	1.25E-11
Overall excess lifetime cancer risk via all routes of exposure (dimensionless)		**5.19E-10**		**1.28E-09**		**1.50E-10**	

OVERVIEW OF DIRECT AND INDIRECT CARCINOGENIC RISK AND NONCARCINOGENIC HEALTH HAZARD FOR SUBSISTENCE FARMER EXPOSURE SCENARIOS

Subsistence Farmer Exposure Scenarios - Noncarcinogenic Effects							
		Adult		Child		Infant	
COPC	CAS Number	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)
1,1-dichloroethene	75-35-4	4.06E-12	6.85E-14	1.14E-11	1.44E-13	6.40E-12	1.78E-13
1,2-dichloroethane	107-06-2	5.05E-14	4.05E-16	1.41E-13	8.14E-16	7.96E-14	1.93E-14
1,4-dichlorobenzene	106-46-7	9.60E-15	7.00E-15	2.69E-14	1.38E-14	1.51E-14	8.87E-14
1,4-dithiane	505-29-3	6.53E-12	2.88E-10	1.83E-11	7.14E-10	1.03E-11	8.00E-10
1,4-oxathiane	15980-15-1						
2,4-dinitrotoluene	121-14-2		8.01E-12		1.54E-11		1.47E-11
2-butanone	78-93-3	8.57E-14	8.36E-13	2.40E-13	2.31E-12	1.35E-13	7.28E-12
acetylene	74-86-2						
benzene	71-43-2	8.10E-14	5.23E-15	2.27E-13	1.12E-14	1.28E-13	8.47E-13
chlorobenzene	108-90-7	6.79E-14	2.32E-14	1.90E-13	6.42E-14	1.07E-13	1.67E-13
chloroform	67-66-3	6.49E-12	2.78E-13	1.82E-11	5.86E-13	1.02E-11	4.42E-11
ethane	74-84-0						
HD	505-60-2	7.29E-05	4.60E-06	2.04E-04	1.28E-05	1.15E-04	1.62E-05
methane	74-82-8						
monoethanolamine	141-43-5						
nitrobenzene	98-95-3	6.42E-15	1.53E-13	1.80E-14	4.19E-13	1.01E-14	4.76E-13
tetrachloroethene	127-18-4	2.26E-12	3.18E-13	6.32E-12	6.77E-13	3.55E-12	1.29E-11
trichloroethene	79-01-6	2.79E-11	3.35E-11	7.80E-11	7.29E-11	4.39E-11	4.56E-09
vinyl chloride	75-01-4	7.81E-09	4.12E-10	2.19E-08	8.88E-10	1.23E-08	1.14E-09
ammonia	7664-41-7	1.03E-06		2.89E-06		1.63E-06	
hydrogen cyanide	74-90-8	9.16E-05	1.56E-05	2.57E-04	5.06E-05	1.44E-04	5.98E-05
total mercury	NA						
mercuric chloride	7487-94-7	3.54E-19	3.47E-19	9.92E-19	1.12E-18	5.58E-19	3.57E-18
methyl mercury	22967-92-6		4.93E-17		1.21E-16		4.10E-16
elemental mercury	7439-97-6	0.00E+00		0.00E+00		0.00E+00	
Total Hazard Quotient - Pathway (dimensionless)		1.66E-04	2.02E-05	4.64E-04	6.34E-05	2.61E-04	7.59E-05
Total Hazard Index (dimensionless)		**1.86E-04**		**5.27E-04**		**3.37E-04**	

OVERVIEW OF DIRECT AND INDIRECT CARCINOGENIC RISK AND NONCARCINOGENIC HEALTH HAZARD FOR THE ADULT WORKER EXPOSURE SCENARIO

Adult Worker Exposure Scenario					
		Carcinogenic Effects		Noncarcinogenic Effects	
COPC	CAS Number	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)	Direct (Inhalation) Pathway (dimensionless)	Indirect (Ingestion, Dermal) Pathway (dimensionless)
1,1-dichloroethene	75-35-4			9.68E-13	4.87E-20
1,2-dichloroethane	107-06-2	1.09E-19	5.06E-26	1.20E-14	3.68E-22
1,4-dichlorobenzene	106-46-7	1.27E-15	5.15E-25	2.29E-15	1.81E-20
1,4-dithiane	505-29-3			1.55E-12	1.17E-15
1,4-oxathiane	15980-15-1				
2,4-dinitrotoluene	121-14-2	4.47E-20	5.56E-22		1.13E-17
2-butanone	78-93-3			2.04E-14	3.71E-18
acetylene	74-86-2				
benzene	71-43-2	3.20E-19	2.13E-25	1.93E-14	1.28E-20
chlorobenzene	108-90-7			1.62E-14	2.60E-20
chloroform	67-66-3	1.25E-16	1.34E-23	1.55E-12	5.72E-19
ethane	74-84-0				
HD	505-60-2	1.04E-10	1.73E-16	1.74E-05	4.25E-11
methane	74-82-8				
monoethanolamine	141-43-5				
nitrobenzene	98-95-3	3.93E-20		1.53E-15	1.60E-18
tetrachloroethene	127-18-4	8.06E-18	6.66E-23	5.37E-13	1.63E-19
trichloroethene	79-01-6	1.90E-15	1.06E-21	6.63E-12	1.18E-16
vinyl chloride	75-01-4	5.78E-14	4.82E-20	1.86E-09	2.96E-16
ammonia	7664-41-7			2.46E-07	
hydrogen cyanide	74-90-8			2.18E-05	2.16E-12
total mercury	NA				
mercuric chloride	7487-94-7			8.44E-20	1.47E-22
methyl mercury	22967-92-6				7.89E-24
elemental mercury	7439-97-6			0.00E+00	
Total Cancer Risk - Pathway (dimensionless)		1.04E-10	1.73E-16		
Overall excess lifetime cancer risk via all routes of exposure (dimensionless)		**1.04E-10**			
Total Hazard Quotient - Pathway (dimensionless)				3.94E-05	4.47E-11
Total Hazard Index (dimensionless)				**3.94E-05**	

RISK AND HAZARD BY PATHWAY FOR RESIDENT EXPOSURE SCENARIOS

CARCINOGENIC EFFECTS: Adult Resident Exposure Scenario											
COPC	CAS Number	Risk from Inhalation	Risk from Dermal Water Contact	Risk from Dermal Soil Contact	Risk from Incidental Soil Ingestion	Risk from Incidental Surface Water Ingestion	Risk from Ingestion of Produce	Risk from Ingestion of Terrestrial Animal Products	Risk from Ingestion of Fish	Risk from Ingestion of Breast Milk	Total Risk from Individual Chemical
1,1-dichloroethene	75-35-4									n/a	**0.00E+00**
1,2-dichloroethane	107-06-2	4.60E-19	1.79E-22	2.43E-26	6.10E-26	9.15E-23	2.07E-20	1.03E-23	5.42E-21	n/a	**4.86E-19**
1,4-dichlorobenzene	106-46-7	5.35E-15	1.01E-21	2.48E-25	6.22E-25	4.61E-23	7.05E-20	1.04E-21	9.47E-20	n/a	**5.35E-15**
1,4-dithiane	505-29-3									n/a	**0.00E+00**
1,4-oxathiane	15980-15-1									n/a	**0.00E+00**
2,4-dinitrotoluene	121-14-2	1.88E-19	1.22E-21	8.24E-23	1.28E-21	6.07E-22	4.32E-17	1.05E-16	8.42E-20	n/a	**1.49E-16**
2-butanone	78-93-3									n/a	**0.00E+00**
acetylene	74-86-2									n/a	**0.00E+00**
benzene	71-43-2	1.34E-18	3.42E-21	1.03E-25	2.57E-25	5.26E-22	2.69E-20	5.69E-23	9.02E-20	n/a	**1.46E-18**
chlorobenzene	108-90-7									n/a	**0.00E+00**
chloroform	67-66-3	5.26E-16	1.30E-19	6.45E-24	1.62E-23	3.90E-20	2.10E-18	3.59E-21	5.61E-18	n/a	**5.34E-16**
ethane	74-84-0									n/a	**0.00E+00**
HD	505-60-2	4.38E-10	2.21E-13	8.33E-17	2.09E-16	8.51E-14	1.45E-11	3.90E-13	2.53E-11	n/a	**4.78E-10**
methane	74-82-8									n/a	**0.00E+00**
monoethanolamine	141-43-5									n/a	**0.00E+00**
nitrobenzene	98-95-3	1.65E-19								n/a	**1.65E-19**
tetrachloroethene	127-18-4	3.38E-17	3.40E-18	3.21E-23	8.04E-23	1.77E-19	2.92E-17	9.51E-20	3.04E-16	n/a	**3.71E-16**
trichloroethene	79-01-6	7.96E-15	9.60E-18	5.13E-22	1.29E-21	1.58E-18	8.41E-17	2.97E-19	4.62E-16	n/a	**8.52E-15**
vinyl chloride	75-01-4	2.43E-13	5.06E-15	2.32E-20	5.82E-20	2.11E-15	1.80E-14	9.20E-18	1.05E-13	n/a	**3.72E-13**
ammonia	7664-41-7									n/a	**0.00E+00**
hydrogen cyanide	74-90-8									n/a	**0.00E+00**
total mercury	NA									n/a	**0.00E+00**
mercuric chloride	7487-94-7									n/a	**0.00E+00**
methyl mercury	22967-92-6									n/a	**0.00E+00**
elemental mercury	7439-97-6									n/a	**0.00E+00**
Total Pathway Risk	**All Chemicals**	**4.38E-10**	**2.26E-13**	**8.33E-17**	**2.09E-16**	**8.72E-14**	**1.46E-11**	**3.90E-13**	**2.54E-11**	**0.00E+00**	**4.78E-10**

RISK AND HAZARD BY PATHWAY FOR RESIDENT EXPOSURE SCENARIOS

NONCARCINOGENIC EFFECTS: Adult Resident Exposure Scenario											
COPC	CAS Number	Hazard from Inhalation	Hazard from Dermal Water Contact	Hazard from Dermal Soil Contact	Hazard from Incidental Soil Ingestion	Hazard from Incidental Surface Water Ingestion	Hazard from Ingestion of Produce	Hazard from Ingestion of Terrestrial Animal Products	Hazard from Ingestion of Fish	Hazard from Ingestion of Breast Milk	Total Hazard from Individual Chemical
1,1-dichloroethene	75-35-4	4.06E-12	8.09E-16	1.69E-20	9.20E-20	1.47E-16	9.50E-15	7.42E-15	2.53E-14	n/a	**4.11E-12**
1,2-dichloroethane	107-06-2	5.05E-14	2.30E-19	1.87E-22	4.69E-22	1.18E-19	1.59E-16	7.57E-20	6.96E-18	n/a	**5.07E-14**
1,4-dichlorobenzene	106-46-7	9.60E-15	6.28E-18	9.19E-21	2.30E-20	2.86E-19	2.55E-15	1.68E-17	5.87E-16	n/a	**1.28E-14**
1,4-dithiane	505-29-3	6.53E-12	1.82E-15	5.96E-16	1.49E-15	1.34E-15	1.15E-10	2.26E-13	6.39E-14	n/a	**1.22E-10**
1,4-oxathiane	15980-15-1									n/a	**0.00E+00**
2,4-dinitrotoluene	121-14-2		1.15E-17	1.86E-18	2.90E-17	5.72E-18	9.56E-13	2.25E-12	7.93E-16	n/a	**3.20E-12**
2-butanone	78-93-3	8.57E-14	4.57E-18	1.89E-18	4.74E-18	1.08E-17	3.34E-13	1.00E-16	7.07E-16	n/a	**4.21E-13**
acetylene	74-86-2									n/a	**0.00E+00**
benzene	71-43-2	8.10E-14	3.63E-17	6.53E-21	1.64E-20	5.58E-18	1.69E-15	3.25E-18	9.58E-16	n/a	**8.37E-14**
chlorobenzene	108-90-7	6.79E-14	2.11E-17	1.39E-20	3.05E-20	1.63E-18	2.77E-15	6.11E-15	9.71E-16	n/a	**7.78E-14**
chloroform	67-66-3	6.49E-12	9.82E-16	2.91E-19	7.30E-19	2.94E-16	9.35E-14	1.42E-16	4.22E-14	n/a	**6.63E-12**
ethane	74-84-0									n/a	**0.00E+00**
HD	505-60-2	7.29E-05	9.56E-09	2.16E-11	5.42E-11	3.69E-09	1.37E-06	2.60E-08	1.09E-06	n/a	**7.54E-05**
methane	74-82-8									n/a	**0.00E+00**
monoethanolamine	141-43-5									n/a	**0.00E+00**
nitrobenzene	98-95-3	6.42E-15	1.89E-18	8.14E-19	2.04E-18	7.04E-19	5.99E-14	1.20E-15	7.75E-17	n/a	**6.76E-14**
tetrachloroethene	127-18-4	2.26E-12	1.47E-15	8.32E-20	2.09E-19	7.66E-17	7.40E-14	7.17E-17	1.32E-13	n/a	**2.46E-12**
trichloroethene	79-01-6	2.79E-11	1.87E-13	5.98E-17	1.50E-16	3.07E-14	9.69E-12	3.10E-14	8.99E-12	n/a	**4.68E-11**
vinyl chloride	75-01-4	7.81E-09	5.47E-12	1.50E-16	3.77E-16	2.28E-12	1.17E-10	5.77E-14	1.13E-10	n/a	**8.05E-09**
ammonia	7664-41-7	1.03E-06								n/a	**1.03E-06**
hydrogen cyanide	74-90-8	9.16E-05	3.71E-10	1.10E-12	2.76E-12	1.18E-09	6.19E-06	8.86E-10	7.73E-08	n/a	**9.79E-05**
total mercury	NA									n/a	**0.00E+00**
mercuric chloride	7487-94-7	3.54E-19	2.47E-25	1.08E-23	4.28E-22	0.00E+00	1.06E-19	3.31E-20	0.00E+00	n/a	**4.93E-19**
methyl mercury	22967-92-6		1.45E-26	6.26E-26	2.50E-23	0.00E+00	5.35E-20	3.78E-21	4.92E-17	n/a	**4.92E-17**
elemental mercury	7439-97-6	0.00E+00								n/a	**0.00E+00**
Total Pathway Hazard	**All Chemicals**	**1.66E-04**	**9.94E-09**	**2.27E-11**	**5.70E-11**	**4.87E-09**	**7.56E-06**	**2.69E-08**	**1.17E-06**	**0.00E+00**	**1.74E-04**

RISK AND HAZARD BY PATHWAY FOR RESIDENT EXPOSURE SCENARIOS

CARCINOGENIC EFFECTS: Child Resident Exposure Scenario											
COPC	CAS Number	Risk from Inhalation	Risk from Dermal Water Contact	Risk from Dermal Soil Contact	Risk from Incidental Soil Ingestion	Risk from Incidental Surface Water Ingestion	Risk from Ingestion of Produce	Risk from Ingestion of Terrestrial Animal Products	Risk from Ingestion of Fish	Risk from Ingestion of Breast Milk	Total Risk from Individual Chemical
1,1-dichloroethene	75-35-4									n/a	**0.00E+00**
1,2-dichloroethane	107-06-2	1.29E-18	5.11E-23	1.59E-25	5.70E-25	7.13E-23	4.14E-20	3.05E-23	2.21E-21	n/a	**1.33E-18**
1,4-dichlorobenzene	106-46-7	1.50E-14	2.90E-22	1.62E-24	5.80E-24	3.61E-23	1.32E-19	1.70E-21	3.87E-20	n/a	**1.50E-14**
1,4-dithiane	505-29-3									n/a	**0.00E+00**
1,4-oxathiane	15980-15-1									n/a	**0.00E+00**
2,4-dinitrotoluene	121-14-2	5.26E-19	8.29E-22	5.03E-22	1.12E-20	1.12E-21	9.94E-17	1.55E-16	8.16E-20	n/a	**2.55E-16**
2-butanone	78-93-3									n/a	**0.00E+00**
acetylene	74-86-2									n/a	**0.00E+00**
benzene	71-43-2	3.76E-18	9.75E-22	6.73E-25	2.40E-24	4.09E-22	5.47E-20	1.58E-22	3.68E-20	n/a	**3.85E-18**
chlorobenzene	108-90-7									n/a	**0.00E+00**
chloroform	67-66-3	1.47E-15	3.72E-20	4.22E-23	1.51E-22	3.04E-20	4.24E-18	9.75E-21	2.28E-18	n/a	**1.48E-15**
ethane	74-84-0									n/a	**0.00E+00**
HD	505-60-2	1.23E-09	6.30E-14	5.46E-16	1.95E-15	6.62E-14	1.52E-11	3.10E-13	1.03E-11	n/a	**1.25E-09**
methane	74-82-8									n/a	**0.00E+00**
monoethanolamine	141-43-5									n/a	**0.00E+00**
nitrobenzene	98-95-3	4.62E-19								n/a	**4.62E-19**
tetrachloroethene	127-18-4	9.48E-17	9.70E-19	2.10E-22	7.51E-22	1.38E-19	5.43E-17	8.51E-20	1.24E-16	n/a	**2.74E-16**
trichloroethene	79-01-6	2.23E-14	2.74E-18	3.36E-21	1.20E-20	1.23E-18	1.72E-16	8.23E-19	1.88E-16	n/a	**2.27E-14**
vinyl chloride	75-01-4	6.79E-13	1.44E-15	1.52E-19	5.43E-19	1.64E-15	3.65E-14	2.76E-17	4.26E-14	n/a	**7.62E-13**
ammonia	7664-41-7									n/a	**0.00E+00**
hydrogen cyanide	74-90-8									n/a	**0.00E+00**
total mercury	NA									n/a	**0.00E+00**
mercuric chloride	7487-94-7									n/a	**0.00E+00**
methyl mercury	22967-92-6									n/a	**0.00E+00**
elemental mercury	7439-97-6									n/a	**0.00E+00**
Total Pathway Risk	**All Chemicals**	**1.23E-09**	**6.44E-14**	**5.46E-16**	**1.95E-15**	**6.79E-14**	**1.53E-11**	**3.10E-13**	**1.03E-11**	**0.00E+00**	**1.25E-09**

RISK AND HAZARD BY PATHWAY FOR RESIDENT EXPOSURE SCENARIOS

NONCARCINOGENIC EFFECTS: Child Resident Exposure Scenario											
COPC	CAS Number	Hazard from Inhalation	Hazard from Dermal Water Contact	Hazard from Dermal Soil Contact	Hazard from Incidental Soil Ingestion	Hazard from Incidental Surface Water Ingestion	Hazard from Ingestion of Produce	Hazard from Ingestion of Terrestrial Animal Products	Hazard from Ingestion of Fish	Hazard from Ingestion of Breast Milk	Total Hazard from Individual Chemical
1,1-dichloroethene	75-35-4	1.14E-11	1.38E-15	1.10E-19	8.59E-19	6.88E-16	1.96E-14	1.24E-14	6.17E-14	n/a	**1.15E-11**
1,2-dichloroethane	107-06-2	1.41E-13	3.93E-19	1.23E-21	4.38E-21	5.49E-19	3.18E-16	2.35E-19	1.70E-17	n/a	**1.42E-13**
1,4-dichlorobenzene	106-46-7	2.69E-14	1.07E-17	6.02E-20	2.15E-19	1.34E-18	4.89E-15	6.31E-17	1.43E-15	n/a	**3.33E-14**
1,4-dithiane	505-29-3	1.83E-11	3.12E-15	3.91E-15	1.39E-14	6.25E-15	2.85E-10	6.99E-13	1.56E-13	n/a	**3.04E-10**
1,4-oxathiane	15980-15-1									n/a	**0.00E+00**
2,4-dinitrotoluene	121-14-2		1.97E-17	1.22E-17	2.71E-16	2.67E-17	2.41E-12	3.76E-12	1.94E-15	n/a	**6.17E-12**
2-butanone	78-93-3	2.40E-13	7.81E-18	1.24E-17	4.42E-17	5.03E-17	9.25E-13	3.10E-16	1.73E-15	n/a	**1.17E-12**
acetylene	74-86-2									n/a	**0.00E+00**
benzene	71-43-2	2.27E-13	6.20E-17	4.28E-20	1.53E-19	2.61E-17	3.48E-15	1.01E-17	2.34E-15	n/a	**2.33E-13**
chlorobenzene	108-90-7	1.90E-13	3.62E-17	9.12E-20	2.85E-19	7.63E-18	5.44E-15	1.93E-14	2.37E-15	n/a	**2.17E-13**
chloroform	67-66-3	1.82E-11	1.68E-15	1.91E-18	6.81E-18	1.37E-15	1.91E-13	4.40E-16	1.03E-13	n/a	**1.85E-11**
ethane	74-84-0									n/a	**0.00E+00**
HD	505-60-2	2.04E-04	1.64E-08	1.42E-10	5.06E-10	1.72E-08	3.95E-06	8.04E-08	2.67E-06	n/a	**2.11E-04**
methane	74-82-8									n/a	**0.00E+00**
monoethanolamine	141-43-5									n/a	**0.00E+00**
nitrobenzene	98-95-3	1.80E-14	3.24E-18	5.33E-18	1.90E-17	3.28E-18	1.63E-13	4.53E-15	1.89E-16	n/a	**1.86E-13**
tetrachloroethene	127-18-4	6.32E-12	2.52E-15	5.45E-19	1.95E-18	3.57E-16	1.41E-13	2.21E-16	3.22E-13	n/a	**6.78E-12**
trichloroethene	79-01-6	7.80E-11	3.20E-13	3.92E-16	1.40E-15	1.43E-13	2.01E-11	9.60E-14	2.20E-11	n/a	**1.21E-10**
vinyl chloride	75-01-4	2.19E-08	9.36E-12	9.86E-16	3.52E-15	1.06E-11	2.37E-10	1.79E-13	2.76E-10	n/a	**2.24E-08**
ammonia	7664-41-7	2.89E-06								n/a	**2.89E-06**
hydrogen cyanide	74-90-8	2.57E-04	6.35E-10	7.21E-12	2.58E-11	5.50E-09	2.02E-05	2.74E-09	1.89E-07	n/a	**2.77E-04**
total mercury	NA									n/a	**0.00E+00**
mercuric chloride	7487-94-7	9.92E-19	4.23E-25	7.09E-23	4.00E-21	0.00E+00	3.30E-19	1.14E-19	0.00E+00	n/a	**1.44E-18**
methyl mercury	22967-92-6		2.48E-26	4.10E-25	2.34E-22	0.00E+00	1.78E-19	1.32E-20	1.20E-16	n/a	**1.20E-16**
elemental mercury	7439-97-6	0.00E+00								n/a	**0.00E+00**
Total Pathway Hazard	**All Chemicals**	**4.64E-04**	**1.70E-08**	**1.49E-10**	**5.32E-10**	**2.27E-08**	**2.41E-05**	**8.32E-08**	**2.86E-06**	**0.00E+00**	**4.91E-04**

RISK AND HAZARD BY PATHWAY FOR RESIDENT EXPOSURE SCENARIOS

CARCINOGENIC EFFECTS: Infant Resident Exposure Scenario											
COPC	CAS Number	Risk from Inhalation	Risk from Dermal Water Contact	Risk from Dermal Soil Contact	Risk from Incidental Soil Ingestion	Risk from Incidental Surface Water Ingestion	Risk from Ingestion of Produce	Risk from Ingestion of Terrestrial Animal Products	Risk from Ingestion of Fish	Risk from Ingestion of Breast Milk	Total Risk from Individual Chemical
1,1-dichloroethene	75-35-4		n/a			n/a					**0.00E+00**
1,2-dichloroethane	107-06-2	1.45E-19	n/a	4.48E-26	1.71E-25	n/a	1.02E-20	1.79E-23	6.63E-22	4.47E-19	**6.03E-19**
1,4-dichlorobenzene	106-46-7	1.68E-15	n/a	4.57E-25	1.74E-24	n/a	3.31E-20	1.15E-21	1.16E-20	2.85E-19	**1.68E-15**
1,4-dithiane	505-29-3		n/a			n/a					**0.00E+00**
1,4-oxathiane	15980-15-1		n/a			n/a					**0.00E+00**
2,4-dinitrotoluene	121-14-2	5.92E-20	n/a	1.42E-22	3.35E-21	n/a	2.21E-17	2.64E-17	2.45E-20		**4.86E-17**
2-butanone	78-93-3		n/a			n/a					**0.00E+00**
acetylene	74-86-2		n/a			n/a					**0.00E+00**
benzene	71-43-2	4.23E-19	n/a	1.89E-25	7.21E-25	n/a	1.33E-20	9.29E-23	1.10E-20	2.58E-18	**3.03E-18**
chlorobenzene	108-90-7		n/a			n/a					**0.00E+00**
chloroform	67-66-3	1.66E-16	n/a	1.19E-23	4.53E-23	n/a	1.03E-18	5.73E-21	6.85E-19	1.90E-16	**3.57E-16**
ethane	74-84-0		n/a			n/a					**0.00E+00**
HD	505-60-2	1.38E-10	n/a	1.53E-16	5.85E-16	n/a	3.56E-12	1.84E-13	3.09E-12		**1.45E-10**
methane	74-82-8		n/a			n/a					**0.00E+00**
monoethanolamine	141-43-5		n/a			n/a					**0.00E+00**
nitrobenzene	98-95-3	5.20E-20	n/a			n/a					**5.20E-20**
tetrachloroethene	127-18-4	1.07E-17	n/a	5.91E-23	2.25E-22	n/a	1.37E-17	5.03E-20	3.72E-17	8.82E-16	**9.44E-16**
trichloroethene	79-01-6	2.51E-15	n/a	9.44E-22	3.60E-21	n/a	4.16E-17	4.83E-19	5.64E-17	7.54E-15	**1.02E-14**
vinyl chloride	75-01-4	7.64E-14	n/a	4.28E-20	1.63E-19	n/a	8.91E-15	1.62E-17	1.28E-14		**9.81E-14**
ammonia	7664-41-7		n/a			n/a					**0.00E+00**
hydrogen cyanide	74-90-8		n/a			n/a					**0.00E+00**
total mercury	NA		n/a			n/a					**0.00E+00**
mercuric chloride	7487-94-7		n/a			n/a					**0.00E+00**
methyl mercury	22967-92-6		n/a			n/a					**0.00E+00**
elemental mercury	7439-97-6		n/a			n/a					**0.00E+00**
Total Pathway Risk	**All Chemicals**	**1.38E-10**	**0.00E+00**	**1.54E-16**	**5.85E-16**	**0.00E+00**	**3.57E-12**	**1.84E-13**	**3.10E-12**	**8.62E-15**	**1.45E-10**

RISK AND HAZARD BY PATHWAY FOR RESIDENT EXPOSURE SCENARIOS

NONCARCINOGENIC EFFECTS: Infant Resident Exposure Scenario											
COPC	CAS Number	Hazard from Inhalation	Hazard from Dermal Water Contact	Hazard from Dermal Soil Contact	Hazard from Incidental Soil Ingestion	Hazard from Incidental Surface Water Ingestion	Hazard from Ingestion of Produce	Hazard from Ingestion of Terrestrial Animal Products	Hazard from Ingestion of Fish	Hazard from Ingestion of Breast Milk	Total Hazard from Individual Chemical
1,1-dichloroethene	75-35-4	6.40E-12	n/a	1.55E-19	1.29E-18	n/a	2.37E-14	1.05E-14	9.26E-14		**6.53E-12**
1,2-dichloroethane	107-06-2	7.96E-14	n/a	1.72E-21	6.57E-21	n/a	3.91E-16	6.90E-19	2.55E-17	1.72E-14	**9.72E-14**
1,4-dichlorobenzene	106-46-7	1.51E-14	n/a	8.46E-20	3.22E-19	n/a	6.13E-15	2.12E-16	2.15E-15	5.29E-14	**7.65E-14**
1,4-dithiane	505-29-3	1.03E-11	n/a	5.49E-15	2.09E-14	n/a	3.18E-10	2.05E-12	2.34E-13		**3.31E-10**
1,4-oxathiane	15980-15-1		n/a			n/a					**0.00E+00**
2,4-dinitrotoluene	121-14-2		n/a	1.71E-17	4.06E-16	n/a	2.67E-12	3.20E-12	2.90E-15		**5.87E-12**
2-butanone	78-93-3	1.35E-13	n/a	1.74E-17	6.63E-17	n/a	9.87E-13	9.11E-16	2.59E-15	2.48E-12	**3.61E-12**
acetylene	74-86-2		n/a			n/a					**0.00E+00**
benzene	71-43-2	1.28E-13	n/a	6.02E-20	2.29E-19	n/a	4.22E-15	2.96E-17	3.51E-15	8.21E-13	**9.56E-13**
chlorobenzene	108-90-7	1.07E-13	n/a	1.28E-19	4.28E-19	n/a	6.75E-15	5.86E-14	3.56E-15		**1.76E-13**
chloroform	67-66-3	1.02E-11	n/a	2.68E-18	1.02E-17	n/a	2.33E-13	1.29E-15	1.55E-13	4.28E-11	**5.34E-11**
ethane	74-84-0		n/a			n/a					**0.00E+00**
HD	505-60-2	1.15E-04	n/a	1.99E-10	7.59E-10	n/a	4.63E-06	2.39E-07	4.01E-06		**1.24E-04**
methane	74-82-8		n/a			n/a					**0.00E+00**
monoethanolamine	141-43-5		n/a			n/a					**0.00E+00**
nitrobenzene	98-95-3	1.01E-14	n/a	7.50E-18	2.86E-17	n/a	1.75E-13	1.53E-14	2.84E-16		**2.01E-13**
tetrachloroethene	127-18-4	3.55E-12	n/a	7.66E-19	2.92E-18	n/a	1.77E-13	6.52E-16	4.82E-13	1.14E-11	**1.57E-11**
trichloroethene	79-01-6	4.39E-11	n/a	5.51E-16	2.10E-15	n/a	2.43E-11	2.82E-13	3.29E-11	4.40E-09	**4.50E-09**
vinyl chloride	75-01-4	1.23E-08	n/a	1.39E-15	5.28E-15	n/a	2.89E-10	5.26E-13	4.14E-10		**1.30E-08**
ammonia	7664-41-7	1.63E-06	n/a			n/a					**1.63E-06**
hydrogen cyanide	74-90-8	1.44E-04	n/a	1.01E-11	3.87E-11	n/a	2.38E-05	8.18E-09	2.83E-07		**1.68E-04**
total mercury	NA		n/a			n/a					**0.00E+00**
mercuric chloride	7487-94-7	5.58E-19	n/a	9.97E-23	5.99E-21	n/a	3.91E-19	3.70E-19	0.00E+00	6.93E-19	**2.02E-18**
methyl mercury	22967-92-6		n/a	5.76E-25	3.50E-22	n/a	2.24E-19	4.29E-20	1.80E-16	2.29E-16	**4.09E-16**
elemental mercury	7439-97-6	0.00E+00	n/a			n/a					**0.00E+00**
Total Pathway Hazard	**All Chemicals**	**2.61E-04**	**0.00E+00**	**2.09E-10**	**7.98E-10**	**0.00E+00**	**2.84E-05**	**2.47E-07**	**4.30E-06**	**4.46E-09**	**2.94E-04**

RISK AND HAZARD BY PATHWAY FOR RESIDENT EXPOSURE SCENARIOS

CARCINOGENIC EFFECTS: Early Life Exposure - Infant											
COPC	CAS Number	Risk from Inhalation	Risk from Dermal Water Contact	Risk from Dermal Soil Contact	Risk from Incidental Soil Ingestion	Risk from Incidental Surface Water Ingestion	Risk from Ingestion of Produce	Risk from Ingestion of Terrestrial Animal Products	Risk from Ingestion of Fish	Risk from Ingestion of Breast Milk	Total Risk from Individual Chemical
vinyl chloride	75-01-4	5.35E-12	n/a	2.99E-18	1.14E-17	n/a	6.24E-13	1.14E-15	8.94E-13	n/a	**6.87E-12**

CARCINOGENIC EFFECTS: Early Life Exposure - Child											
COPC	CAS Number	Risk from Inhalation	Risk from Dermal Water Contact	Risk from Dermal Soil Contact	Risk from Incidental Soil Ingestion	Risk from Incidental Surface Water Ingestion	Risk from Ingestion of Produce	Risk from Ingestion of Terrestrial Animal Products	Risk from Ingestion of Fish	Risk from Ingestion of Breast Milk	Total Risk from Individual Chemical
vinyl chloride	75-01-4	9.51E-12	2.02E-14	2.13E-18	7.60E-18	2.29E-14	5.12E-13	3.87E-16	5.96E-13	n/a	**1.07E-11**

RISK AND HAZARD BY PATHWAY FOR SUBSISTENCE FISHER EXPOSURE SCENARIOS

CARCINOGENIC EFFECTS: Adult Subsistence Fisher Exposure Scenario											
COPC	CAS Number	Risk from Inhalation	Risk from Dermal Water Contact	Risk from Dermal Soil Contact	Risk from Incidental Soil Ingestion	Risk from Incidental Surface Water Ingestion	Risk from Ingestion of Produce	Risk from Ingestion of Terrestrial Animal Products	Risk from Ingestion of Fish	Risk from Ingestion of Breast Milk	Total Risk from Individual Chemical
1,1-dichloroethene	75-35-4									n/a	**0.00E+00**
1,2-dichloroethane	107-06-2	4.60E-19	1.79E-22	2.43E-26	6.10E-26	9.15E-23	2.07E-20	1.03E-23	1.35E-20	n/a	**4.94E-19**
1,4-dichlorobenzene	106-46-7	5.35E-15	1.01E-21	2.48E-25	6.22E-25	4.61E-23	7.05E-20	1.04E-21	2.37E-19	n/a	**5.35E-15**
1,4-dithiane	505-29-3									n/a	**0.00E+00**
1,4-oxathiane	15980-15-1									n/a	**0.00E+00**
2,4-dinitrotoluene	121-14-2	1.88E-19	1.22E-21	8.24E-23	1.28E-21	6.07E-22	4.32E-17	1.05E-16	2.10E-19	n/a	**1.49E-16**
2-butanone	78-93-3									n/a	**0.00E+00**
acetylene	74-86-2									n/a	**0.00E+00**
benzene	71-43-2	1.34E-18	3.42E-21	1.03E-25	2.57E-25	5.26E-22	2.69E-20	5.69E-23	2.26E-19	n/a	**1.60E-18**
chlorobenzene	108-90-7									n/a	**0.00E+00**
chloroform	67-66-3	5.26E-16	1.30E-19	6.45E-24	1.62E-23	3.90E-20	2.10E-18	3.59E-21	1.40E-17	n/a	**5.42E-16**
ethane	74-84-0									n/a	**0.00E+00**
HD	505-60-2	4.38E-10	2.21E-13	8.33E-17	2.09E-16	8.51E-14	1.45E-11	3.90E-13	6.32E-11	n/a	**5.16E-10**
methane	74-82-8									n/a	**0.00E+00**
monoethanolamine	141-43-5									n/a	**0.00E+00**
nitrobenzene	98-95-3	1.65E-19								n/a	**1.65E-19**
tetrachloroethene	127-18-4	3.38E-17	3.40E-18	3.21E-23	8.04E-23	1.77E-19	2.92E-17	9.51E-20	7.61E-16	n/a	**8.28E-16**
trichloroethene	79-01-6	7.96E-15	9.60E-18	5.13E-22	1.29E-21	1.58E-18	8.41E-17	2.97E-19	1.15E-15	n/a	**9.21E-15**
vinyl chloride	75-01-4	2.43E-13	5.06E-15	2.32E-20	5.82E-20	2.11E-15	1.80E-14	9.20E-18	2.61E-13	n/a	**5.29E-13**
ammonia	7664-41-7									n/a	**0.00E+00**
hydrogen cyanide	74-90-8									n/a	**0.00E+00**
total mercury	NA									n/a	**0.00E+00**
mercuric chloride	7487-94-7									n/a	**0.00E+00**
methyl mercury	22967-92-6									n/a	**0.00E+00**
elemental mercury	7439-97-6									n/a	**0.00E+00**
Total Pathway Risk	**All Chemicals**	**4.38E-10**	**2.26E-13**	**8.33E-17**	**2.09E-16**	**8.72E-14**	**1.46E-11**	**3.90E-13**	**6.35E-11**	**0.00E+00**	**5.17E-10**

RISK AND HAZARD BY PATHWAY FOR SUBSISTENCE FISHER EXPOSURE SCENARIOS

NONCARCINOGENIC EFFECTS: Adult Subsistence Fisher Exposure Scenario											
COPC	CAS Number	Hazard from Inhalation	Hazard from Dermal Water Contact	Hazard from Dermal Soil Contact	Hazard from Incidental Soil Ingestion	Hazard from Incidental Surface Water Ingestion	Hazard from Ingestion of Produce	Hazard from Ingestion of Terrestrial Animal Products	Hazard from Ingestion of Fish	Hazard from Ingestion of Breast Milk	Total Hazard from Individual Chemical
1,1-dichloroethene	75-35-4	4.06E-12	8.09E-16	1.69E-20	9.20E-20	1.47E-16	9.50E-15	7.42E-15	6.32E-14	n/a	**4.15E-12**
1,2-dichloroethane	107-06-2	5.05E-14	2.30E-19	1.87E-22	4.69E-22	1.18E-19	1.59E-16	7.57E-20	1.74E-17	n/a	**5.07E-14**
1,4-dichlorobenzene	106-46-7	9.60E-15	6.28E-18	9.19E-21	2.30E-20	2.86E-19	2.55E-15	1.68E-17	1.47E-15	n/a	**1.36E-14**
1,4-dithiane	505-29-3	6.53E-12	1.82E-15	5.96E-16	1.49E-15	1.34E-15	1.15E-10	2.26E-13	1.60E-13	n/a	**1.22E-10**
1,4-oxathiane	15980-15-1									n/a	**0.00E+00**
2,4-dinitrotoluene	121-14-2		1.15E-17	1.86E-18	2.90E-17	5.72E-18	9.56E-13	2.25E-12	1.98E-15	n/a	**3.21E-12**
2-butanone	78-93-3	8.57E-14	4.57E-18	1.89E-18	4.74E-18	1.08E-17	3.34E-13	1.00E-16	1.77E-15	n/a	**4.22E-13**
acetylene	74-86-2									n/a	**0.00E+00**
benzene	71-43-2	8.10E-14	3.63E-17	6.53E-21	1.64E-20	5.58E-18	1.69E-15	3.25E-18	2.39E-15	n/a	**8.51E-14**
chlorobenzene	108-90-7	6.79E-14	2.11E-17	1.39E-20	3.05E-20	1.63E-18	2.77E-15	6.11E-15	2.43E-15	n/a	**7.93E-14**
chloroform	67-66-3	6.49E-12	9.82E-16	2.91E-19	7.30E-19	2.94E-16	9.35E-14	1.42E-16	1.06E-13	n/a	**6.69E-12**
ethane	74-84-0									n/a	**0.00E+00**
HD	505-60-2	7.29E-05	9.56E-09	2.16E-11	5.42E-11	3.69E-09	1.37E-06	2.60E-08	2.74E-06	n/a	**7.71E-05**
methane	74-82-8									n/a	**0.00E+00**
monoethanolamine	141-43-5									n/a	**0.00E+00**
nitrobenzene	98-95-3	6.42E-15	1.89E-18	8.14E-19	2.04E-18	7.04E-19	5.99E-14	1.20E-15	1.94E-16	n/a	**6.77E-14**
tetrachloroethene	127-18-4	2.26E-12	1.47E-15	8.32E-20	2.09E-19	7.66E-17	7.40E-14	7.17E-17	3.29E-13	n/a	**2.66E-12**
trichloroethene	79-01-6	2.79E-11	1.87E-13	5.98E-17	1.50E-16	3.07E-14	9.69E-12	3.10E-14	2.25E-11	n/a	**6.03E-11**
vinyl chloride	75-01-4	7.81E-09	5.47E-12	1.50E-16	3.77E-16	2.28E-12	1.17E-10	5.77E-14	2.82E-10	n/a	**8.22E-09**
ammonia	7664-41-7	1.03E-06								n/a	**1.03E-06**
hydrogen cyanide	74-90-8	9.16E-05	3.71E-10	1.10E-12	2.76E-12	1.18E-09	6.19E-06	8.86E-10	1.93E-07	n/a	**9.80E-05**
total mercury	NA									n/a	**0.00E+00**
mercuric chloride	7487-94-7	3.54E-19	2.47E-25	1.08E-23	4.28E-22	0.00E+00	1.06E-19	3.31E-20	0.00E+00	n/a	**4.93E-19**
methyl mercury	22967-92-6		1.45E-26	6.26E-26	2.50E-23	0.00E+00	5.35E-20	3.78E-21	1.23E-16	n/a	**1.23E-16**
elemental mercury	7439-97-6	0.00E+00								n/a	**0.00E+00**
Total Pathway Hazard	**All Chemicals**	**1.66E-04**	**9.94E-09**	**2.27E-11**	**5.70E-11**	**4.87E-09**	**7.56E-06**	**2.69E-08**	**2.93E-06**	**0.00E+00**	**1.76E-04**

RISK AND HAZARD BY PATHWAY FOR SUBSISTENCE FISHER EXPOSURE SCENARIOS

CARCINOGENIC EFFECTS: Child Subsistence Fisher Exposure Scenario											
COPC	CAS Number	Risk from Inhalation	Risk from Dermal Water Contact	Risk from Dermal Soil Contact	Risk from Incidental Soil Ingestion	Risk from Incidental Surface Water Ingestion	Risk from Ingestion of Produce	Risk from Ingestion of Terrestrial Animal Products	Risk from Ingestion of Fish	Risk from Ingestion of Breast Milk	Total Risk from Individual Chemical
1,1-dichloroethene	75-35-4									n/a	**0.00E+00**
1,2-dichloroethane	107-06-2	1.29E-18	5.11E-23	1.59E-25	5.70E-25	7.13E-23	4.14E-20	3.05E-23	5.52E-21	n/a	**1.33E-18**
1,4-dichlorobenzene	106-46-7	1.50E-14	2.90E-22	1.62E-24	5.80E-24	3.61E-23	1.32E-19	1.70E-21	9.68E-20	n/a	**1.50E-14**
1,4-dithiane	505-29-3									n/a	**0.00E+00**
1,4-oxathiane	15980-15-1									n/a	**0.00E+00**
2,4-dinitrotoluene	121-14-2	5.26E-19	8.29E-22	5.03E-22	1.12E-20	1.12E-21	9.94E-17	1.55E-16	2.04E-19	n/a	**2.56E-16**
2-butanone	78-93-3									n/a	**0.00E+00**
acetylene	74-86-2									n/a	**0.00E+00**
benzene	71-43-2	3.76E-18	9.75E-22	6.73E-25	2.40E-24	4.09E-22	5.47E-20	1.58E-22	9.19E-20	n/a	**3.91E-18**
chlorobenzene	108-90-7									n/a	**0.00E+00**
chloroform	67-66-3	1.47E-15	3.72E-20	4.22E-23	1.51E-22	3.04E-20	4.24E-18	9.75E-21	5.71E-18	n/a	**1.48E-15**
ethane	74-84-0									n/a	**0.00E+00**
HD	505-60-2	1.23E-09	6.30E-14	5.46E-16	1.95E-15	6.62E-14	1.52E-11	3.10E-13	2.57E-11	n/a	**1.27E-09**
methane	74-82-8									n/a	**0.00E+00**
monoethanolamine	141-43-5									n/a	**0.00E+00**
nitrobenzene	98-95-3	4.62E-19								n/a	**4.62E-19**
tetrachloroethene	127-18-4	9.48E-17	9.70E-19	2.10E-22	7.51E-22	1.38E-19	5.43E-17	8.51E-20	3.10E-16	n/a	**4.60E-16**
trichloroethene	79-01-6	2.23E-14	2.74E-18	3.36E-21	1.20E-20	1.23E-18	1.72E-16	8.23E-19	4.70E-16	n/a	**2.29E-14**
vinyl chloride	75-01-4	6.79E-13	1.44E-15	1.52E-19	5.43E-19	1.64E-15	3.65E-14	2.76E-17	1.06E-13	n/a	**8.26E-13**
ammonia	7664-41-7									n/a	**0.00E+00**
hydrogen cyanide	74-90-8									n/a	**0.00E+00**
total mercury	NA									n/a	**0.00E+00**
mercuric chloride	7487-94-7									n/a	**0.00E+00**
methyl mercury	22967-92-6									n/a	**0.00E+00**
elemental mercury	7439-97-6									n/a	**0.00E+00**
Total Pathway Risk	**All Chemicals**	**1.23E-09**	**6.44E-14**	**5.46E-16**	**1.95E-15**	**6.79E-14**	**1.53E-11**	**3.10E-13**	**2.58E-11**	**0.00E+00**	**1.27E-09**

RISK AND HAZARD BY PATHWAY FOR SUBSISTENCE FISHER EXPOSURE SCENARIOS

NONCARCINOGENIC EFFECTS: Child Subsistence Fisher Exposure Scenario											
COPC	CAS Number	Hazard from Inhalation	Hazard from Dermal Water Contact	Hazard from Dermal Soil Contact	Hazard from Incidental Soil Ingestion	Hazard from Incidental Surface Water Ingestion	Hazard from Ingestion of Produce	Hazard from Ingestion of Terrestrial Animal Products	Hazard from Ingestion of Fish	Hazard from Ingestion of Breast Milk	Total Hazard from Individual Chemical
1,1-dichloroethene	75-35-4	1.14E-11	1.38E-15	1.10E-19	8.59E-19	6.88E-16	1.96E-14	1.24E-14	1.54E-13	n/a	**1.16E-11**
1,2-dichloroethane	107-06-2	1.41E-13	3.93E-19	1.23E-21	4.38E-21	5.49E-19	3.18E-16	2.35E-19	4.25E-17	n/a	**1.42E-13**
1,4-dichlorobenzene	106-46-7	2.69E-14	1.07E-17	6.02E-20	2.15E-19	1.34E-18	4.89E-15	6.31E-17	3.59E-15	n/a	**3.54E-14**
1,4-dithiane	505-29-3	1.83E-11	3.12E-15	3.91E-15	1.39E-14	6.25E-15	2.85E-10	6.99E-13	3.90E-13	n/a	**3.04E-10**
1,4-oxathiane	15980-15-1									n/a	**0.00E+00**
2,4-dinitrotoluene	121-14-2		1.97E-17	1.22E-17	2.71E-16	2.67E-17	2.41E-12	3.76E-12	4.84E-15	n/a	**6.17E-12**
2-butanone	78-93-3	2.40E-13	7.81E-18	1.24E-17	4.42E-17	5.03E-17	9.25E-13	3.10E-16	4.32E-15	n/a	**1.17E-12**
acetylene	74-86-2									n/a	**0.00E+00**
benzene	71-43-2	2.27E-13	6.20E-17	4.28E-20	1.53E-19	2.61E-17	3.48E-15	1.01E-17	5.85E-15	n/a	**2.36E-13**
chlorobenzene	108-90-7	1.90E-13	3.62E-17	9.12E-20	2.85E-19	7.63E-18	5.44E-15	1.93E-14	5.93E-15	n/a	**2.21E-13**
chloroform	67-66-3	1.82E-11	1.68E-15	1.91E-18	6.81E-18	1.37E-15	1.91E-13	4.40E-16	2.58E-13	n/a	**1.86E-11**
ethane	74-84-0									n/a	**0.00E+00**
HD	505-60-2	2.04E-04	1.64E-08	1.42E-10	5.06E-10	1.72E-08	3.95E-06	8.04E-08	6.69E-06	n/a	**2.15E-04**
methane	74-82-8									n/a	**0.00E+00**
monoethanolamine	141-43-5									n/a	**0.00E+00**
nitrobenzene	98-95-3	1.80E-14	3.24E-18	5.33E-18	1.90E-17	3.28E-18	1.63E-13	4.53E-15	4.73E-16	n/a	**1.86E-13**
tetrachloroethene	127-18-4	6.32E-12	2.52E-15	5.45E-19	1.95E-18	3.57E-16	1.41E-13	2.21E-16	8.04E-13	n/a	**7.26E-12**
trichloroethene	79-01-6	7.80E-11	3.20E-13	3.92E-16	1.40E-15	1.43E-13	2.01E-11	9.60E-14	5.49E-11	n/a	**1.54E-10**
vinyl chloride	75-01-4	2.19E-08	9.36E-12	9.86E-16	3.52E-15	1.06E-11	2.37E-10	1.79E-13	6.90E-10	n/a	**2.28E-08**
ammonia	7664-41-7	2.89E-06								n/a	**2.89E-06**
hydrogen cyanide	74-90-8	2.57E-04	6.35E-10	7.21E-12	2.58E-11	5.50E-09	2.02E-05	2.74E-09	4.72E-07	n/a	**2.77E-04**
total mercury	NA									n/a	**0.00E+00**
mercuric chloride	7487-94-7	9.92E-19	4.23E-25	7.09E-23	4.00E-21	0.00E+00	3.30E-19	1.14E-19	0.00E+00	n/a	**1.44E-18**
methyl mercury	22967-92-6		2.48E-26	4.10E-25	2.34E-22	0.00E+00	1.78E-19	1.32E-20	3.00E-16	n/a	**3.01E-16**
elemental mercury	7439-97-6	0.00E+00								n/a	**0.00E+00**
Total Pathway Hazard	**All Chemicals**	**4.64E-04**	**1.70E-08**	**1.49E-10**	**5.32E-10**	**2.27E-08**	**2.41E-05**	**8.32E-08**	**7.16E-06**	**0.00E+00**	**4.95E-04**

RISK AND HAZARD BY PATHWAY FOR SUBSISTENCE FISHER EXPOSURE SCENARIOS

CARCINOGENIC EFFECTS: Infant Subsistence Fisher Exposure Scenario											
COPC	CAS Number	Risk from Inhalation	Risk from Dermal Water Contact	Risk from Dermal Soil Contact	Risk from Incidental Soil Ingestion	Risk from Incidental Surface Water Ingestion	Risk from Ingestion of Produce	Risk from Ingestion of Terrestrial Animal Products	Risk from Ingestion of Fish	Risk from Ingestion of Breast Milk	Total Risk from Individual Chemical
1,1-dichloroethene	75-35-4		n/a			n/a					**0.00E+00**
1,2-dichloroethane	107-06-2	1.45E-19	n/a	4.48E-26	1.71E-25	n/a	1.02E-20	1.79E-23	1.66E-21	4.48E-19	**6.05E-19**
1,4-dichlorobenzene	106-46-7	1.68E-15	n/a	4.57E-25	1.74E-24	n/a	3.31E-20	1.15E-21	2.91E-20	3.07E-19	**1.68E-15**
1,4-dithiane	505-29-3		n/a			n/a					**0.00E+00**
1,4-oxathiane	15980-15-1		n/a			n/a					**0.00E+00**
2,4-dinitrotoluene	121-14-2	5.92E-20	n/a	1.42E-22	3.35E-21	n/a	2.21E-17	2.64E-17	6.12E-20		**4.86E-17**
2-butanone	78-93-3		n/a			n/a					**0.00E+00**
acetylene	74-86-2		n/a			n/a					**0.00E+00**
benzene	71-43-2	4.23E-19	n/a	1.89E-25	7.21E-25	n/a	1.33E-20	9.29E-23	2.76E-20	2.60E-18	**3.06E-18**
chlorobenzene	108-90-7		n/a			n/a					**0.00E+00**
chloroform	67-66-3	1.66E-16	n/a	1.19E-23	4.53E-23	n/a	1.03E-18	5.73E-21	1.71E-18	1.91E-16	**3.59E-16**
ethane	74-84-0		n/a			n/a					**0.00E+00**
HD	505-60-2	1.38E-10	n/a	1.53E-16	5.85E-16	n/a	3.56E-12	1.84E-13	7.72E-12		**1.49E-10**
methane	74-82-8		n/a			n/a					**0.00E+00**
monoethanolamine	141-43-5		n/a			n/a					**0.00E+00**
nitrobenzene	98-95-3	5.20E-20	n/a			n/a					**5.20E-20**
tetrachloroethene	127-18-4	1.07E-17	n/a	5.91E-23	2.25E-22	n/a	1.37E-17	5.03E-20	9.30E-17	9.53E-16	**1.07E-15**
trichloroethene	79-01-6	2.51E-15	n/a	9.44E-22	3.60E-21	n/a	4.16E-17	4.83E-19	1.41E-16	7.65E-15	**1.03E-14**
vinyl chloride	75-01-4	7.64E-14	n/a	4.28E-20	1.63E-19	n/a	8.91E-15	1.62E-17	3.19E-14		**1.17E-13**
ammonia	7664-41-7		n/a			n/a					**0.00E+00**
hydrogen cyanide	74-90-8		n/a			n/a					**0.00E+00**
total mercury	NA		n/a			n/a					**0.00E+00**
mercuric chloride	7487-94-7		n/a			n/a					**0.00E+00**
methyl mercury	22967-92-6		n/a			n/a					**0.00E+00**
elemental mercury	7439-97-6		n/a			n/a					**0.00E+00**
Total Pathway Risk	**All Chemicals**	**1.38E-10**	**0.00E+00**	**1.54E-16**	**5.85E-16**	**0.00E+00**	**3.57E-12**	**1.84E-13**	**7.75E-12**	**8.80E-15**	**1.49E-10**

RISK AND HAZARD BY PATHWAY FOR SUBSISTENCE FISHER EXPOSURE SCENARIOS

NONCARCINOGENIC EFFECTS: Infant Subsistence Fisher Exposure Scenario											
COPC	CAS Number	Hazard from Inhalation	Hazard from Dermal Water Contact	Hazard from Dermal Soil Contact	Hazard from Incidental Soil Ingestion	Hazard from Incidental Surface Water Ingestion	Hazard from Ingestion of Produce	Hazard from Ingestion of Terrestrial Animal Products	Hazard from Ingestion of Fish	Hazard from Ingestion of Breast Milk	Total Hazard from Individual Chemical
1,1-dichloroethene	75-35-4	6.40E-12	n/a	1.55E-19	1.29E-18	n/a	2.37E-14	1.05E-14	2.32E-13		**6.67E-12**
1,2-dichloroethane	107-06-2	7.96E-14	n/a	1.72E-21	6.57E-21	n/a	3.91E-16	6.90E-19	6.37E-17	1.72E-14	**9.73E-14**
1,4-dichlorobenzene	106-46-7	1.51E-14	n/a	8.46E-20	3.22E-19	n/a	6.13E-15	2.12E-16	5.38E-15	5.69E-14	**8.38E-14**
1,4-dithiane	505-29-3	1.03E-11	n/a	5.49E-15	2.09E-14	n/a	3.18E-10	2.05E-12	5.86E-13		**3.31E-10**
1,4-oxathiane	15980-15-1		n/a			n/a					**0.00E+00**
2,4-dinitrotoluene	121-14-2		n/a	1.71E-17	4.06E-16	n/a	2.67E-12	3.20E-12	7.26E-15		**5.88E-12**
2-butanone	78-93-3	1.35E-13	n/a	1.74E-17	6.63E-17	n/a	9.87E-13	9.11E-16	6.48E-15	2.49E-12	**3.62E-12**
acetylene	74-86-2		n/a			n/a					**0.00E+00**
benzene	71-43-2	1.28E-13	n/a	6.02E-20	2.29E-19	n/a	4.22E-15	2.96E-17	8.77E-15	8.27E-13	**9.68E-13**
chlorobenzene	108-90-7	1.07E-13	n/a	1.28E-19	4.28E-19	n/a	6.75E-15	5.86E-14	8.89E-15		**1.81E-13**
chloroform	67-66-3	1.02E-11	n/a	2.68E-18	1.02E-17	n/a	2.33E-13	1.29E-15	3.87E-13	4.31E-11	**5.40E-11**
ethane	74-84-0		n/a			n/a					**0.00E+00**
HD	505-60-2	1.15E-04	n/a	1.99E-10	7.59E-10	n/a	4.63E-06	2.39E-07	1.00E-05		**1.30E-04**
methane	74-82-8		n/a			n/a					**0.00E+00**
monoethanolamine	141-43-5		n/a			n/a					**0.00E+00**
nitrobenzene	98-95-3	1.01E-14	n/a	7.50E-18	2.86E-17	n/a	1.75E-13	1.53E-14	7.09E-16		**2.01E-13**
tetrachloroethene	127-18-4	3.55E-12	n/a	7.66E-19	2.92E-18	n/a	1.77E-13	6.52E-16	1.21E-12	1.24E-11	**1.73E-11**
trichloroethene	79-01-6	4.39E-11	n/a	5.51E-16	2.10E-15	n/a	2.43E-11	2.82E-13	8.23E-11	4.46E-09	**4.61E-09**
vinyl chloride	75-01-4	1.23E-08	n/a	1.39E-15	5.28E-15	n/a	2.89E-10	5.26E-13	1.03E-09		**1.36E-08**
ammonia	7664-41-7	1.63E-06	n/a			n/a					**1.63E-06**
hydrogen cyanide	74-90-8	1.44E-04	n/a	1.01E-11	3.87E-11	n/a	2.38E-05	8.18E-09	7.08E-07		**1.69E-04**
total mercury	NA		n/a			n/a					**0.00E+00**
mercuric chloride	7487-94-7	5.58E-19	n/a	9.97E-23	5.99E-21	n/a	3.91E-19	3.70E-19	0.00E+00	6.93E-19	**2.02E-18**
methyl mercury	22967-92-6		n/a	5.76E-25	3.50E-22	n/a	2.24E-19	4.29E-20	4.51E-16	5.71E-16	**1.02E-15**
elemental mercury	7439-97-6	0.00E+00	n/a			n/a					**0.00E+00**
Total Pathway Hazard	**All Chemicals**	**2.61E-04**	**0.00E+00**	**2.09E-10**	**7.98E-10**	**0.00E+00**	**2.84E-05**	**2.47E-07**	**1.07E-05**	**4.52E-09**	**3.00E-04**

RISK AND HAZARD BY PATHWAY FOR SUBSISTENCE FISHER EXPOSURE SCENARIOS

CARCINOGENIC EFFECTS: Early Life Exposure - Infant											
COPC	CAS Number	Risk from Inhalation	Risk from Dermal Water Contact	Risk from Dermal Soil Contact	Risk from Incidental Soil Ingestion	Risk from Incidental Surface Water Ingestion	Risk from Ingestion of Produce	Risk from Ingestion of Terrestrial Animal Products	Risk from Ingestion of Fish	Risk from Ingestion of Breast Milk	Total Risk from Individual Chemical
vinyl chloride	75-01-4	5.35E-12	n/a	2.99E-18	1.14E-17	n/a	6.24E-13	1.14E-15	2.24E-12	n/a	**8.21E-12**

CARCINOGENIC EFFECTS: Early Life Exposure - Child											
COPC	CAS Number	Risk from Inhalation	Risk from Dermal Water Contact	Risk from Dermal Soil Contact	Risk from Incidental Soil Ingestion	Risk from Incidental Surface Water Ingestion	Risk from Ingestion of Produce	Risk from Ingestion of Terrestrial Animal Products	Risk from Ingestion of Fish	Risk from Ingestion of Breast Milk	Total Risk from Individual Chemical
vinyl chloride	75-01-4	9.51E-12	2.02E-14	2.13E-18	7.60E-18	2.29E-14	5.12E-13	3.87E-16	1.49E-12	n/a	**1.16E-11**

RISK AND HAZARD BY PATHWAY FOR SUBSISTENCE FARMER EXPOSURE SCENARIOS

CARCINOGENIC EFFECTS: Adult Subsistence Farmer Exposure Scenario											
COPC	CAS Number	Risk from Inhalation	Risk from Dermal Water Contact	Risk from Dermal Soil Contact	Risk from Incidental Soil Ingestion	Risk from Incidental Surface Water Ingestion	Risk from Ingestion of Produce	Risk from Ingestion of Terrestrial Animal Products	Risk from Ingestion of Fish	Risk from Ingestion of Breast Milk	Total Risk from Individual Chemical
1,1-dichloroethene	75-35-4									n/a	**0.00E+00**
1,2-dichloroethane	107-06-2	4.60E-19	2.39E-22	2.43E-26	6.10E-26	1.22E-22	5.19E-20	2.63E-23	7.22E-21	n/a	**5.19E-19**
1,4-dichlorobenzene	106-46-7	5.35E-15	1.35E-21	2.48E-25	6.22E-25	6.15E-23	1.78E-19	3.20E-21	1.26E-19	n/a	**5.35E-15**
1,4-dithiane	505-29-3									n/a	**0.00E+00**
1,4-oxathiane	15980-15-1									n/a	**0.00E+00**
2,4-dinitrotoluene	121-14-2	1.88E-19	1.51E-21	8.24E-23	1.28E-21	7.48E-22	1.09E-16	2.69E-16	1.04E-19	n/a	**3.78E-16**
2-butanone	78-93-3									n/a	**0.00E+00**
acetylene	74-86-2									n/a	**0.00E+00**
benzene	71-43-2	1.34E-18	4.55E-21	1.03E-25	2.57E-25	7.01E-22	6.74E-20	1.48E-22	1.20E-19	n/a	**1.54E-18**
chlorobenzene	108-90-7									n/a	**0.00E+00**
chloroform	67-66-3	5.26E-16	1.74E-19	6.45E-24	1.62E-23	5.20E-20	5.27E-18	9.40E-21	7.48E-18	n/a	**5.39E-16**
ethane	74-84-0									n/a	**0.00E+00**
HD	505-60-2	4.38E-10	2.94E-13	8.33E-17	2.09E-16	1.13E-13	4.56E-11	1.26E-12	3.37E-11	n/a	**5.19E-10**
methane	74-82-8									n/a	**0.00E+00**
monoethanolamine	141-43-5									n/a	**0.00E+00**
nitrobenzene	98-95-3	1.65E-19								n/a	**1.65E-19**
tetrachloroethene	127-18-4	3.38E-17	4.53E-18	3.21E-23	8.04E-23	2.36E-19	7.38E-17	3.05E-19	4.06E-16	n/a	**5.19E-16**
trichloroethene	79-01-6	7.96E-15	1.28E-17	5.13E-22	1.29E-21	2.10E-18	2.11E-16	7.72E-19	6.16E-16	n/a	**8.80E-15**
vinyl chloride	75-01-4	2.43E-13	6.75E-15	2.32E-20	5.82E-20	2.81E-15	4.51E-14	2.33E-17	1.39E-13	n/a	**4.37E-13**
ammonia	7664-41-7									n/a	**0.00E+00**
hydrogen cyanide	74-90-8									n/a	**0.00E+00**
total mercury	NA									n/a	**0.00E+00**
mercuric chloride	7487-94-7									n/a	**0.00E+00**
methyl mercury	22967-92-6									n/a	**0.00E+00**
elemental mercury	7439-97-6									n/a	**0.00E+00**
Total Pathway Risk	**All Chemicals**	**4.38E-10**	**3.01E-13**	**8.33E-17**	**2.09E-16**	**1.16E-13**	**4.57E-11**	**1.26E-12**	**3.38E-11**	**0.00E+00**	**5.19E-10**

RISK AND HAZARD BY PATHWAY FOR SUBSISTENCE FARMER EXPOSURE SCENARIOS

NONCARCINOGENIC EFFECTS: Adult Subsistence Farmer Exposure Scenario											
COPC	CAS Number	Hazard from Inhalation	Hazard from Dermal Water Contact	Hazard from Dermal Soil Contact	Hazard from Incidental Soil Ingestion	Hazard from Incidental Surface Water Ingestion	Hazard from Ingestion of Produce	Hazard from Ingestion of Terrestrial Animal Products	Hazard from Ingestion of Fish	Hazard from Ingestion of Breast Milk	Total Hazard from Individual Chemical
1,1-dichloroethene	75-35-4	4.06E-12	8.09E-16	1.69E-20	9.20E-20	1.47E-16	2.38E-14	1.85E-14	2.53E-14	n/a	**4.13E-12**
1,2-dichloroethane	107-06-2	5.05E-14	2.30E-19	1.87E-22	4.69E-22	1.18E-19	3.97E-16	1.89E-19	6.96E-18	n/a	**5.09E-14**
1,4-dichlorobenzene	106-46-7	9.60E-15	6.28E-18	9.19E-21	2.30E-20	2.86E-19	6.37E-15	4.20E-17	5.87E-16	n/a	**1.66E-14**
1,4-dithiane	505-29-3	6.53E-12	1.82E-15	5.96E-16	1.49E-15	1.34E-15	2.87E-10	5.64E-13	6.39E-14	n/a	**2.94E-10**
1,4-oxathiane	15980-15-1									n/a	**0.00E+00**
2,4-dinitrotoluene	121-14-2		1.15E-17	1.86E-18	2.90E-17	5.72E-18	2.39E-12	5.62E-12	7.93E-16	n/a	**8.01E-12**
2-butanone	78-93-3	8.57E-14	4.57E-18	1.89E-18	4.74E-18	1.08E-17	8.35E-13	2.50E-16	7.07E-16	n/a	**9.22E-13**
acetylene	74-86-2									n/a	**0.00E+00**
benzene	71-43-2	8.10E-14	3.63E-17	6.53E-21	1.64E-20	5.58E-18	4.23E-15	8.13E-18	9.58E-16	n/a	**8.62E-14**
chlorobenzene	108-90-7	6.79E-14	2.11E-17	1.39E-20	3.05E-20	1.63E-18	6.92E-15	1.53E-14	9.71E-16	n/a	**9.11E-14**
chloroform	67-66-3	6.49E-12	9.82E-16	2.91E-19	7.30E-19	2.94E-16	2.34E-13	3.56E-16	4.22E-14	n/a	**6.77E-12**
ethane	74-84-0									n/a	**0.00E+00**
HD	505-60-2	7.29E-05	9.56E-09	2.16E-11	5.42E-11	3.69E-09	3.42E-06	6.50E-08	1.09E-06	n/a	**7.75E-05**
methane	74-82-8									n/a	**0.00E+00**
monoethanolamine	141-43-5									n/a	**0.00E+00**
nitrobenzene	98-95-3	6.42E-15	1.89E-18	8.14E-19	2.04E-18	7.04E-19	1.50E-13	3.01E-15	7.75E-17	n/a	**1.59E-13**
tetrachloroethene	127-18-4	2.26E-12	1.47E-15	8.32E-20	2.09E-19	7.66E-17	1.85E-13	1.79E-16	1.32E-13	n/a	**2.57E-12**
trichloroethene	79-01-6	2.79E-11	1.87E-13	5.98E-17	1.50E-16	3.07E-14	2.42E-11	7.76E-14	8.99E-12	n/a	**6.14E-11**
vinyl chloride	75-01-4	7.81E-09	5.47E-12	1.50E-16	3.77E-16	2.28E-12	2.91E-10	1.44E-13	1.13E-10	n/a	**8.22E-09**
ammonia	7664-41-7	1.03E-06								n/a	**1.03E-06**
hydrogen cyanide	74-90-8	9.16E-05	3.71E-10	1.10E-12	2.76E-12	1.18E-09	1.55E-05	2.21E-09	7.73E-08	n/a	**1.07E-04**
total mercury	NA									n/a	**0.00E+00**
mercuric chloride	7487-94-7	3.54E-19	2.47E-25	1.08E-23	4.28E-22	0.00E+00	2.64E-19	8.27E-20	0.00E+00	n/a	**7.02E-19**
methyl mercury	22967-92-6		1.45E-26	6.26E-26	2.50E-23	0.00E+00	1.34E-19	9.46E-21	4.92E-17	n/a	**4.93E-17**
elemental mercury	7439-97-6	0.00E+00								n/a	**0.00E+00**
Total Pathway Hazard	**All Chemicals**	**1.66E-04**	**9.94E-09**	**2.27E-11**	**5.70E-11**	**4.87E-09**	**1.89E-05**	**6.72E-08**	**1.17E-06**	**0.00E+00**	**1.86E-04**

RISK AND HAZARD BY PATHWAY FOR SUBSISTENCE FARMER EXPOSURE SCENARIOS

CARCINOGENIC EFFECTS: Child Subsistence Farmer Exposure Scenario											
COPC	CAS Number	Risk from Inhalation	Risk from Dermal Water Contact	Risk from Dermal Soil Contact	Risk from Incidental Soil Ingestion	Risk from Incidental Surface Water Ingestion	Risk from Ingestion of Produce	Risk from Ingestion of Terrestrial Animal Products	Risk from Ingestion of Fish	Risk from Ingestion of Breast Milk	Total Risk from Individual Chemical
1,1-dichloroethene	75-35-4									n/a	**0.00E+00**
1,2-dichloroethane	107-06-2	1.29E-18	5.11E-23	1.59E-25	5.70E-25	7.13E-23	1.03E-19	7.62E-23	2.21E-21	n/a	**1.39E-18**
1,4-dichlorobenzene	106-46-7	1.50E-14	2.90E-22	1.62E-24	5.80E-24	3.61E-23	3.30E-19	4.26E-21	3.87E-20	n/a	**1.50E-14**
1,4-dithiane	505-29-3									n/a	**0.00E+00**
1,4-oxathiane	15980-15-1									n/a	**0.00E+00**
2,4-dinitrotoluene	121-14-2	5.26E-19	8.29E-22	5.03E-22	1.12E-20	1.12E-21	2.48E-16	3.89E-16	8.16E-20	n/a	**6.38E-16**
2-butanone	78-93-3									n/a	**0.00E+00**
acetylene	74-86-2									n/a	**0.00E+00**
benzene	71-43-2	3.76E-18	9.75E-22	6.73E-25	2.40E-24	4.09E-22	1.37E-19	3.95E-22	3.68E-20	n/a	**3.94E-18**
chlorobenzene	108-90-7									n/a	**0.00E+00**
chloroform	67-66-3	1.47E-15	3.72E-20	4.22E-23	1.51E-22	3.04E-20	1.06E-17	2.44E-20	2.28E-18	n/a	**1.49E-15**
ethane	74-84-0									n/a	**0.00E+00**
HD	505-60-2	1.23E-09	6.30E-14	5.46E-16	1.95E-15	6.62E-14	3.80E-11	7.74E-13	1.03E-11	n/a	**1.27E-09**
methane	74-82-8									n/a	**0.00E+00**
monoethanolamine	141-43-5									n/a	**0.00E+00**
nitrobenzene	98-95-3	4.62E-19								n/a	**4.62E-19**
tetrachloroethene	127-18-4	9.48E-17	9.70E-19	2.10E-22	7.51E-22	1.38E-19	1.36E-16	2.13E-19	1.24E-16	n/a	**3.56E-16**
trichloroethene	79-01-6	2.23E-14	2.74E-18	3.36E-21	1.20E-20	1.23E-18	4.30E-16	2.06E-18	1.88E-16	n/a	**2.29E-14**
vinyl chloride	75-01-4	6.79E-13	1.44E-15	1.52E-19	5.43E-19	1.64E-15	9.14E-14	6.90E-17	4.26E-14	n/a	**8.17E-13**
ammonia	7664-41-7									n/a	**0.00E+00**
hydrogen cyanide	74-90-8									n/a	**0.00E+00**
total mercury	NA									n/a	**0.00E+00**
mercuric chloride	7487-94-7									n/a	**0.00E+00**
methyl mercury	22967-92-6									n/a	**0.00E+00**
elemental mercury	7439-97-6									n/a	**0.00E+00**
Total Pathway Risk	**All Chemicals**	**1.23E-09**	**6.44E-14**	**5.46E-16**	**1.95E-15**	**6.79E-14**	**3.81E-11**	**7.75E-13**	**1.03E-11**	**0.00E+00**	**1.28E-09**

RISK AND HAZARD BY PATHWAY FOR SUBSISTENCE FARMER EXPOSURE SCENARIOS

NONCARCINOGENIC EFFECTS: Child Subsistence Farmer Exposure Scenario											
COPC	CAS Number	Hazard from Inhalation	Hazard from Dermal Water Contact	Hazard from Dermal Soil Contact	Hazard from Incidental Soil Ingestion	Hazard from Incidental Surface Water Ingestion	Hazard from Ingestion of Produce	Hazard from Ingestion of Terrestrial Animal Products	Hazard from Ingestion of Fish	Hazard from Ingestion of Breast Milk	Total Hazard from Individual Chemical
1,1-dichloroethene	75-35-4	1.14E-11	1.38E-15	1.10E-19	8.59E-19	6.88E-16	4.89E-14	3.10E-14	6.17E-14	n/a	**1.15E-11**
1,2-dichloroethane	107-06-2	1.41E-13	3.93E-19	1.23E-21	4.38E-21	5.49E-19	7.95E-16	5.86E-19	1.70E-17	n/a	**1.42E-13**
1,4-dichlorobenzene	106-46-7	2.69E-14	1.07E-17	6.02E-20	2.15E-19	1.34E-18	1.22E-14	1.58E-16	1.43E-15	n/a	**4.07E-14**
1,4-dithiane	505-29-3	1.83E-11	3.12E-15	3.91E-15	1.39E-14	6.25E-15	7.13E-10	1.75E-12	1.56E-13	n/a	**7.33E-10**
1,4-oxathiane	15980-15-1									n/a	**0.00E+00**
2,4-dinitrotoluene	121-14-2		1.97E-17	1.22E-17	2.71E-16	2.67E-17	6.02E-12	9.40E-12	1.94E-15	n/a	**1.54E-11**
2-butanone	78-93-3	2.40E-13	7.81E-18	1.24E-17	4.42E-17	5.03E-17	2.31E-12	7.75E-16	1.73E-15	n/a	**2.55E-12**
acetylene	74-86-2									n/a	**0.00E+00**
benzene	71-43-2	2.27E-13	6.20E-17	4.28E-20	1.53E-19	2.61E-17	8.71E-15	2.52E-17	2.34E-15	n/a	**2.38E-13**
chlorobenzene	108-90-7	1.90E-13	3.62E-17	9.12E-20	2.85E-19	7.63E-18	1.36E-14	4.82E-14	2.37E-15	n/a	**2.54E-13**
chloroform	67-66-3	1.82E-11	1.68E-15	1.91E-18	6.81E-18	1.37E-15	4.79E-13	1.10E-15	1.03E-13	n/a	**1.88E-11**
ethane	74-84-0									n/a	**0.00E+00**
HD	505-60-2	2.04E-04	1.64E-08	1.42E-10	5.06E-10	1.72E-08	9.88E-06	2.01E-07	2.67E-06	n/a	**2.17E-04**
methane	74-82-8									n/a	**0.00E+00**
monoethanolamine	141-43-5									n/a	**0.00E+00**
nitrobenzene	98-95-3	1.80E-14	3.24E-18	5.33E-18	1.90E-17	3.28E-18	4.07E-13	1.13E-14	1.89E-16	n/a	**4.37E-13**
tetrachloroethene	127-18-4	6.32E-12	2.52E-15	5.45E-19	1.95E-18	3.57E-16	3.52E-13	5.52E-16	3.22E-13	n/a	**6.99E-12**
trichloroethene	79-01-6	7.80E-11	3.20E-13	3.92E-16	1.40E-15	1.43E-13	5.02E-11	2.40E-13	2.20E-11	n/a	**1.51E-10**
vinyl chloride	75-01-4	2.19E-08	9.36E-12	9.86E-16	3.52E-15	1.06E-11	5.92E-10	4.48E-13	2.76E-10	n/a	**2.28E-08**
ammonia	7664-41-7	2.89E-06								n/a	**2.89E-06**
hydrogen cyanide	74-90-8	2.57E-04	6.35E-10	7.21E-12	2.58E-11	5.50E-09	5.04E-05	6.86E-09	1.89E-07	n/a	**3.07E-04**
total mercury	NA									n/a	**0.00E+00**
mercuric chloride	7487-94-7	9.92E-19	4.23E-25	7.09E-23	4.00E-21	0.00E+00	8.25E-19	2.86E-19	0.00E+00	n/a	**2.11E-18**
methyl mercury	22967-92-6		2.48E-26	4.10E-25	2.34E-22	0.00E+00	4.45E-19	3.30E-20	1.20E-16	n/a	**1.21E-16**
elemental mercury	7439-97-6	0.00E+00								n/a	**0.00E+00**
Total Pathway Hazard	**All Chemicals**	**4.64E-04**	**1.70E-08**	**1.49E-10**	**5.32E-10**	**2.27E-08**	**6.03E-05**	**2.08E-07**	**2.86E-06**	**0.00E+00**	**5.27E-04**

RISK AND HAZARD BY PATHWAY FOR SUBSISTENCE FARMER EXPOSURE SCENARIOS

CARCINOGENIC EFFECTS: Infant Subsistence Farmer Exposure Scenario											
COPC	CAS Number	Risk from Inhalation	Risk from Dermal Water Contact	Risk from Dermal Soil Contact	Risk from Incidental Soil Ingestion	Risk from Incidental Surface Water Ingestion	Risk from Ingestion of Produce	Risk from Ingestion of Terrestrial Animal Products	Risk from Ingestion of Fish	Risk from Ingestion of Breast Milk	Total Risk from Individual Chemical
1,1-dichloroethene	75-35-4		n/a			n/a					**0.00E+00**
1,2-dichloroethane	107-06-2	1.45E-19	n/a	4.48E-26	1.71E-25	n/a	2.54E-20	4.48E-23	6.63E-22	4.76E-19	**6.47E-19**
1,4-dichlorobenzene	106-46-7	1.68E-15	n/a	4.57E-25	1.74E-24	n/a	8.28E-20	2.87E-21	1.16E-20	3.82E-19	**1.68E-15**
1,4-dithiane	505-29-3		n/a			n/a					**0.00E+00**
1,4-oxathiane	15980-15-1		n/a			n/a					**0.00E+00**
2,4-dinitrotoluene	121-14-2	5.92E-20	n/a	1.42E-22	3.35E-21	n/a	5.52E-17	6.60E-17	2.45E-20		**1.21E-16**
2-butanone	78-93-3		n/a			n/a					**0.00E+00**
acetylene	74-86-2		n/a			n/a					**0.00E+00**
benzene	71-43-2	4.23E-19	n/a	1.89E-25	7.21E-25	n/a	3.32E-20	2.32E-22	1.10E-20	2.62E-18	**3.08E-18**
chlorobenzene	108-90-7		n/a			n/a					**0.00E+00**
chloroform	67-66-3	1.66E-16	n/a	1.19E-23	4.53E-23	n/a	2.58E-18	1.43E-20	6.85E-19	1.93E-16	**3.61E-16**
ethane	74-84-0		n/a			n/a					**0.00E+00**
HD	505-60-2	1.38E-10	n/a	1.53E-16	5.85E-16	n/a	8.90E-12	4.60E-13	3.09E-12		**1.50E-10**
methane	74-82-8		n/a			n/a					**0.00E+00**
monoethanolamine	141-43-5		n/a			n/a					**0.00E+00**
nitrobenzene	98-95-3	5.20E-20	n/a			n/a					**5.20E-20**
tetrachloroethene	127-18-4	1.07E-17	n/a	5.91E-23	2.25E-22	n/a	3.42E-17	1.26E-19	3.72E-17	9.22E-16	**1.00E-15**
trichloroethene	79-01-6	2.51E-15	n/a	9.44E-22	3.60E-21	n/a	1.04E-16	1.21E-18	5.64E-17	7.66E-15	**1.03E-14**
vinyl chloride	75-01-4	7.64E-14	n/a	4.28E-20	1.63E-19	n/a	2.23E-14	4.06E-17	1.28E-14		**1.12E-13**
ammonia	7664-41-7		n/a			n/a					**0.00E+00**
hydrogen cyanide	74-90-8		n/a			n/a					**0.00E+00**
total mercury	NA		n/a			n/a					**0.00E+00**
mercuric chloride	7487-94-7		n/a			n/a					**0.00E+00**
methyl mercury	22967-92-6		n/a			n/a					**0.00E+00**
elemental mercury	7439-97-6		n/a			n/a					**0.00E+00**
Total Pathway Risk	**All Chemicals**	**1.38E-10**	**0.00E+00**	**1.54E-16**	**5.85E-16**	**0.00E+00**	**8.93E-12**	**4.60E-13**	**3.10E-12**	**8.78E-15**	**1.50E-10**

RISK AND HAZARD BY PATHWAY FOR SUBSISTENCE FARMER EXPOSURE SCENARIOS

NONCARCINOGENIC EFFECTS: Infant Subsistence Farmer Exposure Scenario											
COPC	CAS Number	Hazard from Inhalation	Hazard from Dermal Water Contact	Hazard from Dermal Soil Contact	Hazard from Incidental Soil Ingestion	Hazard from Incidental Surface Water Ingestion	Hazard from Ingestion of Produce	Hazard from Ingestion of Terrestrial Animal Products	Hazard from Ingestion of Fish	Hazard from Ingestion of Breast Milk	Total Hazard from Individual Chemical
1,1-dichloroethene	75-35-4	6.40E-12	n/a	1.55E-19	1.29E-18	n/a	5.93E-14	2.63E-14	9.26E-14		**6.58E-12**
1,2-dichloroethane	107-06-2	7.96E-14	n/a	1.72E-21	6.57E-21	n/a	9.77E-16	1.72E-18	2.55E-17	1.83E-14	**9.89E-14**
1,4-dichlorobenzene	106-46-7	1.51E-14	n/a	8.46E-20	3.22E-19	n/a	1.53E-14	5.31E-16	2.15E-15	7.07E-14	**1.04E-13**
1,4-dithiane	505-29-3	1.03E-11	n/a	5.49E-15	2.09E-14	n/a	7.95E-10	5.13E-12	2.34E-13		**8.11E-10**
1,4-oxathiane	15980-15-1		n/a			n/a					**0.00E+00**
2,4-dinitrotoluene	121-14-2		n/a	1.71E-17	4.06E-16	n/a	6.68E-12	7.99E-12	2.90E-15		**1.47E-11**
2-butanone	78-93-3	1.35E-13	n/a	1.74E-17	6.63E-17	n/a	2.47E-12	2.28E-15	2.59E-15	4.81E-12	**7.42E-12**
acetylene	74-86-2		n/a			n/a					**0.00E+00**
benzene	71-43-2	1.28E-13	n/a	6.02E-20	2.29E-19	n/a	1.06E-14	7.39E-17	3.51E-15	8.32E-13	**9.74E-13**
chlorobenzene	108-90-7	1.07E-13	n/a	1.28E-19	4.28E-19	n/a	1.69E-14	1.47E-13	3.56E-15		**2.74E-13**
chloroform	67-66-3	1.02E-11	n/a	2.68E-18	1.02E-17	n/a	5.82E-13	3.23E-15	1.55E-13	4.35E-11	**5.44E-11**
ethane	74-84-0		n/a			n/a					**0.00E+00**
HD	505-60-2	1.15E-04	n/a	1.99E-10	7.59E-10	n/a	1.16E-05	5.97E-07	4.01E-06		**1.31E-04**
methane	74-82-8		n/a			n/a					**0.00E+00**
monoethanolamine	141-43-5		n/a			n/a					**0.00E+00**
nitrobenzene	98-95-3	1.01E-14	n/a	7.50E-18	2.86E-17	n/a	4.38E-13	3.82E-14	2.84E-16		**4.86E-13**
tetrachloroethene	127-18-4	3.55E-12	n/a	7.66E-19	2.92E-18	n/a	4.44E-13	1.63E-15	4.82E-13	1.20E-11	**1.64E-11**
trichloroethene	79-01-6	4.39E-11	n/a	5.51E-16	2.10E-15	n/a	6.07E-11	7.04E-13	3.29E-11	4.47E-09	**4.61E-09**
vinyl chloride	75-01-4	1.23E-08	n/a	1.39E-15	5.28E-15	n/a	7.22E-10	1.32E-12	4.14E-10		**1.34E-08**
ammonia	7664-41-7	1.63E-06	n/a			n/a					**1.63E-06**
hydrogen cyanide	74-90-8	1.44E-04	n/a	1.01E-11	3.87E-11	n/a	5.95E-05	2.04E-08	2.83E-07		**2.04E-04**
total mercury	NA		n/a			n/a					**0.00E+00**
mercuric chloride	7487-94-7	5.58E-19	n/a	9.97E-23	5.99E-21	n/a	9.78E-19	9.24E-19	0.00E+00	1.66E-18	**4.13E-18**
methyl mercury	22967-92-6		n/a	5.76E-25	3.50E-22	n/a	5.59E-19	1.07E-19	1.80E-16	2.29E-16	**4.10E-16**
elemental mercury	7439-97-6	0.00E+00	n/a			n/a					**0.00E+00**
Total Pathway Hazard	**All Chemicals**	**2.61E-04**	**0.00E+00**	**2.09E-10**	**7.98E-10**	**0.00E+00**	**7.10E-05**	**6.18E-07**	**4.30E-06**	**4.53E-09**	**3.37E-04**

RISK AND HAZARD BY PATHWAY FOR SUBSISTENCE FARMER EXPOSURE SCENARIOS

CARCINOGENIC EFFECTS: Early Life Exposure - Infant											
COPC	CAS Number	Risk from Inhalation	Risk from Dermal Water Contact	Risk from Dermal Soil Contact	Risk from Incidental Soil Ingestion	Risk from Incidental Surface Water Ingestion	Risk from Ingestion of Produce	Risk from Ingestion of Terrestrial Animal Products	Risk from Ingestion of Fish	Risk from Ingestion of Breast Milk	Total Risk from Individual Chemical
vinyl chloride	75-01-4	5.35E-12	n/a	2.99E-18	1.14E-17	n/a	1.56E-12	2.84E-15	8.94E-13	n/a	**7.81E-12**

CARCINOGENIC EFFECTS: Early Life Exposure - Child											
COPC	CAS Number	Risk from Inhalation	Risk from Dermal Water Contact	Risk from Dermal Soil Contact	Risk from Incidental Soil Ingestion	Risk from Incidental Surface Water Ingestion	Risk from Ingestion of Produce	Risk from Ingestion of Terrestrial Animal Products	Risk from Ingestion of Fish	Risk from Ingestion of Breast Milk	Total Risk from Individual Chemical
vinyl chloride	75-01-4	9.51E-12	2.02E-14	2.13E-18	7.60E-18	2.29E-14	1.28E-12	9.67E-16	5.96E-13	n/a	**1.14E-11**

RISK AND HAZARD BY PATHWAY FOR THE ADULT WORKER EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Adult Worker Exposure Scenario											
COPC	CAS Number	Risk from Inhalation	Risk from Dermal Water Contact	Risk from Dermal Soil Contact	Risk from Incidental Soil Ingestion	Risk from Incidental Surface Water Ingestion	Risk from Ingestion of Produce	Risk from Ingestion of Terrestrial Animal Products	Risk from Ingestion of Fish	Risk from Ingestion of Breast Milk	Total Risk from Individual Chemical
1,1-dichloroethene	75-35-4		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
1,2-dichloroethane	107-06-2	1.09E-19	n/a	2.88E-26	2.18E-26	n/a	n/a	n/a	n/a	n/a	**1.09E-19**
1,4-dichlorobenzene	106-46-7	1.27E-15	n/a	2.93E-25	2.22E-25	n/a	n/a	n/a	n/a	n/a	**1.27E-15**
1,4-dithiane	505-29-3		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
1,4-oxathiane	15980-15-1		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
2,4-dinitrotoluene	121-14-2	4.47E-20	n/a	9.74E-23	4.59E-22	n/a	n/a	n/a	n/a	n/a	**4.53E-20**
2-butanone	78-93-3		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
acetylene	74-86-2		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
benzene	71-43-2	3.20E-19	n/a	1.21E-25	9.19E-26	n/a	n/a	n/a	n/a	n/a	**3.20E-19**
chlorobenzene	108-90-7		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
chloroform	67-66-3	1.25E-16	n/a	7.62E-24	5.77E-24	n/a	n/a	n/a	n/a	n/a	**1.25E-16**
ethane	74-84-0		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
HD	505-60-2	1.04E-10	n/a	9.84E-17	7.46E-17	n/a	n/a	n/a	n/a	n/a	**1.04E-10**
methane	74-82-8		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
monoethanolamine	141-43-5		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
nitrobenzene	98-95-3	3.93E-20	n/a			n/a	n/a	n/a	n/a	n/a	**3.93E-20**
tetrachloroethene	127-18-4	8.06E-18	n/a	3.79E-23	2.87E-23	n/a	n/a	n/a	n/a	n/a	**8.06E-18**
trichloroethene	79-01-6	1.90E-15	n/a	6.06E-22	4.59E-22	n/a	n/a	n/a	n/a	n/a	**1.90E-15**
vinyl chloride	75-01-4	5.78E-14	n/a	2.74E-20	2.08E-20	n/a	n/a	n/a	n/a	n/a	**5.78E-14**
ammonia	7664-41-7		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
hydrogen cyanide	74-90-8		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
total mercury	NA		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
mercuric chloride	7487-94-7		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
methyl mercury	22967-92-6		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
elemental mercury	7439-97-6		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
Total Pathway Risk	**All Chemicals**	**1.04E-10**	**0.00E+00**	**9.85E-17**	**7.46E-17**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**1.04E-10**

RISK AND HAZARD BY PATHWAY FOR THE ADULT WORKER EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS: Adult Worker Exposure Scenario											
COPC	CAS Number	Hazard from Inhalation	Hazard from Dermal Water Contact	Hazard from Dermal Soil Contact	Hazard from Incidental Soil Ingestion	Hazard from Incidental Surface Water Ingestion	Hazard from Ingestion of Produce	Hazard from Ingestion of Terrestrial Animal Products	Hazard from Ingestion of Fish	Hazard from Ingestion of Breast Milk	Total Hazard from Individual Chemical
1,1-dichloroethene	75-35-4	9.68E-13	n/a	2.39E-20	3.94E-20	n/a	n/a	n/a	n/a	n/a	**9.68E-13**
1,2-dichloroethane	107-06-2	1.20E-14	n/a	2.66E-22	2.01E-22	n/a	n/a	n/a	n/a	n/a	**1.20E-14**
1,4-dichlorobenzene	106-46-7	2.29E-15	n/a	1.30E-20	9.87E-21	n/a	n/a	n/a	n/a	n/a	**2.29E-15**
1,4-dithiane	505-29-3	1.55E-12	n/a	8.46E-16	6.41E-16	n/a	n/a	n/a	n/a	n/a	**1.56E-12**
1,4-oxathiane	15980-15-1		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
2,4-dinitrotoluene	121-14-2		n/a	2.64E-18	1.24E-17	n/a	n/a	n/a	n/a	n/a	**1.51E-17**
2-butanone	78-93-3	2.04E-14	n/a	2.68E-18	2.03E-18	n/a	n/a	n/a	n/a	n/a	**2.04E-14**
acetylene	74-86-2		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
benzene	71-43-2	1.93E-14	n/a	9.26E-21	7.02E-21	n/a	n/a	n/a	n/a	n/a	**1.93E-14**
chlorobenzene	108-90-7	1.62E-14	n/a	1.97E-20	1.31E-20	n/a	n/a	n/a	n/a	n/a	**1.62E-14**
chloroform	67-66-3	1.55E-12	n/a	4.13E-19	3.13E-19	n/a	n/a	n/a	n/a	n/a	**1.55E-12**
ethane	74-84-0		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
HD	505-60-2	1.74E-05	n/a	3.07E-11	2.32E-11	n/a	n/a	n/a	n/a	n/a	**1.74E-05**
methane	74-82-8		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
monoethanolamine	141-43-5		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
nitrobenzene	98-95-3	1.53E-15	n/a	1.15E-18	8.74E-19	n/a	n/a	n/a	n/a	n/a	**1.53E-15**
tetrachloroethene	127-18-4	5.37E-13	n/a	1.18E-19	8.94E-20	n/a	n/a	n/a	n/a	n/a	**5.37E-13**
trichloroethene	79-01-6	6.63E-12	n/a	8.48E-17	6.43E-17	n/a	n/a	n/a	n/a	n/a	**6.63E-12**
vinyl chloride	75-01-4	1.86E-09	n/a	2.13E-16	1.62E-16	n/a	n/a	n/a	n/a	n/a	**1.86E-09**
ammonia	7664-41-7	2.46E-07	n/a			n/a	n/a	n/a	n/a	n/a	**2.46E-07**
hydrogen cyanide	74-90-8	2.18E-05	n/a	1.56E-12	1.18E-12	n/a	n/a	n/a	n/a	n/a	**2.18E-05**
total mercury	NA		n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
mercuric chloride	7487-94-7	8.44E-20	n/a	1.53E-23	1.83E-22	n/a	n/a	n/a	n/a	n/a	**8.46E-20**
methyl mercury	22967-92-6		n/a	8.87E-26	1.07E-23	n/a	n/a	n/a	n/a	n/a	**1.08E-23**
elemental mercury	7439-97-6	0.00E+00	n/a			n/a	n/a	n/a	n/a	n/a	**0.00E+00**
Total Pathway Hazard	**All Chemicals**	**3.94E-05**	**0.00E+00**	**3.22E-11**	**2.44E-11**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**0.00E+00**	**3.94E-05**

COPC UPTAKE

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Adult Resident Exposure Scenario														
COPC	CAS Number	Incidental Ingestion of Soil (mg/day)	Ingestion of Exposed Produce (mg/day)	Ingestion of Protected Produce (mg/day)	Ingestion of Belowground Produce (mg/day)	Ingestion of Beef (mg/day)	Ingestion of Pork (mg/day)	Ingestion of Poultry (mg/day)	Ingestion of Eggs (mg/day)	Ingestion of Milk (mg/day)	Ingestion of Fish (mg/day)	Incidental Ingestion of Surface Water (mg/day)	Ingestion of Breast Milk (mg/day)	Total Daily COPC Ingestion (mg/day)
1,1-dichloroethene	75-35-4	5.60E-20	4.71E-16	3.10E-16	5.06E-15	4.09E-15	8.68E-16	3.93E-17	1.58E-17	7.42E-18	9.22E-14	5.38E-16	n/a	**1.04E-13**
1,2-dichloroethane	107-06-2	1.14E-22	1.92E-18	1.41E-18	3.54E-17	6.26E-21	1.42E-21	6.48E-23	2.61E-23	1.15E-20	1.01E-17	1.71E-19	n/a	**4.91E-17**
1,4-dichlorobenzene	106-46-7	1.96E-20	8.57E-17	1.68E-17	2.12E-15	3.64E-18	3.89E-19	1.40E-20	5.62E-21	2.89E-17	2.99E-15	1.46E-18	n/a	**5.24E-15**
1,4-dithiane	505-29-3	1.82E-16	3.35E-12	2.63E-12	8.02E-12	8.89E-15	2.10E-15	9.72E-17	3.91E-17	1.64E-14	3.31E-14	6.94E-16	n/a	**1.40E-11**
1,4-oxathiane	15980-15-1	4.19E-17	2.38E-12	1.88E-12	1.09E-11	1.12E-15	2.65E-16	1.22E-17	4.92E-18	2.08E-15	8.96E-14	1.37E-15	n/a	**1.52E-11**
2,4-dinitrotoluene	121-14-2	7.06E-19	6.40E-15	4.59E-15	1.28E-14	4.67E-14	1.05E-14	4.80E-16	1.93E-16	8.54E-17	4.63E-17	3.33E-19	n/a	**8.17E-14**
2-butanone	78-93-3	3.46E-17	8.59E-13	6.78E-13	9.01E-13	2.35E-16	5.59E-17	2.58E-18	1.04E-18	4.36E-16	2.87E-14	4.37E-16	n/a	**2.47E-12**
acetylene	74-86-2	1.65E-15	1.07E-10	3.23E-11	6.94E-11	3.19E-14	3.97E-15	1.48E-16	5.95E-17	5.52E-14	7.88E-09	1.20E-10	n/a	**8.21E-09**
benzene	71-43-2	7.97E-22	6.68E-18	4.42E-18	7.21E-17	5.79E-20	1.23E-20	5.59E-22	2.25E-22	1.05E-19	2.79E-16	1.63E-18	n/a	**3.64E-16**
chlorobenzene	108-90-7	7.43E-21	3.32E-17	1.62E-17	6.35E-16	7.26E-16	1.29E-17	5.63E-18	2.26E-18	1.28E-15	1.41E-15	2.38E-18	n/a	**4.12E-15**
chloroform	67-66-3	8.88E-20	8.78E-16	5.61E-16	1.01E-14	6.49E-18	1.35E-18	6.07E-20	2.44E-20	1.18E-17	3.08E-14	2.14E-16	n/a	**4.26E-14**
ethane	74-84-0	4.76E-17	5.18E-13	3.88E-13	2.02E-12	2.88E-15	6.65E-16	3.07E-17	1.23E-17	5.31E-15	5.65E-10	5.50E-12	n/a	**5.73E-10**
HD	505-60-2	4.62E-15	2.68E-10	1.70E-11	3.71E-11	3.17E-12	1.92E-13	3.43E-15	1.38E-15	5.25E-12	5.59E-10	1.88E-12	n/a	**8.91E-10**
methane	74-82-8	7.09E-17	1.95E-12	1.51E-12	7.28E-12	2.95E-15	2.51E-17	1.16E-18	4.64E-19	1.98E-16	1.47E-09	5.12E-11	n/a	**1.53E-09**
monoethanolamine	141-43-5	1.67E-13	4.44E-09	3.27E-09	3.03E-07	1.04E-13	2.36E-14	1.08E-15	4.33E-16	1.91E-13	4.01E-10	6.11E-12	n/a	**3.11E-07**
nitrobenzene	98-95-3	4.96E-20	4.89E-16	3.83E-16	5.88E-16	2.93E-18	6.99E-19	3.24E-20	1.30E-20	2.57E-17	9.29E-18	8.45E-20	n/a	**1.50E-15**
tetrachloroethene	127-18-4	2.54E-20	2.96E-16	2.49E-17	8.90E-15	1.10E-17	7.69E-19	1.83E-20	7.38E-21	1.82E-17	9.60E-14	5.59E-17	n/a	**1.05E-13**
trichloroethene	79-01-6	5.47E-19	3.08E-15	2.04E-15	3.07E-14	4.15E-17	8.89E-18	4.06E-19	1.63E-19	7.53E-17	1.97E-13	6.72E-16	n/a	**2.33E-13**
vinyl chloride	75-01-4	1.38E-17	2.58E-13	1.94E-13	3.81E-12	7.02E-16	1.63E-16	7.43E-18	2.99E-18	1.30E-15	2.47E-11	4.99E-13	n/a	**2.95E-11**
ammonia	7664-41-7	5.10E-13	4.31E-08	3.40E-08	2.25E-07	1.02E-11	2.41E-12	1.11E-13	4.49E-14	1.90E-11	1.36E-08	2.06E-10	n/a	**3.16E-07**
hydrogen cyanide	74-90-8	2.02E-14	1.65E-07	6.97E-09	3.36E-09	1.06E-11	5.65E-13	7.15E-15	2.88E-15	1.75E-11	3.38E-09	5.15E-11	n/a	**1.79E-07**
total mercury	NA												n/a	
mercuric chloride	7487-94-7	8.59E-24	1.58E-21	2.92E-22	3.49E-22	1.68E-22	6.13E-26	2.91E-24	2.05E-24	5.45E-22	0.00E+00	0.00E+00	n/a	**2.95E-21**
methyl mercury	22967-92-6	1.37E-25	3.54E-22	9.43E-24	1.53E-23	6.33E-24	9.78E-28	7.76E-27	5.47E-27	2.12E-23	3.33E-19	0.00E+00	n/a	**3.33E-19**
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	n/a	**0.00E+00**

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS:
Adult Resident Exposure Scenario

COPC	CAS Number	Incidental Ingestion of Soil (mg/day)[a]	Ingestion of Exposed Produce (mg/day)[a]	Ingestion of Protected Produce (mg/day)[a]	Ingestion of Belowground Produce (mg/day)[a]	Ingestion of Beef (mg/day)[a]	Ingestion of Pork (mg/day)[a]	Ingestion of Poultry (mg/day)[a]	Ingestion of Eggs (mg/day)[a]	Ingestion of Milk (mg/day)[a]	Ingestion of Fish (mg/day)[a]	Incidental Ingestion of Surface Water (mg/day)[a]	Ingestion of Breast Milk (mg/day)[a]	Total Daily COPC Ingestion (mg/day)[a]
1,1-dichloroethene	75-35-4	3.36E-19	2.44E-15	1.86E-15	3.04E-14	2.16E-14	5.09E-15	2.36E-16	9.49E-17	3.98E-17	9.23E-14	5.38E-16	n/a	**1.55E-13**
1,2-dichloroethane	107-06-2	6.85E-22	1.08E-17	8.43E-18	2.13E-16	3.55E-20	8.44E-21	3.89E-22	1.56E-22	6.60E-20	1.02E-17	1.72E-19	n/a	**2.42E-16**
1,4-dichlorobenzene	106-46-7	1.18E-19	1.92E-16	1.01E-16	1.27E-14	9.13E-18	1.81E-18	8.37E-20	3.37E-20	7.48E-17	3.00E-15	1.46E-18	n/a	**1.61E-14**
1,4-dithiane	505-29-3	1.09E-15	2.00E-11	1.58E-11	4.81E-11	5.31E-14	1.26E-14	5.83E-16	2.35E-16	9.82E-14	4.67E-14	9.77E-16	n/a	**8.40E-11**
1,4-oxathiane	15980-15-1	2.51E-16	1.43E-11	1.13E-11	6.52E-11	6.70E-15	1.59E-15	7.31E-17	2.95E-17	1.25E-14	9.88E-14	1.51E-15	n/a	**9.09E-11**
2,4-dinitrotoluene	121-14-2	4.23E-18	3.55E-14	2.75E-14	7.65E-14	2.62E-13	6.21E-14	2.88E-15	1.16E-15	4.82E-16	1.16E-16	8.34E-19	n/a	**4.68E-13**
2-butanone	78-93-3	2.08E-16	5.16E-12	4.07E-12	5.41E-12	1.41E-15	3.35E-16	1.55E-17	6.23E-18	2.62E-15	3.10E-14	4.72E-16	n/a	**1.47E-11**
acetylene	74-86-2	9.88E-15	3.12E-10	1.94E-10	4.16E-10	9.91E-14	2.00E-14	8.87E-16	3.57E-16	1.80E-13	7.88E-09	1.20E-10	n/a	**8.92E-09**
benzene	71-43-2	4.78E-21	3.47E-17	2.65E-17	4.32E-16	3.07E-19	7.24E-20	3.35E-21	1.35E-21	5.66E-19	2.80E-16	1.63E-18	n/a	**7.76E-16**
chlorobenzene	108-90-7	4.46E-20	1.36E-16	9.73E-17	3.81E-15	3.14E-15	7.23E-17	3.38E-17	1.36E-17	5.66E-15	1.42E-15	2.39E-18	n/a	**1.44E-14**
chloroform	67-66-3	5.33E-19	4.43E-15	3.37E-15	6.05E-14	3.36E-17	7.86E-18	3.64E-19	1.46E-19	6.19E-17	3.08E-14	2.15E-16	n/a	**9.94E-14**
ethane	74-84-0	2.86E-16	2.97E-12	2.33E-12	1.21E-11	1.67E-14	3.97E-15	1.84E-16	7.41E-17	3.08E-14	5.65E-10	5.50E-12	n/a	**5.88E-10**
HD	505-60-2	2.77E-14	3.75E-10	1.02E-10	2.23E-10	4.68E-12	5.58E-13	2.06E-14	8.27E-15	8.02E-12	5.59E-10	1.88E-12	n/a	**1.27E-09**
methane	74-82-8	4.26E-16	1.15E-11	9.04E-12	4.37E-11	1.75E-14	1.50E-16	6.93E-18	2.79E-18	1.17E-15	1.47E-09	5.12E-11	n/a	**1.58E-09**
monoethanolamine	141-43-5	1.00E-12	2.52E-08	1.96E-08	1.82E-06	5.93E-13	1.40E-13	6.45E-15	2.60E-15	1.10E-12	4.59E-10	6.99E-12	n/a	**1.87E-06**
nitrobenzene	98-95-3	2.98E-19	2.92E-15	2.30E-15	3.53E-15	1.75E-17	4.19E-18	1.94E-19	7.83E-20	1.54E-16	1.13E-17	1.03E-19	n/a	**8.93E-15**
tetrachloroethene	127-18-4	1.52E-19	4.54E-16	1.50E-16	5.34E-14	1.83E-17	2.64E-18	1.10E-19	4.43E-20	3.12E-17	9.61E-14	5.59E-17	n/a	**1.50E-13**
trichloroethene	79-01-6	3.28E-18	1.60E-14	1.22E-14	1.84E-13	2.20E-16	5.22E-17	2.43E-18	9.78E-19	4.04E-16	1.97E-13	6.72E-16	n/a	**4.10E-13**
vinyl chloride	75-01-4	8.26E-17	1.48E-12	1.16E-12	2.29E-11	4.06E-15	9.69E-16	4.46E-17	1.80E-17	7.55E-15	2.47E-11	4.99E-13	n/a	**5.08E-11**
ammonia	7664-41-7	3.06E-12	2.59E-07	2.04E-07	1.35E-06	6.11E-11	1.45E-11	6.68E-13	2.69E-13	1.14E-10	1.36E-08	2.08E-10	n/a	**1.83E-06**
hydrogen cyanide	74-90-8	1.21E-13	2.09E-07	4.18E-08	2.01E-08	1.38E-11	1.34E-12	4.29E-14	1.73E-14	2.36E-11	3.39E-09	5.16E-11	n/a	**2.75E-07**
total mercury	NA												n/a	
mercuric chloride	7487-94-7	9.38E-24	1.61E-21	3.18E-22	3.81E-22	1.70E-22	6.51E-26	3.17E-24	2.23E-24	5.49E-22	0.00E+00	0.00E+00	n/a	**3.05E-21**
methyl mercury	22967-92-6	1.83E-25	3.58E-22	1.26E-23	2.04E-23	6.35E-24	1.02E-27	1.03E-26	7.28E-27	2.13E-23	3.59E-19	0.00E+00	n/a	**3.59E-19**
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	n/a	**0.00E+00**

a. Ingestion rates of total PCDDs/PCDFs are presented in units of mg TEQ/day

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS:
Adult Subsistence Fisher Exposure Scenario

COPC	CAS Number	Incidental Ingestion of Soil (mg/day)	Ingestion of Exposed Produce (mg/day)	Ingestion of Protected Produce (mg/day)	Ingestion of Belowground Produce (mg/day)	Ingestion of Beef (mg/day)	Ingestion of Pork (mg/day)	Ingestion of Poultry (mg/day)	Ingestion of Eggs (mg/day)	Ingestion of Milk (mg/day)	Ingestion of Fish (mg/day)	Incidental Ingestion of Surface Water (mg/day)	Ingestion of Breast Milk (mg/day)	Total Daily COPC Ingestion (mg/day)
1,1-dichloroethene	75-35-4	5.60E-20	4.71E-16	3.10E-16	5.06E-15	4.09E-15	8.68E-16	3.93E-17	1.58E-17	7.42E-18	2.31E-13	5.38E-16	n/a	**2.42E-13**
1,2-dichloroethane	107-06-2	1.14E-22	1.92E-18	1.41E-18	3.54E-17	6.26E-21	1.42E-21	6.48E-23	2.61E-23	1.15E-20	2.54E-17	1.71E-19	n/a	**6.43E-17**
1,4-dichlorobenzene	106-46-7	1.96E-20	8.57E-17	1.68E-17	2.12E-15	3.64E-18	3.89E-19	1.40E-20	5.62E-21	2.89E-17	7.47E-15	1.46E-18	n/a	**9.73E-15**
1,4-dithiane	505-29-3	1.82E-16	3.35E-12	2.63E-12	8.02E-12	8.89E-15	2.10E-15	9.72E-17	3.91E-17	1.64E-14	8.28E-14	6.94E-16	n/a	**1.41E-11**
1,4-oxathiane	15980-15-1	4.19E-17	2.38E-12	1.88E-12	1.09E-11	1.12E-15	2.65E-16	1.22E-17	4.92E-18	2.08E-15	2.24E-13	1.37E-15	n/a	**1.54E-11**
2,4-dinitrotoluene	121-14-2	7.06E-19	6.40E-15	4.59E-15	1.28E-14	4.67E-14	1.05E-14	4.80E-16	1.93E-16	8.54E-17	1.16E-16	3.33E-19	n/a	**8.18E-14**
2-butanone	78-93-3	3.46E-17	8.59E-13	6.78E-13	9.01E-13	2.35E-16	5.59E-17	2.58E-18	1.04E-18	4.36E-16	7.16E-14	4.37E-16	n/a	**2.51E-12**
acetylene	74-86-2	1.65E-15	1.07E-10	3.23E-11	6.94E-11	3.19E-14	3.97E-15	1.48E-16	5.95E-17	5.52E-14	1.97E-08	1.20E-10	n/a	**2.00E-08**
benzene	71-43-2	7.97E-22	6.68E-18	4.42E-18	7.21E-17	5.79E-20	1.23E-20	5.59E-22	2.25E-22	1.05E-19	6.99E-16	1.63E-18	n/a	**7.84E-16**
chlorobenzene	108-90-7	7.43E-21	3.32E-17	1.62E-17	6.35E-16	7.26E-16	1.29E-17	5.63E-18	2.26E-18	1.28E-15	3.54E-15	2.38E-18	n/a	**6.25E-15**
chloroform	67-66-3	8.88E-20	8.78E-16	5.61E-16	1.01E-14	6.49E-18	1.35E-18	6.07E-20	2.44E-20	1.18E-17	7.70E-14	2.14E-16	n/a	**8.88E-14**
ethane	74-84-0	4.76E-17	5.18E-13	3.88E-13	2.02E-12	2.88E-15	6.65E-16	3.07E-17	1.23E-17	5.31E-15	1.41E-09	5.50E-12	n/a	**1.42E-09**
HD	505-60-2	4.62E-15	2.68E-10	1.70E-11	3.71E-11	3.17E-12	1.92E-13	3.43E-15	1.38E-15	5.25E-12	1.40E-09	1.88E-12	n/a	**1.73E-09**
methane	74-82-8	7.09E-17	1.95E-12	1.51E-12	7.28E-12	2.95E-15	2.51E-17	1.16E-18	4.64E-19	1.98E-16	3.67E-09	5.12E-11	n/a	**3.73E-09**
monoethanolamine	141-43-5	1.67E-13	4.44E-09	3.27E-09	3.03E-07	1.04E-13	2.36E-14	1.08E-15	4.33E-16	1.91E-13	1.00E-09	6.11E-12	n/a	**3.12E-07**
nitrobenzene	98-95-3	4.96E-20	4.89E-16	3.83E-16	5.88E-16	2.93E-18	6.99E-19	3.24E-20	1.30E-20	2.57E-17	2.32E-17	8.45E-20	n/a	**1.51E-15**
tetrachloroethene	127-18-4	2.54E-20	2.96E-16	2.49E-17	8.90E-15	1.10E-17	7.69E-19	1.83E-20	7.38E-21	1.82E-17	2.40E-13	5.59E-17	n/a	**2.49E-13**
trichloroethene	79-01-6	5.47E-19	3.08E-15	2.04E-15	3.07E-14	4.15E-17	8.89E-18	4.06E-19	1.63E-19	7.53E-17	4.92E-13	6.72E-16	n/a	**5.28E-13**
vinyl chloride	75-01-4	1.38E-17	2.58E-13	1.94E-13	3.81E-12	7.02E-16	1.63E-16	7.43E-18	2.99E-18	1.30E-15	6.19E-11	4.99E-13	n/a	**6.66E-11**
ammonia	7664-41-7	5.10E-13	4.31E-08	3.40E-08	2.25E-07	1.02E-11	2.41E-12	1.11E-13	4.49E-14	1.90E-11	3.39E-08	2.06E-10	n/a	**3.37E-07**
hydrogen cyanide	74-90-8	2.02E-14	1.65E-07	6.97E-09	3.36E-09	1.06E-11	5.65E-13	7.15E-15	2.88E-15	1.75E-11	8.46E-09	5.15E-11	n/a	**1.84E-07**
total mercury	NA												n/a	
mercuric chloride	7487-94-7	8.59E-24	1.58E-21	2.92E-22	3.49E-22	1.68E-22	6.13E-26	2.91E-24	2.05E-24	5.45E-22	0.00E+00	0.00E+00	n/a	**2.95E-21**
methyl mercury	22967-92-6	1.37E-25	3.54E-22	9.43E-24	1.53E-23	6.33E-24	9.78E-28	7.76E-27	5.47E-27	2.12E-23	8.32E-19	0.00E+00	n/a	**8.32E-19**
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	n/a	**0.00E+00**

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS:
Adult Subsistence Fisher Exposure Scenario

COPC	CAS Number	Incidental Ingestion of Soil (mg/day)[a]	Ingestion of Exposed Produce (mg/day)[a]	Ingestion of Protected Produce (mg/day)[a]	Ingestion of Belowground Produce (mg/day)[a]	Ingestion of Beef (mg/day)[a]	Ingestion of Pork (mg/day)[a]	Ingestion of Poultry (mg/day)[a]	Ingestion of Eggs (mg/day)[a]	Ingestion of Milk (mg/day)[a]	Ingestion of Fish (mg/day)[a]	Incidental Ingestion of Surface Water (mg/day)[a]	Ingestion of Breast Milk (mg/day)[a]	Total Daily COPC Ingestion (mg/day)[a]
1,1-dichloroethene	75-35-4	3.36E-19	2.44E-15	1.86E-15	3.04E-14	2.16E-14	5.09E-15	2.36E-16	9.49E-17	3.98E-17	2.31E-13	5.38E-16	n/a	**2.93E-13**
1,2-dichloroethane	107-06-2	6.85E-22	1.08E-17	8.43E-18	2.13E-16	3.55E-20	8.44E-21	3.89E-22	1.56E-22	6.60E-20	2.54E-17	1.72E-19	n/a	**2.58E-16**
1,4-dichlorobenzene	106-46-7	1.18E-19	1.92E-16	1.01E-16	1.27E-14	9.13E-18	1.81E-18	8.37E-20	3.37E-20	7.48E-17	7.50E-15	1.46E-18	n/a	**2.06E-14**
1,4-dithiane	505-29-3	1.09E-15	2.00E-11	1.58E-11	4.81E-11	5.31E-14	1.26E-14	5.83E-16	2.35E-16	9.82E-14	1.17E-13	9.77E-16	n/a	**8.41E-11**
1,4-oxathiane	15980-15-1	2.51E-16	1.43E-11	1.13E-11	6.52E-11	6.70E-15	1.59E-15	7.31E-17	2.95E-17	1.25E-14	2.47E-13	1.51E-15	n/a	**9.10E-11**
2,4-dinitrotoluene	121-14-2	4.23E-18	3.55E-14	2.75E-14	7.65E-14	2.62E-13	6.21E-14	2.88E-15	1.16E-15	4.82E-16	2.89E-16	8.34E-19	n/a	**4.68E-13**
2-butanone	78-93-3	2.08E-16	5.16E-12	4.07E-12	5.41E-12	1.41E-15	3.35E-16	1.55E-17	6.23E-18	2.62E-15	7.75E-14	4.72E-16	n/a	**1.47E-11**
acetylene	74-86-2	9.88E-15	3.12E-10	1.94E-10	4.16E-10	9.91E-14	2.00E-14	8.87E-16	3.57E-16	1.80E-13	1.97E-08	1.20E-10	n/a	**2.07E-08**
benzene	71-43-2	4.78E-21	3.47E-17	2.65E-17	4.32E-16	3.07E-19	7.24E-20	3.35E-21	1.35E-21	5.66E-19	6.99E-16	1.63E-18	n/a	**1.20E-15**
chlorobenzene	108-90-7	4.46E-20	1.36E-16	9.73E-17	3.81E-15	3.14E-15	7.23E-17	3.38E-17	1.36E-17	5.66E-15	3.54E-15	2.39E-18	n/a	**1.65E-14**
chloroform	67-66-3	5.33E-19	4.43E-15	3.37E-15	6.05E-14	3.36E-17	7.86E-18	3.64E-19	1.46E-19	6.19E-17	7.71E-14	2.15E-16	n/a	**1.46E-13**
ethane	74-84-0	2.86E-16	2.97E-12	2.33E-12	1.21E-11	1.67E-14	3.97E-15	1.84E-16	7.41E-17	3.08E-14	1.41E-09	5.50E-12	n/a	**1.43E-09**
HD	505-60-2	2.77E-14	3.75E-10	1.02E-10	2.23E-10	4.68E-12	5.58E-13	2.06E-14	8.27E-15	8.02E-12	1.40E-09	1.88E-12	n/a	**2.11E-09**
methane	74-82-8	4.26E-16	1.15E-11	9.04E-12	4.37E-11	1.75E-14	1.50E-16	6.93E-18	2.79E-18	1.17E-15	3.67E-09	5.12E-11	n/a	**3.78E-09**
monoethanolamine	141-43-5	1.00E-12	2.52E-08	1.96E-08	1.82E-06	5.93E-13	1.40E-13	6.45E-15	2.60E-15	1.10E-12	1.15E-09	6.99E-12	n/a	**1.87E-06**
nitrobenzene	98-95-3	2.98E-19	2.92E-15	2.30E-15	3.53E-15	1.75E-17	4.19E-18	1.94E-19	7.83E-20	1.54E-16	2.83E-17	1.03E-19	n/a	**8.95E-15**
tetrachloroethene	127-18-4	1.52E-19	4.54E-16	1.50E-16	5.34E-14	1.83E-17	2.64E-18	1.10E-19	4.43E-20	3.12E-17	2.40E-13	5.59E-17	n/a	**2.94E-13**
trichloroethene	79-01-6	3.28E-18	1.60E-14	1.22E-14	1.84E-13	2.20E-16	5.22E-17	2.43E-18	9.78E-19	4.04E-16	4.92E-13	6.72E-16	n/a	**7.06E-13**
vinyl chloride	75-01-4	8.26E-17	1.48E-12	1.16E-12	2.29E-11	4.06E-15	9.69E-16	4.46E-17	1.80E-17	7.55E-15	6.19E-11	4.99E-13	n/a	**8.79E-11**
ammonia	7664-41-7	3.06E-12	2.59E-07	2.04E-07	1.35E-06	6.11E-11	1.45E-11	6.68E-13	2.69E-13	1.14E-10	3.41E-08	2.08E-10	n/a	**1.85E-06**
hydrogen cyanide	74-90-8	1.21E-13	2.09E-07	4.18E-08	2.01E-08	1.38E-11	1.34E-12	4.29E-14	1.73E-14	2.36E-11	8.47E-09	5.16E-11	n/a	**2.80E-07**
total mercury	NA												n/a	
mercuric chloride	7487-94-7	9.38E-24	1.61E-21	3.18E-22	3.81E-22	1.70E-22	6.51E-26	3.17E-24	2.23E-24	5.49E-22	0.00E+00	0.00E+00	n/a	**3.05E-21**
methyl mercury	22967-92-6	1.83E-25	3.58E-22	1.26E-23	2.04E-23	6.35E-24	1.02E-27	1.03E-26	7.28E-27	2.13E-23	8.98E-19	0.00E+00	n/a	**8.98E-19**
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	n/a	**0.00E+00**

a. Ingestion rates of total PCDDs/PCDFs are presented in units of mg TEQ/day

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS:
Adult Subsistence Farmer Exposure Scenario

COPC	CAS Number	Incidental Ingestion of Soil (mg/day)	Ingestion of Exposed Produce (mg/day)	Ingestion of Protected Produce (mg/day)	Ingestion of Belowground Produce (mg/day)	Ingestion of Beef (mg/day)	Ingestion of Pork (mg/day)	Ingestion of Poultry (mg/day)	Ingestion of Eggs (mg/day)	Ingestion of Milk (mg/day)	Ingestion of Fish (mg/day)	Incidental Ingestion of Surface Water (mg/day)	Ingestion of Breast Milk (mg/day)	Total Daily COPC Ingestion (mg/day)
1,1-dichloroethene	75-35-4	4.20E-20	9.32E-16	5.82E-16	9.49E-15	8.02E-15	1.64E-15	7.37E-17	2.97E-17	1.45E-17	9.22E-14	5.38E-16	n/a	**1.14E-13**
1,2-dichloroethane	107-06-2	8.57E-23	3.70E-18	2.64E-18	6.65E-17	1.20E-20	2.67E-21	1.21E-22	4.89E-23	2.21E-20	1.01E-17	1.71E-19	n/a	**8.31E-17**
1,4-dichlorobenzene	106-46-7	1.47E-20	2.01E-16	3.16E-17	3.98E-15	8.40E-18	7.94E-19	2.62E-20	1.05E-20	6.66E-17	2.99E-15	1.46E-18	n/a	**7.27E-15**
1,4-dithiane	505-29-3	1.36E-16	6.28E-12	4.92E-12	1.50E-11	1.67E-14	3.95E-15	1.82E-16	7.33E-17	3.08E-14	3.24E-14	6.79E-16	n/a	**2.63E-11**
1,4-oxathiane	15980-15-1	3.14E-17	4.47E-12	3.52E-12	2.04E-11	2.10E-15	4.97E-16	2.28E-17	9.23E-18	3.90E-15	8.92E-14	1.36E-15	n/a	**2.85E-11**
2,4-dinitrotoluene	121-14-2	5.29E-19	1.24E-14	8.61E-15	2.39E-14	8.98E-14	1.97E-14	9.00E-16	3.62E-16	1.64E-16	4.28E-17	3.08E-19	n/a	**1.56E-13**
2-butanone	78-93-3	2.59E-17	1.61E-12	1.27E-12	1.69E-12	4.40E-16	1.05E-16	4.84E-18	1.95E-18	8.18E-16	2.85E-14	4.35E-16	n/a	**4.60E-12**
acetylene	74-86-2	1.24E-15	2.42E-10	6.06E-11	1.30E-10	7.14E-14	7.92E-15	2.77E-16	1.11E-16	1.22E-13	7.88E-09	1.20E-10	n/a	**8.43E-09**
benzene	71-43-2	5.98E-22	1.32E-17	8.29E-18	1.35E-16	1.14E-19	2.33E-20	1.05E-21	4.21E-22	2.06E-19	2.79E-16	1.63E-18	n/a	**4.38E-16**
chlorobenzene	108-90-7	5.57E-21	7.02E-17	3.04E-17	1.19E-15	1.51E-15	2.48E-17	1.06E-17	4.25E-18	2.64E-15	1.41E-15	2.38E-18	n/a	**6.90E-15**
chloroform	67-66-3	6.66E-20	1.75E-15	1.05E-15	1.89E-14	1.28E-17	2.55E-18	1.14E-19	4.57E-20	2.32E-17	3.08E-14	2.14E-16	n/a	**5.28E-14**
ethane	74-84-0	3.57E-17	9.87E-13	7.27E-13	3.80E-12	5.48E-15	1.25E-15	5.75E-17	2.32E-17	1.01E-14	5.65E-10	5.50E-12	n/a	**5.76E-10**
HD	505-60-2	3.46E-15	6.56E-10	3.18E-11	6.96E-11	7.75E-12	4.34E-13	6.43E-15	2.58E-15	1.28E-11	5.59E-10	1.88E-12	n/a	**1.34E-09**
methane	74-82-8	5.32E-17	3.67E-12	2.83E-12	1.36E-11	5.57E-15	4.71E-17	2.17E-18	8.70E-19	3.73E-16	1.47E-09	5.12E-11	n/a	**1.54E-09**
monoethanolamine	141-43-5	1.25E-13	8.51E-09	6.14E-09	5.69E-07	1.98E-13	4.43E-14	2.02E-15	8.12E-16	3.65E-13	3.98E-10	6.07E-12	n/a	**5.84E-07**
nitrobenzene	98-95-3	3.72E-20	9.18E-16	7.19E-16	1.10E-15	5.50E-18	1.31E-18	6.08E-20	2.45E-20	4.83E-17	9.19E-18	8.35E-20	n/a	**2.80E-15**
tetrachloroethene	127-18-4	1.90E-20	7.20E-16	4.67E-17	1.67E-14	2.66E-17	1.69E-18	3.44E-20	1.38E-20	4.39E-17	9.60E-14	5.59E-17	n/a	**1.14E-13**
trichloroethene	79-01-6	4.10E-19	6.10E-15	3.82E-15	5.75E-14	8.15E-17	1.68E-17	7.61E-19	3.06E-19	1.47E-16	1.97E-13	6.72E-16	n/a	**2.65E-13**
vinyl chloride	75-01-4	1.03E-17	4.92E-13	3.63E-13	7.15E-12	1.33E-15	3.06E-16	1.39E-17	5.61E-18	2.47E-15	2.47E-11	4.99E-13	n/a	**3.33E-11**
ammonia	7664-41-7	3.83E-13	8.08E-08	6.38E-08	4.23E-07	1.91E-11	4.52E-12	2.09E-13	8.41E-14	3.56E-11	1.36E-08	2.06E-10	n/a	**5.81E-07**
hydrogen cyanide	74-90-8	1.51E-14	4.07E-07	1.31E-08	6.30E-09	2.60E-11	1.32E-12	1.34E-14	5.39E-15	4.29E-11	3.38E-09	5.15E-11	n/a	**4.30E-07**
total mercury	NA												n/a	
mercuric chloride	7487-94-7	8.79E-24	3.97E-21	7.45E-22	8.92E-22	4.22E-22	1.56E-25	7.43E-24	5.24E-24	1.36E-21	0.00E+00	0.00E+00	n/a	**7.42E-21**
methyl mercury	22967-92-6	1.29E-25	8.82E-22	2.22E-23	3.60E-23	1.58E-23	2.43E-27	1.82E-26	1.29E-26	5.30E-23	3.39E-19	0.00E+00	n/a	**3.40E-19**
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	n/a	**0.00E+00**

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS:
Adult Subsistence Farmer Exposure Scenario

COPC	CAS Number	Incidental Ingestion of Soil (mg/day)[a]	Ingestion of Exposed Produce (mg/day)[a]	Ingestion of Protected Produce (mg/day)[a]	Ingestion of Belowground Produce (mg/day)[a]	Ingestion of Beef (mg/day)[a]	Ingestion of Pork (mg/day)[a]	Ingestion of Poultry (mg/day)[a]	Ingestion of Eggs (mg/day)[a]	Ingestion of Milk (mg/day)[a]	Ingestion of Fish (mg/day)[a]	Incidental Ingestion of Surface Water (mg/day)[a]	Ingestion of Breast Milk (mg/day)[a]	Total Daily COPC Ingestion (mg/day)[a]
1,1-dichloroethene	75-35-4	3.36E-19	6.09E-15	4.66E-15	7.59E-14	5.40E-14	1.27E-14	5.90E-16	2.37E-16	9.94E-17	9.23E-14	5.38E-16	n/a	**2.47E-13**
1,2-dichloroethane	107-06-2	6.85E-22	2.71E-17	2.11E-17	5.32E-16	8.88E-20	2.11E-20	9.72E-22	3.91E-22	1.65E-19	1.02E-17	1.72E-19	n/a	**5.90E-16**
1,4-dichlorobenzene	106-46-7	1.18E-19	4.81E-16	2.53E-16	3.18E-14	2.28E-17	4.52E-18	2.09E-19	8.42E-20	1.87E-16	3.00E-15	1.46E-18	n/a	**3.58E-14**
1,4-dithiane	505-29-3	1.09E-15	4.99E-11	3.94E-11	1.20E-10	1.33E-13	3.15E-14	1.46E-15	5.87E-16	2.45E-13	4.67E-14	9.77E-16	n/a	**2.10E-10**
1,4-oxathiane	15980-15-1	2.51E-16	3.57E-11	2.81E-11	1.63E-10	1.67E-14	3.98E-15	1.83E-16	7.38E-17	3.11E-14	9.88E-14	1.51E-15	n/a	**2.27E-10**
2,4-dinitrotoluene	121-14-2	4.23E-18	8.87E-14	6.88E-14	1.91E-13	6.54E-13	1.55E-13	7.20E-15	2.90E-15	1.21E-15	1.16E-16	8.34E-19	n/a	**1.17E-12**
2-butanone	78-93-3	2.08E-16	1.29E-11	1.02E-11	1.35E-11	3.52E-15	8.38E-16	3.87E-17	1.56E-17	6.54E-15	3.10E-14	4.72E-16	n/a	**3.66E-11**
acetylene	74-86-2	9.88E-15	7.79E-10	4.85E-10	1.04E-09	2.48E-13	4.99E-14	2.22E-15	8.92E-16	4.50E-13	7.88E-09	1.20E-10	n/a	**1.03E-08**
benzene	71-43-2	4.78E-21	8.67E-17	6.63E-17	1.08E-15	7.68E-19	1.81E-19	8.39E-21	3.37E-21	1.41E-18	2.80E-16	1.63E-18	n/a	**1.52E-15**
chlorobenzene	108-90-7	4.46E-20	3.40E-16	2.43E-16	9.52E-15	7.85E-15	1.81E-16	8.44E-17	3.40E-17	1.42E-14	1.42E-15	2.39E-18	n/a	**3.38E-14**
chloroform	67-66-3	5.33E-19	1.11E-14	8.42E-15	1.51E-13	8.40E-17	1.97E-17	9.10E-19	3.65E-19	1.55E-16	3.08E-14	2.15E-16	n/a	**2.02E-13**
ethane	74-84-0	2.86E-16	7.43E-12	5.82E-12	3.04E-11	4.16E-14	9.91E-15	4.60E-16	1.85E-16	7.70E-14	5.65E-10	5.50E-12	n/a	**6.14E-10**
HD	505-60-2	2.77E-14	9.38E-10	2.55E-10	5.56E-10	1.17E-11	1.40E-12	5.14E-14	2.07E-14	2.01E-11	5.59E-10	1.88E-12	n/a	**2.34E-09**
methane	74-82-8	4.26E-16	2.87E-11	2.26E-11	1.09E-10	4.37E-14	3.75E-16	1.73E-17	6.96E-18	2.93E-15	1.47E-09	5.12E-11	n/a	**1.68E-09**
monoethanolamine	141-43-5	1.00E-12	6.29E-08	4.91E-08	4.55E-06	1.48E-12	3.50E-13	1.61E-14	6.49E-15	2.75E-12	4.59E-10	6.99E-12	n/a	**4.66E-06**
nitrobenzene	98-95-3	2.98E-19	7.29E-15	5.75E-15	8.82E-15	4.37E-17	1.05E-17	4.86E-19	1.96E-19	3.84E-16	1.13E-17	1.03E-19	n/a	**2.23E-14**
tetrachloroethene	127-18-4	1.52E-19	1.13E-15	3.74E-16	1.33E-13	4.58E-17	6.61E-18	2.75E-19	1.11E-19	7.80E-17	9.61E-14	5.59E-17	n/a	**2.31E-13**
trichloroethene	79-01-6	3.28E-18	3.99E-14	3.05E-14	4.60E-13	5.50E-16	1.30E-16	6.09E-18	2.44E-18	1.01E-15	1.97E-13	6.72E-16	n/a	**7.30E-13**
vinyl chloride	75-01-4	8.26E-17	3.71E-12	2.90E-12	5.72E-11	1.01E-14	2.42E-15	1.11E-16	4.49E-17	1.89E-14	2.47E-11	4.99E-13	n/a	**8.91E-11**
ammonia	7664-41-7	3.06E-12	6.47E-07	5.11E-07	3.38E-06	1.53E-10	3.62E-11	1.67E-12	6.73E-13	2.85E-10	1.36E-08	2.08E-10	n/a	**4.55E-06**
hydrogen cyanide	74-90-8	1.21E-13	5.23E-07	1.04E-07	5.04E-08	3.46E-11	3.36E-12	1.07E-13	4.32E-14	5.89E-11	3.39E-09	5.16E-11	n/a	**6.82E-07**
total mercury	NA												n/a	
mercuric chloride	7487-94-7	9.38E-24	4.04E-21	7.95E-22	9.52E-22	4.25E-22	1.63E-25	7.93E-24	5.59E-24	1.37E-21	0.00E+00	0.00E+00	n/a	**7.60E-21**
methyl mercury	22967-92-6	1.83E-25	8.94E-22	3.14E-23	5.10E-23	1.59E-23	2.54E-27	2.59E-26	1.82E-26	5.31E-23	3.59E-19	0.00E+00	n/a	**3.60E-19**
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	n/a	**0.00E+00**

a. Ingestion rates of total PCDDs/PCDFs are presented in units of mg TEQ/day

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Adult Worker Exposure Scenario														
COPC	CAS Number	Incidental Ingestion of Soil (mg/day)	Ingestion of Exposed Produce (mg/day)	Ingestion of Protected Produce (mg/day)	Ingestion of Belowground Produce (mg/day)	Ingestion of Beef (mg/day)	Ingestion of Pork (mg/day)	Ingestion of Poultry (mg/day)	Ingestion of Eggs (mg/day)	Ingestion of Milk (mg/day)	Ingestion of Fish (mg/day)	Incidental Ingestion of Surface Water (mg/day)	Ingestion of Breast Milk (mg/day)	Total Daily COPC Ingestion (mg/day)
1,1-dichloroethene	75-35-4	3.36E-20	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**3.36E-20**
1,2-dichloroethane	107-06-2	6.85E-23	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**6.85E-23**
1,4-dichlorobenzene	106-46-7	1.18E-20	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.18E-20**
1,4-dithiane	505-29-3	1.09E-16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.09E-16**
1,4-oxathiane	15980-15-1	2.51E-17	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**2.51E-17**
2,4-dinitrotoluene	121-14-2	4.23E-19	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**4.23E-19**
2-butanone	78-93-3	2.08E-17	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**2.08E-17**
acetylene	74-86-2	9.88E-16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**9.88E-16**
benzene	71-43-2	4.78E-22	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**4.78E-22**
chlorobenzene	108-90-7	4.46E-21	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**4.46E-21**
chloroform	67-66-3	5.33E-20	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**5.33E-20**
ethane	74-84-0	2.86E-17	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**2.86E-17**
HD	505-60-2	2.77E-15	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**2.77E-15**
methane	74-82-8	4.26E-17	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**4.26E-17**
monoethanolamine	141-43-5	1.00E-13	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.00E-13**
nitrobenzene	98-95-3	2.98E-20	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**2.98E-20**
tetrachloroethene	127-18-4	1.52E-20	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.52E-20**
trichloroethene	79-01-6	3.28E-19	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**3.28E-19**
vinyl chloride	75-01-4	8.26E-18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**8.26E-18**
ammonia	7664-41-7	3.06E-13	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**3.06E-13**
hydrogen cyanide	74-90-8	1.21E-14	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.21E-14**
total mercury	NA		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
mercuric chloride	7487-94-7	4.22E-24	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**4.22E-24**
methyl mercury	22967-92-6	7.03E-26	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**7.03E-26**
elemental mercury	7439-97-6	0.00E+00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**0.00E+00**

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS: Adult Worker Exposure Scenario														
COPC	CAS Number	Incidental Ingestion of Soil (mg/day)[a]	Ingestion of Exposed Produce (mg/day)[a]	Ingestion of Protected Produce (mg/day)[a]	Ingestion of Belowground Produce (mg/day)[a]	Ingestion of Beef (mg/day)[a]	Ingestion of Pork (mg/day)[a]	Ingestion of Poultry (mg/day)[a]	Ingestion of Eggs (mg/day)[a]	Ingestion of Milk (mg/day)[a]	Ingestion of Fish (mg/day)[a]	Incidental Ingestion of Surface Water (mg/day)[a]	Ingestion of Breast Milk (mg/day)[a]	Total Daily COPC Ingestion (mg/day)[a]
1,1-dichloroethene	75-35-4	1.68E-19	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.68E-19**
1,2-dichloroethane	107-06-2	3.43E-22	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**3.43E-22**
1,4-dichlorobenzene	106-46-7	5.88E-20	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**5.88E-20**
1,4-dithiane	505-29-3	5.46E-16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**5.46E-16**
1,4-oxathiane	15980-15-1	1.26E-16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.26E-16**
2,4-dinitrotoluene	121-14-2	2.12E-18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**2.12E-18**
2-butanone	78-93-3	1.04E-16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.04E-16**
acetylene	74-86-2	4.94E-15	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**4.94E-15**
benzene	71-43-2	2.39E-21	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**2.39E-21**
chlorobenzene	108-90-7	2.23E-20	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**2.23E-20**
chloroform	67-66-3	2.66E-19	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**2.66E-19**
ethane	74-84-0	1.43E-16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.43E-16**
HD	505-60-2	1.39E-14	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.39E-14**
methane	74-82-8	2.13E-16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**2.13E-16**
monoethanolamine	141-43-5	5.01E-13	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**5.01E-13**
nitrobenzene	98-95-3	1.49E-19	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.49E-19**
tetrachloroethene	127-18-4	7.61E-20	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**7.61E-20**
trichloroethene	79-01-6	1.64E-18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.64E-18**
vinyl chloride	75-01-4	4.13E-17	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**4.13E-17**
ammonia	7664-41-7	1.53E-12	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**1.53E-12**
hydrogen cyanide	74-90-8	6.05E-14	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**6.05E-14**
total mercury	NA		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
mercuric chloride	7487-94-7	4.69E-24	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**4.69E-24**
methyl mercury	22967-92-6	9.13E-26	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**9.13E-26**
elemental mercury	7439-97-6	0.00E+00	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**0.00E+00**

a. Ingestion rates of total PCDDs/PCDFs are presented in units of mg TEQ/day

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Child Resident Exposure Scenario														
COPC	CAS Number	Incidental Ingestion of Soil (mg/day)	Ingestion of Exposed Produce (mg/day)	Ingestion of Protected Produce (mg/day)	Ingestion of Belowground Produce (mg/day)	Ingestion of Beef (mg/day)	Ingestion of Pork (mg/day)	Ingestion of Poultry (mg/day)	Ingestion of Eggs (mg/day)	Ingestion of Milk (mg/day)	Ingestion of Fish (mg/day)	Incidental Ingestion of Surface Water (mg/day)	Ingestion of Breast Milk (mg/day)	Total Daily COPC Ingestion (mg/day)
1,1-dichloroethene	75-35-4	6.72E-19	1.79E-15	1.24E-15	1.23E-14	7.16E-15	2.35E-15	9.47E-17	5.79E-17	3.46E-17	4.83E-14	5.38E-16	n/a	**7.38E-14**
1,2-dichloroethane	107-06-2	1.37E-21	7.93E-18	5.62E-18	8.60E-17	1.18E-20	3.90E-21	1.56E-22	9.54E-23	5.75E-20	5.32E-18	1.72E-19	n/a	**1.05E-16**
1,4-dichlorobenzene	106-46-7	2.35E-19	1.41E-16	6.74E-17	5.14E-15	3.02E-18	8.36E-19	3.36E-20	2.06E-20	6.51E-17	1.57E-15	1.46E-18	n/a	**6.99E-15**
1,4-dithiane	505-29-3	2.18E-15	1.46E-11	1.05E-11	1.94E-11	1.76E-14	5.82E-15	2.33E-16	1.43E-16	8.53E-14	2.44E-14	9.77E-16	n/a	**4.46E-11**
1,4-oxathiane	15980-15-1	5.03E-16	1.04E-11	7.50E-12	2.64E-11	2.22E-15	7.36E-16	2.93E-17	1.80E-17	1.08E-14	5.17E-14	1.51E-15	n/a	**4.44E-11**
2,4-dinitrotoluene	121-14-2	7.89E-18	2.43E-14	1.71E-14	2.88E-14	8.09E-14	2.68E-14	1.08E-15	6.59E-16	3.92E-16	5.76E-17	7.94E-19	n/a	**1.80E-13**
2-butanone	78-93-3	4.15E-16	3.78E-12	2.71E-12	2.19E-12	4.67E-16	1.55E-16	6.21E-18	3.80E-18	2.28E-15	1.62E-14	4.72E-16	n/a	**8.70E-12**
acetylene	74-86-2	1.98E-14	2.28E-10	1.29E-10	1.68E-10	3.28E-14	9.24E-15	3.56E-16	2.18E-16	1.57E-13	4.12E-09	1.20E-10	n/a	**4.77E-09**
benzene	71-43-2	9.56E-21	2.54E-17	1.77E-17	1.75E-16	1.02E-19	3.35E-20	1.35E-21	8.22E-22	4.92E-19	1.46E-16	1.63E-18	n/a	**3.67E-16**
chlorobenzene	108-90-7	8.92E-20	9.96E-17	6.48E-17	1.54E-15	1.04E-15	3.34E-17	1.36E-17	8.29E-18	4.93E-15	7.42E-16	2.39E-18	n/a	**8.48E-15**
chloroform	67-66-3	1.07E-18	3.25E-15	2.24E-15	2.45E-14	1.11E-17	3.64E-18	1.46E-19	8.91E-20	5.39E-17	1.61E-14	2.15E-16	n/a	**4.64E-14**
ethane	74-84-0	5.71E-16	2.18E-12	1.55E-12	4.91E-12	5.52E-15	1.83E-15	7.39E-17	4.52E-17	2.68E-14	2.96E-10	5.50E-12	n/a	**3.10E-10**
HD	505-60-2	5.54E-14	2.75E-10	6.79E-11	9.00E-11	1.55E-12	2.58E-13	8.26E-15	5.04E-15	6.98E-12	2.93E-10	1.88E-12	n/a	**7.36E-10**
methane	74-82-8	8.51E-16	8.42E-12	6.03E-12	1.76E-11	5.79E-15	6.95E-17	2.78E-18	1.70E-18	1.02E-15	7.67E-10	5.12E-11	n/a	**8.51E-10**
monoethanolamine	141-43-5	2.00E-12	1.84E-08	1.31E-08	7.35E-07	1.96E-13	6.48E-14	2.59E-15	1.58E-15	9.57E-13	2.40E-10	6.99E-12	n/a	**7.67E-07**
nitrobenzene	98-95-3	5.94E-19	2.13E-15	1.53E-15	1.42E-15	5.78E-18	1.93E-18	7.79E-20	4.76E-20	1.33E-16	5.92E-18	1.03E-19	n/a	**5.23E-15**
tetrachloroethene	127-18-4	3.04E-19	3.33E-16	9.97E-17	2.16E-14	6.07E-18	1.22E-18	4.41E-20	2.70E-20	2.72E-17	5.03E-14	5.59E-17	n/a	**7.24E-14**
trichloroethene	79-01-6	6.57E-18	1.17E-14	8.14E-15	7.44E-14	7.29E-17	2.41E-17	9.77E-19	5.97E-19	3.52E-16	1.03E-13	6.72E-16	n/a	**1.98E-13**
vinyl chloride	75-01-4	1.65E-16	1.09E-12	7.74E-13	9.25E-12	1.34E-15	4.48E-16	1.79E-17	1.10E-17	6.58E-15	1.30E-11	4.99E-13	n/a	**2.46E-11**
ammonia	7664-41-7	6.12E-12	1.90E-07	1.36E-07	5.47E-07	2.02E-11	6.70E-12	2.68E-13	1.64E-13	9.91E-11	7.14E-09	2.08E-10	n/a	**8.80E-07**
hydrogen cyanide	74-90-8	2.42E-13	1.53E-07	2.79E-08	8.15E-09	4.58E-12	6.21E-13	1.72E-14	1.05E-14	2.05E-11	1.77E-09	5.16E-11	n/a	**1.91E-07**
total mercury	NA												n/a	
mercuric chloride	7487-94-7	9.38E-24	1.04E-21	1.06E-22	7.70E-23	5.28E-23	1.98E-26	6.37E-25	6.81E-25	4.56E-22	0.00E+00	0.00E+00	n/a	**1.74E-21**
methyl mercury	22967-92-6	1.86E-25	2.56E-22	4.25E-24	4.19E-24	2.09E-24	4.35E-28	2.11E-27	2.26E-27	1.84E-23	1.09E-19	0.00E+00	n/a	**1.09E-19**
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	n/a	**0.00E+00**

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS: Child Resident Exposure Scenario														
COPC	CAS Number	Incidental Ingestion of Soil (mg/day)[a]	Ingestion of Exposed Produce (mg/day)[a]	Ingestion of Protected Produce (mg/day)[a]	Ingestion of Belowground Produce (mg/day)[a]	Ingestion of Beef (mg/day)[a]	Ingestion of Pork (mg/day)[a]	Ingestion of Poultry (mg/day)[a]	Ingestion of Eggs (mg/day)[a]	Ingestion of Milk (mg/day)[a]	Ingestion of Fish (mg/day)[a]	Incidental Ingestion of Surface Water (mg/day)[a]	Ingestion of Breast Milk (mg/day)[a]	Total Daily COPC Ingestion (mg/day)[a]
1,1-dichloroethene	75-35-4	6.72E-19	1.79E-15	1.24E-15	1.23E-14	7.16E-15	2.35E-15	9.47E-17	5.79E-17	3.46E-17	4.83E-14	5.38E-16	n/a	**7.38E-14**
1,2-dichloroethane	107-06-2	1.37E-21	7.93E-18	5.62E-18	8.60E-17	1.18E-20	3.90E-21	1.56E-22	9.54E-23	5.75E-20	5.32E-18	1.72E-19	n/a	**1.05E-16**
1,4-dichlorobenzene	106-46-7	2.35E-19	1.41E-16	6.74E-17	5.14E-15	3.02E-18	8.36E-19	3.36E-20	2.06E-20	6.51E-17	1.57E-15	1.46E-18	n/a	**6.99E-15**
1,4-dithiane	505-29-3	2.18E-15	1.46E-11	1.05E-11	1.94E-11	1.76E-14	5.83E-15	2.34E-16	1.43E-16	8.55E-14	2.44E-14	9.77E-16	n/a	**4.47E-11**
1,4-oxathiane	15980-15-1	5.03E-16	1.05E-11	7.50E-12	2.64E-11	2.22E-15	7.36E-16	2.93E-17	1.80E-17	1.08E-14	5.17E-14	1.51E-15	n/a	**4.44E-11**
2,4-dinitrotoluene	121-14-2	8.47E-18	2.60E-14	1.84E-14	3.09E-14	8.67E-14	2.87E-14	1.16E-15	7.07E-16	4.20E-16	6.06E-17	8.34E-19	n/a	**1.93E-13**
2-butanone	78-93-3	4.15E-16	3.78E-12	2.71E-12	2.19E-12	4.67E-16	1.55E-16	6.21E-18	3.80E-18	2.28E-15	1.62E-14	4.72E-16	n/a	**8.70E-12**
acetylene	74-86-2	1.98E-14	2.28E-10	1.29E-10	1.68E-10	3.28E-14	9.24E-15	3.56E-16	2.18E-16	1.57E-13	4.12E-09	1.20E-10	n/a	**4.77E-09**
benzene	71-43-2	9.56E-21	2.54E-17	1.77E-17	1.75E-16	1.02E-19	3.35E-20	1.35E-21	8.22E-22	4.92E-19	1.46E-16	1.63E-18	n/a	**3.67E-16**
chlorobenzene	108-90-7	8.92E-20	9.96E-17	6.48E-17	1.54E-15	1.04E-15	3.34E-17	1.36E-17	8.29E-18	4.93E-15	7.42E-16	2.39E-18	n/a	**8.48E-15**
chloroform	67-66-3	1.07E-18	3.25E-15	2.24E-15	2.45E-14	1.11E-17	3.64E-18	1.46E-19	8.91E-20	5.39E-17	1.61E-14	2.15E-16	n/a	**4.64E-14**
ethane	74-84-0	5.71E-16	2.18E-12	1.55E-12	4.91E-12	5.52E-15	1.83E-15	7.39E-17	4.52E-17	2.68E-14	2.96E-10	5.50E-12	n/a	**3.10E-10**
HD	505-60-2	5.54E-14	2.75E-10	6.79E-11	9.00E-11	1.55E-12	2.58E-13	8.26E-15	5.04E-15	6.98E-12	2.93E-10	1.88E-12	n/a	**7.36E-10**
methane	74-82-8	8.51E-16	8.42E-12	6.03E-12	1.76E-11	5.79E-15	6.95E-17	2.78E-18	1.70E-18	1.02E-15	7.67E-10	5.12E-11	n/a	**8.51E-10**
monoethanolamine	141-43-5	2.00E-12	1.85E-08	1.31E-08	7.36E-07	1.96E-13	6.48E-14	2.59E-15	1.58E-15	9.58E-13	2.40E-10	6.99E-12	n/a	**7.68E-07**
nitrobenzene	98-95-3	5.96E-19	2.14E-15	1.53E-15	1.43E-15	5.80E-18	1.94E-18	7.81E-20	4.77E-20	1.34E-16	5.92E-18	1.03E-19	n/a	**5.24E-15**
tetrachloroethene	127-18-4	3.04E-19	3.33E-16	9.97E-17	2.16E-14	6.07E-18	1.22E-18	4.41E-20	2.70E-20	2.72E-17	5.03E-14	5.59E-17	n/a	**7.24E-14**
trichloroethene	79-01-6	6.57E-18	1.17E-14	8.14E-15	7.44E-14	7.29E-17	2.41E-17	9.77E-19	5.97E-19	3.52E-16	1.03E-13	6.72E-16	n/a	**1.98E-13**
vinyl chloride	75-01-4	1.65E-16	1.09E-12	7.74E-13	9.25E-12	1.34E-15	4.48E-16	1.79E-17	1.10E-17	6.58E-15	1.30E-11	4.99E-13	n/a	**2.46E-11**
ammonia	7664-41-7	6.12E-12	1.90E-07	1.36E-07	5.47E-07	2.02E-11	6.70E-12	2.68E-13	1.64E-13	9.91E-11	7.14E-09	2.08E-10	n/a	**8.80E-07**
hydrogen cyanide	74-90-8	2.42E-13	1.53E-07	2.79E-08	8.15E-09	4.58E-12	6.21E-13	1.72E-14	1.05E-14	2.05E-11	1.77E-09	5.16E-11	n/a	**1.91E-07**
total mercury	NA												n/a	
mercuric chloride	7487-94-7	1.88E-23	1.18E-21	2.12E-22	1.54E-22	5.64E-23	3.01E-26	1.27E-24	1.36E-24	4.78E-22	0.00E+00	0.00E+00	n/a	**2.10E-21**
methyl mercury	22967-92-6	3.65E-25	2.62E-22	8.38E-24	8.25E-24	2.10E-24	4.70E-28	4.15E-27	4.44E-27	1.85E-23	1.88E-19	0.00E+00	n/a	**1.88E-19**
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	n/a	**0.00E+00**

a. Ingestion rates of total PCDDs/PCDFs are presented in units of mg TEQ/day

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS:
Child Subsistence Fisher Exposure Scenario

COPC	CAS Number	Incidental Ingestion of Soil (mg/day)	Ingestion of Exposed Produce (mg/day)	Ingestion of Protected Produce (mg/day)	Ingestion of Belowground Produce (mg/day)	Ingestion of Beef (mg/day)	Ingestion of Pork (mg/day)	Ingestion of Poultry (mg/day)	Ingestion of Eggs (mg/day)	Ingestion of Milk (mg/day)	Ingestion of Fish (mg/day)	Incidental Ingestion of Surface Water (mg/day)	Ingestion of Breast Milk (mg/day)	Total Daily COPC Ingestion (mg/day)
1,1-dichloroethene	75-35-4	6.72E-19	1.79E-15	1.24E-15	1.23E-14	7.16E-15	2.35E-15	9.47E-17	5.79E-17	3.46E-17	1.21E-13	5.38E-16	n/a	**1.46E-13**
1,2-dichloroethane	107-06-2	1.37E-21	7.93E-18	5.62E-18	8.60E-17	1.18E-20	3.90E-21	1.56E-22	9.54E-23	5.75E-20	1.33E-17	1.72E-19	n/a	**1.13E-16**
1,4-dichlorobenzene	106-46-7	2.35E-19	1.41E-16	6.74E-17	5.14E-15	3.02E-18	8.36E-19	3.36E-20	2.06E-20	6.51E-17	3.93E-15	1.46E-18	n/a	**9.35E-15**
1,4-dithiane	505-29-3	2.18E-15	1.46E-11	1.05E-11	1.94E-11	1.76E-14	5.82E-15	2.33E-16	1.43E-16	8.53E-14	6.10E-14	9.77E-16	n/a	**4.47E-11**
1,4-oxathiane	15980-15-1	5.03E-16	1.04E-11	7.50E-12	2.64E-11	2.22E-15	7.36E-16	2.93E-17	1.80E-17	1.08E-14	1.29E-13	1.51E-15	n/a	**4.45E-11**
2,4-dinitrotoluene	121-14-2	7.89E-18	2.43E-14	1.71E-14	2.88E-14	8.09E-14	2.68E-14	1.08E-15	6.59E-16	3.92E-16	1.44E-16	7.94E-19	n/a	**1.80E-13**
2-butanone	78-93-3	4.15E-16	3.78E-12	2.71E-12	2.19E-12	4.67E-16	1.55E-16	6.21E-18	3.80E-18	2.28E-15	4.05E-14	4.72E-16	n/a	**8.72E-12**
acetylene	74-86-2	1.98E-14	2.28E-10	1.29E-10	1.68E-10	3.28E-14	9.24E-15	3.56E-16	2.18E-16	1.57E-13	1.03E-08	1.20E-10	n/a	**1.10E-08**
benzene	71-43-2	9.56E-21	2.54E-17	1.77E-17	1.75E-16	1.02E-19	3.35E-20	1.35E-21	8.22E-22	4.92E-19	3.66E-16	1.63E-18	n/a	**5.86E-16**
chlorobenzene	108-90-7	8.92E-20	9.96E-17	6.48E-17	1.54E-15	1.04E-15	3.34E-17	1.36E-17	8.29E-18	4.93E-15	1.85E-15	2.39E-18	n/a	**9.59E-15**
chloroform	67-66-3	1.07E-18	3.25E-15	2.24E-15	2.45E-14	1.11E-17	3.64E-18	1.46E-19	8.91E-20	5.39E-17	4.04E-14	2.15E-16	n/a	**7.06E-14**
ethane	74-84-0	5.71E-16	2.18E-12	1.55E-12	4.91E-12	5.52E-15	1.83E-15	7.39E-17	4.52E-17	2.68E-14	7.39E-10	5.50E-12	n/a	**7.53E-10**
HD	505-60-2	5.54E-14	2.75E-10	6.79E-11	9.00E-11	1.55E-12	2.58E-13	8.26E-15	5.04E-15	6.98E-12	7.32E-10	1.88E-12	n/a	**1.18E-09**
methane	74-82-8	8.51E-16	8.42E-12	6.03E-12	1.76E-11	5.79E-15	6.95E-17	2.78E-18	1.70E-18	1.02E-15	1.92E-09	5.12E-11	n/a	**2.00E-09**
monoethanolamine	141-43-5	2.00E-12	1.84E-08	1.31E-08	7.35E-07	1.96E-13	6.48E-14	2.59E-15	1.58E-15	9.57E-13	6.01E-10	6.99E-12	n/a	**7.68E-07**
nitrobenzene	98-95-3	5.94E-19	2.13E-15	1.53E-15	1.42E-15	5.78E-18	1.93E-18	7.79E-20	4.76E-20	1.33E-16	1.48E-17	1.03E-19	n/a	**5.24E-15**
tetrachloroethene	127-18-4	3.04E-19	3.33E-16	9.97E-17	2.16E-14	6.07E-18	1.22E-18	4.41E-20	2.70E-20	2.72E-17	1.26E-13	5.59E-17	n/a	**1.48E-13**
trichloroethene	79-01-6	6.57E-18	1.17E-14	8.14E-15	7.44E-14	7.29E-17	2.41E-17	9.77E-19	5.97E-19	3.52E-16	2.58E-13	6.72E-16	n/a	**3.53E-13**
vinyl chloride	75-01-4	1.65E-16	1.09E-12	7.74E-13	9.25E-12	1.34E-15	4.48E-16	1.79E-17	1.10E-17	6.58E-15	3.24E-11	4.99E-13	n/a	**4.40E-11**
ammonia	7664-41-7	6.12E-12	1.90E-07	1.36E-07	5.47E-07	2.02E-11	6.70E-12	2.68E-13	1.64E-13	9.91E-11	1.78E-08	2.08E-10	n/a	**8.91E-07**
hydrogen cyanide	74-90-8	2.42E-13	1.53E-07	2.79E-08	8.15E-09	4.58E-12	6.21E-13	1.72E-14	1.05E-14	2.05E-11	4.43E-09	5.16E-11	n/a	**1.94E-07**
total mercury	NA												n/a	
mercuric chloride	7487-94-7	9.38E-24	1.04E-21	1.06E-22	7.70E-23	5.28E-23	1.98E-26	6.37E-25	6.81E-25	4.56E-22	0.00E+00	0.00E+00	n/a	**1.74E-21**
methyl mercury	22967-92-6	1.86E-25	2.56E-22	4.25E-24	4.19E-24	2.09E-24	4.35E-28	2.11E-27	2.26E-27	1.84E-23	2.71E-19	0.00E+00	n/a	**2.72E-19**
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	n/a	**0.00E+00**

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS:
Child Subsistence Fisher Exposure Scenario

COPC	CAS Number	Incidental Ingestion of Soil (mg/day)[a]	Ingestion of Exposed Produce (mg/day)[a]	Ingestion of Protected Produce (mg/day)[a]	Ingestion of Belowground Produce (mg/day)[a]	Ingestion of Beef (mg/day)[a]	Ingestion of Pork (mg/day)[a]	Ingestion of Poultry (mg/day)[a]	Ingestion of Eggs (mg/day)[a]	Ingestion of Milk (mg/day)[a]	Ingestion of Fish (mg/day)[a]	Incidental Ingestion of Surface Water (mg/day)[a]	Ingestion of Breast Milk (mg/day)[a]	Total Daily COPC Ingestion (mg/day)[a]
1,1-dichloroethene	75-35-4	6.72E-19	1.79E-15	1.24E-15	1.23E-14	7.16E-15	2.35E-15	9.47E-17	5.79E-17	3.46E-17	1.21E-13	5.38E-16	n/a	**1.46E-13**
1,2-dichloroethane	107-06-2	1.37E-21	7.93E-18	5.62E-18	8.60E-17	1.18E-20	3.90E-21	1.56E-22	9.54E-23	5.75E-20	1.33E-17	1.72E-19	n/a	**1.13E-16**
1,4-dichlorobenzene	106-46-7	2.35E-19	1.41E-16	6.74E-17	5.14E-15	3.02E-18	8.36E-19	3.36E-20	2.06E-20	6.51E-17	3.93E-15	1.46E-18	n/a	**9.35E-15**
1,4-dithiane	505-29-3	2.18E-15	1.46E-11	1.05E-11	1.94E-11	1.76E-14	5.83E-15	2.34E-16	1.43E-16	8.55E-14	6.11E-14	9.77E-16	n/a	**4.48E-11**
1,4-oxathiane	15980-15-1	5.03E-16	1.05E-11	7.50E-12	2.64E-11	2.22E-15	7.36E-16	2.93E-17	1.80E-17	1.08E-14	1.29E-13	1.51E-15	n/a	**4.45E-11**
2,4-dinitrotoluene	121-14-2	8.47E-18	2.60E-14	1.84E-14	3.09E-14	8.67E-14	2.87E-14	1.16E-15	7.07E-16	4.20E-16	1.51E-16	8.34E-19	n/a	**1.93E-13**
2-butanone	78-93-3	4.15E-16	3.78E-12	2.71E-12	2.19E-12	4.67E-16	1.55E-16	6.21E-18	3.80E-18	2.28E-15	4.05E-14	4.72E-16	n/a	**8.72E-12**
acetylene	74-86-2	1.98E-14	2.28E-10	1.29E-10	1.68E-10	3.28E-14	9.24E-15	3.56E-16	2.18E-16	1.57E-13	1.03E-08	1.20E-10	n/a	**1.10E-08**
benzene	71-43-2	9.56E-21	2.54E-17	1.77E-17	1.75E-16	1.02E-19	3.35E-20	1.35E-21	8.22E-22	4.92E-19	3.66E-16	1.63E-18	n/a	**5.86E-16**
chlorobenzene	108-90-7	8.92E-20	9.96E-17	6.48E-17	1.54E-15	1.04E-15	3.34E-17	1.36E-17	8.29E-18	4.93E-15	1.85E-15	2.39E-18	n/a	**9.59E-15**
chloroform	67-66-3	1.07E-18	3.25E-15	2.24E-15	2.45E-14	1.11E-17	3.64E-18	1.46E-19	8.91E-20	5.39E-17	4.04E-14	2.15E-16	n/a	**7.06E-14**
ethane	74-84-0	5.71E-16	2.18E-12	1.55E-12	4.91E-12	5.52E-15	1.83E-15	7.39E-17	4.52E-17	2.68E-14	7.39E-10	5.50E-12	n/a	**7.53E-10**
HD	505-60-2	5.54E-14	2.75E-10	6.79E-11	9.00E-11	1.55E-12	2.58E-13	8.26E-15	5.04E-15	6.98E-12	7.32E-10	1.88E-12	n/a	**1.18E-09**
methane	74-82-8	8.51E-16	8.42E-12	6.03E-12	1.76E-11	5.79E-15	6.95E-17	2.78E-18	1.70E-18	1.02E-15	1.92E-09	5.12E-11	n/a	**2.00E-09**
monoethanolamine	141-43-5	2.00E-12	1.85E-08	1.31E-08	7.36E-07	1.96E-13	6.48E-14	2.59E-15	1.58E-15	9.58E-13	6.01E-10	6.99E-12	n/a	**7.68E-07**
nitrobenzene	98-95-3	5.96E-19	2.14E-15	1.53E-15	1.43E-15	5.80E-18	1.94E-18	7.81E-20	4.77E-20	1.34E-16	1.48E-17	1.03E-19	n/a	**5.25E-15**
tetrachloroethene	127-18-4	3.04E-19	3.33E-16	9.97E-17	2.16E-14	6.07E-18	1.22E-18	4.41E-20	2.70E-20	2.72E-17	1.26E-13	5.59E-17	n/a	**1.48E-13**
trichloroethene	79-01-6	6.57E-18	1.17E-14	8.14E-15	7.44E-14	7.29E-17	2.41E-17	9.77E-19	5.97E-19	3.52E-16	2.58E-13	6.72E-16	n/a	**3.53E-13**
vinyl chloride	75-01-4	1.65E-16	1.09E-12	7.74E-13	9.25E-12	1.34E-15	4.48E-16	1.79E-17	1.10E-17	6.58E-15	3.24E-11	4.99E-13	n/a	**4.40E-11**
ammonia	7664-41-7	6.12E-12	1.90E-07	1.36E-07	5.47E-07	2.02E-11	6.70E-12	2.68E-13	1.64E-13	9.91E-11	1.78E-08	2.08E-10	n/a	**8.91E-07**
hydrogen cyanide	74-90-8	2.42E-13	1.53E-07	2.79E-08	8.15E-09	4.58E-12	6.21E-13	1.72E-14	1.05E-14	2.05E-11	4.43E-09	5.16E-11	n/a	**1.94E-07**
total mercury	NA												n/a	
mercuric chloride	7487-94-7	1.88E-23	1.18E-21	2.12E-22	1.54E-22	5.64E-23	3.01E-26	1.27E-24	1.36E-24	4.78E-22	0.00E+00	0.00E+00	n/a	**2.10E-21**
methyl mercury	22967-92-6	3.65E-25	2.62E-22	8.38E-24	8.25E-24	2.10E-24	4.70E-28	4.15E-27	4.44E-27	1.85E-23	4.70E-19	0.00E+00	n/a	**4.70E-19**
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	n/a	**0.00E+00**

a. Ingestion rates of total PCDDs/PCDFs are presented in units of mg TEQ/day

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS:
Child Subsistence Farmer Exposure Scenario

COPC	CAS Number	Incidental Ingestion of Soil (mg/day)	Ingestion of Exposed Produce (mg/day)	Ingestion of Protected Produce (mg/day)	Ingestion of Belowground Produce (mg/day)	Ingestion of Beef (mg/day)	Ingestion of Pork (mg/day)	Ingestion of Poultry (mg/day)	Ingestion of Eggs (mg/day)	Ingestion of Milk (mg/day)	Ingestion of Fish (mg/day)	Incidental Ingestion of Surface Water (mg/day)	Ingestion of Breast Milk (mg/day)	Total Daily COPC Ingestion (mg/day)
1,1-dichloroethene	75-35-4	6.72E-19	4.47E-15	3.10E-15	3.07E-14	1.79E-14	5.88E-15	2.37E-16	1.45E-16	8.65E-17	4.83E-14	5.38E-16	n/a	**1.11E-13**
1,2-dichloroethane	107-06-2	1.37E-21	1.98E-17	1.41E-17	2.15E-16	2.94E-20	9.75E-21	3.90E-22	2.38E-22	1.44E-19	5.32E-18	1.72E-19	n/a	**2.55E-16**
1,4-dichlorobenzene	106-46-7	2.35E-19	3.52E-16	1.68E-16	1.29E-14	7.56E-18	2.09E-18	8.40E-20	5.14E-20	1.63E-16	1.57E-15	1.46E-18	n/a	**1.51E-14**
1,4-dithiane	505-29-3	2.18E-15	3.65E-11	2.62E-11	4.85E-11	4.39E-14	1.46E-14	5.84E-16	3.57E-16	2.13E-13	2.44E-14	9.77E-16	n/a	**1.12E-10**
1,4-oxathiane	15980-15-1	5.03E-16	2.61E-11	1.88E-11	6.59E-11	5.55E-15	1.84E-15	7.33E-17	4.50E-17	2.71E-14	5.17E-14	1.51E-15	n/a	**1.11E-10**
2,4-dinitrotoluene	121-14-2	7.89E-18	6.06E-14	4.28E-14	7.21E-14	2.02E-13	6.70E-14	2.70E-15	1.65E-15	9.80E-16	5.76E-17	7.94E-19	n/a	**4.50E-13**
2-butanone	78-93-3	4.15E-16	9.44E-12	6.78E-12	5.47E-12	1.17E-15	3.88E-16	1.55E-17	9.50E-18	5.69E-15	1.62E-14	4.72E-16	n/a	**2.17E-11**
acetylene	74-86-2	1.98E-14	5.71E-10	3.23E-10	4.21E-10	8.21E-14	2.31E-14	8.90E-16	5.44E-16	3.92E-13	4.12E-09	1.20E-10	n/a	**5.56E-09**
benzene	71-43-2	9.56E-21	6.35E-17	4.42E-17	4.37E-16	2.55E-19	8.37E-20	3.37E-21	2.05E-21	1.23E-18	1.46E-16	1.63E-18	n/a	**6.94E-16**
chlorobenzene	108-90-7	8.92E-20	2.49E-16	1.62E-16	3.85E-15	2.60E-15	8.35E-17	3.39E-17	2.07E-17	1.23E-14	7.42E-16	2.39E-18	n/a	**2.01E-14**
chloroform	67-66-3	1.07E-18	8.12E-15	5.61E-15	6.11E-14	2.78E-17	9.09E-18	3.65E-19	2.23E-19	1.35E-16	1.61E-14	2.15E-16	n/a	**9.14E-14**
ethane	74-84-0	5.71E-16	5.45E-12	3.88E-12	1.23E-11	1.38E-14	4.59E-15	1.85E-16	1.13E-16	6.71E-14	2.96E-10	5.50E-12	n/a	**3.23E-10**
HD	505-60-2	5.54E-14	6.87E-10	1.70E-10	2.25E-10	3.88E-12	6.45E-13	2.06E-14	1.26E-14	1.75E-11	2.93E-10	1.88E-12	n/a	**1.40E-09**
methane	74-82-8	8.51E-16	2.11E-11	1.51E-11	4.41E-11	1.45E-14	1.74E-16	6.96E-18	4.25E-18	2.55E-15	7.67E-10	5.12E-11	n/a	**8.99E-10**
monoethanolamine	141-43-5	2.00E-12	4.61E-08	3.27E-08	1.84E-06	4.91E-13	1.62E-13	6.47E-15	3.96E-15	2.39E-12	2.40E-10	6.99E-12	n/a	**1.92E-06**
nitrobenzene	98-95-3	5.94E-19	5.33E-15	3.82E-15	3.56E-15	1.45E-17	4.84E-18	1.95E-19	1.19E-19	3.34E-16	5.92E-18	1.03E-19	n/a	**1.31E-14**
tetrachloroethene	127-18-4	3.04E-19	8.32E-16	2.49E-16	5.40E-14	1.52E-17	3.06E-18	1.10E-19	6.75E-20	6.79E-17	5.03E-14	5.59E-17	n/a	**1.05E-13**
trichloroethene	79-01-6	6.57E-18	2.93E-14	2.04E-14	1.86E-13	1.82E-16	6.03E-17	2.44E-18	1.49E-18	8.80E-16	1.03E-13	6.72E-16	n/a	**3.40E-13**
vinyl chloride	75-01-4	1.65E-16	2.72E-12	1.94E-12	2.31E-11	3.36E-15	1.12E-15	4.47E-17	2.74E-17	1.64E-14	1.30E-11	4.99E-13	n/a	**4.13E-11**
ammonia	7664-41-7	6.12E-12	4.74E-07	3.40E-07	1.37E-06	5.06E-11	1.67E-11	6.70E-13	4.10E-13	2.48E-10	7.14E-09	2.08E-10	n/a	**2.19E-06**
hydrogen cyanide	74-90-8	2.42E-13	3.83E-07	6.97E-08	2.04E-08	1.15E-11	1.55E-12	4.31E-14	2.63E-14	5.13E-11	1.77E-09	5.16E-11	n/a	**4.75E-07**
total mercury	NA												n/a	
mercuric chloride	7487-94-7	9.38E-24	2.59E-21	2.65E-22	1.92E-22	1.32E-22	4.95E-26	1.59E-24	1.70E-24	1.14E-21	0.00E+00	0.00E+00	n/a	**4.33E-21**
methyl mercury	22967-92-6	1.86E-25	6.41E-22	1.06E-23	1.05E-23	5.23E-24	1.09E-27	5.27E-27	5.64E-27	4.61E-23	1.09E-19	0.00E+00	n/a	**1.09E-19**
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	n/a	**0.00E+00**

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS:
Child Subsistence Farmer Exposure Scenario

COPC	CAS Number	Incidental Ingestion of Soil (mg/day)[a]	Ingestion of Exposed Produce (mg/day)[a]	Ingestion of Protected Produce (mg/day)[a]	Ingestion of Belowground Produce (mg/day)[a]	Ingestion of Beef (mg/day)[a]	Ingestion of Pork (mg/day)[a]	Ingestion of Poultry (mg/day)[a]	Ingestion of Eggs (mg/day)[a]	Ingestion of Milk (mg/day)[a]	Ingestion of Fish (mg/day)[a]	Incidental Ingestion of Surface Water (mg/day)[a]	Ingestion of Breast Milk (mg/day)[a]	Total Daily COPC Ingestion (mg/day)[a]
1,1-dichloroethene	75-35-4	6.72E-19	4.47E-15	3.10E-15	3.07E-14	1.79E-14	5.88E-15	2.37E-16	1.45E-16	8.65E-17	4.83E-14	5.38E-16	n/a	**1.11E-13**
1,2-dichloroethane	107-06-2	1.37E-21	1.98E-17	1.41E-17	2.15E-16	2.94E-20	9.75E-21	3.90E-22	2.38E-22	1.44E-19	5.32E-18	1.72E-19	n/a	**2.55E-16**
1,4-dichlorobenzene	106-46-7	2.35E-19	3.52E-16	1.68E-16	1.29E-14	7.56E-18	2.09E-18	8.40E-20	5.14E-20	1.63E-16	1.57E-15	1.46E-18	n/a	**1.51E-14**
1,4-dithiane	505-29-3	2.18E-15	3.66E-11	2.63E-11	4.86E-11	4.40E-14	1.46E-14	5.85E-16	3.58E-16	2.14E-13	2.44E-14	9.77E-16	n/a	**1.12E-10**
1,4-oxathiane	15980-15-1	5.03E-16	2.61E-11	1.88E-11	6.59E-11	5.55E-15	1.84E-15	7.33E-17	4.50E-17	2.71E-14	5.17E-14	1.51E-15	n/a	**1.11E-10**
2,4-dinitrotoluene	121-14-2	8.47E-18	6.50E-14	4.59E-14	7.73E-14	2.17E-13	7.18E-14	2.89E-15	1.77E-15	1.05E-15	6.06E-17	8.34E-19	n/a	**4.83E-13**
2-butanone	78-93-3	4.15E-16	9.44E-12	6.78E-12	5.47E-12	1.17E-15	3.88E-16	1.55E-17	9.50E-18	5.69E-15	1.62E-14	4.72E-16	n/a	**2.17E-11**
acetylene	74-86-2	1.98E-14	5.71E-10	3.23E-10	4.21E-10	8.21E-14	2.31E-14	8.90E-16	5.44E-16	3.92E-13	4.12E-09	1.20E-10	n/a	**5.56E-09**
benzene	71-43-2	9.56E-21	6.35E-17	4.42E-17	4.37E-16	2.55E-19	8.37E-20	3.37E-21	2.05E-21	1.23E-18	1.46E-16	1.63E-18	n/a	**6.94E-16**
chlorobenzene	108-90-7	8.92E-20	2.49E-16	1.62E-16	3.85E-15	2.60E-15	8.35E-17	3.39E-17	2.07E-17	1.23E-14	7.42E-16	2.39E-18	n/a	**2.01E-14**
chloroform	67-66-3	1.07E-18	8.12E-15	5.61E-15	6.11E-14	2.78E-17	9.09E-18	3.65E-19	2.23E-19	1.35E-16	1.61E-14	2.15E-16	n/a	**9.14E-14**
ethane	74-84-0	5.71E-16	5.45E-12	3.88E-12	1.23E-11	1.38E-14	4.59E-15	1.85E-16	1.13E-16	6.71E-14	2.96E-10	5.50E-12	n/a	**3.23E-10**
HD	505-60-2	5.54E-14	6.87E-10	1.70E-10	2.25E-10	3.88E-12	6.45E-13	2.06E-14	1.26E-14	1.75E-11	2.93E-10	1.88E-12	n/a	**1.40E-09**
methane	74-82-8	8.51E-16	2.11E-11	1.51E-11	4.41E-11	1.45E-14	1.74E-16	6.96E-18	4.25E-18	2.55E-15	7.67E-10	5.12E-11	n/a	**8.99E-10**
monoethanolamine	141-43-5	2.00E-12	4.61E-08	3.27E-08	1.84E-06	4.91E-13	1.62E-13	6.48E-15	3.96E-15	2.39E-12	2.40E-10	6.99E-12	n/a	**1.92E-06**
nitrobenzene	98-95-3	5.96E-19	5.34E-15	3.83E-15	3.57E-15	1.45E-17	4.85E-18	1.95E-19	1.19E-19	3.35E-16	5.92E-18	1.03E-19	n/a	**1.31E-14**
tetrachloroethene	127-18-4	3.04E-19	8.32E-16	2.49E-16	5.40E-14	1.52E-17	3.06E-18	1.10E-19	6.75E-20	6.79E-17	5.03E-14	5.59E-17	n/a	**1.05E-13**
trichloroethene	79-01-6	6.57E-18	2.93E-14	2.04E-14	1.86E-13	1.82E-16	6.03E-17	2.44E-18	1.49E-18	8.80E-16	1.03E-13	6.72E-16	n/a	**3.40E-13**
vinyl chloride	75-01-4	1.65E-16	2.72E-12	1.94E-12	2.31E-11	3.36E-15	1.12E-15	4.47E-17	2.74E-17	1.64E-14	1.30E-11	4.99E-13	n/a	**4.13E-11**
ammonia	7664-41-7	6.12E-12	4.74E-07	3.40E-07	1.37E-06	5.06E-11	1.67E-11	6.70E-13	4.10E-13	2.48E-10	7.14E-09	2.08E-10	n/a	**2.19E-06**
hydrogen cyanide	74-90-8	2.42E-13	3.83E-07	6.97E-08	2.04E-08	1.15E-11	1.55E-12	4.31E-14	2.63E-14	5.13E-11	1.77E-09	5.16E-11	n/a	**4.75E-07**
total mercury	NA												n/a	
mercuric chloride	7487-94-7	1.88E-23	2.96E-21	5.30E-22	3.85E-22	1.41E-22	7.52E-26	3.18E-24	3.41E-24	1.19E-21	0.00E+00	0.00E+00	n/a	**5.23E-21**
methyl mercury	22967-92-6	3.65E-25	6.55E-22	2.09E-23	2.06E-23	5.26E-24	1.17E-27	1.04E-26	1.11E-26	4.63E-23	1.88E-19	0.00E+00	n/a	**1.89E-19**
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	n/a	**0.00E+00**

a. Ingestion rates of total PCDDs/PCDFs are presented in units of mg TEQ/day

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS:
Infant Resident Exposure Scenario

COPC	CAS Number	Incidental Ingestion of Soil (mg/day)	Ingestion of Exposed Produce (mg/day)	Ingestion of Protected Produce (mg/day)	Ingestion of Belowground Produce (mg/day)	Ingestion of Beef (mg/day)	Ingestion of Pork (mg/day)	Ingestion of Poultry (mg/day)	Ingestion of Eggs (mg/day)	Ingestion of Milk (mg/day)	Ingestion of Fish (mg/day)	Incidental Ingestion of Surface Water (mg/day)	Ingestion of Breast Milk (mg/day)	Total Daily COPC Ingestion (mg/day)
1,1-dichloroethene	75-35-4	6.72E-19	1.52E-15	5.13E-16	1.03E-14	4.24E-15	1.08E-15	5.81E-17	3.13E-17	8.13E-17	4.83E-14	n/a		**6.62E-14**
1,2-dichloroethane	107-06-2	1.37E-21	6.75E-18	2.32E-18	7.24E-17	6.98E-21	1.79E-21	9.58E-23	5.16E-23	1.35E-19	5.32E-18	n/a	3.59E-15	**3.67E-15**
1,4-dichlorobenzene	106-46-7	2.35E-19	1.20E-16	2.78E-17	4.33E-15	1.79E-18	3.84E-19	2.06E-20	1.11E-20	1.53E-16	1.57E-15	n/a	3.86E-14	**4.48E-14**
1,4-dithiane	505-29-3	2.18E-15	1.24E-11	4.33E-12	1.63E-11	1.04E-14	2.67E-15	1.43E-16	7.72E-17	2.00E-13	2.44E-14	n/a		**3.33E-11**
1,4-oxathiane	15980-15-1	5.03E-16	8.89E-12	3.10E-12	2.22E-11	1.31E-15	3.38E-16	1.80E-17	9.74E-18	2.55E-14	5.17E-14	n/a		**3.43E-11**
2,4-dinitrotoluene	121-14-2	7.89E-18	2.06E-14	7.07E-15	2.43E-14	4.79E-14	1.23E-14	6.62E-16	3.57E-16	9.20E-16	5.76E-17	n/a		**1.14E-13**
2-butanone	78-93-3	4.15E-16	3.21E-12	1.12E-12	1.84E-12	2.76E-16	7.12E-17	3.81E-18	2.06E-18	5.35E-15	1.62E-14	n/a		**6.20E-12**
acetylene	74-86-2	1.98E-14	1.94E-10	5.33E-11	1.42E-10	1.95E-14	4.25E-15	2.19E-16	1.18E-16	3.68E-13	4.12E-09	n/a		**4.51E-09**
benzene	71-43-2	9.56E-21	2.16E-17	7.30E-18	1.47E-16	6.03E-20	1.54E-20	8.27E-22	4.45E-22	1.16E-18	1.46E-16	n/a	3.42E-14	**3.46E-14**
chlorobenzene	108-90-7	8.92E-20	8.47E-17	2.68E-17	1.30E-15	6.16E-16	1.54E-17	8.32E-18	4.48E-18	1.16E-14	7.42E-16	n/a		**1.44E-14**
chloroform	67-66-3	1.07E-18	2.76E-15	9.27E-16	2.06E-14	6.59E-18	1.67E-18	8.97E-20	4.82E-20	1.26E-16	1.61E-14	n/a	4.47E-12	**4.51E-12**
ethane	74-84-0	5.71E-16	1.85E-12	6.40E-13	4.13E-12	3.27E-15	8.43E-16	4.54E-17	2.45E-17	6.30E-14	2.96E-10	n/a		**3.02E-10**
HD	505-60-2	5.54E-14	2.34E-10	2.80E-11	7.58E-11	9.20E-13	1.19E-13	5.07E-15	2.73E-15	1.64E-11	2.93E-10	n/a		**6.48E-10**
methane	74-82-8	8.51E-16	7.17E-12	2.49E-12	1.49E-11	3.43E-15	3.19E-17	1.71E-18	9.19E-19	2.40E-15	7.67E-10	n/a		**7.92E-10**
monoethanolamine	141-43-5	2.00E-12	1.57E-08	5.40E-09	6.19E-07	1.16E-13	2.98E-14	1.59E-15	8.57E-16	2.25E-12	2.40E-10	n/a		**6.41E-07**
nitrobenzene	98-95-3	5.94E-19	1.81E-15	6.31E-16	1.20E-15	3.43E-18	8.89E-19	4.78E-20	2.58E-20	3.13E-16	5.92E-18	n/a		**3.97E-15**
tetrachloroethene	127-18-4	3.04E-19	2.83E-16	4.12E-17	1.82E-14	3.60E-18	5.62E-19	2.71E-20	1.46E-20	6.38E-17	5.03E-14	n/a	1.19E-12	**1.26E-12**
trichloroethene	79-01-6	6.57E-18	9.96E-15	3.36E-15	6.27E-14	4.32E-17	1.11E-17	6.00E-19	3.23E-19	8.26E-16	1.03E-13	n/a	1.38E-11	**1.39E-11**
vinyl chloride	75-01-4	1.65E-16	9.25E-13	3.20E-13	7.79E-12	7.97E-16	2.06E-16	1.10E-17	5.92E-18	1.54E-14	1.30E-11	n/a		**2.20E-11**
ammonia	7664-41-7	6.12E-12	1.61E-07	5.62E-08	4.60E-07	1.20E-11	3.08E-12	1.65E-13	8.88E-14	2.33E-10	7.14E-09	n/a		**6.85E-07**
hydrogen cyanide	74-90-8	2.42E-13	1.30E-07	1.15E-08	6.86E-09	2.72E-12	2.85E-13	1.06E-14	5.70E-15	4.81E-11	1.77E-09	n/a		**1.51E-07**
total mercury	NA											n/a		
mercuric chloride	7487-94-7	9.38E-24	8.81E-22	4.38E-23	6.48E-23	2.73E-23	9.09E-27	3.91E-25	3.69E-25	9.31E-22	0.00E+00	n/a		**1.96E-21**
methyl mercury	22967-92-6	1.86E-25	2.18E-22	1.76E-24	3.53E-24	1.07E-24	2.00E-28	1.29E-27	1.22E-27	3.73E-23	1.09E-19	n/a		**1.09E-19**
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	n/a		**0.00E+00**

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS: Infant Resident Exposure Scenario														
COPC	CAS Number	Incidental Ingestion of Soil (mg/day)[a]	Ingestion of Exposed Produce (mg/day)[a]	Ingestion of Protected Produce (mg/day)[a]	Ingestion of Belowground Produce (mg/day)[a]	Ingestion of Beef (mg/day)[a]	Ingestion of Pork (mg/day)[a]	Ingestion of Poultry (mg/day)[a]	Ingestion of Eggs (mg/day)[a]	Ingestion of Milk (mg/day)[a]	Ingestion of Fish (mg/day)[a]	Incidental Ingestion of Surface Water (mg/day)[a]	Ingestion of Breast Milk (mg/day)[a]	Total Daily COPC Ingestion (mg/day)[a]
1,1-dichloroethene	75-35-4	6.72E-19	1.52E-15	5.13E-16	1.03E-14	4.24E-15	1.08E-15	5.81E-17	3.13E-17	8.13E-17	4.83E-14	n/a		**6.62E-14**
1,2-dichloroethane	107-06-2	1.37E-21	6.75E-18	2.32E-18	7.24E-17	6.98E-21	1.79E-21	9.58E-23	5.16E-23	1.35E-19	5.32E-18	n/a	3.59E-15	**3.67E-15**
1,4-dichlorobenzene	106-46-7	2.35E-19	1.20E-16	2.78E-17	4.33E-15	1.79E-18	3.84E-19	2.06E-20	1.11E-20	1.53E-16	1.57E-15	n/a	3.86E-14	**4.48E-14**
1,4-dithiane	505-29-3	2.18E-15	1.25E-11	4.34E-12	1.64E-11	1.04E-14	2.68E-15	1.44E-16	7.74E-17	2.01E-13	2.44E-14	n/a		**3.34E-11**
1,4-oxathiane	15980-15-1	5.03E-16	8.89E-12	3.10E-12	2.22E-11	1.31E-15	3.38E-16	1.80E-17	9.74E-18	2.55E-14	5.17E-14	n/a		**3.43E-11**
2,4-dinitrotoluene	121-14-2	8.47E-18	2.21E-14	7.58E-15	2.60E-14	5.14E-14	1.32E-14	7.10E-16	3.83E-16	9.86E-16	6.06E-17	n/a		**1.22E-13**
2-butanone	78-93-3	4.15E-16	3.21E-12	1.12E-12	1.84E-12	2.77E-16	7.13E-17	3.81E-18	2.06E-18	5.35E-15	1.62E-14	n/a	1.55E-11	**2.17E-11**
acetylene	74-86-2	1.98E-14	1.94E-10	5.33E-11	1.42E-10	1.95E-14	4.25E-15	2.19E-16	1.18E-16	3.68E-13	4.12E-09	n/a		**4.51E-09**
benzene	71-43-2	9.56E-21	2.16E-17	7.30E-18	1.47E-16	6.03E-20	1.54E-20	8.27E-22	4.45E-22	1.16E-18	1.46E-16	n/a	3.42E-14	**3.46E-14**
chlorobenzene	108-90-7	8.92E-20	8.47E-17	2.68E-17	1.30E-15	6.16E-16	1.54E-17	8.32E-18	4.48E-18	1.16E-14	7.42E-16	n/a		**1.44E-14**
chloroform	67-66-3	1.07E-18	2.76E-15	9.27E-16	2.06E-14	6.59E-18	1.67E-18	8.97E-20	4.82E-20	1.26E-16	1.61E-14	n/a	4.47E-12	**4.51E-12**
ethane	74-84-0	5.71E-16	1.85E-12	6.40E-13	4.13E-12	3.27E-15	8.43E-16	4.54E-17	2.45E-17	6.30E-14	2.96E-10	n/a		**3.02E-10**
HD	505-60-2	5.54E-14	2.34E-10	2.80E-11	7.58E-11	9.20E-13	1.19E-13	5.07E-15	2.73E-15	1.64E-11	2.93E-10	n/a		**6.48E-10**
methane	74-82-8	8.51E-16	7.17E-12	2.49E-12	1.49E-11	3.43E-15	3.19E-17	1.71E-18	9.19E-19	2.40E-15	7.67E-10	n/a		**7.92E-10**
monoethanolamine	141-43-5	2.00E-12	1.57E-08	5.41E-09	6.20E-07	1.16E-13	2.98E-14	1.59E-15	8.57E-16	2.25E-12	2.40E-10	n/a		**6.41E-07**
nitrobenzene	98-95-3	5.96E-19	1.82E-15	6.33E-16	1.20E-15	3.43E-18	8.91E-19	4.79E-20	2.58E-20	3.14E-16	5.92E-18	n/a		**3.98E-15**
tetrachloroethene	127-18-4	3.04E-19	2.83E-16	4.12E-17	1.82E-14	3.60E-18	5.62E-19	2.71E-20	1.46E-20	6.38E-17	5.03E-14	n/a	1.19E-12	**1.26E-12**
trichloroethene	79-01-6	6.57E-18	9.96E-15	3.36E-15	6.27E-14	4.32E-17	1.11E-17	6.00E-19	3.23E-19	8.26E-16	1.03E-13	n/a	1.38E-11	**1.39E-11**
vinyl chloride	75-01-4	1.65E-16	9.25E-13	3.20E-13	7.79E-12	7.97E-16	2.06E-16	1.10E-17	5.92E-18	1.54E-14	1.30E-11	n/a		**2.20E-11**
ammonia	7664-41-7	6.12E-12	1.61E-07	5.62E-08	4.60E-07	1.20E-11	3.08E-12	1.65E-13	8.88E-14	2.33E-10	7.14E-09	n/a		**6.85E-07**
hydrogen cyanide	74-90-8	2.42E-13	1.30E-07	1.15E-08	6.86E-09	2.72E-12	2.85E-13	1.06E-14	5.70E-15	4.81E-11	1.77E-09	n/a		**1.51E-07**
total mercury	NA											n/a		
mercuric chloride	7487-94-7	1.88E-23	1.01E-21	8.76E-23	1.30E-22	3.34E-23	1.38E-26	7.82E-25	7.37E-25	1.12E-21	0.00E+00	n/a	2.17E-21	**4.57E-21**
methyl mercury	22967-92-6	3.65E-25	2.23E-22	3.46E-24	6.95E-24	1.25E-24	2.16E-28	2.55E-27	2.40E-27	4.35E-23	1.88E-19	n/a	2.38E-19	**4.27E-19**
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	n/a		**0.00E+00**

a. Ingestion rates of total PCDDs/PCDFs are presented in units of mg TEQ/day

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS:
Infant Subsistence Fisher Exposure Scenario

COPC	CAS Number	Incidental Ingestion of Soil (mg/day)	Ingestion of Exposed Produce (mg/day)	Ingestion of Protected Produce (mg/day)	Ingestion of Belowground Produce (mg/day)	Ingestion of Beef (mg/day)	Ingestion of Pork (mg/day)	Ingestion of Poultry (mg/day)	Ingestion of Eggs (mg/day)	Ingestion of Milk (mg/day)	Ingestion of Fish (mg/day)	Incidental Ingestion of Surface Water (mg/day)	Ingestion of Breast Milk (mg/day)	Total Daily COPC Ingestion (mg/day)
1,1-dichloroethene	75-35-4	6.72E-19	1.52E-15	5.13E-16	1.03E-14	4.24E-15	1.08E-15	5.81E-17	3.13E-17	8.13E-17	1.21E-13	n/a		**1.39E-13**
1,2-dichloroethane	107-06-2	1.37E-21	6.75E-18	2.32E-18	7.24E-17	6.98E-21	1.79E-21	9.58E-23	5.16E-23	1.35E-19	1.33E-17	n/a	3.60E-15	**3.69E-15**
1,4-dichlorobenzene	106-46-7	2.35E-19	1.20E-16	2.78E-17	4.33E-15	1.79E-18	3.84E-19	2.06E-20	1.11E-20	1.53E-16	3.93E-15	n/a	4.16E-14	**5.01E-14**
1,4-dithiane	505-29-3	2.18E-15	1.24E-11	4.33E-12	1.63E-11	1.04E-14	2.67E-15	1.43E-16	7.72E-17	2.00E-13	6.10E-14	n/a		**3.34E-11**
1,4-oxathiane	15980-15-1	5.03E-16	8.89E-12	3.10E-12	2.22E-11	1.31E-15	3.38E-16	1.80E-17	9.74E-18	2.55E-14	1.29E-13	n/a		**3.43E-11**
2,4-dinitrotoluene	121-14-2	7.89E-18	2.06E-14	7.07E-15	2.43E-14	4.79E-14	1.23E-14	6.62E-16	3.57E-16	9.20E-16	1.44E-16	n/a		**1.14E-13**
2-butanone	78-93-3	4.15E-16	3.21E-12	1.12E-12	1.84E-12	2.76E-16	7.12E-17	3.81E-18	2.06E-18	5.35E-15	4.05E-14	n/a		**6.22E-12**
acetylene	74-86-2	1.98E-14	1.94E-10	5.33E-11	1.42E-10	1.95E-14	4.25E-15	2.19E-16	1.18E-16	3.68E-13	1.03E-08	n/a		**1.07E-08**
benzene	71-43-2	9.56E-21	2.16E-17	7.30E-18	1.47E-16	6.03E-20	1.54E-20	8.27E-22	4.45E-22	1.16E-18	3.66E-16	n/a	3.45E-14	**3.51E-14**
chlorobenzene	108-90-7	8.92E-20	8.47E-17	2.68E-17	1.30E-15	6.16E-16	1.54E-17	8.32E-18	4.48E-18	1.16E-14	1.85E-15	n/a		**1.55E-14**
chloroform	67-66-3	1.07E-18	2.76E-15	9.27E-16	2.06E-14	6.59E-18	1.67E-18	8.97E-20	4.82E-20	1.26E-16	4.04E-14	n/a	4.50E-12	**4.56E-12**
ethane	74-84-0	5.71E-16	1.85E-12	6.40E-13	4.13E-12	3.27E-15	8.43E-16	4.54E-17	2.45E-17	6.30E-14	7.39E-10	n/a		**7.46E-10**
HD	505-60-2	5.54E-14	2.34E-10	2.80E-11	7.58E-11	9.20E-13	1.19E-13	5.07E-15	2.73E-15	1.64E-11	7.32E-10	n/a		**1.09E-09**
methane	74-82-8	8.51E-16	7.17E-12	2.49E-12	1.49E-11	3.43E-15	3.19E-17	1.71E-18	9.19E-19	2.40E-15	1.92E-09	n/a		**1.94E-09**
monoethanolamine	141-43-5	2.00E-12	1.57E-08	5.40E-09	6.19E-07	1.16E-13	2.98E-14	1.59E-15	8.57E-16	2.25E-12	6.01E-10	n/a		**6.41E-07**
nitrobenzene	98-95-3	5.94E-19	1.81E-15	6.31E-16	1.20E-15	3.43E-18	8.89E-19	4.78E-20	2.58E-20	3.13E-16	1.48E-17	n/a		**3.98E-15**
tetrachloroethene	127-18-4	3.04E-19	2.83E-16	4.12E-17	1.82E-14	3.60E-18	5.62E-19	2.71E-20	1.46E-20	6.38E-17	1.26E-13	n/a	1.29E-12	**1.43E-12**
trichloroethene	79-01-6	6.57E-18	9.96E-15	3.36E-15	6.27E-14	4.32E-17	1.11E-17	6.00E-19	3.23E-19	8.26E-16	2.58E-13	n/a	1.40E-11	**1.43E-11**
vinyl chloride	75-01-4	1.65E-16	9.25E-13	3.20E-13	7.79E-12	7.97E-16	2.06E-16	1.10E-17	5.92E-18	1.54E-14	3.24E-11	n/a		**4.14E-11**
ammonia	7664-41-7	6.12E-12	1.61E-07	5.62E-08	4.60E-07	1.20E-11	3.08E-12	1.65E-13	8.88E-14	2.33E-10	1.78E-08	n/a		**6.96E-07**
hydrogen cyanide	74-90-8	2.42E-13	1.30E-07	1.15E-08	6.86E-09	2.72E-12	2.85E-13	1.06E-14	5.70E-15	4.81E-11	4.43E-09	n/a		**1.53E-07**
total mercury	NA											n/a		
mercuric chloride	7487-94-7	9.38E-24	8.81E-22	4.38E-23	6.48E-23	2.73E-23	9.09E-27	3.91E-25	3.69E-25	9.31E-22	0.00E+00	n/a		**1.96E-21**
methyl mercury	22967-92-6	1.86E-25	2.18E-22	1.76E-24	3.53E-24	1.07E-24	2.00E-28	1.29E-27	1.22E-27	3.73E-23	2.71E-19	n/a		**2.72E-19**
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	n/a		**0.00E+00**

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS:
Infant Subsistence Fisher Exposure Scenario

COPC	CAS Number	Incidental Ingestion of Soil (mg/day)[a]	Ingestion of Exposed Produce (mg/day)[a]	Ingestion of Protected Produce (mg/day)[a]	Ingestion of Belowground Produce (mg/day)[a]	Ingestion of Beef (mg/day)[a]	Ingestion of Pork (mg/day)[a]	Ingestion of Poultry (mg/day)[a]	Ingestion of Eggs (mg/day)[a]	Ingestion of Milk (mg/day)[a]	Ingestion of Fish (mg/day)[a]	Incidental Ingestion of Surface Water (mg/day)[a]	Ingestion of Breast Milk (mg/day)[a]	Total Daily COPC Ingestion (mg/day)[a]
1,1-dichloroethene	75-35-4	6.72E-19	1.52E-15	5.13E-16	1.03E-14	4.24E-15	1.08E-15	5.81E-17	3.13E-17	8.13E-17	1.21E-13	n/a		**1.39E-13**
1,2-dichloroethane	107-06-2	1.37E-21	6.75E-18	2.32E-18	7.24E-17	6.98E-21	1.79E-21	9.58E-23	5.16E-23	1.35E-19	1.33E-17	n/a	3.60E-15	**3.69E-15**
1,4-dichlorobenzene	106-46-7	2.35E-19	1.20E-16	2.78E-17	4.33E-15	1.79E-18	3.84E-19	2.06E-20	1.11E-20	1.53E-16	3.93E-15	n/a	4.16E-14	**5.01E-14**
1,4-dithiane	505-29-3	2.18E-15	1.25E-11	4.34E-12	1.64E-11	1.04E-14	2.68E-15	1.44E-16	7.74E-17	2.01E-13	6.11E-14	n/a		**3.34E-11**
1,4-oxathiane	15980-15-1	5.03E-16	8.89E-12	3.10E-12	2.22E-11	1.31E-15	3.38E-16	1.80E-17	9.74E-18	2.55E-14	1.29E-13	n/a		**3.44E-11**
2,4-dinitrotoluene	121-14-2	8.47E-18	2.21E-14	7.58E-15	2.60E-14	5.14E-14	1.32E-14	7.10E-16	3.83E-16	9.86E-16	1.51E-16	n/a		**1.23E-13**
2-butanone	78-93-3	4.15E-16	3.21E-12	1.12E-12	1.84E-12	2.77E-16	7.13E-17	3.81E-18	2.06E-18	5.35E-15	4.05E-14	n/a	1.56E-11	**2.18E-11**
acetylene	74-86-2	1.98E-14	1.94E-10	5.33E-11	1.42E-10	1.95E-14	4.25E-15	2.19E-16	1.18E-16	3.68E-13	1.03E-08	n/a		**1.07E-08**
benzene	71-43-2	9.56E-21	2.16E-17	7.30E-18	1.47E-16	6.03E-20	1.54E-20	8.27E-22	4.45E-22	1.16E-18	3.66E-16	n/a	3.45E-14	**3.51E-14**
chlorobenzene	108-90-7	8.92E-20	8.47E-17	2.68E-17	1.30E-15	6.16E-16	1.54E-17	8.32E-18	4.48E-18	1.16E-14	1.85E-15	n/a		**1.55E-14**
chloroform	67-66-3	1.07E-18	2.76E-15	9.27E-16	2.06E-14	6.59E-18	1.67E-18	8.97E-20	4.82E-20	1.26E-16	4.04E-14	n/a	4.50E-12	**4.56E-12**
ethane	74-84-0	5.71E-16	1.85E-12	6.40E-13	4.13E-12	3.27E-15	8.43E-16	4.54E-17	2.45E-17	6.30E-14	7.39E-10	n/a		**7.46E-10**
HD	505-60-2	5.54E-14	2.34E-10	2.80E-11	7.58E-11	9.20E-13	1.19E-13	5.07E-15	2.73E-15	1.64E-11	7.32E-10	n/a		**1.09E-09**
methane	74-82-8	8.51E-16	7.17E-12	2.49E-12	1.49E-11	3.43E-15	3.19E-17	1.71E-18	9.19E-19	2.40E-15	1.92E-09	n/a		**1.94E-09**
monoethanolamine	141-43-5	2.00E-12	1.57E-08	5.41E-09	6.20E-07	1.16E-13	2.98E-14	1.59E-15	8.57E-16	2.25E-12	6.01E-10	n/a		**6.41E-07**
nitrobenzene	98-95-3	5.96E-19	1.82E-15	6.33E-16	1.20E-15	3.43E-18	8.91E-19	4.79E-20	2.58E-20	3.14E-16	1.48E-17	n/a		**3.99E-15**
tetrachloroethene	127-18-4	3.04E-19	2.83E-16	4.12E-17	1.82E-14	3.60E-18	5.62E-19	2.71E-20	1.46E-20	6.38E-17	1.26E-13	n/a	1.29E-12	**1.43E-12**
trichloroethene	79-01-6	6.57E-18	9.96E-15	3.36E-15	6.27E-14	4.32E-17	1.11E-17	6.00E-19	3.23E-19	8.26E-16	2.58E-13	n/a	1.40E-11	**1.43E-11**
vinyl chloride	75-01-4	1.65E-16	9.25E-13	3.20E-13	7.79E-12	7.97E-16	2.06E-16	1.10E-17	5.92E-18	1.54E-14	3.24E-11	n/a		**4.14E-11**
ammonia	7664-41-7	6.12E-12	1.61E-07	5.62E-08	4.60E-07	1.20E-11	3.08E-12	1.65E-13	8.88E-14	2.33E-10	1.78E-08	n/a		**6.96E-07**
hydrogen cyanide	74-90-8	2.42E-13	1.30E-07	1.15E-08	6.86E-09	2.72E-12	2.85E-13	1.06E-14	5.70E-15	4.81E-11	4.43E-09	n/a		**1.53E-07**
total mercury	NA											n/a		
mercuric chloride	7487-94-7	1.88E-23	1.01E-21	8.76E-23	1.30E-22	3.34E-23	1.38E-26	7.82E-25	7.37E-25	1.12E-21	0.00E+00	n/a	2.17E-21	**4.57E-21**
methyl mercury	22967-92-6	3.65E-25	2.23E-22	3.46E-24	6.95E-24	1.25E-24	2.16E-28	2.55E-27	2.40E-27	4.35E-23	4.70E-19	n/a	5.96E-19	**1.07E-18**
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	n/a		**0.00E+00**

a. Ingestion rates of total PCDDs/PCDFs are presented in units of mg TEQ/day

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS:
Infant Subsistence Farmer Exposure Scenario

COPC	CAS Number	Incidental Ingestion of Soil (mg/day)	Ingestion of Exposed Produce (mg/day)	Ingestion of Protected Produce (mg/day)	Ingestion of Belowground Produce (mg/day)	Ingestion of Beef (mg/day)	Ingestion of Pork (mg/day)	Ingestion of Poultry (mg/day)	Ingestion of Eggs (mg/day)	Ingestion of Milk (mg/day)	Ingestion of Fish (mg/day)	Incidental Ingestion of Surface Water (mg/day)	Ingestion of Breast Milk (mg/day)	Total Daily COPC Ingestion (mg/day)
1,1-dichloroethene	75-35-4	6.72E-19	3.80E-15	1.28E-15	2.59E-14	1.06E-14	2.70E-15	1.45E-16	7.83E-17	2.03E-16	4.83E-14	n/a		**9.30E-14**
1,2-dichloroethane	107-06-2	1.37E-21	1.69E-17	5.80E-18	1.81E-16	1.74E-20	4.48E-21	2.40E-22	1.29E-22	3.37E-19	5.32E-18	n/a	3.82E-15	**4.03E-15**
1,4-dichlorobenzene	106-46-7	2.35E-19	3.00E-16	6.95E-17	1.08E-14	4.48E-18	9.60E-19	5.16E-20	2.78E-20	3.82E-16	1.57E-15	n/a	5.16E-14	**6.48E-14**
1,4-dithiane	505-29-3	2.18E-15	3.11E-11	1.08E-11	4.08E-11	2.60E-14	6.69E-15	3.58E-16	1.93E-16	5.01E-13	2.44E-14	n/a		**8.33E-11**
1,4-oxathiane	15980-15-1	5.03E-16	2.22E-11	7.74E-12	5.55E-11	3.29E-15	8.45E-16	4.50E-17	2.44E-17	6.36E-14	5.17E-14	n/a		**8.56E-11**
2,4-dinitrotoluene	121-14-2	7.89E-18	5.16E-14	1.77E-14	6.07E-14	1.20E-13	3.08E-14	1.65E-15	8.92E-16	2.30E-15	5.76E-17	n/a		**2.85E-13**
2-butanone	78-93-3	4.15E-16	8.03E-12	2.80E-12	4.60E-12	6.91E-16	1.78E-16	9.53E-18	5.14E-18	1.34E-14	1.62E-14	n/a		**1.55E-11**
acetylene	74-86-2	1.98E-14	4.86E-10	1.33E-10	3.54E-10	4.86E-14	1.06E-14	5.46E-16	2.94E-16	9.20E-13	4.12E-09	n/a		**5.10E-09**
benzene	71-43-2	9.56E-21	5.40E-17	1.82E-17	3.68E-16	1.51E-19	3.84E-20	2.07E-21	1.11E-21	2.89E-18	1.46E-16	n/a	3.47E-14	**3.53E-14**
chlorobenzene	108-90-7	8.92E-20	2.12E-16	6.69E-17	3.24E-15	1.54E-15	3.84E-17	2.08E-17	1.12E-17	2.90E-14	7.42E-16	n/a		**3.48E-14**
chloroform	67-66-3	1.07E-18	6.91E-15	2.32E-15	5.15E-14	1.65E-17	4.18E-18	2.24E-19	1.21E-19	3.16E-16	1.61E-14	n/a	4.53E-12	**4.61E-12**
ethane	74-84-0	5.71E-16	4.63E-12	1.60E-12	1.03E-11	8.17E-15	2.11E-15	1.13E-16	6.11E-17	1.58E-13	2.96E-10	n/a		**3.12E-10**
HD	505-60-2	5.54E-14	5.85E-10	7.01E-11	1.89E-10	2.30E-12	2.96E-13	1.27E-14	6.82E-15	4.10E-11	2.93E-10	n/a		**1.18E-09**
methane	74-82-8	8.51E-16	1.79E-11	6.22E-12	3.72E-11	8.58E-15	7.98E-17	4.27E-18	2.30E-18	5.99E-15	7.67E-10	n/a		**8.29E-10**
monoethanolamine	141-43-5	2.00E-12	3.92E-08	1.35E-08	1.55E-06	2.91E-13	7.44E-14	3.98E-15	2.14E-15	5.62E-12	2.40E-10	n/a		**1.60E-06**
nitrobenzene	98-95-3	5.94E-19	4.53E-15	1.58E-15	3.00E-15	8.56E-18	2.22E-18	1.20E-19	6.44E-20	7.83E-16	5.92E-18	n/a		**9.91E-15**
tetrachloroethene	127-18-4	3.04E-19	7.08E-16	1.03E-16	4.54E-14	9.00E-18	1.40E-18	6.78E-20	3.65E-20	1.59E-16	5.03E-14	n/a	1.25E-12	**1.34E-12**
trichloroethene	79-01-6	6.57E-18	2.49E-14	8.40E-15	1.57E-13	1.08E-16	2.77E-17	1.50E-18	8.07E-19	2.07E-15	1.03E-13	n/a	1.40E-11	**1.43E-11**
vinyl chloride	75-01-4	1.65E-16	2.31E-12	7.99E-13	1.95E-11	1.99E-15	5.15E-16	2.75E-17	1.48E-17	3.86E-14	1.30E-11	n/a		**3.56E-11**
ammonia	7664-41-7	6.12E-12	4.03E-07	1.41E-07	1.15E-06	3.00E-11	7.69E-12	4.11E-13	2.22E-13	5.82E-10	7.14E-09	n/a		**1.70E-06**
hydrogen cyanide	74-90-8	2.42E-13	3.26E-07	2.88E-08	1.71E-08	6.79E-12	7.13E-13	2.64E-14	1.42E-14	1.20E-10	1.77E-09	n/a		**3.74E-07**
total mercury	NA											n/a		
mercuric chloride	7487-94-7	9.38E-24	2.20E-21	1.09E-22	1.62E-22	6.82E-23	2.27E-26	9.77E-25	9.22E-25	2.33E-21	0.00E+00	n/a		**4.88E-21**
methyl mercury	22967-92-6	1.86E-25	5.45E-22	4.39E-24	8.82E-24	2.67E-24	5.00E-28	3.24E-27	3.05E-27	9.33E-23	1.09E-19	n/a		**1.09E-19**
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	n/a		**0.00E+00**

TOTAL DAILY COPC UPTAKE THROUGH INGESTION FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS:
Infant Subsistence Farmer Exposure Scenario

COPC	CAS Number	Incidental Ingestion of Soil (mg/day)[a]	Ingestion of Exposed Produce (mg/day)[a]	Ingestion of Protected Produce (mg/day)[a]	Ingestion of Belowground Produce (mg/day)[a]	Ingestion of Beef (mg/day)[a]	Ingestion of Pork (mg/day)[a]	Ingestion of Poultry (mg/day)[a]	Ingestion of Eggs (mg/day)[a]	Ingestion of Milk (mg/day)[a]	Ingestion of Fish (mg/day)[a]	Incidental Ingestion of Surface Water (mg/day)[a]	Ingestion of Breast Milk (mg/day)[a]	Total Daily COPC Ingestion (mg/day)[a]
1,1-dichloroethene	75-35-4	6.72E-19	3.80E-15	1.28E-15	2.59E-14	1.06E-14	2.70E-15	1.45E-16	7.83E-17	2.03E-16	4.83E-14	n/a		**9.30E-14**
1,2-dichloroethane	107-06-2	1.37E-21	1.69E-17	5.80E-18	1.81E-16	1.74E-20	4.48E-21	2.40E-22	1.29E-22	3.37E-19	5.32E-18	n/a	3.82E-15	**4.03E-15**
1,4-dichlorobenzene	106-46-7	2.35E-19	3.00E-16	6.95E-17	1.08E-14	4.48E-18	9.60E-19	5.16E-20	2.78E-20	3.82E-16	1.57E-15	n/a	5.16E-14	**6.48E-14**
1,4-dithiane	505-29-3	2.18E-15	3.11E-11	1.08E-11	4.09E-11	2.61E-14	6.70E-15	3.59E-16	1.94E-16	5.02E-13	2.44E-14	n/a		**8.35E-11**
1,4-oxathiane	15980-15-1	5.03E-16	2.22E-11	7.74E-12	5.55E-11	3.29E-15	8.45E-16	4.50E-17	2.44E-17	6.37E-14	5.17E-14	n/a		**8.56E-11**
2,4-dinitrotoluene	121-14-2	8.47E-18	5.53E-14	1.89E-14	6.51E-14	1.28E-13	3.30E-14	1.78E-15	9.56E-16	2.46E-15	6.06E-17	n/a		**3.06E-13**
2-butanone	78-93-3	4.15E-16	8.04E-12	2.80E-12	4.60E-12	6.91E-16	1.78E-16	9.53E-18	5.14E-18	1.34E-14	1.62E-14	n/a	3.01E-11	**4.56E-11**
acetylene	74-86-2	1.98E-14	4.86E-10	1.33E-10	3.54E-10	4.86E-14	1.06E-14	5.46E-16	2.94E-16	9.20E-13	4.12E-09	n/a		**5.10E-09**
benzene	71-43-2	9.56E-21	5.40E-17	1.82E-17	3.68E-16	1.51E-19	3.84E-20	2.07E-21	1.11E-21	2.89E-18	1.46E-16	n/a	3.47E-14	**3.53E-14**
chlorobenzene	108-90-7	8.92E-20	2.12E-16	6.69E-17	3.24E-15	1.54E-15	3.84E-17	2.08E-17	1.12E-17	2.90E-14	7.42E-16	n/a		**3.48E-14**
chloroform	67-66-3	1.07E-18	6.91E-15	2.32E-15	5.15E-14	1.65E-17	4.18E-18	2.24E-19	1.21E-19	3.16E-16	1.61E-14	n/a	4.53E-12	**4.61E-12**
ethane	74-84-0	5.71E-16	4.63E-12	1.60E-12	1.03E-11	8.17E-15	2.11E-15	1.13E-16	6.11E-17	1.58E-13	2.96E-10	n/a		**3.12E-10**
HD	505-60-2	5.54E-14	5.85E-10	7.01E-11	1.89E-10	2.30E-12	2.96E-13	1.27E-14	6.82E-15	4.10E-11	2.93E-10	n/a		**1.18E-09**
methane	74-82-8	8.51E-16	1.79E-11	6.22E-12	3.72E-11	8.58E-15	7.98E-17	4.27E-18	2.30E-18	5.99E-15	7.67E-10	n/a		**8.29E-10**
monoethanolamine	141-43-5	2.00E-12	3.92E-08	1.35E-08	1.55E-06	2.91E-13	7.44E-14	3.98E-15	2.14E-15	5.62E-12	2.40E-10	n/a		**1.60E-06**
nitrobenzene	98-95-3	5.96E-19	4.55E-15	1.58E-15	3.00E-15	8.59E-18	2.23E-18	1.20E-19	6.46E-20	7.85E-16	5.92E-18	n/a		**9.93E-15**
tetrachloroethene	127-18-4	3.04E-19	7.08E-16	1.03E-16	4.54E-14	9.00E-18	1.40E-18	6.78E-20	3.65E-20	1.59E-16	5.03E-14	n/a	1.25E-12	**1.34E-12**
trichloroethene	79-01-6	6.57E-18	2.49E-14	8.40E-15	1.57E-13	1.08E-16	2.77E-17	1.50E-18	8.07E-19	2.07E-15	1.03E-13	n/a	1.40E-11	**1.43E-11**
vinyl chloride	75-01-4	1.65E-16	2.31E-12	7.99E-13	1.95E-11	1.99E-15	5.15E-16	2.75E-17	1.48E-17	3.86E-14	1.30E-11	n/a		**3.56E-11**
ammonia	7664-41-7	6.12E-12	4.03E-07	1.41E-07	1.15E-06	3.00E-11	7.69E-12	4.11E-13	2.22E-13	5.82E-10	7.14E-09	n/a		**1.70E-06**
hydrogen cyanide	74-90-8	2.42E-13	3.26E-07	2.88E-08	1.71E-08	6.79E-12	7.13E-13	2.64E-14	1.42E-14	1.20E-10	1.77E-09	n/a		**3.74E-07**
total mercury	NA											n/a		
mercuric chloride	7487-94-7	1.88E-23	2.52E-21	2.19E-22	3.24E-22	8.35E-23	3.46E-26	1.95E-24	1.84E-24	2.80E-21	0.00E+00	n/a	5.19E-21	**1.12E-20**
methyl mercury	22967-92-6	3.65E-25	5.57E-22	8.65E-24	1.74E-23	3.12E-24	5.39E-28	6.37E-27	6.01E-27	1.09E-22	1.88E-19	n/a	2.39E-19	**4.27E-19**
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	n/a		**0.00E+00**

a. Ingestion rates of total PCDDs/PCDFs are presented in units of mg TEQ/day

DERMAL UPTAKE OF COPCS FROM CONTACT WITH SOIL FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: All Exposure Scenarios							
COPC	CAS Number	Adult Resident DA_{event} mg/(cm2-event)	Adult Fisher DA_{event} mg/(cm2-event)	Adult Farmer DA_{event} mg/(cm2-event)	Adult Worker DA_{event} mg/(cm2-event)	Child DA_{event} mg/(cm2-event)	Infant DA_{event} mg/(cm2-event)
1,1-dichloroethene	75-35-4	1.80E-24	1.80E-24	1.35E-24	6.17E-24	3.08E-23	3.08E-23
1,2-dichloroethane	107-06-2	7.99E-27	7.99E-27	6.00E-27	2.74E-26	1.37E-25	1.37E-25
1,4-dichlorobenzene	106-46-7	1.37E-24	1.37E-24	1.03E-24	4.71E-24	2.35E-23	2.35E-23
1,4-dithiane	505-29-3	1.27E-20	1.27E-20	9.55E-21	4.36E-20	2.18E-19	2.18E-19
1,4-oxathiane	15980-15-1	2.93E-21	2.93E-21	2.20E-21	1.01E-20	5.03E-20	5.03E-20
2,4-dinitrotoluene	121-14-2	7.95E-24	7.95E-24	5.96E-24	2.72E-23	1.27E-22	1.27E-22
2-butanone	78-93-3	2.42E-21	2.42E-21	1.82E-21	8.30E-21	4.15E-20	4.15E-20
acetylene	74-86-2	1.15E-19	1.15E-19	8.65E-20	3.95E-19	1.98E-18	1.98E-18
benzene	71-43-2	5.58E-26	5.58E-26	4.18E-26	1.91E-25	9.56E-25	9.56E-25
chlorobenzene	108-90-7	5.94E-25	5.94E-25	4.46E-25	2.04E-24	1.02E-23	1.02E-23
chloroform	67-66-3	6.22E-24	6.22E-24	4.66E-24	2.13E-23	1.07E-22	1.07E-22
ethane	74-84-0	3.33E-21	3.33E-21	2.50E-21	1.14E-20	5.71E-20	5.71E-20
HD	505-60-2	3.23E-19	3.23E-19	2.43E-19	1.11E-18	5.54E-18	5.54E-18
methane	74-82-8	4.97E-21	4.97E-21	3.72E-21	1.70E-20	8.51E-20	8.51E-20
monoethanolamine	141-43-5	1.17E-17	1.17E-17	8.76E-18	4.01E-17	2.00E-16	2.00E-16
nitrobenzene	98-95-3	3.47E-24	3.47E-24	2.61E-24	1.19E-23	5.94E-23	5.94E-23
tetrachloroethene	127-18-4	1.78E-24	1.78E-24	1.33E-24	6.09E-24	3.04E-23	3.04E-23
trichloroethene	79-01-6	3.83E-23	3.83E-23	2.87E-23	1.31E-22	6.57E-22	6.57E-22
vinyl chloride	75-01-4	9.64E-22	9.64E-22	7.23E-22	3.30E-21	1.65E-20	1.65E-20
ammonia	7664-41-7	3.57E-17	3.57E-17	2.68E-17	1.22E-16	6.12E-16	6.12E-16
hydrogen cyanide	74-90-8	1.41E-18	1.41E-18	1.06E-18	4.84E-18	2.42E-17	2.42E-17
total mercury	NA						
mercuric chloride	7487-94-7	3.81E-29	3.81E-29	3.90E-29	1.07E-28	5.94E-29	5.94E-29
methyl mercury	22967-92-6	6.02E-32	6.02E-32	5.66E-32	1.76E-31	1.16E-31	1.16E-31
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

DERMAL UPTAKE OF COPCS FROM CONTACT WITH SOIL FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS: All Exposure Scenarios							
COPC	CAS Number	Adult Resident DA_{event} mg/(cm2-event)	Adult Fisher DA_{event} mg/(cm2-event)	Adult Farmer DA_{event} mg/(cm2-event)	Adult Worker DA_{event} mg/(cm2-event)	Child DA_{event} mg/(cm2-event)	Infant DA_{event} mg/(cm2-event)
1,1-dichloroethene	75-35-4	1.08E-23	1.08E-23	1.08E-23	3.08E-23	3.08E-23	3.08E-23
1,2-dichloroethane	107-06-2	4.80E-26	4.80E-26	4.80E-26	1.37E-25	1.37E-25	1.37E-25
1,4-dichlorobenzene	106-46-7	8.24E-24	8.24E-24	8.24E-24	2.35E-23	2.35E-23	2.35E-23
1,4-dithiane	505-29-3	7.64E-20	7.64E-20	7.64E-20	2.18E-19	2.18E-19	2.18E-19
1,4-oxathiane	15980-15-1	1.76E-20	1.76E-20	1.76E-20	5.03E-20	5.03E-20	5.03E-20
2,4-dinitrotoluene	121-14-2	4.77E-23	4.77E-23	4.77E-23	1.36E-22	1.36E-22	1.36E-22
2-butanone	78-93-3	1.45E-20	1.45E-20	1.45E-20	4.15E-20	4.15E-20	4.15E-20
acetylene	74-86-2	6.92E-19	6.92E-19	6.92E-19	1.98E-18	1.98E-18	1.98E-18
benzene	71-43-2	3.35E-25	3.35E-25	3.35E-25	9.56E-25	9.56E-25	9.56E-25
chlorobenzene	108-90-7	3.57E-24	3.57E-24	3.57E-24	1.02E-23	1.02E-23	1.02E-23
chloroform	67-66-3	3.73E-23	3.73E-23	3.73E-23	1.07E-22	1.07E-22	1.07E-22
ethane	74-84-0	2.00E-20	2.00E-20	2.00E-20	5.71E-20	5.71E-20	5.71E-20
HD	505-60-2	1.94E-18	1.94E-18	1.94E-18	5.54E-18	5.54E-18	5.54E-18
methane	74-82-8	2.98E-20	2.98E-20	2.98E-20	8.51E-20	8.51E-20	8.51E-20
monoethanolamine	141-43-5	7.01E-17	7.01E-17	7.01E-17	2.00E-16	2.00E-16	2.00E-16
nitrobenzene	98-95-3	2.08E-23	2.08E-23	2.08E-23	5.96E-23	5.96E-23	5.96E-23
tetrachloroethene	127-18-4	1.07E-23	1.07E-23	1.07E-23	3.04E-23	3.04E-23	3.04E-23
trichloroethene	79-01-6	2.30E-22	2.30E-22	2.30E-22	6.57E-22	6.57E-22	6.57E-22
vinyl chloride	75-01-4	5.78E-21	5.78E-21	5.78E-21	1.65E-20	1.65E-20	1.65E-20
ammonia	7664-41-7	2.14E-16	2.14E-16	2.14E-16	6.12E-16	6.12E-16	6.12E-16
hydrogen cyanide	74-90-8	8.46E-18	8.46E-18	8.46E-18	2.42E-17	2.42E-17	2.42E-17
total mercury	NA						
mercuric chloride	7487-94-7	4.16E-29	4.16E-29	4.16E-29	1.19E-28	1.19E-28	1.19E-28
methyl mercury	22967-92-6	8.02E-32	8.02E-32	8.02E-32	2.29E-31	2.29E-31	2.29E-31
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

DERMAL UPTAKE OF COPCS FROM SWIMMING FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Adult Resident and Adult Subsistence Fisher Exposure Scenarios								
COPC	CAS Number	B (dimensionless)	D_{sc} (cm^2/hr)	τ_{event} (hr)	b (dimensionless)	c (dimensionless)	t* (hr)	Dermally Absorbed Dose per Event DA_{event} mg/(cm^2-event)
1,1-dichloroethene	75-35-4	4.59E-02	4.42E-07	3.77E-01			9.04E-01	4.78E-18
1,2-dichloroethane	107-06-2	1.61E-02	4.42E-07	3.77E-01			9.04E-01	5.43E-22
1,4-dichlorobenzene	106-46-7	1.96E-01	2.38E-07	7.00E-01			1.68E+00	5.17E-20
1,4-dithiane	505-29-3	1.15E-02	3.36E-07	4.96E-01			1.19E+00	1.53E-18
1,4-oxathiane	15980-15-1	3.63E-03	4.14E-07	4.03E-01			9.67E-01	9.74E-19
2,4-dinitrotoluene	121-14-2	1.61E-02	1.51E-07	1.10E+00			2.64E+00	1.09E-21
2-butanone	78-93-3	3.14E-03	6.25E-07	2.66E-01			6.40E-01	3.00E-19
acetylene	74-86-2	3.90E-03	1.13E-06	1.47E-01			3.53E-01	1.59E-13
benzene	71-43-2	5.10E-02	5.79E-07	2.88E-01			6.91E-01	1.71E-20
chlorobenzene	108-90-7	1.14E-01	3.71E-07	4.49E-01			1.08E+00	4.99E-20
chloroform	67-66-3	2.86E-02	3.40E-07	4.90E-01			1.18E+00	1.16E-18
ethane	74-84-0	3.55E-02	1.08E-06	1.55E-01			3.72E-01	6.05E-14
HD	505-60-2	2.18E-02	2.04E-07	8.18E-01			1.96E+00	7.91E-15
methane	74-82-8	1.04E-02	1.29E-06	1.29E-01			3.10E-01	2.26E-13
monoethanolamine	141-43-5	2.96E-04	7.21E-07	2.31E-01			5.55E-01	4.22E-16
nitrobenzene	98-95-3	2.30E-02	3.24E-07	5.14E-01			1.23E+00	3.68E-22
tetrachloroethene	127-18-4	1.63E-01	1.87E-07	8.92E-01			2.14E+00	1.74E-18
trichloroethene	79-01-6	5.29E-02	2.91E-07	5.72E-01			1.37E+00	6.63E-18
vinyl chloride	75-01-4	1.70E-02	7.08E-07	2.35E-01			5.65E-01	1.94E-15
ammonia	7664-41-7							2.27E-13
hydrogen cyanide	74-90-8	1.53E-03	1.12E-06	1.49E-01			3.58E-01	2.63E-14
total mercury	NA							
mercuric chloride	7487-94-7							8.12E-30
methyl mercury	22967-92-6							1.59E-31
elemental mercury	7439-97-6							0.00E+00

DERMAL UPTAKE OF COPCS FROM SWIMMING FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Adult Subsistence Farmer Exposure Scenario								
COPC	CAS Number	B (dimensionless)	D_{sc} (cm^2/hr)	τ_{event} (hr)	b (dimensionless)	c (dimensionless)	t* (hr)	Dermally Absorbed Dose per Event DA_{event} mg/(cm^2-event)
1,1-dichloroethene	75-35-4	4.59E-02	4.42E-07	3.77E-01			9.04E-01	4.78E-18
1,2-dichloroethane	107-06-2	1.61E-02	4.42E-07	3.77E-01			9.04E-01	5.43E-22
1,4-dichlorobenzene	106-46-7	1.96E-01	2.38E-07	7.00E-01			1.68E+00	5.17E-20
1,4-dithiane	505-29-3	1.15E-02	3.36E-07	4.96E-01			1.19E+00	1.50E-18
1,4-oxathiane	15980-15-1	3.63E-03	4.14E-07	4.03E-01			9.67E-01	9.69E-19
2,4-dinitrotoluene	121-14-2	1.61E-02	1.51E-07	1.10E+00			2.64E+00	1.01E-21
2-butanone	78-93-3	3.14E-03	6.25E-07	2.66E-01			6.40E-01	2.99E-19
acetylene	74-86-2	3.90E-03	1.13E-06	1.47E-01			3.53E-01	1.59E-13
benzene	71-43-2	5.10E-02	5.79E-07	2.88E-01			6.91E-01	1.71E-20
chlorobenzene	108-90-7	1.14E-01	3.71E-07	4.49E-01			1.08E+00	4.99E-20
chloroform	67-66-3	2.86E-02	3.40E-07	4.90E-01			1.18E+00	1.16E-18
ethane	74-84-0	3.55E-02	1.08E-06	1.55E-01			3.72E-01	6.05E-14
HD	505-60-2	2.18E-02	2.04E-07	8.18E-01			1.96E+00	7.91E-15
methane	74-82-8	1.04E-02	1.29E-06	1.29E-01			3.10E-01	2.26E-13
monoethanolamine	141-43-5	2.96E-04	7.21E-07	2.31E-01			5.55E-01	4.19E-16
nitrobenzene	98-95-3	2.30E-02	3.24E-07	5.14E-01			1.23E+00	3.64E-22
tetrachloroethene	127-18-4	1.63E-01	1.87E-07	8.92E-01			2.14E+00	1.74E-18
trichloroethene	79-01-6	5.29E-02	2.91E-07	5.72E-01			1.37E+00	6.63E-18
vinyl chloride	75-01-4	1.70E-02	7.08E-07	2.35E-01			5.65E-01	1.94E-15
ammonia	7664-41-7							2.27E-13
hydrogen cyanide	74-90-8	1.53E-03	1.12E-06	1.49E-01			3.58E-01	2.63E-14
total mercury	NA							
mercuric chloride	7487-94-7							8.27E-30
methyl mercury	22967-92-6							1.62E-31
elemental mercury	7439-97-6							0.00E+00

DERMAL UPTAKE OF COPCS FROM SWIMMING FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Child Exposure Scenarios								
COPC	CAS Number	B (dimensionless)	D_{sc} (cm^2/hr)	τ_{event} (hr)	b (dimensionless)	c (dimensionless)	t* (hr)	Dermally Absorbed Dose per Event DA_{event} mg/(cm^2-event)
1,1-dichloroethene	75-35-4	4.59E-02	4.42E-07	3.77E-01			9.04E-01	4.79E-18
1,2-dichloroethane	107-06-2	1.61E-02	4.42E-07	3.77E-01			9.04E-01	5.43E-22
1,4-dichlorobenzene	106-46-7	1.96E-01	2.38E-07	7.00E-01			1.68E+00	5.20E-20
1,4-dithiane	505-29-3	1.15E-02	3.36E-07	4.96E-01			1.19E+00	2.15E-18
1,4-oxathiane	15980-15-1	3.63E-03	4.14E-07	4.03E-01			9.67E-01	1.07E-18
2,4-dinitrotoluene	121-14-2	1.61E-02	1.51E-07	1.10E+00			2.64E+00	2.59E-21
2-butanone	78-93-3	3.14E-03	6.25E-07	2.66E-01			6.40E-01	3.24E-19
acetylene	74-86-2	3.90E-03	1.13E-06	1.47E-01			3.53E-01	1.59E-13
benzene	71-43-2	5.10E-02	5.79E-07	2.88E-01			6.91E-01	1.72E-20
chlorobenzene	108-90-7	1.14E-01	3.71E-07	4.49E-01			1.08E+00	5.00E-20
chloroform	67-66-3	2.86E-02	3.40E-07	4.90E-01			1.18E+00	1.16E-18
ethane	74-84-0	3.55E-02	1.08E-06	1.55E-01			3.72E-01	6.05E-14
HD	505-60-2	2.18E-02	2.04E-07	8.18E-01			1.96E+00	7.92E-15
methane	74-82-8	1.04E-02	1.29E-06	1.29E-01			3.10E-01	2.26E-13
monoethanolamine	141-43-5	2.96E-04	7.21E-07	2.31E-01			5.55E-01	4.83E-16
nitrobenzene	98-95-3	2.30E-02	3.24E-07	5.14E-01			1.23E+00	4.48E-22
tetrachloroethene	127-18-4	1.63E-01	1.87E-07	8.92E-01			2.14E+00	1.74E-18
trichloroethene	79-01-6	5.29E-02	2.91E-07	5.72E-01			1.37E+00	6.63E-18
vinyl chloride	75-01-4	1.70E-02	7.08E-07	2.35E-01			5.65E-01	1.94E-15
ammonia	7664-41-7							2.28E-13
hydrogen cyanide	74-90-8	1.53E-03	1.12E-06	1.49E-01			3.58E-01	2.64E-14
total mercury	NA							
mercuric chloride	7487-94-7							5.06E-30
methyl mercury	22967-92-6							9.92E-32
elemental mercury	7439-97-6							0.00E+00

DERMAL UPTAKE OF COPCS FROM SWIMMING FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS: All Exposure Scenarios (Except Infants and Adult Worker)								
COPC	CAS Number	B (dimensionless)	D_{sc} (cm^2/hr)	τ_{event} (hr)	b (dimensionless)	c (dimensionless)	t* (hr)	Dermally Absorbed Dose per Event DA_{event} mg/(cm^2-event)
1,1-dichloroethene	75-35-4	4.59E-02	4.42E-07	3.77E-01			9.04E-01	4.79E-18
1,2-dichloroethane	107-06-2	1.61E-02	4.42E-07	3.77E-01			9.04E-01	5.43E-22
1,4-dichlorobenzene	106-46-7	1.96E-01	2.38E-07	7.00E-01			1.68E+00	5.20E-20
1,4-dithiane	505-29-3	1.15E-02	3.36E-07	4.96E-01			1.19E+00	2.15E-18
1,4-oxathiane	15980-15-1	3.63E-03	4.14E-07	4.03E-01			9.67E-01	1.07E-18
2,4-dinitrotoluene	121-14-2	1.61E-02	1.51E-07	1.10E+00			2.64E+00	2.72E-21
2-butanone	78-93-3	3.14E-03	6.25E-07	2.66E-01			6.40E-01	3.24E-19
acetylene	74-86-2	3.90E-03	1.13E-06	1.47E-01			3.53E-01	1.59E-13
benzene	71-43-2	5.10E-02	5.79E-07	2.88E-01			6.91E-01	1.72E-20
chlorobenzene	108-90-7	1.14E-01	3.71E-07	4.49E-01			1.08E+00	5.00E-20
chloroform	67-66-3	2.86E-02	3.40E-07	4.90E-01			1.18E+00	1.16E-18
ethane	74-84-0	3.55E-02	1.08E-06	1.55E-01			3.72E-01	6.05E-14
HD	505-60-2	2.18E-02	2.04E-07	8.18E-01			1.96E+00	7.92E-15
methane	74-82-8	1.04E-02	1.29E-06	1.29E-01			3.10E-01	2.26E-13
monoethanolamine	141-43-5	2.96E-04	7.21E-07	2.31E-01			5.55E-01	4.83E-16
nitrobenzene	98-95-3	2.30E-02	3.24E-07	5.14E-01			1.23E+00	4.48E-22
tetrachloroethene	127-18-4	1.63E-01	1.87E-07	8.92E-01			2.14E+00	1.74E-18
trichloroethene	79-01-6	5.29E-02	2.91E-07	5.72E-01			1.37E+00	6.63E-18
vinyl chloride	75-01-4	1.70E-02	7.08E-07	2.35E-01			5.65E-01	1.94E-15
ammonia	7664-41-7							2.28E-13
hydrogen cyanide	74-90-8	1.53E-03	1.12E-06	1.49E-01			3.58E-01	2.64E-14
total mercury	NA							
mercuric chloride	7487-94-7							8.77E-30
methyl mercury	22967-92-6							1.72E-31
elemental mercury	7439-97-6							0.00E+00

TOTAL COPC UPTAKE FOR EACH EXPOSURE SCENARIO

Adult Resident Exposure Scenario													
		CARCINOGENIC EFFECTS:						NONCARCINOGENIC EFFECTS:					
		Direct Exposure		Indirect Exposure				Direct Exposure		Indirect Exposure			
COPC	CAS Number	Inhalation Cancer Slope Factor?	Inhalation Exposure (mg/kg-day)	Oral Cancer Slope Factor?	Dermal Exposure (mg/kg-day)	Total Ingestion Exposure (mg/kg-day)	Total Indirect Exposure (mg/kg-day)	Inhalation Reference Dose?	Inhalation Exposure (mg/kg-day)	Oral Reference Dose?	Dermal Exposure (mg/kg-day)	Total Ingestion Exposure (mg/kg-day)	Total Indirect Exposure (mg/kg-day)
1,1-dichloroethene	75-35-4		1.66E-14		1.73E-17	6.08E-16	6.26E-16	Yes	2.32E-13	Yes	4.05E-17	2.12E-15	2.16E-15
1,2-dichloroethane	107-06-2	Yes	5.05E-18	Yes	1.97E-21	2.88E-19	2.90E-19	Yes	7.07E-17	Yes	4.60E-21	3.32E-18	3.32E-18
1,4-dichlorobenzene	106-46-7	Yes	4.11E-17	Yes	1.87E-19	3.08E-17	3.10E-17	Yes	5.76E-16	Yes	4.40E-19	2.21E-16	2.21E-16
1,4-dithiane	505-29-3		4.66E-15		5.96E-18	8.25E-14	8.25E-14	Yes	6.53E-14	Yes	2.42E-17	1.15E-12	1.15E-12
1,4-oxathiane	15980-15-1		9.85E-15		3.63E-18	8.94E-14	8.94E-14		1.38E-13		1.05E-17	1.24E-12	1.24E-12
2,4-dinitrotoluene	121-14-2	Yes	6.02E-19	Yes	4.21E-21	4.80E-16	4.80E-16		8.43E-18	Yes	2.67E-20	6.41E-15	6.41E-15
2-butanone	78-93-3		8.57E-15		1.17E-18	1.45E-14	1.45E-14	Yes	1.20E-13	Yes	3.87E-18	2.01E-13	2.01E-13
acetylene	74-86-2		4.99E-09		5.75E-13	4.82E-11	4.88E-11		6.99E-08		1.34E-12	1.22E-10	1.24E-10
benzene	71-43-2	Yes	4.97E-17	Yes	6.21E-20	2.14E-18	2.20E-18	Yes	6.96E-16	Yes	1.45E-19	1.06E-17	1.08E-17
chlorobenzene	108-90-7		6.93E-17		1.81E-19	2.42E-17	2.44E-17	Yes	9.71E-16	Yes	4.23E-19	1.97E-16	1.97E-16
chloroform	67-66-3	Yes	6.49E-15	Yes	4.20E-18	2.50E-16	2.54E-16	Yes	9.09E-14	Yes	9.82E-18	1.36E-15	1.37E-15
ethane	74-84-0		2.22E-10		2.19E-13	3.36E-12	3.58E-12		3.10E-09		5.11E-13	8.05E-12	8.56E-12
HD	505-60-2	Yes	3.13E-11	Yes	2.87E-14	5.23E-12	5.26E-12	Yes	4.38E-10	Yes	6.71E-14	1.75E-11	1.75E-11
methane	74-82-8		2.44E-09		8.20E-13	8.97E-12	9.79E-12		3.41E-08		1.91E-12	2.17E-11	2.36E-11
monoethanolamine	141-43-5		1.97E-11		1.92E-15	1.83E-09	1.83E-09		2.76E-10		9.56E-15	2.56E-08	2.56E-08
nitrobenzene	98-95-3	Yes	1.18E-18		1.45E-21	8.80E-18	8.80E-18	Yes	1.65E-17	Yes	5.41E-21	1.22E-16	1.22E-16
tetrachloroethene	127-18-4	Yes	1.61E-15	Yes	6.30E-18	6.18E-16	6.25E-16	Yes	2.26E-14	Yes	1.47E-17	2.06E-15	2.07E-15
trichloroethene	79-01-6	Yes	1.99E-14	Yes	2.40E-17	1.37E-15	1.39E-15	Yes	2.79E-13	Yes	5.61E-17	5.62E-15	5.68E-15
vinyl chloride	75-01-4	Yes	1.62E-11	Yes	7.03E-15	1.73E-13	1.80E-13	Yes	2.26E-10	Yes	1.64E-14	6.96E-13	7.12E-13
ammonia	7664-41-7		2.11E-09		8.23E-13	1.86E-09	1.86E-09	Yes	2.95E-08		1.94E-12	2.51E-08	2.51E-08
hydrogen cyanide	74-90-8		1.51E-09		9.54E-14	1.05E-09	1.05E-09	Yes	2.11E-08	Yes	2.23E-13	3.76E-09	3.76E-09
total mercury	NA												
mercuric chloride	7487-94-7		2.17E-25		1.31E-27	1.73E-23	1.73E-23	Yes	3.04E-24	Yes	3.32E-27	4.17E-23	4.17E-23
methyl mercury	22967-92-6		0.00E+00		2.59E-30	1.96E-21	1.96E-21		0.00E+00	Yes	7.71E-30	4.92E-21	4.92E-21
elemental mercury	7439-97-6		0.00E+00		0.00E+00	0.00E+00	0.00E+00	Yes	0.00E+00		0.00E+00	0.00E+00	0.00E+00

TOTAL COPC UPTAKE FOR EACH EXPOSURE SCENARIO

Adult Subsistence Fisher Exposure Scenario													
		CARCINOGENIC EFFECTS:						NONCARCINOGENIC EFFECTS:					
		Direct Exposure		Indirect Exposure				Direct Exposure		Indirect Exposure			
COPC	CAS Number	Inhalation Cancer Slope Factor?	Inhalation Exposure (mg/kg-day)	Oral Cancer Slope Factor?	Dermal Exposure (mg/kg-day)	Total Ingestion Exposure (mg/kg-day)	Total Indirect Exposure (mg/kg-day)	Inhalation Reference Dose?	Inhalation Exposure (mg/kg-day)	Oral Reference Dose?	Dermal Exposure (mg/kg-day)	Total Ingestion Exposure (mg/kg-day)	Total Indirect Exposure (mg/kg-day)
1,1-dichloroethene	75-35-4		1.66E-14		1.73E-17	1.42E-15	1.44E-15	Yes	2.32E-13	Yes	4.05E-17	4.01E-15	4.05E-15
1,2-dichloroethane	107-06-2	Yes	5.05E-18	Yes	1.97E-21	3.78E-19	3.80E-19	Yes	7.07E-17	Yes	4.60E-21	3.53E-18	3.53E-18
1,4-dichlorobenzene	106-46-7	Yes	4.11E-17	Yes	1.87E-19	5.71E-17	5.73E-17	Yes	5.76E-16	Yes	4.40E-19	2.82E-16	2.83E-16
1,4-dithiane	505-29-3		4.66E-15		5.96E-18	8.28E-14	8.28E-14	Yes	6.53E-14	Yes	2.42E-17	1.15E-12	1.15E-12
1,4-oxathiane	15980-15-1		9.85E-15		3.63E-18	9.02E-14	9.02E-14		1.38E-13		1.05E-17	1.25E-12	1.25E-12
2,4-dinitrotoluene	121-14-2	Yes	6.02E-19	Yes	4.21E-21	4.80E-16	4.80E-16		8.43E-18	Yes	2.67E-20	6.41E-15	6.41E-15
2-butanone	78-93-3		8.57E-15		1.17E-18	1.47E-14	1.47E-14	Yes	1.20E-13	Yes	3.87E-18	2.02E-13	2.02E-13
acetylene	74-86-2		4.99E-09		5.75E-13	1.18E-10	1.18E-10		6.99E-08		1.34E-12	2.84E-10	2.85E-10
benzene	71-43-2	Yes	4.97E-17	Yes	6.21E-20	4.60E-18	4.66E-18	Yes	6.96E-16	Yes	1.45E-19	1.64E-17	1.65E-17
chlorobenzene	108-90-7		6.93E-17		1.81E-19	3.67E-17	3.68E-17	Yes	9.71E-16	Yes	4.23E-19	2.26E-16	2.27E-16
chloroform	67-66-3	Yes	6.49E-15	Yes	4.20E-18	5.21E-16	5.25E-16	Yes	9.09E-14	Yes	9.82E-18	2.00E-15	2.01E-15
ethane	74-84-0		2.22E-10		2.19E-13	8.34E-12	8.56E-12		3.10E-09		5.11E-13	1.97E-11	2.02E-11
HD	505-60-2	Yes	3.13E-11	Yes	2.87E-14	1.02E-11	1.02E-11	Yes	4.38E-10	Yes	6.71E-14	2.90E-11	2.90E-11
methane	74-82-8		2.44E-09		8.20E-13	2.19E-11	2.27E-11		3.41E-08		1.91E-12	5.18E-11	5.37E-11
monoethanolamine	141-43-5		1.97E-11		1.92E-15	1.83E-09	1.83E-09		2.76E-10		9.56E-15	2.56E-08	2.56E-08
nitrobenzene	98-95-3	Yes	1.18E-18		1.45E-21	8.88E-18	8.88E-18	Yes	1.65E-17	Yes	5.41E-21	1.23E-16	1.23E-16
tetrachloroethene	127-18-4	Yes	1.61E-15	Yes	6.30E-18	1.46E-15	1.47E-15	Yes	2.26E-14	Yes	1.47E-17	4.03E-15	4.05E-15
trichloroethene	79-01-6	Yes	1.99E-14	Yes	2.40E-17	3.10E-15	3.13E-15	Yes	2.79E-13	Yes	5.61E-17	9.67E-15	9.72E-15
vinyl chloride	75-01-4	Yes	1.62E-11	Yes	7.03E-15	3.91E-13	3.98E-13	Yes	2.26E-10	Yes	1.64E-14	1.20E-12	1.22E-12
ammonia	7664-41-7		2.11E-09		8.23E-13	1.98E-09	1.98E-09	Yes	2.95E-08		1.94E-12	2.53E-08	2.53E-08
hydrogen cyanide	74-90-8		1.51E-09		9.54E-14	1.08E-09	1.08E-09	Yes	2.11E-08	Yes	2.23E-13	3.83E-09	3.83E-09
total mercury	NA												
mercuric chloride	7487-94-7		2.17E-25		1.31E-27	1.73E-23	1.73E-23	Yes	3.04E-24	Yes	3.32E-27	4.17E-23	4.17E-23
methyl mercury	22967-92-6		0.00E+00		2.59E-30	4.89E-21	4.89E-21		0.00E+00	Yes	7.71E-30	1.23E-20	1.23E-20
elemental mercury	7439-97-6		0.00E+00		0.00E+00	0.00E+00	0.00E+00	Yes	0.00E+00		0.00E+00	0.00E+00	0.00E+00

TOTAL COPC UPTAKE FOR EACH EXPOSURE SCENARIO

Adult Subsistence Farmer Exposure Scenario													
		CARCINOGENIC EFFECTS:						NONCARCINOGENIC EFFECTS:					
		Direct Exposure		Indirect Exposure				Direct Exposure		Indirect Exposure			
COPC	CAS Number	Inhalation Cancer Slope Factor?	Inhalation Exposure (mg/kg-day)	Oral Cancer Slope Factor?	Dermal Exposure (mg/kg-day)	Total Ingestion Exposure (mg/kg-day)	Total Indirect Exposure (mg/kg-day)	Inhalation Reference Dose?	Inhalation Exposure (mg/kg-day)	Oral Reference Dose?	Dermal Exposure (mg/kg-day)	Total Ingestion Exposure (mg/kg-day)	Total Indirect Exposure (mg/kg-day)
1,1-dichloroethene	75-35-4		1.66E-14		2.31E-17	8.89E-16	9.12E-16	Yes	2.32E-13	Yes	4.05E-17	3.39E-15	3.43E-15
1,2-dichloroethane	107-06-2	Yes	5.05E-18	Yes	2.62E-21	6.51E-19	6.53E-19	Yes	7.07E-17	Yes	4.60E-21	8.09E-18	8.09E-18
1,4-dichlorobenzene	106-46-7	Yes	4.11E-17	Yes	2.50E-19	5.69E-17	5.72E-17	Yes	5.76E-16	Yes	4.40E-19	4.90E-16	4.90E-16
1,4-dithiane	505-29-3		4.66E-15		7.66E-18	2.06E-13	2.06E-13	Yes	6.53E-14	Yes	2.42E-17	2.88E-12	2.88E-12
1,4-oxathiane	15980-15-1		9.85E-15		4.78E-18	2.23E-13	2.23E-13		1.38E-13		1.05E-17	3.11E-12	3.11E-12
2,4-dinitrotoluene	121-14-2	Yes	6.02E-19	Yes	5.13E-21	1.22E-15	1.22E-15		8.43E-18	Yes	2.67E-20	1.60E-14	1.60E-14
2-butanone	78-93-3		8.57E-15		1.52E-18	3.60E-14	3.60E-14	Yes	1.20E-13	Yes	3.87E-18	5.02E-13	5.02E-13
acetylene	74-86-2		4.99E-09		7.67E-13	6.60E-11	6.68E-11		6.99E-08		1.34E-12	1.41E-10	1.42E-10
benzene	71-43-2	Yes	4.97E-17	Yes	8.28E-20	3.43E-18	3.51E-18	Yes	6.96E-16	Yes	1.45E-19	2.08E-17	2.09E-17
chlorobenzene	108-90-7		6.93E-17		2.41E-19	5.40E-17	5.43E-17	Yes	9.71E-16	Yes	4.23E-19	4.63E-16	4.64E-16
chloroform	67-66-3	Yes	6.49E-15	Yes	5.61E-18	4.13E-16	4.19E-16	Yes	9.09E-14	Yes	9.82E-18	2.77E-15	2.78E-15
ethane	74-84-0		2.22E-10		2.92E-13	4.51E-12	4.80E-12		3.10E-09		5.11E-13	8.41E-12	8.92E-12
HD	505-60-2	Yes	3.13E-11	Yes	3.82E-14	1.05E-11	1.05E-11	Yes	4.38E-10	Yes	6.71E-14	3.21E-11	3.22E-11
methane	74-82-8		2.44E-09		1.09E-12	1.20E-11	1.31E-11		3.41E-08		1.91E-12	2.30E-11	2.49E-11
monoethanolamine	141-43-5		1.97E-11		2.42E-15	4.57E-09	4.57E-09		2.76E-10		9.56E-15	6.39E-08	6.39E-08
nitrobenzene	98-95-3	Yes	1.18E-18		1.87E-21	2.20E-17	2.20E-17	Yes	1.65E-17	Yes	5.41E-21	3.06E-16	3.06E-16
tetrachloroethene	127-18-4	Yes	1.61E-15	Yes	8.40E-18	8.89E-16	8.98E-16	Yes	2.26E-14	Yes	1.47E-17	3.17E-15	3.18E-15
trichloroethene	79-01-6	Yes	1.99E-14	Yes	3.20E-17	2.07E-15	2.11E-15	Yes	2.79E-13	Yes	5.61E-17	1.00E-14	1.01E-14
vinyl chloride	75-01-4	Yes	1.62E-11	Yes	9.38E-15	2.60E-13	2.70E-13	Yes	2.26E-10	Yes	1.64E-14	1.22E-12	1.24E-12
ammonia	7664-41-7		2.11E-09		1.10E-12	4.55E-09	4.55E-09	Yes	2.95E-08		1.94E-12	6.24E-08	6.24E-08
hydrogen cyanide	74-90-8		1.51E-09		1.27E-13	3.37E-09	3.37E-09	Yes	2.11E-08	Yes	2.23E-13	9.34E-09	9.34E-09
total mercury	NA												
mercuric chloride	7487-94-7		2.17E-25		1.78E-27	5.81E-23	5.81E-23	Yes	3.04E-24	Yes	3.32E-27	1.04E-22	1.04E-22
methyl mercury	22967-92-6		0.00E+00		3.31E-30	2.66E-21	2.66E-21		0.00E+00	Yes	7.71E-30	4.93E-21	4.93E-21
elemental mercury	7439-97-6		0.00E+00		0.00E+00	0.00E+00	0.00E+00	Yes	0.00E+00		0.00E+00	0.00E+00	0.00E+00

TOTAL COPC UPTAKE FOR EACH EXPOSURE SCENARIO

Adult Worker Exposure Scenario													
		CARCINOGENIC EFFECTS:						NONCARCINOGENIC EFFECTS:					
		Direct Exposure		Indirect Exposure				Direct Exposure		Indirect Exposure			
COPC	CAS Number	Inhalation Cancer Slope Factor?	Inhalation Exposure (mg/kg-day)[a]	Oral Cancer Slope Factor?	Dermal Exposure (mg/kg-day)[a]	Total Ingestion Exposure (mg/kg-day)[a]	Total Indirect Exposure (mg/kg-day)[a]	Inhalation Reference Dose?	Inhalation Exposure (mg/kg-day)[b]	Oral Reference Dose?	Dermal Exposure (mg/kg-day)[b]	Total Ingestion Exposure (mg/kg-day)[b]	Total Indirect Exposure (mg/kg-day)[b]
1,1-dichloroethene	75-35-4		3.95E-15		7.11E-23	1.17E-22	1.89E-22	Yes	5.53E-14	Yes	9.96E-22	1.44E-21	2.43E-21
1,2-dichloroethane	107-06-2	Yes	1.20E-18	Yes	3.16E-25	2.39E-25	5.56E-25	Yes	1.68E-17	Yes	4.43E-24	2.93E-24	7.36E-24
1,4-dichlorobenzene	106-46-7	Yes	9.79E-18	Yes	5.43E-23	4.11E-23	9.54E-23	Yes	1.37E-16	Yes	7.60E-22	5.04E-22	1.26E-21
1,4-dithiane	505-29-3		1.11E-15		5.03E-19	3.81E-19	8.85E-19	Yes	1.55E-14	Yes	7.05E-18	4.67E-18	1.17E-17
1,4-oxathiane	15980-15-1		2.35E-15		1.16E-19	8.79E-20	2.04E-19		3.28E-14		1.62E-18	1.08E-18	2.70E-18
2,4-dinitrotoluene	121-14-2	Yes	1.43E-19	Yes	3.14E-22	1.48E-21	1.79E-21		2.01E-18	Yes	4.40E-21	1.81E-20	2.25E-20
2-butanone	78-93-3		2.04E-15		9.57E-20	7.25E-20	1.68E-19	Yes	2.86E-14	Yes	1.34E-18	8.88E-19	2.23E-18
acetylene	74-86-2		1.19E-09		4.56E-18	3.45E-18	8.01E-18		1.66E-08		6.38E-17	4.23E-17	1.06E-16
benzene	71-43-2	Yes	1.18E-17	Yes	2.21E-24	1.67E-24	3.88E-24	Yes	1.66E-16	Yes	3.09E-23	2.05E-23	5.14E-23
chlorobenzene	108-90-7		1.65E-17		2.35E-23	1.56E-23	3.91E-23	Yes	2.31E-16	Yes	3.29E-22	1.91E-22	5.20E-22
chloroform	67-66-3	Yes	1.55E-15	Yes	2.46E-22	1.86E-22	4.32E-22	Yes	2.16E-14	Yes	3.44E-21	2.28E-21	5.72E-21
ethane	74-84-0		5.28E-11		1.32E-19	9.98E-20	2.32E-19		7.39E-10		1.85E-18	1.22E-18	3.07E-18
HD	505-60-2	Yes	7.44E-12	Yes	1.28E-17	9.69E-18	2.25E-17	Yes	1.04E-10	Yes	1.79E-16	1.19E-16	2.98E-16
methane	74-82-8		5.80E-10		1.96E-19	1.49E-19	3.45E-19		8.13E-09		2.75E-18	1.82E-18	4.57E-18
monoethanolamine	141-43-5		4.70E-12		4.62E-16	3.50E-16	8.12E-16		6.58E-11		6.47E-15	4.29E-15	1.08E-14
nitrobenzene	98-95-3	Yes	2.81E-19		1.37E-22	1.04E-22	2.41E-22	Yes	3.93E-18	Yes	1.92E-21	1.27E-21	3.20E-21
tetrachloroethene	127-18-4	Yes	3.84E-16	Yes	7.02E-23	5.32E-23	1.23E-22	Yes	5.37E-15	Yes	9.83E-22	6.52E-22	1.63E-21
trichloroethene	79-01-6	Yes	4.74E-15	Yes	1.51E-21	1.15E-21	2.66E-21	Yes	6.63E-14	Yes	2.12E-20	1.41E-20	3.53E-20
vinyl chloride	75-01-4	Yes	3.85E-12	Yes	3.81E-20	2.89E-20	6.70E-20	Yes	5.39E-11	Yes	5.33E-19	3.54E-19	8.87E-19
ammonia	7664-41-7		5.02E-10		1.41E-15	1.07E-15	2.48E-15	Yes	7.02E-09		1.98E-14	1.31E-14	3.29E-14
hydrogen cyanide	74-90-8		3.58E-10		5.58E-17	4.23E-17	9.80E-17	Yes	5.02E-09	Yes	7.81E-16	5.18E-16	1.30E-15
total mercury	NA												
mercuric chloride	7487-94-7		5.16E-26		1.23E-27	1.47E-26	1.60E-26	Yes	7.23E-25	Yes	3.84E-27	4.01E-26	4.40E-26
methyl mercury	22967-92-6		0.00E+00		2.03E-30	2.46E-28	2.48E-28		0.00E+00	Yes	7.40E-30	7.82E-28	7.89E-28
elemental mercury	7439-97-6		0.00E+00		0.00E+00	0.00E+00	0.00E+00	Yes	0.00E+00		0.00E+00	0.00E+00	0.00E+00

TOTAL COPC UPTAKE FOR EACH EXPOSURE SCENARIO

Child Resident Exposure Scenario													
		CARCINOGENIC EFFECTS:						NONCARCINOGENIC EFFECTS:					
		Direct Exposure		Indirect Exposure				Direct Exposure		Indirect Exposure			
COPC	CAS Number	Inhalation Cancer Slope Factor?	Inhalation Exposure (mg/kg-day)	Oral Cancer Slope Factor?	Dermal Exposure (mg/kg-day)	Total Ingestion Exposure (mg/kg-day)	Total Indirect Exposure (mg/kg-day)	Inhalation Reference Dose?	Inhalation Exposure (mg/kg-day)	Oral Reference Dose?	Dermal Exposure (mg/kg-day)	Total Ingestion Exposure (mg/kg-day)	Total Indirect Exposure (mg/kg-day)
1,1-dichloroethene	75-35-4		4.64E-14		4.95E-18	3.37E-16	3.42E-16	Yes	6.50E-13	Yes	6.92E-17	4.72E-15	4.79E-15
1,2-dichloroethane	107-06-2	Yes	1.41E-17	Yes	5.63E-22	4.80E-19	4.80E-19	Yes	1.98E-16	Yes	7.89E-21	6.72E-18	6.73E-18
1,4-dichlorobenzene	106-46-7	Yes	1.15E-16	Yes	5.40E-20	3.19E-17	3.20E-17	Yes	1.61E-15	Yes	7.56E-19	4.47E-16	4.48E-16
1,4-dithiane	505-29-3		1.31E-14		5.01E-18	2.04E-13	2.04E-13	Yes	1.83E-13	Yes	7.02E-17	2.86E-12	2.86E-12
1,4-oxathiane	15980-15-1		2.76E-14		1.75E-18	2.03E-13	2.03E-13		3.86E-13		2.45E-17	2.84E-12	2.84E-12
2,4-dinitrotoluene	121-14-2	Yes	1.69E-18	Yes	4.30E-21	8.22E-16	8.22E-16		2.36E-17	Yes	6.38E-20	1.23E-14	1.23E-14
2-butanone	78-93-3		2.40E-14		8.65E-19	3.97E-14	3.97E-14	Yes	3.36E-13	Yes	1.21E-17	5.56E-13	5.56E-13
acetylene	74-86-2		1.40E-08		1.64E-13	2.18E-11	2.19E-11		1.96E-07		2.30E-12	3.05E-10	3.07E-10
benzene	71-43-2	Yes	1.39E-16	Yes	1.77E-20	1.67E-18	1.69E-18	Yes	1.95E-15	Yes	2.48E-19	2.34E-17	2.37E-17
chlorobenzene	108-90-7		1.94E-16		5.18E-20	3.87E-17	3.88E-17	Yes	2.72E-15	Yes	7.25E-19	5.42E-16	5.43E-16
chloroform	67-66-3	Yes	1.82E-14	Yes	1.20E-18	2.12E-16	2.13E-16	Yes	2.54E-13	Yes	1.68E-17	2.96E-15	2.98E-15
ethane	74-84-0		6.20E-10		6.25E-14	1.41E-12	1.48E-12		8.69E-09		8.75E-13	1.98E-11	2.07E-11
HD	505-60-2	Yes	8.75E-11	Yes	8.25E-15	3.36E-12	3.37E-12	Yes	1.23E-09	Yes	1.15E-13	4.71E-11	4.72E-11
methane	74-82-8		6.83E-09		2.34E-13	3.88E-12	4.12E-12		9.56E-08		3.27E-12	5.44E-11	5.77E-11
monoethanolamine	141-43-5		5.52E-11		3.06E-15	3.50E-09	3.50E-09		7.73E-10		4.28E-14	4.91E-08	4.91E-08
nitrobenzene	98-95-3	Yes	3.30E-18		1.22E-21	2.39E-17	2.39E-17	Yes	4.62E-17	Yes	1.71E-20	3.35E-16	3.35E-16
tetrachloroethene	127-18-4	Yes	4.51E-15	Yes	1.80E-18	3.31E-16	3.32E-16	Yes	6.32E-14	Yes	2.52E-17	4.63E-15	4.65E-15
trichloroethene	79-01-6	Yes	5.57E-14	Yes	6.86E-18	9.06E-16	9.13E-16	Yes	7.80E-13	Yes	9.60E-17	1.27E-14	1.28E-14
vinyl chloride	75-01-4	Yes	4.53E-11	Yes	2.01E-15	1.12E-13	1.14E-13	Yes	6.34E-10	Yes	2.81E-14	1.57E-12	1.60E-12
ammonia	7664-41-7		5.90E-09		2.43E-13	4.02E-09	4.02E-09	Yes	8.26E-08		3.41E-12	5.63E-08	5.63E-08
hydrogen cyanide	74-90-8		4.21E-09		2.75E-14	8.73E-10	8.73E-10	Yes	5.90E-08	Yes	3.86E-13	1.22E-08	1.22E-08
total mercury	NA												
mercuric chloride	7487-94-7		6.07E-25		7.65E-28	7.94E-24	7.94E-24	Yes	8.50E-24	Yes	2.14E-26	1.35E-22	1.35E-22
methyl mercury	22967-92-6		0.00E+00		1.59E-30	4.97E-22	4.97E-22		0.00E+00	Yes	4.35E-29	1.20E-20	1.20E-20
elemental mercury	7439-97-6		0.00E+00		0.00E+00	0.00E+00	0.00E+00	Yes	0.00E+00		0.00E+00	0.00E+00	0.00E+00

TOTAL COPC UPTAKE FOR EACH EXPOSURE SCENARIO

Child Subsistence Fisher Exposure Scenario													
		CARCINOGENIC EFFECTS:						NONCARCINOGENIC EFFECTS:					
		Direct Exposure		Indirect Exposure				Direct Exposure		Indirect Exposure			
COPC	CAS Number	Inhalation Cancer Slope Factor?	Inhalation Exposure (mg/kg-day)	Oral Cancer Slope Factor?	Dermal Exposure (mg/kg-day)	Total Ingestion Exposure (mg/kg-day)	Total Indirect Exposure (mg/kg-day)	Inhalation Reference Dose?	Inhalation Exposure (mg/kg-day)	Oral Reference Dose?	Dermal Exposure (mg/kg-day)	Total Ingestion Exposure (mg/kg-day)	Total Indirect Exposure (mg/kg-day)
1,1-dichloroethene	75-35-4		4.64E-14		4.95E-18	6.68E-16	6.73E-16	Yes	6.50E-13	Yes	6.92E-17	9.35E-15	9.42E-15
1,2-dichloroethane	107-06-2	Yes	1.41E-17	Yes	5.63E-22	5.16E-19	5.17E-19	Yes	1.98E-16	Yes	7.89E-21	7.23E-18	7.24E-18
1,4-dichlorobenzene	106-46-7	Yes	1.15E-16	Yes	5.40E-20	4.27E-17	4.27E-17	Yes	1.61E-15	Yes	7.56E-19	5.98E-16	5.98E-16
1,4-dithiane	505-29-3		1.31E-14		5.01E-18	2.04E-13	2.04E-13	Yes	1.83E-13	Yes	7.02E-17	2.86E-12	2.86E-12
1,4-oxathiane	15980-15-1		2.76E-14		1.75E-18	2.03E-13	2.03E-13		3.86E-13		2.45E-17	2.84E-12	2.84E-12
2,4-dinitrotoluene	121-14-2	Yes	1.69E-18	Yes	4.30E-21	8.23E-16	8.23E-16		2.36E-17	Yes	6.38E-20	1.23E-14	1.23E-14
2-butanone	78-93-3		2.40E-14		8.65E-19	3.98E-14	3.98E-14	Yes	3.36E-13	Yes	1.21E-17	5.58E-13	5.58E-13
acetylene	74-86-2		1.40E-08		1.64E-13	5.00E-11	5.02E-11		1.96E-07		2.30E-12	7.00E-10	7.03E-10
benzene	71-43-2	Yes	1.39E-16	Yes	1.77E-20	2.68E-18	2.69E-18	Yes	1.95E-15	Yes	2.48E-19	3.75E-17	3.77E-17
chlorobenzene	108-90-7		1.94E-16		5.18E-20	4.38E-17	4.38E-17	Yes	2.72E-15	Yes	7.25E-19	6.13E-16	6.14E-16
chloroform	67-66-3	Yes	1.82E-14	Yes	1.20E-18	3.22E-16	3.23E-16	Yes	2.54E-13	Yes	1.68E-17	4.51E-15	4.53E-15
ethane	74-84-0		6.20E-10		6.25E-14	3.44E-12	3.50E-12		8.69E-09		8.75E-13	4.81E-11	4.90E-11
HD	505-60-2	Yes	8.75E-11	Yes	8.25E-15	5.37E-12	5.38E-12	Yes	1.23E-09	Yes	1.15E-13	7.52E-11	7.53E-11
methane	74-82-8		6.83E-09		2.34E-13	9.14E-12	9.37E-12		9.56E-08		3.27E-12	1.28E-10	1.31E-10
monoethanolamine	141-43-5		5.52E-11		3.06E-15	3.50E-09	3.50E-09		7.73E-10		4.28E-14	4.91E-08	4.91E-08
nitrobenzene	98-95-3	Yes	3.30E-18		1.22E-21	2.39E-17	2.39E-17	Yes	4.62E-17	Yes	1.71E-20	3.36E-16	3.36E-16
tetrachloroethene	127-18-4	Yes	4.51E-15	Yes	1.80E-18	6.75E-16	6.77E-16	Yes	6.32E-14	Yes	2.52E-17	9.45E-15	9.48E-15
trichloroethene	79-01-6	Yes	5.57E-14	Yes	6.86E-18	1.61E-15	1.62E-15	Yes	7.80E-13	Yes	9.60E-17	2.26E-14	2.27E-14
vinyl chloride	75-01-4	Yes	4.53E-11	Yes	2.01E-15	2.01E-13	2.03E-13	Yes	6.34E-10	Yes	2.81E-14	2.81E-12	2.84E-12
ammonia	7664-41-7		5.90E-09		2.43E-13	4.07E-09	4.07E-09	Yes	8.26E-08		3.41E-12	5.69E-08	5.69E-08
hydrogen cyanide	74-90-8		4.21E-09		2.75E-14	8.85E-10	8.85E-10	Yes	5.90E-08	Yes	3.86E-13	1.24E-08	1.24E-08
total mercury	NA												
mercuric chloride	7487-94-7		6.07E-25		7.65E-28	7.94E-24	7.94E-24	Yes	8.50E-24	Yes	2.14E-26	1.35E-22	1.35E-22
methyl mercury	22967-92-6		0.00E+00		1.59E-30	1.24E-21	1.24E-21		0.00E+00	Yes	4.35E-29	3.01E-20	3.01E-20
elemental mercury	7439-97-6		0.00E+00		0.00E+00	0.00E+00	0.00E+00	Yes	0.00E+00		0.00E+00	0.00E+00	0.00E+00

TOTAL COPC UPTAKE FOR EACH EXPOSURE SCENARIO

Child Subsistence Farmer Exposure Scenario													
		CARCINOGENIC EFFECTS:						NONCARCINOGENIC EFFECTS:					
		Direct Exposure		Indirect Exposure				Direct Exposure		Indirect Exposure			
COPC	CAS Number	Inhalation Cancer Slope Factor?	Inhalation Exposure (mg/kg-day)	Oral Cancer Slope Factor?	Dermal Exposure (mg/kg-day)	Total Ingestion Exposure (mg/kg-day)	Total Indirect Exposure (mg/kg-day)	Inhalation Reference Dose?	Inhalation Exposure (mg/kg-day)	Oral Reference Dose?	Dermal Exposure (mg/kg-day)	Total Ingestion Exposure (mg/kg-day)	Total Indirect Exposure (mg/kg-day)
1,1-dichloroethene	75-35-4		4.64E-14		4.95E-18	5.08E-16	5.13E-16	Yes	6.50E-13	Yes	6.92E-17	7.12E-15	7.19E-15
1,2-dichloroethane	107-06-2	Yes	1.41E-17	Yes	5.63E-22	1.16E-18	1.16E-18	Yes	1.98E-16	Yes	7.89E-21	1.63E-17	1.63E-17
1,4-dichlorobenzene	106-46-7	Yes	1.15E-16	Yes	5.40E-20	6.90E-17	6.91E-17	Yes	1.61E-15	Yes	7.56E-19	9.67E-16	9.67E-16
1,4-dithiane	505-29-3		1.31E-14		5.01E-18	5.09E-13	5.09E-13	Yes	1.83E-13	Yes	7.02E-17	7.14E-12	7.14E-12
1,4-oxathiane	15980-15-1		2.76E-14		1.75E-18	5.06E-13	5.06E-13		3.86E-13		2.45E-17	7.09E-12	7.09E-12
2,4-dinitrotoluene	121-14-2	Yes	1.69E-18	Yes	4.30E-21	2.06E-15	2.06E-15		2.36E-17	Yes	6.38E-20	3.08E-14	3.08E-14
2-butanone	78-93-3		2.40E-14		8.65E-19	9.91E-14	9.91E-14	Yes	3.36E-13	Yes	1.21E-17	1.39E-12	1.39E-12
acetylene	74-86-2		1.40E-08		1.64E-13	2.54E-11	2.55E-11		1.96E-07		2.30E-12	3.55E-10	3.58E-10
benzene	71-43-2	Yes	1.39E-16	Yes	1.77E-20	3.17E-18	3.19E-18	Yes	1.95E-15	Yes	2.48E-19	4.44E-17	4.46E-17
chlorobenzene	108-90-7		1.94E-16		5.18E-20	9.17E-17	9.17E-17	Yes	2.72E-15	Yes	7.25E-19	1.28E-15	1.28E-15
chloroform	67-66-3	Yes	1.82E-14	Yes	1.20E-18	4.17E-16	4.18E-16	Yes	2.54E-13	Yes	1.68E-17	5.84E-15	5.86E-15
ethane	74-84-0		6.20E-10		6.25E-14	1.47E-12	1.54E-12		8.69E-09		8.75E-13	2.06E-11	2.15E-11
HD	505-60-2	Yes	8.75E-11	Yes	8.25E-15	6.39E-12	6.39E-12	Yes	1.23E-09	Yes	1.15E-13	8.94E-11	8.95E-11
methane	74-82-8		6.83E-09		2.34E-13	4.10E-12	4.34E-12		9.56E-08		3.27E-12	5.75E-11	6.07E-11
monoethanolamine	141-43-5		5.52E-11		3.06E-15	8.76E-09	8.76E-09		7.73E-10		4.28E-14	1.23E-07	1.23E-07
nitrobenzene	98-95-3	Yes	3.30E-18		1.22E-21	5.97E-17	5.97E-17	Yes	4.62E-17	Yes	1.71E-20	8.38E-16	8.38E-16
tetrachloroethene	127-18-4	Yes	4.51E-15	Yes	1.80E-18	4.82E-16	4.83E-16	Yes	6.32E-14	Yes	2.52E-17	6.74E-15	6.77E-15
trichloroethene	79-01-6	Yes	5.57E-14	Yes	6.86E-18	1.55E-15	1.56E-15	Yes	7.80E-13	Yes	9.60E-17	2.18E-14	2.19E-14
vinyl chloride	75-01-4	Yes	4.53E-11	Yes	2.01E-15	1.88E-13	1.90E-13	Yes	6.34E-10	Yes	2.81E-14	2.64E-12	2.67E-12
ammonia	7664-41-7		5.90E-09		2.43E-13	9.99E-09	9.99E-09	Yes	8.26E-08		3.41E-12	1.40E-07	1.40E-07
hydrogen cyanide	74-90-8		4.21E-09		2.75E-14	2.17E-09	2.17E-09	Yes	5.90E-08	Yes	3.86E-13	3.04E-08	3.04E-08
total mercury	NA												
mercuric chloride	7487-94-7		6.07E-25		7.65E-28	1.98E-23	1.98E-23	Yes	8.50E-24	Yes	2.14E-26	3.35E-22	3.35E-22
methyl mercury	22967-92-6		0.00E+00		1.59E-30	4.99E-22	4.99E-22		0.00E+00	Yes	4.35E-29	1.21E-20	1.21E-20
elemental mercury	7439-97-6		0.00E+00		0.00E+00	0.00E+00	0.00E+00	Yes	0.00E+00		0.00E+00	0.00E+00	0.00E+00

TOTAL COPC UPTAKE FOR EACH EXPOSURE SCENARIO

Infant Resident Exposure Scenario													
		CARCINOGENIC EFFECTS:						NONCARCINOGENIC EFFECTS:					
		Direct Exposure		Indirect Exposure				Direct Exposure		Indirect Exposure			
COPC	CAS Number	Inhalation Cancer Slope Factor?	Inhalation Exposure (mg/kg-day)	Oral Cancer Slope Factor?	Dermal Exposure (mg/kg-day)	Total Ingestion Exposure (mg/kg-day)	Total Indirect Exposure (mg/kg-day)	Inhalation Reference Dose?	Inhalation Exposure (mg/kg-day)	Oral Reference Dose?	Dermal Exposure (mg/kg-day)	Total Ingestion Exposure (mg/kg-day)	Total Indirect Exposure (mg/kg-day)
1,1-dichloroethene	75-35-4		5.23E-15		1.11E-22	9.06E-17	9.06E-17	Yes	3.66E-13	Yes	7.76E-21	6.34E-15	6.34E-15
1,2-dichloroethane	107-06-2	Yes	1.59E-18	Yes	4.93E-25	5.03E-18	5.03E-18	Yes	1.11E-16	Yes	3.45E-23	3.52E-16	3.52E-16
1,4-dichlorobenzene	106-46-7	Yes	1.30E-17	Yes	8.46E-23	6.14E-17	6.14E-17	Yes	9.07E-16	Yes	5.92E-21	4.29E-15	4.29E-15
1,4-dithiane	505-29-3		1.47E-15		7.83E-19	4.57E-14	4.57E-14	Yes	1.03E-13	Yes	5.49E-17	3.20E-12	3.20E-12
1,4-oxathiane	15980-15-1		3.10E-15		1.81E-19	4.69E-14	4.69E-14		2.17E-13		1.27E-17	3.29E-12	3.29E-12
2,4-dinitrotoluene	121-14-2	Yes	1.90E-19	Yes	4.57E-22	1.56E-16	1.56E-16		1.33E-17	Yes	3.43E-20	1.17E-14	1.17E-14
2-butanone	78-93-3		2.70E-15		1.49E-19	8.49E-15	8.49E-15	Yes	1.89E-13	Yes	1.04E-17	2.08E-12	2.08E-12
acetylene	74-86-2		1.57E-09		7.11E-18	6.18E-12	6.18E-12		1.10E-07		4.98E-16	4.33E-10	4.33E-10
benzene	71-43-2	Yes	1.57E-17	Yes	3.44E-24	4.73E-17	4.73E-17	Yes	1.10E-15	Yes	2.41E-22	3.31E-15	3.31E-15
chlorobenzene	108-90-7		2.18E-17		3.66E-23	1.97E-17	1.97E-17	Yes	1.53E-15	Yes	2.57E-21	1.38E-15	1.38E-15
chloroform	67-66-3	Yes	2.04E-15	Yes	3.83E-22	6.17E-15	6.17E-15	Yes	1.43E-13	Yes	2.68E-20	4.32E-13	4.32E-13
ethane	74-84-0		6.98E-11		2.05E-19	4.14E-13	4.14E-13		4.89E-09		1.44E-17	2.90E-11	2.90E-11
HD	505-60-2	Yes	9.84E-12	Yes	1.99E-17	8.88E-13	8.88E-13	Yes	6.89E-10	Yes	1.40E-15	6.21E-11	6.21E-11
methane	74-82-8		7.68E-10		3.06E-19	1.08E-12	1.08E-12		5.38E-08		2.14E-17	7.59E-11	7.59E-11
monoethanolamine	141-43-5		6.21E-12		7.20E-16	8.78E-10	8.78E-10		4.35E-10		5.04E-14	6.15E-08	6.15E-08
nitrobenzene	98-95-3	Yes	3.71E-19		2.14E-22	5.44E-18	5.44E-18	Yes	2.60E-17	Yes	1.50E-20	3.81E-16	3.81E-16
tetrachloroethene	127-18-4	Yes	5.08E-16	Yes	1.09E-22	1.73E-15	1.73E-15	Yes	3.55E-14	Yes	7.66E-21	1.21E-13	1.21E-13
trichloroethene	79-01-6	Yes	6.27E-15	Yes	2.36E-21	1.91E-14	1.91E-14	Yes	4.39E-13	Yes	1.65E-19	1.34E-12	1.34E-12
vinyl chloride	75-01-4	Yes	5.10E-12	Yes	5.94E-20	3.01E-14	3.01E-14	Yes	3.57E-10	Yes	4.16E-18	2.11E-12	2.11E-12
ammonia	7664-41-7		6.64E-10		2.20E-15	9.39E-10	9.39E-10	Yes	4.65E-08		1.54E-13	6.57E-08	6.57E-08
hydrogen cyanide	74-90-8		4.74E-10		8.70E-17	2.06E-10	2.06E-10	Yes	3.32E-08	Yes	6.09E-15	1.44E-08	1.44E-08
total mercury	NA												
mercuric chloride	7487-94-7		6.83E-26		2.14E-28	2.68E-24	2.68E-24	Yes	4.78E-24	Yes	2.99E-26	4.38E-22	4.38E-22
methyl mercury	22967-92-6		0.00E+00		4.18E-31	1.49E-22	1.49E-22		0.00E+00	Yes	5.76E-29	4.09E-20	4.09E-20
elemental mercury	7439-97-6		0.00E+00		0.00E+00	0.00E+00	0.00E+00	Yes	0.00E+00		0.00E+00	0.00E+00	0.00E+00

TOTAL COPC UPTAKE FOR EACH EXPOSURE SCENARIO

Infant Subsistence Fisher Exposure Scenario													
		CARCINOGENIC EFFECTS:						NONCARCINOGENIC EFFECTS:					
		Direct Exposure		Indirect Exposure				Direct Exposure		Indirect Exposure			
COPC	CAS Number	Inhalation Cancer Slope Factor?	Inhalation Exposure (mg/kg-day)	Oral Cancer Slope Factor?	Dermal Exposure (mg/kg-day)	Total Ingestion Exposure (mg/kg-day)	Total Indirect Exposure (mg/kg-day)	Inhalation Reference Dose?	Inhalation Exposure (mg/kg-day)	Oral Reference Dose?	Dermal Exposure (mg/kg-day)	Total Ingestion Exposure (mg/kg-day)	Total Indirect Exposure (mg/kg-day)
1,1-dichloroethene	75-35-4		5.23E-15		1.11E-22	1.90E-16	1.90E-16	Yes	3.66E-13	Yes	7.76E-21	1.33E-14	1.33E-14
1,2-dichloroethane	107-06-2	Yes	1.59E-18	Yes	4.93E-25	5.06E-18	5.06E-18	Yes	1.11E-16	Yes	3.45E-23	3.54E-16	3.54E-16
1,4-dichlorobenzene	106-46-7	Yes	1.30E-17	Yes	8.46E-23	6.87E-17	6.87E-17	Yes	9.07E-16	Yes	5.92E-21	4.81E-15	4.81E-15
1,4-dithiane	505-29-3		1.47E-15		7.83E-19	4.57E-14	4.57E-14	Yes	1.03E-13	Yes	5.49E-17	3.21E-12	3.21E-12
1,4-oxathiane	15980-15-1		3.10E-15		1.81E-19	4.70E-14	4.70E-14		2.17E-13		1.27E-17	3.29E-12	3.29E-12
2,4-dinitrotoluene	121-14-2	Yes	1.90E-19	Yes	4.57E-22	1.57E-16	1.57E-16		1.33E-17	Yes	3.43E-20	1.18E-14	1.18E-14
2-butanone	78-93-3		2.70E-15		1.49E-19	8.52E-15	8.52E-15	Yes	1.89E-13	Yes	1.04E-17	2.09E-12	2.09E-12
acetylene	74-86-2		1.57E-09		7.11E-18	1.47E-11	1.47E-11		1.10E-07		4.98E-16	1.03E-09	1.03E-09
benzene	71-43-2	Yes	1.57E-17	Yes	3.44E-24	4.80E-17	4.80E-17	Yes	1.10E-15	Yes	2.41E-22	3.36E-15	3.36E-15
chlorobenzene	108-90-7		2.18E-17		3.66E-23	2.12E-17	2.12E-17	Yes	1.53E-15	Yes	2.57E-21	1.49E-15	1.49E-15
chloroform	67-66-3	Yes	2.04E-15	Yes	3.83E-22	6.25E-15	6.25E-15	Yes	1.43E-13	Yes	2.68E-20	4.37E-13	4.37E-13
ethane	74-84-0		6.98E-11		2.05E-19	1.02E-12	1.02E-12		4.89E-09		1.44E-17	7.15E-11	7.15E-11
HD	505-60-2	Yes	9.84E-12	Yes	1.99E-17	1.49E-12	1.49E-12	Yes	6.89E-10	Yes	1.40E-15	1.04E-10	1.04E-10
methane	74-82-8		7.68E-10		3.06E-19	2.66E-12	2.66E-12		5.38E-08		2.14E-17	1.86E-10	1.86E-10
monoethanolamine	141-43-5		6.21E-12		7.20E-16	8.78E-10	8.78E-10		4.35E-10		5.04E-14	6.15E-08	6.15E-08
nitrobenzene	98-95-3	Yes	3.71E-19		2.14E-22	5.45E-18	5.45E-18	Yes	2.60E-17	Yes	1.50E-20	3.82E-16	3.82E-16
tetrachloroethene	127-18-4	Yes	5.08E-16	Yes	1.09E-22	1.96E-15	1.96E-15	Yes	3.55E-14	Yes	7.66E-21	1.37E-13	1.37E-13
trichloroethene	79-01-6	Yes	6.27E-15	Yes	2.36E-21	1.96E-14	1.96E-14	Yes	4.39E-13	Yes	1.65E-19	1.37E-12	1.37E-12
vinyl chloride	75-01-4	Yes	5.10E-12	Yes	5.94E-20	5.68E-14	5.68E-14	Yes	3.57E-10	Yes	4.16E-18	3.97E-12	3.97E-12
ammonia	7664-41-7		6.64E-10		2.20E-15	9.53E-10	9.53E-10	Yes	4.65E-08		1.54E-13	6.67E-08	6.67E-08
hydrogen cyanide	74-90-8		4.74E-10		8.70E-17	2.10E-10	2.10E-10	Yes	3.32E-08	Yes	6.09E-15	1.47E-08	1.47E-08
total mercury	NA												
mercuric chloride	7487-94-7		6.83E-26		2.14E-28	2.68E-24	2.68E-24	Yes	4.78E-24	Yes	2.99E-26	4.38E-22	4.38E-22
methyl mercury	22967-92-6		0.00E+00		4.18E-31	3.72E-22	3.72E-22		0.00E+00	Yes	5.76E-29	1.02E-19	1.02E-19
elemental mercury	7439-97-6		0.00E+00		0.00E+00	0.00E+00	0.00E+00	Yes	0.00E+00		0.00E+00	0.00E+00	0.00E+00

TOTAL COPC UPTAKE FOR EACH EXPOSURE SCENARIO

Infant Subsistence Farmer Exposure Scenario													
		CARCINOGENIC EFFECTS:						NONCARCINOGENIC EFFECTS:					
		Direct Exposure		Indirect Exposure				Direct Exposure		Indirect Exposure			
COPC	CAS Number	Inhalation Cancer Slope Factor?	Inhalation Exposure (mg/kg-day)	Oral Cancer Slope Factor?	Dermal Exposure (mg/kg-day)	Total Ingestion Exposure (mg/kg-day)	Total Indirect Exposure (mg/kg-day)	Inhalation Reference Dose?	Inhalation Exposure (mg/kg-day)	Oral Reference Dose?	Dermal Exposure (mg/kg-day)	Total Ingestion Exposure (mg/kg-day)	Total Indirect Exposure (mg/kg-day)
1,1-dichloroethene	75-35-4		5.23E-15		1.11E-22	1.27E-16	1.27E-16	Yes	3.66E-13	Yes	7.76E-21	8.91E-15	8.91E-15
1,2-dichloroethane	107-06-2	Yes	1.59E-18	Yes	4.93E-25	5.52E-18	5.52E-18	Yes	1.11E-16	Yes	3.45E-23	3.86E-16	3.86E-16
1,4-dichlorobenzene	106-46-7	Yes	1.30E-17	Yes	8.46E-23	8.87E-17	8.87E-17	Yes	9.07E-16	Yes	5.92E-21	6.21E-15	6.21E-15
1,4-dithiane	505-29-3		1.47E-15		7.83E-19	1.14E-13	1.14E-13	Yes	1.03E-13	Yes	5.49E-17	8.00E-12	8.00E-12
1,4-oxathiane	15980-15-1		3.10E-15		1.81E-19	1.17E-13	1.17E-13		2.17E-13		1.27E-17	8.21E-12	8.21E-12
2,4-dinitrotoluene	121-14-2	Yes	1.90E-19	Yes	4.57E-22	3.91E-16	3.91E-16		1.33E-17	Yes	3.43E-20	2.93E-14	2.93E-14
2-butanone	78-93-3		2.70E-15		1.49E-19	2.12E-14	2.12E-14	Yes	1.89E-13	Yes	1.04E-17	4.37E-12	4.37E-12
acetylene	74-86-2		1.57E-09		7.11E-18	6.98E-12	6.98E-12		1.10E-07		4.98E-16	4.89E-10	4.89E-10
benzene	71-43-2	Yes	1.57E-17	Yes	3.44E-24	4.84E-17	4.84E-17	Yes	1.10E-15	Yes	2.41E-22	3.39E-15	3.39E-15
chlorobenzene	108-90-7		2.18E-17		3.66E-23	4.77E-17	4.77E-17	Yes	1.53E-15	Yes	2.57E-21	3.34E-15	3.34E-15
chloroform	67-66-3	Yes	2.04E-15	Yes	3.83E-22	6.32E-15	6.32E-15	Yes	1.43E-13	Yes	2.68E-20	4.42E-13	4.42E-13
ethane	74-84-0		6.98E-11		2.05E-19	4.28E-13	4.28E-13		4.89E-09		1.44E-17	2.99E-11	2.99E-11
HD	505-60-2	Yes	9.84E-12	Yes	1.99E-17	1.62E-12	1.62E-12	Yes	6.89E-10	Yes	1.40E-15	1.13E-10	1.13E-10
methane	74-82-8		7.68E-10		3.06E-19	1.14E-12	1.14E-12		5.38E-08		2.14E-17	7.95E-11	7.95E-11
monoethanolamine	141-43-5		6.21E-12		7.20E-16	2.19E-09	2.19E-09		4.35E-10		5.04E-14	1.54E-07	1.54E-07
nitrobenzene	98-95-3	Yes	3.71E-19		2.14E-22	1.36E-17	1.36E-17	Yes	2.60E-17	Yes	1.50E-20	9.53E-16	9.53E-16
tetrachloroethene	127-18-4	Yes	5.08E-16	Yes	1.09E-22	1.84E-15	1.84E-15	Yes	3.55E-14	Yes	7.66E-21	1.29E-13	1.29E-13
trichloroethene	79-01-6	Yes	6.27E-15	Yes	2.36E-21	1.96E-14	1.96E-14	Yes	4.39E-13	Yes	1.65E-19	1.37E-12	1.37E-12
vinyl chloride	75-01-4	Yes	5.10E-12	Yes	5.94E-20	4.87E-14	4.87E-14	Yes	3.57E-10	Yes	4.16E-18	3.41E-12	3.41E-12
ammonia	7664-41-7		6.64E-10		2.20E-15	2.33E-09	2.33E-09	Yes	4.65E-08		1.54E-13	1.63E-07	1.63E-07
hydrogen cyanide	74-90-8		4.74E-10		8.70E-17	5.12E-10	5.12E-10	Yes	3.32E-08	Yes	6.09E-15	3.59E-08	3.59E-08
total mercury	NA												
mercuric chloride	7487-94-7		6.83E-26		2.14E-28	6.69E-24	6.69E-24	Yes	4.78E-24	Yes	2.99E-26	1.07E-21	1.07E-21
methyl mercury	22967-92-6		0.00E+00		4.18E-31	1.50E-22	1.50E-22		0.00E+00	Yes	5.76E-29	4.10E-20	4.10E-20
elemental mercury	7439-97-6		0.00E+00		0.00E+00	0.00E+00	0.00E+00	Yes	0.00E+00		0.00E+00	0.00E+00	0.00E+00

MEDIA CONCENTRATIONS OF COPCS

CONCENTRATIONS OF COPCS IN SOIL FOR EACH EXPOSURE SCENARIO

		Soil Loss Constants							Soil Concentrations					
		Due to Leaching	Due to Erosion	Due to Runoff	Due to Degradation	Due to Volatilization	Due to All Processes	Deposition Term	Highest Annual Average Soil Concentration	Soil Concentration Averaged Over 30 Year Exposure Duration	Soil Concentration Averaged Over 40 Year Exposure Duration	Soil Concentration Averaged Over 25 Year Exposure Duration	Soil Concentration Averaged Over 5 Year Exposure Duration	Soil Concentration Averaged Over 1 Year Exposure Duration
		(yr^{-1})	(yr^{-1})	(yr^{-1})	(yr^{-1})	(yr^{-1})	(yr^{-1})	(mg COPC/kg soil-yr)	(mg COPC/kg soil)[a]	(mg COPC/kg soil)	(mg COPC/kg soil)	(mg COPC/kg soil)	(mg COPC/kg soil)	(mg COPC/kg soil)
COPC	CAS No.	ksl	kse	ksr	ksg	ksv	ks	Ds	Cs_{ID}	Cs	Cs	Cs	Cs	Cs
1,1-dichloroethene	75-35-4	0.00	0	1.67	1.41	1,024,649.40	1,024,652.48	3.44E-09	3.36E-15	5.60E-16	4.20E-16	6.72E-16	3.36E-15	3.36E-15
1,2-dichloroethane	107-06-2	0.00	0	2.51	1.41	153,014.31	153,018.24	1.05E-12	6.85E-18	1.14E-18	8.57E-19	1.37E-18	6.85E-18	6.85E-18
1,4-dichlorobenzene	106-46-7	0.00	0	0.32	1.41	7,251.36	7,253.09	8.53E-12	1.18E-15	1.96E-16	1.47E-16	2.35E-16	1.18E-15	1.18E-15
1,4-dithiane	505-29-3	0.00	0	1.17	0	87.50	88.66	9.67E-10	1.09E-11	1.82E-12	1.36E-12	2.18E-12	1.09E-11	1.09E-11
1,4-oxathiane	15980-15-1	0.00	0	2.59	0	810.40	812.99	2.04E-09	2.51E-12	4.19E-13	3.14E-13	5.03E-13	2.51E-12	2.51E-12
2,4-dinitrotoluene	121-14-2	0.00	0	0.42	1.41	1.12	2.95	1.25E-13	4.23E-14	7.06E-15	5.29E-15	8.47E-15	3.95E-14	3.95E-14
2-butanone	78-93-3	0.00	0	1.00	36.14	819.86	857.00	1.78E-09	2.08E-12	3.46E-13	2.59E-13	4.15E-13	2.08E-12	2.08E-12
acetylene	74-86-2	0.00	0	2.70	0	10,485,529.34	10,485,532.04	1.04E-03	9.88E-11	1.65E-11	1.24E-11	1.98E-11	9.88E-11	9.88E-11
benzene	71-43-2	0.00	0	1.67	15.81	215,789.41	215,806.89	1.03E-11	4.78E-17	7.97E-18	5.98E-18	9.56E-18	4.78E-17	4.78E-17
chlorobenzene	108-90-7	0.00	0	0.74	1.69	32,256.15	32,258.58	1.44E-11	4.46E-16	7.43E-17	5.57E-17	8.92E-17	4.46E-16	4.46E-16
chloroform	67-66-3	0.00	0	1.98	1.41	252,746.85	252,750.25	1.35E-09	5.33E-15	8.88E-16	6.66E-16	1.07E-15	5.33E-15	5.33E-15
ethane	74-84-0	0.00	0	0.93	0	16,092,250.18	16,092,251.12	4.60E-05	2.86E-12	4.76E-13	3.57E-13	5.71E-13	2.86E-12	2.86E-12
HD	505-60-2	0.00	0	0.17	23349	48.17	23,397.34	6.48E-06	2.77E-10	4.62E-11	3.46E-11	5.54E-11	2.77E-10	2.77E-10
methane	74-82-8	0.00	0	1.92	0	118,827,923.45	118,827,925.37	5.06E-04	4.26E-12	7.09E-13	5.32E-13	8.51E-13	4.26E-12	4.26E-12
monoethanolamine	141-43-5	0.00	0	3.16	0	405.53	408.70	4.09E-06	1.00E-08	1.67E-09	1.25E-09	2.00E-09	1.00E-08	1.00E-08
nitrobenzene	98-95-3	0.00	0	0.32	1.28	80.54	82.14	2.45E-13	2.98E-15	4.96E-16	3.72E-16	5.96E-16	2.97E-15	2.97E-15
tetrachloroethene	127-18-4	0.00	0	0.95	0.7	219,676.70	219,678.35	3.34E-10	1.52E-15	2.54E-16	1.90E-16	3.04E-16	1.52E-15	1.52E-15
trichloroethene	79-01-6	0.00	0	0.91	0.7	125,792.23	125,793.85	4.13E-09	3.28E-14	5.47E-15	4.10E-15	6.57E-15	3.28E-14	3.28E-14
vinyl chloride	75-01-4	0.00	0	2.49	1.41	4,064,513.63	4,064,517.52	3.36E-06	8.26E-13	1.38E-13	1.03E-13	1.65E-13	8.26E-13	8.26E-13
ammonia	7664-41-7	0.00	0	2.82	0	14,284.38	14,287.20	4.37E-04	3.06E-08	5.10E-09	3.83E-09	6.12E-09	3.06E-08	3.06E-08
hydrogen cyanide	74-90-8	0.00	0	3.05	0	258,273.48	258,276.52	3.12E-04	1.21E-09	2.02E-10	1.51E-10	2.42E-10	1.21E-09	1.21E-09
total mercury	NA													
mercuric chloride	7487-94-7	0.00	0	0.00	0	0.00	0.00	1.88E-20	9.38E-20	8.59E-20	8.79E-20	8.44E-20	4.69E-20	4.69E-20
methyl mercury	22967-92-6	0.00	0	0.00	0	0.02	0.02	3.83E-22	1.83E-21	1.37E-21	1.29E-21	1.41E-21	9.28E-22	9.28E-22
elemental mercury	7439-97-6	0.00	0	0.00	0	4.07	4.07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

CONCENTRATIONS OF COPCS IN PRODUCE FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS:								
Adult Resident and Adult Subsistence Fisher Exposure Scenarios								
		Aboveground Produce - Individual Uptake Mechanisms			Exposed Produce	Protected Produce	Belowground Produce	
		Due to Direct Deposition	Due to Air-to-Plant Transfer	Due to Direct Uptake from Soil	Due to All Processes	Due to All Processes	Due to Direct Uptake from Soil	Due to All Processes
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
COPC	CAS Number	Pd	Pv	Pr	P_{ag}	P_p	Pr_{bg}	P_{bg}
1,1-dichloroethene	75-35-4	0	2.62E-16	1.33E-15	1.59E-15	1.33E-15	4.49E-14	4.49E-14
1,2-dichloroethane	107-06-2	0	4.86E-19	6.01E-18	6.49E-18	6.01E-18	3.14E-16	3.14E-16
1,4-dichlorobenzene	106-46-7	0	2.17E-16	7.20E-17	2.89E-16	7.20E-17	1.88E-14	1.88E-14
1,4-dithiane	505-29-3	0	6.67E-14	1.12E-11	1.13E-11	1.12E-11	7.11E-11	7.11E-11
1,4-oxathiane	15980-15-1	0	1.60E-14	8.02E-12	8.03E-12	8.02E-12	9.64E-11	9.64E-11
2,4-dinitrotoluene	121-14-2	0	1.99E-15	1.96E-14	2.16E-14	1.96E-14	1.13E-13	1.13E-13
2-butanone	78-93-3	0	7.41E-16	2.90E-12	2.90E-12	2.90E-12	7.99E-12	7.99E-12
acetylene	74-86-2	0	2.23E-10	1.38E-10	3.61E-10	1.38E-10	6.15E-10	6.15E-10
benzene	71-43-2	0	3.64E-18	1.89E-17	2.25E-17	1.89E-17	6.39E-16	6.39E-16
chlorobenzene	108-90-7	0	4.28E-17	6.93E-17	1.12E-16	6.93E-17	5.63E-15	5.63E-15
chloroform	67-66-3	0	5.64E-16	2.40E-15	2.96E-15	2.40E-15	8.94E-14	8.94E-14
ethane	74-84-0	0	8.93E-14	1.66E-12	1.75E-12	1.66E-12	1.79E-11	1.79E-11
HD	505-60-2	0	8.30E-10	7.25E-11	9.03E-10	7.25E-11	3.29E-10	3.29E-10
methane	74-82-8	0	1.28E-13	6.44E-12	6.57E-12	6.44E-12	6.45E-11	6.45E-11
monoethanolamine	141-43-5	0	9.96E-10	1.40E-08	1.50E-08	1.40E-08	2.69E-06	2.69E-06
nitrobenzene	98-95-3	0	1.09E-17	1.64E-15	1.65E-15	1.64E-15	5.21E-15	5.21E-15
tetrachloroethene	127-18-4	0	8.92E-16	1.07E-16	9.99E-16	1.07E-16	7.89E-14	7.89E-14
trichloroethene	79-01-6	0	1.70E-15	8.70E-15	1.04E-14	8.70E-15	2.72E-13	2.72E-13
vinyl chloride	75-01-4	0	4.42E-14	8.27E-13	8.71E-13	8.27E-13	3.38E-11	3.38E-11
ammonia	7664-41-7	0	0.00E+00	1.45E-07	1.45E-07	1.45E-07	2.00E-06	2.00E-06
hydrogen cyanide	74-90-8	0	5.27E-07	2.98E-08	5.57E-07	2.98E-08	2.98E-08	2.98E-08
total mercury	NA			0.00E+00			0.00E+00	
mercuric chloride	7487-94-7	4.08679E-21	0.00E+00	1.25E-21	5.33E-21	1.25E-21	3.09E-21	3.09E-21
methyl mercury	22967-92-6	1.15269E-21	0.00E+00	4.03E-23	1.19E-21	4.03E-23	1.36E-22	1.36E-22
elemental mercury	7439-97-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

CONCENTRATIONS OF COPCS IN PRODUCE FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Adult Subsistence Farmer Exposure Scenario								
		Aboveground Produce - Individual Uptake Mechanisms			Exposed Produce	Protected Produce	Belowground Produce	
		Due to Direct Deposition	Due to Air-to-Plant Transfer	Due to Direct Uptake from Soil	Due to All Processes	Due to All Processes	Due to Direct Uptake from Soil	Due to All Processes
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
COPC	CAS Number	Pd	Pv	Pr	P_{ag}	P_p	Pr_{bg}	P_{bg}
1,1-dichloroethene	75-35-4	0	2.62E-16	9.95E-16	1.26E-15	9.95E-16	3.37E-14	3.37E-14
1,2-dichloroethane	107-06-2	0	4.86E-19	4.51E-18	4.99E-18	4.51E-18	2.36E-16	2.36E-16
1,4-dichlorobenzene	106-46-7	0	2.17E-16	5.40E-17	2.71E-16	5.40E-17	1.41E-14	1.41E-14
1,4-dithiane	505-29-3	0	6.67E-14	8.41E-12	8.48E-12	8.41E-12	5.33E-11	5.33E-11
1,4-oxathiane	15980-15-1	0	1.60E-14	6.01E-12	6.03E-12	6.01E-12	7.23E-11	7.23E-11
2,4-dinitrotoluene	121-14-2	0	1.99E-15	1.47E-14	1.67E-14	1.47E-14	8.48E-14	8.48E-14
2-butanone	78-93-3	0	7.41E-16	2.17E-12	2.17E-12	2.17E-12	5.99E-12	5.99E-12
acetylene	74-86-2	0	2.23E-10	1.04E-10	3.27E-10	1.04E-10	4.61E-10	4.61E-10
benzene	71-43-2	0	3.64E-18	1.42E-17	1.78E-17	1.42E-17	4.79E-16	4.79E-16
chlorobenzene	108-90-7	0	4.28E-17	5.20E-17	9.48E-17	5.20E-17	4.22E-15	4.22E-15
chloroform	67-66-3	0	5.64E-16	1.80E-15	2.36E-15	1.80E-15	6.70E-14	6.70E-14
ethane	74-84-0	0	8.93E-14	1.24E-12	1.33E-12	1.24E-12	1.35E-11	1.35E-11
HD	505-60-2	0	8.30E-10	5.44E-11	8.85E-10	5.44E-11	2.47E-10	2.47E-10
methane	74-82-8	0	1.28E-13	4.83E-12	4.96E-12	4.83E-12	4.84E-11	4.84E-11
monoethanolamine	141-43-5	0	9.96E-10	1.05E-08	1.15E-08	1.05E-08	2.02E-06	2.02E-06
nitrobenzene	98-95-3	0	1.09E-17	1.23E-15	1.24E-15	1.23E-15	3.91E-15	3.91E-15
tetrachloroethene	127-18-4	0	8.92E-16	7.99E-17	9.72E-16	7.99E-17	5.92E-14	5.92E-14
trichloroethene	79-01-6	0	1.70E-15	6.53E-15	8.23E-15	6.53E-15	2.04E-13	2.04E-13
vinyl chloride	75-01-4	0	4.42E-14	6.20E-13	6.65E-13	6.20E-13	2.54E-11	2.54E-11
ammonia	7664-41-7	0	0.00E+00	1.09E-07	1.09E-07	1.09E-07	1.50E-06	1.50E-06
hydrogen cyanide	74-90-8	0	5.27E-07	2.23E-08	5.50E-07	2.23E-08	2.23E-08	2.23E-08
total mercury	NA			0.00E+00			0.00E+00	
mercuric chloride	7487-94-7	4.08679E-21	0.00E+00	1.27E-21	5.36E-21	1.27E-21	3.16E-21	3.16E-21
methyl mercury	22967-92-6	1.15269E-21	0.00E+00	3.79E-23	1.19E-21	3.79E-23	1.28E-22	1.28E-22
elemental mercury	7439-97-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

CONCENTRATIONS OF COPCS IN PRODUCE FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Child Exposure Scenarios								
		Aboveground Produce - Individual Uptake Mechanisms			Exposed Produce	Protected Produce	Belowground Produce	
		Due to Direct Deposition	Due to Air-to-Plant Transfer	Due to Direct Uptake from Soil	Due to All Processes	Due to All Processes	Due to Direct Uptake from Soil	Due to All Processes
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
COPC	CAS Number	Pd	Pv	Pr	P_{ag}	P_p	Pr_{bg}	P_{bg}
1,1-dichloroethene	75-35-4	0	2.62E-16	7.96E-15	8.22E-15	7.96E-15	2.69E-13	2.69E-13
1,2-dichloroethane	107-06-2	0	4.86E-19	3.60E-17	3.65E-17	3.60E-17	1.89E-15	1.89E-15
1,4-dichlorobenzene	106-46-7	0	2.17E-16	4.32E-16	6.49E-16	4.32E-16	1.13E-13	1.13E-13
1,4-dithiane	505-29-3	0	6.67E-14	6.72E-11	6.72E-11	6.72E-11	4.25E-10	4.25E-10
1,4-oxathiane	15980-15-1	0	1.60E-14	4.81E-11	4.81E-11	4.81E-11	5.78E-10	5.78E-10
2,4-dinitrotoluene	121-14-2	0	1.99E-15	1.10E-13	1.12E-13	1.10E-13	6.32E-13	6.32E-13
2-butanone	78-93-3	0	7.41E-16	1.74E-11	1.74E-11	1.74E-11	4.79E-11	4.79E-11
acetylene	74-86-2	0	2.23E-10	8.28E-10	1.05E-09	8.28E-10	3.69E-09	3.69E-09
benzene	71-43-2	0	3.64E-18	1.13E-16	1.17E-16	1.13E-16	3.83E-15	3.83E-15
chlorobenzene	108-90-7	0	4.28E-17	4.16E-16	4.58E-16	4.16E-16	3.38E-14	3.38E-14
chloroform	67-66-3	0	5.64E-16	1.44E-14	1.50E-14	1.44E-14	5.36E-13	5.36E-13
ethane	74-84-0	0	8.93E-14	9.94E-12	1.00E-11	9.94E-12	1.08E-10	1.08E-10
HD	505-60-2	0	8.30E-10	4.35E-10	1.27E-09	4.35E-10	1.97E-09	1.97E-09
methane	74-82-8	0	1.28E-13	3.87E-11	3.88E-11	3.87E-11	3.87E-10	3.87E-10
monoethanolamine	141-43-5	0	9.96E-10	8.39E-08	8.49E-08	8.39E-08	1.61E-05	1.61E-05
nitrobenzene	98-95-3	0	1.09E-17	9.80E-15	9.81E-15	9.80E-15	3.12E-14	3.12E-14
tetrachloroethene	127-18-4	0	8.92E-16	6.39E-16	1.53E-15	6.39E-16	4.73E-13	4.73E-13
trichloroethene	79-01-6	0	1.70E-15	5.22E-14	5.39E-14	5.22E-14	1.63E-12	1.63E-12
vinyl chloride	75-01-4	0	4.42E-14	4.96E-12	5.01E-12	4.96E-12	2.03E-10	2.03E-10
ammonia	7664-41-7	0	0.00E+00	8.73E-07	8.73E-07	8.73E-07	1.20E-05	1.20E-05
hydrogen cyanide	74-90-8	0	5.27E-07	1.79E-07	7.06E-07	1.79E-07	1.79E-07	1.79E-07
total mercury	NA			0.00E+00			0.00E+00	
mercuric chloride	7487-94-7	4.08679E-21	0.00E+00	6.80E-22	4.77E-21	6.80E-22	1.69E-21	1.69E-21
methyl mercury	22967-92-6	1.15269E-21	0.00E+00	2.73E-23	1.18E-21	2.73E-23	9.18E-23	9.18E-23
elemental mercury	7439-97-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

CONCENTRATIONS OF COPCS IN PRODUCE FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Infant Exposure Scenarios								
		Aboveground Produce - Individual Uptake Mechanisms			Exposed Produce	Protected Produce	Belowground Produce	
		Due to Direct Deposition	Due to Air-to-Plant Transfer	Due to Direct Uptake from Soil	Due to All Processes	Due to All Processes	Due to Direct Uptake from Soil	Due to All Processes
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
COPC	CAS Number	Pd	Pv	Pr	P_{ag}	P_p	Pr_{bg}	P_{bg}
1,1-dichloroethene	75-35-4	0	2.62E-16	7.96E-15	8.22E-15	7.96E-15	2.69E-13	2.69E-13
1,2-dichloroethane	107-06-2	0	4.86E-19	3.60E-17	3.65E-17	3.60E-17	1.89E-15	1.89E-15
1,4-dichlorobenzene	106-46-7	0	2.17E-16	4.32E-16	6.49E-16	4.32E-16	1.13E-13	1.13E-13
1,4-dithiane	505-29-3	0	6.67E-14	6.72E-11	6.72E-11	6.72E-11	4.25E-10	4.25E-10
1,4-oxathiane	15980-15-1	0	1.60E-14	4.81E-11	4.81E-11	4.81E-11	5.78E-10	5.78E-10
2,4-dinitrotoluene	121-14-2	0	1.99E-15	1.10E-13	1.12E-13	1.10E-13	6.32E-13	6.32E-13
2-butanone	78-93-3	0	7.41E-16	1.74E-11	1.74E-11	1.74E-11	4.79E-11	4.79E-11
acetylene	74-86-2	0	2.23E-10	8.28E-10	1.05E-09	8.28E-10	3.69E-09	3.69E-09
benzene	71-43-2	0	3.64E-18	1.13E-16	1.17E-16	1.13E-16	3.83E-15	3.83E-15
chlorobenzene	108-90-7	0	4.28E-17	4.16E-16	4.58E-16	4.16E-16	3.38E-14	3.38E-14
chloroform	67-66-3	0	5.64E-16	1.44E-14	1.50E-14	1.44E-14	5.36E-13	5.36E-13
ethane	74-84-0	0	8.93E-14	9.94E-12	1.00E-11	9.94E-12	1.08E-10	1.08E-10
HD	505-60-2	0	8.30E-10	4.35E-10	1.27E-09	4.35E-10	1.97E-09	1.97E-09
methane	74-82-8	0	1.28E-13	3.87E-11	3.88E-11	3.87E-11	3.87E-10	3.87E-10
monoethanolamine	141-43-5	0	9.96E-10	8.39E-08	8.49E-08	8.39E-08	1.61E-05	1.61E-05
nitrobenzene	98-95-3	0	1.09E-17	9.80E-15	9.81E-15	9.80E-15	3.12E-14	3.12E-14
tetrachloroethene	127-18-4	0	8.92E-16	6.39E-16	1.53E-15	6.39E-16	4.73E-13	4.73E-13
trichloroethene	79-01-6	0	1.70E-15	5.22E-14	5.39E-14	5.22E-14	1.63E-12	1.63E-12
vinyl chloride	75-01-4	0	4.42E-14	4.96E-12	5.01E-12	4.96E-12	2.03E-10	2.03E-10
ammonia	7664-41-7	0	0.00E+00	8.73E-07	8.73E-07	8.73E-07	1.20E-05	1.20E-05
hydrogen cyanide	74-90-8	0	5.27E-07	1.79E-07	7.06E-07	1.79E-07	1.79E-07	1.79E-07
total mercury	NA			0.00E+00			0.00E+00	
mercuric chloride	7487-94-7	4.08679E-21	0.00E+00	6.80E-22	4.77E-21	6.80E-22	1.69E-21	1.69E-21
methyl mercury	22967-92-6	1.15269E-21	0.00E+00	2.73E-23	1.18E-21	2.73E-23	9.18E-23	9.18E-23
elemental mercury	7439-97-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

CONCENTRATIONS OF COPCS IN PRODUCE FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS: All Exposure Scenarios								
		Aboveground Produce - Individual Uptake Mechanisms			Exposed Produce	Protected Produce	Belowground Produce	
		Due to Direct Deposition	Due to Air-to-Plant Transfer	Due to Direct Uptake from Soil	Due to All Processes	Due to All Processes	Due to Direct Uptake from Soil	Due to All Processes
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
COPC	CAS Number	Pd	Pv	Pr	P_{ag}	P_p	Pr_{bg}	P_{bg}
1,1-dichloroethene	75-35-4	0	2.62E-16	7.96E-15	8.22E-15	7.96E-15	2.69E-13	2.69E-13
1,2-dichloroethane	107-06-2	0	4.86E-19	3.60E-17	3.65E-17	3.60E-17	1.89E-15	1.89E-15
1,4-dichlorobenzene	106-46-7	0	2.17E-16	4.32E-16	6.49E-16	4.32E-16	1.13E-13	1.13E-13
1,4-dithiane	505-29-3	0	6.67E-14	6.73E-11	6.74E-11	6.73E-11	4.26E-10	4.26E-10
1,4-oxathiane	15980-15-1	0	1.60E-14	4.81E-11	4.81E-11	4.81E-11	5.78E-10	5.78E-10
2,4-dinitrotoluene	121-14-2	0	1.99E-15	1.18E-13	1.20E-13	1.18E-13	6.78E-13	6.78E-13
2-butanone	78-93-3	0	7.41E-16	1.74E-11	1.74E-11	1.74E-11	4.80E-11	4.80E-11
acetylene	74-86-2	0	2.23E-10	8.28E-10	1.05E-09	8.28E-10	3.69E-09	3.69E-09
benzene	71-43-2	0	3.64E-18	1.13E-16	1.17E-16	1.13E-16	3.83E-15	3.83E-15
chlorobenzene	108-90-7	0	4.28E-17	4.16E-16	4.58E-16	4.16E-16	3.38E-14	3.38E-14
chloroform	67-66-3	0	5.64E-16	1.44E-14	1.50E-14	1.44E-14	5.36E-13	5.36E-13
ethane	74-84-0	0	8.93E-14	9.94E-12	1.00E-11	9.94E-12	1.08E-10	1.08E-10
HD	505-60-2	0	8.30E-10	4.35E-10	1.27E-09	4.35E-10	1.97E-09	1.97E-09
methane	74-82-8	0	1.28E-13	3.87E-11	3.88E-11	3.87E-11	3.87E-10	3.87E-10
monoethanolamine	141-43-5	0	9.96E-10	8.39E-08	8.49E-08	8.39E-08	1.61E-05	1.61E-05
nitrobenzene	98-95-3	0	1.09E-17	9.83E-15	9.84E-15	9.83E-15	3.13E-14	3.13E-14
tetrachloroethene	127-18-4	0	8.92E-16	6.39E-16	1.53E-15	6.39E-16	4.73E-13	4.73E-13
trichloroethene	79-01-6	0	1.70E-15	5.22E-14	5.39E-14	5.22E-14	1.63E-12	1.63E-12
vinyl chloride	75-01-4	0	4.42E-14	4.96E-12	5.01E-12	4.96E-12	2.03E-10	2.03E-10
ammonia	7664-41-7	0	0.00E+00	8.73E-07	8.73E-07	8.73E-07	1.20E-05	1.20E-05
hydrogen cyanide	74-90-8	0	5.27E-07	1.79E-07	7.06E-07	1.79E-07	1.79E-07	1.79E-07
total mercury	NA			0.00E+00			0.00E+00	
mercuric chloride	7487-94-7	4.08679E-21	0.00E+00	1.36E-21	5.45E-21	1.36E-21	3.38E-21	3.38E-21
methyl mercury	22967-92-6	1.15269E-21	0.00E+00	5.37E-23	1.21E-21	5.37E-23	1.81E-22	1.81E-22
elemental mercury	7439-97-6	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

CONCENTRATIONS OF COPCS IN ANIMAL FEED FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Adult Resident and Adult Subsistence Fisher Exposure Scenarios									
		Concentration Due to Individual Uptake Mechanisms					Forage	Silage	Grain[1]
		Due to Direct Deposition - Forage	Due to Direct Deposition - Silage	Due to Air-to-Plant Transfer - Forage	Due to Air-to-Plant Transfer - Silage	Due to Direct Uptake from Soil	Due to All Processes	Due to All Processes	Due to All Processes
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
COPC	CAS Number	Pd_{forage}	Pd_{silage}	Pv_{forage}	Pv_{silage}	Pr	P_{forage}	P_{silage}	P_{grain}
1,1-dichloroethene	75-35-4	0.00E+00	0.00E+00	2.62E-16	1.31E-16	1.33E-15	1.59E-15	1.46E-15	1.33E-15
1,2-dichloroethane	107-06-2	0.00E+00	0.00E+00	4.86E-19	2.43E-19	6.01E-18	6.49E-18	6.25E-18	6.01E-18
1,4-dichlorobenzene	106-46-7	0.00E+00	0.00E+00	2.17E-16	1.09E-16	7.20E-17	2.89E-16	1.81E-16	7.20E-17
1,4-dithiane	505-29-3	0.00E+00	0.00E+00	6.67E-14	3.34E-14	1.12E-11	1.13E-11	1.13E-11	1.12E-11
1,4-oxathiane	15980-15-1	0.00E+00	0.00E+00	1.60E-14	7.99E-15	8.02E-12	8.03E-12	8.02E-12	8.02E-12
2,4-dinitrotoluene	121-14-2	0.00E+00	0.00E+00	1.99E-15	9.93E-16	1.96E-14	2.16E-14	2.06E-14	1.96E-14
2-butanone	78-93-3	0.00E+00	0.00E+00	7.41E-16	3.71E-16	2.90E-12	2.90E-12	2.90E-12	2.90E-12
acetylene	74-86-2	0.00E+00	0.00E+00	2.23E-10	1.12E-10	1.38E-10	3.61E-10	2.50E-10	1.38E-10
benzene	71-43-2	0.00E+00	0.00E+00	3.64E-18	1.82E-18	1.89E-17	2.25E-17	2.07E-17	1.89E-17
chlorobenzene	108-90-7	0.00E+00	0.00E+00	4.28E-17	2.14E-17	6.93E-17	1.12E-16	9.07E-17	6.93E-17
chloroform	67-66-3	0.00E+00	0.00E+00	5.64E-16	2.82E-16	2.40E-15	2.96E-15	2.68E-15	2.40E-15
ethane	74-84-0	0.00E+00	0.00E+00	8.93E-14	4.46E-14	1.66E-12	1.75E-12	1.70E-12	1.66E-12
HD	505-60-2	0.00E+00	0.00E+00	8.30E-10	4.15E-10	7.25E-11	9.03E-10	4.88E-10	7.25E-11
methane	74-82-8	0.00E+00	0.00E+00	1.28E-13	6.38E-14	6.44E-12	6.57E-12	6.51E-12	6.44E-12
monoethanolamine	141-43-5	0.00E+00	0.00E+00	9.96E-10	4.98E-10	1.40E-08	1.50E-08	1.45E-08	1.40E-08
nitrobenzene	98-95-3	0.00E+00	0.00E+00	1.09E-17	5.45E-18	1.64E-15	1.65E-15	1.64E-15	1.64E-15
tetrachloroethene	127-18-4	0.00E+00	0.00E+00	8.92E-16	4.46E-16	1.07E-16	9.99E-16	5.53E-16	1.07E-16
trichloroethene	79-01-6	0.00E+00	0.00E+00	1.70E-15	8.52E-16	8.70E-15	1.04E-14	9.55E-15	8.70E-15
vinyl chloride	75-01-4	0.00E+00	0.00E+00	4.42E-14	2.21E-14	8.27E-13	8.71E-13	8.49E-13	8.27E-13
ammonia	7664-41-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.45E-07	1.45E-07	1.45E-07	1.45E-07
hydrogen cyanide	74-90-8	0.00E+00	0.00E+00	5.27E-07	2.64E-07	2.98E-08	5.57E-07	2.93E-07	2.98E-08
total mercury	NA								
mercuric chloride	7487-94-7	4.58E-20	1.35E-20	0.00E+00	0.00E+00	1.25E-21	4.71E-20	1.47E-20	1.25E-21
methyl mercury	22967-92-6	1.29E-20	3.81E-21	0.00E+00	0.00E+00	4.03E-23	1.30E-20	3.85E-21	4.03E-23
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

1. Grain was assumed grown on untilled land (Zs = 2cm). This causes a higher COPC concentration in grain, rather than using the default tilled soil depth of 20cm.

CONCENTRATIONS OF COPCS IN ANIMAL FEED FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Adult Farmer Exposure Scenario									
		Concentration Due to Individual Uptake Mechanisms					Forage	Silage	Grain[1]
		Due to Direct Deposition - Forage	Due to Direct Deposition - Silage	Due to Air-to-Plant Transfer - Forage	Due to Air-to-Plant Transfer - Silage	Due to Direct Uptake from Soil	Due to All Processes	Due to All Processes	Due to All Processes
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
COPC	CAS Number	Pd_{forage}	Pd_{silage}	Pv_{forage}	Pv_{silage}	Pr	P_{forage}	P_{silage}	P_{grain}
1,1-dichloroethene	75-35-4	0.00E+00	0.00E+00	2.62E-16	1.31E-16	9.95E-16	1.26E-15	1.13E-15	9.95E-16
1,2-dichloroethane	107-06-2	0.00E+00	0.00E+00	4.86E-19	2.43E-19	4.51E-18	4.99E-18	4.75E-18	4.51E-18
1,4-dichlorobenzene	106-46-7	0.00E+00	0.00E+00	2.17E-16	1.09E-16	5.40E-17	2.71E-16	1.63E-16	5.40E-17
1,4-dithiane	505-29-3	0.00E+00	0.00E+00	6.67E-14	3.34E-14	8.41E-12	8.48E-12	8.45E-12	8.41E-12
1,4-oxathiane	15980-15-1	0.00E+00	0.00E+00	1.60E-14	7.99E-15	6.01E-12	6.03E-12	6.02E-12	6.01E-12
2,4-dinitrotoluene	121-14-2	0.00E+00	0.00E+00	1.99E-15	9.93E-16	1.47E-14	1.67E-14	1.57E-14	1.47E-14
2-butanone	78-93-3	0.00E+00	0.00E+00	7.41E-16	3.71E-16	2.17E-12	2.17E-12	2.17E-12	2.17E-12
acetylene	74-86-2	0.00E+00	0.00E+00	2.23E-10	1.12E-10	1.04E-10	3.27E-10	2.15E-10	1.04E-10
benzene	71-43-2	0.00E+00	0.00E+00	3.64E-18	1.82E-18	1.42E-17	1.78E-17	1.60E-17	1.42E-17
chlorobenzene	108-90-7	0.00E+00	0.00E+00	4.28E-17	2.14E-17	5.20E-17	9.48E-17	7.34E-17	5.20E-17
chloroform	67-66-3	0.00E+00	0.00E+00	5.64E-16	2.82E-16	1.80E-15	2.36E-15	2.08E-15	1.80E-15
ethane	74-84-0	0.00E+00	0.00E+00	8.93E-14	4.46E-14	1.24E-12	1.33E-12	1.29E-12	1.24E-12
HD	505-60-2	0.00E+00	0.00E+00	8.30E-10	4.15E-10	5.44E-11	8.85E-10	4.70E-10	5.44E-11
methane	74-82-8	0.00E+00	0.00E+00	1.28E-13	6.38E-14	4.83E-12	4.96E-12	4.90E-12	4.83E-12
monoethanolamine	141-43-5	0.00E+00	0.00E+00	9.96E-10	4.98E-10	1.05E-08	1.15E-08	1.10E-08	1.05E-08
nitrobenzene	98-95-3	0.00E+00	0.00E+00	1.09E-17	5.45E-18	1.23E-15	1.24E-15	1.23E-15	1.23E-15
tetrachloroethene	127-18-4	0.00E+00	0.00E+00	8.92E-16	4.46E-16	7.99E-17	9.72E-16	5.26E-16	7.99E-17
trichloroethene	79-01-6	0.00E+00	0.00E+00	1.70E-15	8.52E-16	6.53E-15	8.23E-15	7.38E-15	6.53E-15
vinyl chloride	75-01-4	0.00E+00	0.00E+00	4.42E-14	2.21E-14	6.20E-13	6.65E-13	6.43E-13	6.20E-13
ammonia	7664-41-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.09E-07	1.09E-07	1.09E-07	1.09E-07
hydrogen cyanide	74-90-8	0.00E+00	0.00E+00	5.27E-07	2.64E-07	2.23E-08	5.50E-07	2.86E-07	2.23E-08
total mercury	NA								
mercuric chloride	7487-94-7	4.58E-20	1.35E-20	0.00E+00	0.00E+00	1.27E-21	4.71E-20	1.48E-20	1.27E-21
methyl mercury	22967-92-6	1.29E-20	3.81E-21	0.00E+00	0.00E+00	3.79E-23	1.30E-20	3.84E-21	3.79E-23
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

1. Grain was assumed grown on untilled land (Zs = 2cm). This causes a higher COPC concentration in grain, rather than using the default tilled soil depth of 20cm.

CONCENTRATIONS OF COPCS IN ANIMAL FEED FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Child Exposure Scenarios									
		Concentration Due to Individual Uptake Mechanisms					Forage	Silage	Grain[1]
		Due to Direct Deposition - Forage	Due to Direct Deposition - Silage	Due to Air-to-Plant Transfer - Forage	Due to Air-to-Plant Transfer - Silage	Due to Direct Uptake from Soil	Due to All Processes	Due to All Processes	Due to All Processes
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
COPC	CAS Number	Pd_{forage}	Pd_{silage}	Pv_{forage}	Pv_{silage}	Pr	P_{forage}	P_{silage}	P_{grain}
1,1-dichloroethene	75-35-4	0.00E+00	0.00E+00	2.62E-16	1.31E-16	7.96E-15	8.22E-15	8.09E-15	7.96E-15
1,2-dichloroethane	107-06-2	0.00E+00	0.00E+00	4.86E-19	2.43E-19	3.60E-17	3.65E-17	3.63E-17	3.60E-17
1,4-dichlorobenzene	106-46-7	0.00E+00	0.00E+00	2.17E-16	1.09E-16	4.32E-16	6.49E-16	5.40E-16	4.32E-16
1,4-dithiane	505-29-3	0.00E+00	0.00E+00	6.67E-14	3.34E-14	6.72E-11	6.72E-11	6.72E-11	6.72E-11
1,4-oxathiane	15980-15-1	0.00E+00	0.00E+00	1.60E-14	7.99E-15	4.81E-11	4.81E-11	4.81E-11	4.81E-11
2,4-dinitrotoluene	121-14-2	0.00E+00	0.00E+00	1.99E-15	9.93E-16	1.10E-13	1.12E-13	1.11E-13	1.10E-13
2-butanone	78-93-3	0.00E+00	0.00E+00	7.41E-16	3.71E-16	1.74E-11	1.74E-11	1.74E-11	1.74E-11
acetylene	74-86-2	0.00E+00	0.00E+00	2.23E-10	1.12E-10	8.28E-10	1.05E-09	9.40E-10	8.28E-10
benzene	71-43-2	0.00E+00	0.00E+00	3.64E-18	1.82E-18	1.13E-16	1.17E-16	1.15E-16	1.13E-16
chlorobenzene	108-90-7	0.00E+00	0.00E+00	4.28E-17	2.14E-17	4.16E-16	4.58E-16	4.37E-16	4.16E-16
chloroform	67-66-3	0.00E+00	0.00E+00	5.64E-16	2.82E-16	1.44E-14	1.50E-14	1.47E-14	1.44E-14
ethane	74-84-0	0.00E+00	0.00E+00	8.93E-14	4.46E-14	9.94E-12	1.00E-11	9.99E-12	9.94E-12
HD	505-60-2	0.00E+00	0.00E+00	8.30E-10	4.15E-10	4.35E-10	1.27E-09	8.50E-10	4.35E-10
methane	74-82-8	0.00E+00	0.00E+00	1.28E-13	6.38E-14	3.87E-11	3.88E-11	3.87E-11	3.87E-11
monoethanolamine	141-43-5	0.00E+00	0.00E+00	9.96E-10	4.98E-10	8.39E-08	8.49E-08	8.44E-08	8.39E-08
nitrobenzene	98-95-3	0.00E+00	0.00E+00	1.09E-17	5.45E-18	9.80E-15	9.81E-15	9.81E-15	9.80E-15
tetrachloroethene	127-18-4	0.00E+00	0.00E+00	8.92E-16	4.46E-16	6.39E-16	1.53E-15	1.09E-15	6.39E-16
trichloroethene	79-01-6	0.00E+00	0.00E+00	1.70E-15	8.52E-16	5.22E-14	5.39E-14	5.31E-14	5.22E-14
vinyl chloride	75-01-4	0.00E+00	0.00E+00	4.42E-14	2.21E-14	4.96E-12	5.01E-12	4.99E-12	4.96E-12
ammonia	7664-41-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.73E-07	8.73E-07	8.73E-07	8.73E-07
hydrogen cyanide	74-90-8	0.00E+00	0.00E+00	5.27E-07	2.64E-07	1.79E-07	7.06E-07	4.42E-07	1.79E-07
total mercury	NA								
mercuric chloride	7487-94-7	4.58E-20	1.35E-20	0.00E+00	0.00E+00	6.80E-22	4.65E-20	1.42E-20	6.80E-22
methyl mercury	22967-92-6	1.29E-20	3.81E-21	0.00E+00	0.00E+00	2.73E-23	1.30E-20	3.83E-21	2.73E-23
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

1. Grain was assumed grown on untilled land (Zs = 2cm). This causes a higher COPC concentration in grain, rather than using the default tilled soil depth of 20cm.

CONCENTRATIONS OF COPCS IN ANIMAL FEED FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Infant Exposure Scenarios									
		Concentration Due to Individual Uptake Mechanisms					Forage	Silage	Grain[1]
		Due to Direct Deposition - Forage	Due to Direct Deposition - Silage	Due to Air-to-Plant Transfer - Forage	Due to Air-to-Plant Transfer - Silage	Due to Direct Uptake from Soil	Due to All Processes	Due to All Processes	Due to All Processes
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
COPC	CAS Number	Pd_{forage}	Pd_{silage}	Pv_{forage}	Pv_{silage}	Pr	P_{forage}	P_{silage}	P_{grain}
1,1-dichloroethene	75-35-4	0.00E+00	0.00E+00	2.62E-16	1.31E-16	7.96E-15	8.22E-15	8.09E-15	7.96E-15
1,2-dichloroethane	107-06-2	0.00E+00	0.00E+00	4.86E-19	2.43E-19	3.60E-17	3.65E-17	3.63E-17	3.60E-17
1,4-dichlorobenzene	106-46-7	0.00E+00	0.00E+00	2.17E-16	1.09E-16	4.32E-16	6.49E-16	5.40E-16	4.32E-16
1,4-dithiane	505-29-3	0.00E+00	0.00E+00	6.67E-14	3.34E-14	6.72E-11	6.72E-11	6.72E-11	6.72E-11
1,4-oxathiane	15980-15-1	0.00E+00	0.00E+00	1.60E-14	7.99E-15	4.81E-11	4.81E-11	4.81E-11	4.81E-11
2,4-dinitrotoluene	121-14-2	0.00E+00	0.00E+00	1.99E-15	9.93E-16	1.10E-13	1.12E-13	1.11E-13	1.10E-13
2-butanone	78-93-3	0.00E+00	0.00E+00	7.41E-16	3.71E-16	1.74E-11	1.74E-11	1.74E-11	1.74E-11
acetylene	74-86-2	0.00E+00	0.00E+00	2.23E-10	1.12E-10	8.28E-10	1.05E-09	9.40E-10	8.28E-10
benzene	71-43-2	0.00E+00	0.00E+00	3.64E-18	1.82E-18	1.13E-16	1.17E-16	1.15E-16	1.13E-16
chlorobenzene	108-90-7	0.00E+00	0.00E+00	4.28E-17	2.14E-17	4.16E-16	4.58E-16	4.37E-16	4.16E-16
chloroform	67-66-3	0.00E+00	0.00E+00	5.64E-16	2.82E-16	1.44E-14	1.50E-14	1.47E-14	1.44E-14
ethane	74-84-0	0.00E+00	0.00E+00	8.93E-14	4.46E-14	9.94E-12	1.00E-11	9.99E-12	9.94E-12
HD	505-60-2	0.00E+00	0.00E+00	8.30E-10	4.15E-10	4.35E-10	1.27E-09	8.50E-10	4.35E-10
methane	74-82-8	0.00E+00	0.00E+00	1.28E-13	6.38E-14	3.87E-11	3.88E-11	3.87E-11	3.87E-11
monoethanolamine	141-43-5	0.00E+00	0.00E+00	9.96E-10	4.98E-10	8.39E-08	8.49E-08	8.44E-08	8.39E-08
nitrobenzene	98-95-3	0.00E+00	0.00E+00	1.09E-17	5.45E-18	9.80E-15	9.81E-15	9.81E-15	9.80E-15
tetrachloroethene	127-18-4	0.00E+00	0.00E+00	8.92E-16	4.46E-16	6.39E-16	1.53E-15	1.09E-15	6.39E-16
trichloroethene	79-01-6	0.00E+00	0.00E+00	1.70E-15	8.52E-16	5.22E-14	5.39E-14	5.31E-14	5.22E-14
vinyl chloride	75-01-4	0.00E+00	0.00E+00	4.42E-14	2.21E-14	4.96E-12	5.01E-12	4.99E-12	4.96E-12
ammonia	7664-41-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.73E-07	8.73E-07	8.73E-07	8.73E-07
hydrogen cyanide	74-90-8	0.00E+00	0.00E+00	5.27E-07	2.64E-07	1.79E-07	7.06E-07	4.42E-07	1.79E-07
total mercury	NA								
mercuric chloride	7487-94-7	3.90E-20	1.35E-20	0.00E+00	0.00E+00	6.80E-22	3.96E-20	1.42E-20	6.80E-22
methyl mercury	22967-92-6	1.10E-20	3.81E-21	0.00E+00	0.00E+00	2.73E-23	1.10E-20	3.83E-21	2.73E-23
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

1. Grain was assumed grown on untilled land (Zs = 2cm). This causes a higher COPC concentration in grain, rather than using the default tilled soil depth of 20cm.

CONCENTRATIONS OF COPCS IN ANIMAL FEED FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS: All Exposure Scenarios									
		Concentration Due to Individual Uptake Mechanisms					Forage	Silage	Grain[1]
		Due to Direct Deposition - Forage	Due to Direct Deposition - Silage	Due to Air-to-Plant Transfer - Forage	Due to Air-to-Plant Transfer - Silage	Due to Direct Uptake from Soil	Due to All Processes	Due to All Processes	Due to All Processes
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
COPC	CAS Number	Pd_{forage}	Pd_{silage}	Pv_{forage}	Pv_{silage}	Pr	P_{forage}	P_{silage}	P_{grain}
1,1-dichloroethene	75-35-4	0.00E+00	0.00E+00	2.62E-16	1.31E-16	7.96E-15	8.22E-15	8.09E-15	7.96E-15
1,2-dichloroethane	107-06-2	0.00E+00	0.00E+00	4.86E-19	2.43E-19	3.60E-17	3.65E-17	3.63E-17	3.60E-17
1,4-dichlorobenzene	106-46-7	0.00E+00	0.00E+00	2.17E-16	1.09E-16	4.32E-16	6.49E-16	5.40E-16	4.32E-16
1,4-dithiane	505-29-3	0.00E+00	0.00E+00	6.67E-14	3.34E-14	6.73E-11	6.74E-11	6.74E-11	6.73E-11
1,4-oxathiane	15980-15-1	0.00E+00	0.00E+00	1.60E-14	7.99E-15	4.81E-11	4.81E-11	4.81E-11	4.81E-11
2,4-dinitrotoluene	121-14-2	0.00E+00	0.00E+00	1.99E-15	9.93E-16	1.18E-13	1.20E-13	1.19E-13	1.18E-13
2-butanone	78-93-3	0.00E+00	0.00E+00	7.41E-16	3.71E-16	1.74E-11	1.74E-11	1.74E-11	1.74E-11
acetylene	74-86-2	0.00E+00	0.00E+00	2.23E-10	1.12E-10	8.28E-10	1.05E-09	9.40E-10	8.28E-10
benzene	71-43-2	0.00E+00	0.00E+00	3.64E-18	1.82E-18	1.13E-16	1.17E-16	1.15E-16	1.13E-16
chlorobenzene	108-90-7	0.00E+00	0.00E+00	4.28E-17	2.14E-17	4.16E-16	4.58E-16	4.37E-16	4.16E-16
chloroform	67-66-3	0.00E+00	0.00E+00	5.64E-16	2.82E-16	1.44E-14	1.50E-14	1.47E-14	1.44E-14
ethane	74-84-0	0.00E+00	0.00E+00	8.93E-14	4.46E-14	9.94E-12	1.00E-11	9.99E-12	9.94E-12
HD	505-60-2	0.00E+00	0.00E+00	8.30E-10	4.15E-10	4.35E-10	1.27E-09	8.50E-10	4.35E-10
methane	74-82-8	0.00E+00	0.00E+00	1.28E-13	6.38E-14	3.87E-11	3.88E-11	3.87E-11	3.87E-11
monoethanolamine	141-43-5	0.00E+00	0.00E+00	9.96E-10	4.98E-10	8.39E-08	8.49E-08	8.44E-08	8.39E-08
nitrobenzene	98-95-3	0.00E+00	0.00E+00	1.09E-17	5.45E-18	9.83E-15	9.84E-15	9.83E-15	9.83E-15
tetrachloroethene	127-18-4	0.00E+00	0.00E+00	8.92E-16	4.46E-16	6.39E-16	1.53E-15	1.09E-15	6.39E-16
trichloroethene	79-01-6	0.00E+00	0.00E+00	1.70E-15	8.52E-16	5.22E-14	5.39E-14	5.31E-14	5.22E-14
vinyl chloride	75-01-4	0.00E+00	0.00E+00	4.42E-14	2.21E-14	4.96E-12	5.01E-12	4.99E-12	4.96E-12
ammonia	7664-41-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.73E-07	8.73E-07	8.73E-07	8.73E-07
hydrogen cyanide	74-90-8	0.00E+00	0.00E+00	5.27E-07	2.64E-07	1.79E-07	7.06E-07	4.42E-07	1.79E-07
total mercury	NA								
mercuric chloride	7487-94-7	4.58E-20	1.35E-20	0.00E+00	0.00E+00	1.36E-21	4.72E-20	1.49E-20	1.36E-21
methyl mercury	22967-92-6	1.29E-20	3.81E-21	0.00E+00	0.00E+00	5.37E-23	1.30E-20	3.86E-21	5.37E-23
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

1. Grain was assumed grown on untilled land (Zs = 2cm). This causes a higher COPC concentration in grain, rather than using the default tilled soil depth of 20cm.

CONCENTRATIONS OF COPCS IN ANIMAL PRODUCTS FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Adult Resident and Adult Subsistence Fisher Exposure Scenarios						
		Beef Concentration	Pork Concentration	Poultry Concentration	Egg Concentration	Milk Concentration
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
COPC	CAS Number	A_{beef}	A_{pork}	$A_{poultry}$	A_{egg}	A_{milk}
1,1-dichloroethene	75-35-4	6.27E-14	2.71E-14	6.92E-16	3.95E-16	2.22E-17
1,2-dichloroethane	107-06-2	9.60E-20	4.44E-20	1.14E-21	6.51E-22	3.45E-20
1,4-dichlorobenzene	106-46-7	5.58E-17	1.21E-17	2.46E-19	1.40E-19	8.65E-17
1,4-dithiane	505-29-3	1.36E-13	6.57E-14	1.71E-15	9.78E-16	4.91E-14
1,4-oxathiane	15980-15-1	1.71E-14	8.29E-15	2.14E-16	1.23E-16	6.22E-15
2,4-dinitrotoluene	121-14-2	7.16E-13	3.28E-13	8.45E-15	4.83E-15	2.55E-16
2-butanone	78-93-3	3.60E-15	1.75E-15	4.54E-17	2.60E-17	1.30E-15
acetylene	74-86-2	4.89E-13	1.24E-13	2.60E-15	1.49E-15	1.65E-13
benzene	71-43-2	8.89E-19	3.86E-19	9.84E-21	5.61E-21	3.15E-19
chlorobenzene	108-90-7	1.11E-14	4.03E-16	9.91E-17	5.66E-17	3.82E-15
chloroform	67-66-3	9.96E-17	4.21E-17	1.07E-18	6.09E-19	3.52E-17
ethane	74-84-0	4.42E-14	2.08E-14	5.40E-16	3.09E-16	1.59E-14
HD	505-60-2	4.87E-11	6.00E-12	6.04E-14	3.45E-14	1.57E-11
methane	74-82-8	4.53E-14	7.84E-16	2.03E-17	1.16E-17	5.92E-16
monoethanolamine	141-43-5	1.59E-12	7.36E-13	1.89E-14	1.08E-14	5.72E-13
nitrobenzene	98-95-3	4.49E-17	2.19E-17	5.71E-19	3.26E-19	7.69E-17
tetrachloroethene	127-18-4	1.69E-16	2.40E-17	3.23E-19	1.84E-19	5.44E-17
trichloroethene	79-01-6	6.37E-16	2.78E-16	7.14E-18	4.07E-18	2.25E-16
vinyl chloride	75-01-4	1.08E-14	5.08E-15	1.31E-16	7.48E-17	3.89E-15
ammonia	7664-41-7	1.56E-10	7.54E-11	1.96E-12	1.12E-12	5.67E-11
hydrogen cyanide	74-90-8	1.62E-10	1.77E-11	1.26E-13	7.19E-14	5.22E-11
total mercury	NA					
mercuric chloride	7487-94-7	2.58E-21	1.92E-24	5.12E-23	5.12E-23	1.63E-21
methyl mercury	22967-92-6	9.71E-23	3.06E-26	1.37E-25	1.37E-25	6.34E-23
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

CONCENTRATIONS OF COPCS IN ANIMAL PRODUCTS FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Adult Subsistence Farmer Exposure Scenario						
COPC	CAS Number	Beef Concentration (mg/kg) A_{beef}	Pork Concentration (mg/kg) A_{pork}	Poultry Concentration (mg/kg) $A_{poultry}$	Egg Concentration (mg/kg) A_{egg}	Milk Concentration (mg/kg) A_{milk}
1,1-dichloroethene	75-35-4	4.92E-14	2.05E-14	5.19E-16	2.97E-16	1.73E-17
1,2-dichloroethane	107-06-2	7.35E-20	3.34E-20	8.56E-22	4.89E-22	2.64E-20
1,4-dichlorobenzene	106-46-7	5.15E-17	9.93E-18	1.84E-19	1.05E-19	7.96E-17
1,4-dithiane	505-29-3	1.02E-13	4.93E-14	1.28E-15	7.33E-16	3.69E-14
1,4-oxathiane	15980-15-1	1.29E-14	6.22E-15	1.61E-16	9.23E-17	4.66E-15
2,4-dinitrotoluene	121-14-2	5.51E-13	2.47E-13	6.34E-15	3.62E-15	1.96E-16
2-butanone	78-93-3	2.70E-15	1.31E-15	3.41E-17	1.95E-17	9.78E-16
acetylene	74-86-2	4.38E-13	9.89E-14	1.95E-15	1.11E-15	1.46E-13
benzene	71-43-2	6.97E-19	2.92E-19	7.38E-21	4.21E-21	2.46E-19
chlorobenzene	108-90-7	9.29E-15	3.10E-16	7.43E-17	4.25E-17	3.16E-15
chloroform	67-66-3	7.88E-17	3.19E-17	8.01E-19	4.57E-19	2.77E-17
ethane	74-84-0	3.36E-14	1.56E-14	4.05E-16	2.32E-16	1.21E-14
HD	505-60-2	4.75E-11	5.43E-12	4.53E-14	2.58E-14	1.53E-11
methane	74-82-8	3.42E-14	5.89E-16	1.53E-17	8.70E-18	4.46E-16
monoethanolamine	141-43-5	1.22E-12	5.54E-13	1.42E-14	8.12E-15	4.37E-13
nitrobenzene	98-95-3	3.38E-17	1.64E-17	4.28E-19	2.45E-19	5.78E-17
tetrachloroethene	127-18-4	1.63E-16	2.11E-17	2.42E-19	1.38E-19	5.25E-17
trichloroethene	79-01-6	5.00E-16	2.10E-16	5.36E-18	3.06E-18	1.76E-16
vinyl chloride	75-01-4	8.19E-15	3.82E-15	9.81E-17	5.61E-17	2.95E-15
ammonia	7664-41-7	1.17E-10	5.66E-11	1.47E-12	8.41E-13	4.25E-11
hydrogen cyanide	74-90-8	1.59E-10	1.65E-11	9.44E-14	5.39E-14	5.13E-11
total mercury	NA					
mercuric chloride	7487-94-7	2.59E-21	1.95E-24	5.24E-23	5.24E-23	1.63E-21
methyl mercury	22967-92-6	9.70E-23	3.03E-26	1.29E-25	1.29E-25	6.34E-23
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

CONCENTRATIONS OF COPCS IN ANIMAL PRODUCTS FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Child Exposure Scenarios						
		Beef Concentration	Pork Concentration	Poultry Concentration	Egg Concentration	Milk Concentration
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
COPC	CAS Number	A_{beef}	A_{pork}	$A_{poultry}$	A_{egg}	A_{milk}
1,1-dichloroethene	75-35-4	3.31E-13	1.59E-13	4.15E-15	2.37E-15	1.19E-16
1,2-dichloroethane	107-06-2	5.45E-19	2.64E-19	6.84E-21	3.91E-21	1.97E-19
1,4-dichlorobenzene	106-46-7	1.40E-16	5.65E-17	1.47E-18	8.42E-19	2.24E-16
1,4-dithiane	505-29-3	8.13E-13	3.93E-13	1.02E-14	5.85E-15	2.93E-13
1,4-oxathiane	15980-15-1	1.03E-13	4.97E-14	1.29E-15	7.38E-16	3.72E-14
2,4-dinitrotoluene	121-14-2	3.74E-12	1.81E-12	4.73E-14	2.70E-14	1.35E-15
2-butanone	78-93-3	2.16E-14	1.05E-14	2.72E-16	1.56E-16	7.82E-15
acetylene	74-86-2	1.52E-12	6.24E-13	1.56E-14	8.92E-15	5.38E-13
benzene	71-43-2	4.71E-18	2.26E-18	5.91E-20	3.37E-20	1.69E-18
chlorobenzene	108-90-7	4.81E-14	2.26E-15	5.95E-16	3.40E-16	1.69E-14
chloroform	67-66-3	5.15E-16	2.46E-16	6.41E-18	3.65E-18	1.85E-16
ethane	74-84-0	2.55E-13	1.24E-13	3.24E-15	1.85E-15	9.22E-14
HD	505-60-2	7.18E-11	1.74E-11	3.62E-13	2.07E-13	2.40E-11
methane	74-82-8	2.68E-13	4.69E-15	1.22E-16	6.96E-17	3.51E-15
monoethanolamine	141-43-5	9.09E-12	4.38E-12	1.14E-13	6.49E-14	3.29E-12
nitrobenzene	98-95-3	2.68E-16	1.31E-16	3.42E-18	1.95E-18	4.58E-16
tetrachloroethene	127-18-4	2.81E-16	8.26E-17	1.94E-18	1.11E-18	9.33E-17
trichloroethene	79-01-6	3.38E-15	1.63E-15	4.29E-17	2.44E-17	1.21E-15
vinyl chloride	75-01-4	6.22E-14	3.03E-14	7.84E-16	4.49E-16	2.26E-14
ammonia	7664-41-7	9.37E-10	4.52E-10	1.18E-11	6.73E-12	3.40E-10
hydrogen cyanide	74-90-8	2.12E-10	4.20E-11	7.55E-13	4.32E-13	7.04E-11
total mercury	NA					
mercuric chloride	7487-94-7	2.45E-21	1.34E-24	2.79E-23	2.79E-23	1.57E-21
methyl mercury	22967-92-6	9.68E-23	2.94E-26	9.25E-26	9.25E-26	6.33E-23
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

CONCENTRATIONS OF COPCS IN ANIMAL PRODUCTS FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS: Infant Exposure Scenarios						
		Beef Concentration	Pork Concentration	Poultry Concentration	Egg Concentration	Milk Concentration
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
COPC	CAS Number	A_{beef}	A_{pork}	$A_{poultry}$	A_{egg}	A_{milk}
1,1-dichloroethene	75-35-4	3.31E-13	1.59E-13	4.15E-15	2.37E-15	1.19E-16
1,2-dichloroethane	107-06-2	5.45E-19	2.64E-19	6.84E-21	3.91E-21	1.97E-19
1,4-dichlorobenzene	106-46-7	1.40E-16	5.65E-17	1.47E-18	8.42E-19	2.24E-16
1,4-dithiane	505-29-3	8.13E-13	3.93E-13	1.02E-14	5.85E-15	2.93E-13
1,4-oxathiane	15980-15-1	1.03E-13	4.97E-14	1.29E-15	7.38E-16	3.72E-14
2,4-dinitrotoluene	121-14-2	3.74E-12	1.81E-12	4.73E-14	2.70E-14	1.35E-15
2-butanone	78-93-3	2.16E-14	1.05E-14	2.72E-16	1.56E-16	7.82E-15
acetylene	74-86-2	1.52E-12	6.24E-13	1.56E-14	8.92E-15	5.38E-13
benzene	71-43-2	4.71E-18	2.26E-18	5.91E-20	3.37E-20	1.69E-18
chlorobenzene	108-90-7	4.81E-14	2.26E-15	5.95E-16	3.40E-16	1.69E-14
chloroform	67-66-3	5.15E-16	2.46E-16	6.41E-18	3.65E-18	1.85E-16
ethane	74-84-0	2.55E-13	1.24E-13	3.24E-15	1.85E-15	9.22E-14
HD	505-60-2	7.18E-11	1.74E-11	3.62E-13	2.07E-13	2.40E-11
methane	74-82-8	2.68E-13	4.69E-15	1.22E-16	6.96E-17	3.51E-15
monoethanolamine	141-43-5	9.09E-12	4.38E-12	1.14E-13	6.49E-14	3.29E-12
nitrobenzene	98-95-3	2.68E-16	1.31E-16	3.42E-18	1.95E-18	4.58E-16
tetrachloroethene	127-18-4	2.81E-16	8.26E-17	1.94E-18	1.11E-18	9.33E-17
trichloroethene	79-01-6	3.38E-15	1.63E-15	4.29E-17	2.44E-17	1.21E-15
vinyl chloride	75-01-4	6.22E-14	3.03E-14	7.84E-16	4.49E-16	2.26E-14
ammonia	7664-41-7	9.37E-10	4.52E-10	1.18E-11	6.73E-12	3.40E-10
hydrogen cyanide	74-90-8	2.12E-10	4.20E-11	7.55E-13	4.32E-13	7.04E-11
total mercury	NA					
mercuric chloride	7487-94-7	2.13E-21	1.34E-24	2.79E-23	2.79E-23	1.36E-21
methyl mercury	22967-92-6	8.35E-23	2.94E-26	9.25E-26	9.25E-26	5.46E-23
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

CONCENTRATIONS OF COPCS IN ANIMAL PRODUCTS FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS: All Exposure Scenarios						
		Beef Concentration	Pork Concentration	Poultry Concentration	Egg Concentration	Milk Concentration
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
COPC	CAS Number	A_{beef}	A_{pork}	$A_{poultry}$	A_{egg}	A_{milk}
1,1-dichloroethene	75-35-4	3.31E-13	1.59E-13	4.15E-15	2.37E-15	1.19E-16
1,2-dichloroethane	107-06-2	5.45E-19	2.64E-19	6.84E-21	3.91E-21	1.97E-19
1,4-dichlorobenzene	106-46-7	1.40E-16	5.65E-17	1.47E-18	8.42E-19	2.24E-16
1,4-dithiane	505-29-3	8.14E-13	3.94E-13	1.03E-14	5.87E-15	2.94E-13
1,4-oxathiane	15980-15-1	1.03E-13	4.97E-14	1.29E-15	7.38E-16	3.72E-14
2,4-dinitrotoluene	121-14-2	4.01E-12	1.94E-12	5.07E-14	2.90E-14	1.44E-15
2-butanone	78-93-3	2.16E-14	1.05E-14	2.72E-16	1.56E-16	7.82E-15
acetylene	74-86-2	1.52E-12	6.24E-13	1.56E-14	8.92E-15	5.38E-13
benzene	71-43-2	4.71E-18	2.26E-18	5.91E-20	3.37E-20	1.69E-18
chlorobenzene	108-90-7	4.81E-14	2.26E-15	5.95E-16	3.40E-16	1.69E-14
chloroform	67-66-3	5.15E-16	2.46E-16	6.41E-18	3.65E-18	1.85E-16
ethane	74-84-0	2.55E-13	1.24E-13	3.24E-15	1.85E-15	9.22E-14
HD	505-60-2	7.18E-11	1.74E-11	3.62E-13	2.07E-13	2.40E-11
methane	74-82-8	2.68E-13	4.69E-15	1.22E-16	6.96E-17	3.51E-15
monoethanolamine	141-43-5	9.09E-12	4.38E-12	1.14E-13	6.49E-14	3.29E-12
nitrobenzene	98-95-3	2.68E-16	1.31E-16	3.42E-18	1.96E-18	4.60E-16
tetrachloroethene	127-18-4	2.81E-16	8.26E-17	1.94E-18	1.11E-18	9.33E-17
trichloroethene	79-01-6	3.38E-15	1.63E-15	4.29E-17	2.44E-17	1.21E-15
vinyl chloride	75-01-4	6.22E-14	3.03E-14	7.84E-16	4.49E-16	2.26E-14
ammonia	7664-41-7	9.37E-10	4.52E-10	1.18E-11	6.73E-12	3.40E-10
hydrogen cyanide	74-90-8	2.12E-10	4.20E-11	7.55E-13	4.32E-13	7.04E-11
total mercury	NA					
mercuric chloride	7487-94-7	2.61E-21	2.03E-24	5.59E-23	5.59E-23	1.64E-21
methyl mercury	22967-92-6	9.74E-23	3.17E-26	1.82E-25	1.82E-25	6.36E-23
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

CONCENTRATIONS OF COPCS IN SURFACE WATER AND FISH FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS:
Adult Resident and Adult Subsistence Fisher Exposure Scenarios

		Diffusive Mass Transfer Coefficient			Erosion Loading Supporting Calculation		Contaminant Load To The Waterbody					
		Liquid Phase Transfer Coefficient	Gas Phase Transfer Coefficient	Overall Transfer Rate	Unit Soil Loss	Watershed Sediment Delivery Ratio	Due to Direct Deposition	Due to Impervious Runoff	Due to Pervious Runoff	Due to Erosion	Due to Diffusion	Due to All Processes
		(m/yr)	(m/yr)	(m/yr)	(kg/m^2-yr)	(dimensionless)	(g/yr)	(g/yr)	(g/yr)	(g/yr)	(g/yr)	(g/yr)
COPC	CAS Number	K_L	K_G	K_v	X_e	SD	L_{Dep}	L_{RI}	L_R	L_E	L_{Dif}	L_T
1,1-dichloroethene	75-35-4	1.84E+02	5.33E+05	2.09E+02	3.86E-01	3.59E-01	2.32E-07	2.85E-07	1.69E-11	6.65E-14	5.80E-10	5.18E-07
1,2-dichloroethane	107-06-2	1.78E+02	5.87E+05	2.01E+02	3.86E-01	3.59E-01	7.06E-11	8.69E-11	5.20E-14	5.95E-17	4.51E-12	1.62E-10
1,4-dichlorobenzene	106-46-7	1.53E+02	4.46E+05	1.74E+02	3.86E-01	3.59E-01	5.74E-10	7.08E-10	1.13E-12	4.43E-14	1.29E-11	1.30E-09
1,4-dithiane	505-29-3	1.68E+02	4.85E+05	7.00E+01	3.86E-01	3.59E-01	6.51E-08	8.02E-08	3.84E-08	2.89E-10	2.89E-07	4.73E-07
1,4-oxathiane	15980-15-1	1.79E+02	5.17E+05	7.91E+01	3.86E-01	3.59E-01	1.38E-07	1.69E-07	1.97E-08	1.93E-11	6.29E-07	9.56E-07
2,4-dinitrotoluene	121-14-2	1.42E+02	9.20E+05	3.87E+00	3.86E-01	3.59E-01	8.41E-12	1.04E-11	5.34E-11	1.54E-12	1.09E-10	1.83E-10
2-butanone	78-93-3	1.77E+02	4.96E+05	1.74E+02	3.86E-01	3.59E-01	1.20E-07	1.47E-07	6.26E-09	5.94E-11	1.16E-07	3.89E-07
acetylene	74-86-2	3.32E+02	9.59E+05	3.77E+02	3.86E-01	3.59E-01	6.98E-02	8.59E-02	8.05E-07	6.19E-10	3.77E-04	1.56E-01
benzene	71-43-2	1.82E+02	5.25E+05	2.07E+02	3.86E-01	3.59E-01	6.95E-10	8.56E-10	2.41E-13	9.47E-16	7.97E-12	1.56E-09
chlorobenzene	108-90-7	1.64E+02	4.63E+05	1.85E+02	3.86E-01	3.59E-01	9.68E-10	1.19E-09	9.94E-13	1.43E-14	1.51E-11	2.18E-09
chloroform	67-66-3	1.80E+02	5.87E+05	2.04E+02	3.86E-01	3.59E-01	9.06E-08	1.12E-07	3.19E-11	8.35E-14	1.55E-09	2.04E-07
ethane	74-84-0	3.12E+02	8.98E+05	3.55E+02	3.86E-01	3.59E-01	3.09E-03	3.81E-03	8.05E-09	8.43E-11	6.82E-07	6.91E-03
HD	505-60-2	1.48E+02	4.29E+05	1.34E+02	3.86E-01	3.59E-01	4.36E-04	5.38E-04	1.43E-07	1.10E-08	5.51E-04	1.53E-03
methane	74-82-8	4.12E+02	1.19E+06	4.69E+02	3.86E-01	3.59E-01	3.40E-02	4.19E-02	2.47E-08	7.02E-11	7.54E-06	7.60E-02
monoethanolamine	141-43-5	2.27E+02	6.56E+05	9.87E-01	3.86E-01	3.59E-01	2.76E-04	3.39E-04	9.56E-05	1.61E-09	2.60E-03	3.31E-03
nitrobenzene	98-95-3	1.62E+02	4.76E+05	1.37E+02	3.86E-01	3.59E-01	1.65E-11	2.03E-11	2.88E-12	1.12E-13	2.92E-11	6.90E-11
tetrachloroethene	127-18-4	1.57E+02	4.59E+05	1.79E+02	3.86E-01	3.59E-01	2.25E-08	2.77E-08	4.39E-12	4.45E-14	6.95E-11	5.03E-08
trichloroethene	79-01-6	1.69E+02	4.89E+05	1.91E+02	3.86E-01	3.59E-01	2.78E-07	3.42E-07	9.05E-11	9.77E-13	1.66E-09	6.22E-07
vinyl chloride	75-01-4	2.06E+02	5.95E+05	2.34E+02	3.86E-01	3.59E-01	2.26E-04	2.78E-04	6.20E-09	7.50E-12	6.10E-07	5.05E-04
ammonia	7664-41-7	4.02E+02	1.16E+06	2.99E+02	3.86E-01	3.59E-01	2.94E-02	3.63E-02	2.60E-04	1.45E-07	1.70E-01	2.36E-01
hydrogen cyanide	74-90-8	3.26E+02	9.41E+05	3.49E+02	3.86E-01	3.59E-01	2.10E-02	2.59E-02	1.11E-05	2.07E-09	1.71E-02	6.41E-02
total mercury	NA	1.17E+02	7.37E+06	2.43E-01	3.86E-01	3.59E-01	1.97E-18	2.43E-18			0.00E+00	2.63E-17
mercuric chloride	7487-94-7	1.17E+02	7.37E+06	2.43E-01	3.86E-01	3.59E-01	0.00E+00	0.00E+00	1.14E-20	2.15E-17	0.00E+00	0.00E+00
methyl mercury	22967-92-6	1.29E+02	8.16E+06	8.05E+01	3.86E-01	3.59E-01	0.00E+00	0.00E+00	1.50E-21	3.44E-19	0.00E+00	0.00E+00
elemental mercury	7439-97-6	3.76E+02	1.30E+05	4.23E+02	3.86E-01	3.59E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

CONCENTRATIONS OF COPCS IN SURFACE WATER AND FISH FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS:
Adult Resident and Adult Subsistence Fisher Exposure Scenarios

		Waterbody Dissipation Rate Constant					Concentration in Water				Concentration in Fish
		Fraction in Water Column	Fraction in Benthic Sediment	Water Column Volatilization Rate Constant	Benthic Burial Rate Constant	Overall Total Waterbody Dissipation Rate Constant	Total Waterbody Concentration Including Water Column and Bed Sediment	Total Concentration in Water Column	Dissolved Phase Water Concentration	Concentration Sorbed to Bed Sediment	Fish Concentration
		(dimensionless)	(dimensionless)	(yr^{-1})	(yr^{-1})	(yr^{-1})	(mg/ℓ)	(mg/ℓ)	(mg/ℓ)	(mg/kg)	(mg/kg)
COPC	CAS Number	f_{wc}	f_{bs}	k_v	k_b	k_{wt}	C_{wtot}	C_{wctot}	C_{dw}	C_{sb}	C_{fish}
1,1-dichloroethene	75-35-4	9.81E-01	1.88E-02	4.16E+01	1.95E-01	4.09E+01	1.10E-13	1.09E-13	1.09E-13		9.01E-13
1,2-dichloroethane	107-06-2	9.87E-01	1.26E-02	4.00E+01	1.95E-01	3.95E+01	3.50E-17	3.47E-17	3.47E-17		9.90E-17
1,4-dichlorobenzene	106-46-7	8.69E-01	1.31E-01	3.45E+01	1.95E-01	3.00E+01	3.38E-16	2.95E-16	2.95E-16		2.92E-14
1,4-dithiane	505-29-3	9.91E-01	8.98E-03	1.39E+01	1.95E-01	1.38E+01	1.41E-13	1.41E-13	1.41E-13		3.23E-13
1,4-oxathiane	15980-15-1	9.96E-01	4.36E-03	1.57E+01	1.95E-01	1.57E+01	2.77E-13	2.77E-13	2.77E-13		8.75E-13
2,4-dinitrotoluene	121-14-2	9.76E-01	2.42E-02	7.68E-01	1.95E-01	7.54E-01	6.89E-17	6.76E-17	6.76E-17		4.52E-16
2-butanone	78-93-3	9.96E-01	4.06E-03	3.46E+01	1.95E-01	3.45E+01	8.84E-14	8.86E-14	8.86E-14		2.80E-13
acetylene	74-86-2	9.96E-01	4.15E-03	7.50E+01	1.95E-01	7.47E+01	2.43E-08	2.43E-08	2.43E-08		7.69E-08
benzene	71-43-2	9.82E-01	1.81E-02	4.11E+01	1.95E-01	4.03E+01	3.34E-16	3.30E-16	3.30E-16		2.73E-15
chlorobenzene	108-90-7	9.46E-01	5.42E-02	3.69E+01	1.95E-01	3.49E+01	5.08E-16	4.83E-16	4.83E-16		1.38E-14
chloroform	67-66-3	9.84E-01	1.59E-02	4.05E+01	1.95E-01	3.98E+01	4.39E-14	4.35E-14	4.35E-14		3.01E-13
ethane	74-84-0	9.89E-01	1.13E-02	7.05E+01	1.95E-01	6.97E+01	1.12E-09	1.12E-09	1.12E-09		5.51E-09
HD	505-60-2	9.44E-01	5.64E-02	2.66E+01	1.95E-01	2.51E+01	4.02E-10	3.82E-10	3.82E-10		5.46E-09
methane	74-82-8	9.94E-01	5.67E-03	9.32E+01	1.95E-01	9.27E+01	1.04E-08	1.04E-08	1.04E-08		1.43E-08
monoethanolamine	141-43-5	9.96E-01	3.60E-03	1.96E-01	1.95E-01	1.96E-01	1.24E-09	1.24E-09	1.24E-09		3.92E-09
nitrobenzene	98-95-3	9.69E-01	3.12E-02	2.72E+01	1.95E-01	2.64E+01	1.76E-17	1.71E-17	1.71E-17		9.08E-17
tetrachloroethene	127-18-4	9.37E-01	6.30E-02	3.55E+01	1.95E-01	3.33E+01	1.20E-14	1.13E-14	1.13E-14		9.38E-13
trichloroethene	79-01-6	9.74E-01	2.55E-02	3.81E+01	1.95E-01	3.71E+01	1.39E-13	1.36E-13	1.36E-13		1.92E-12
vinyl chloride	75-01-4	9.93E-01	7.27E-03	4.66E+01	1.95E-01	4.63E+01	1.01E-10	1.01E-10	1.01E-10		2.42E-10
ammonia	7664-41-7	9.96E-01	4.02E-03	5.95E+01	1.95E-01	5.93E+01	4.18E-08	4.19E-08	4.19E-08		1.32E-07
hydrogen cyanide	74-90-8	9.96E-01	3.72E-03	6.93E+01	1.95E-01	6.91E+01	1.04E-08	1.04E-08	1.04E-08		3.30E-08
total mercury	NA	6.62E-03	9.93E-01	2.41E-02	1.95E-01	1.94E-01	9.56E-22	6.37E-24	0.00E+00		
mercuric chloride	7487-94-7	6.62E-03	9.93E-01	2.41E-02	1.95E-01	1.94E-01	0.00E+00	0.00E+00	2.71E-24		0.00E+00
methyl mercury	22967-92-6	1.00E-01	9.00E-01	8.00E+00	1.95E-01	9.75E-01	0.00E+00	0.00E+00	4.78E-25		3.25E-18
elemental mercury	7439-97-6	5.31E-02	9.47E-01	8.32E+01	1.95E-01	4.61E+00	0.00E+00	0.00E+00	0.00E+00		0.00E+00

CONCENTRATIONS OF COPCS IN SURFACE WATER AND FISH FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS:
Adult Subsistence Farmer Exposure Scenario

		Diffusive Mass Transfer Coefficient			Erosion Loading Supporting Calculation		Contaminant Load To The Waterbody					
		Liquid Phase Transfer Coefficient	Gas Phase Transfer Coefficient	Overall Transfer Rate	Unit Soil Loss	Watershed Sediment Delivery Ratio	Due to Direct Deposition	Due to Impervious Runoff	Due to Pervious Runoff	Due to Erosion	Due to Diffusion	Due to All Processes
		(m/yr)	(m/yr)	(m/yr)	(kg/m^2-yr)	(dimensionless)	(g/yr)	(g/yr)	(g/yr)	(g/yr)	(g/yr)	(g/yr)
COPC	CAS Number	K_L	K_G	K_v	X_e	SD	L_{Dep}	L_{RI}	L_R	L_E	L_{Dif}	L_T
1,1-dichloroethene	75-35-4	184.29	533257.08	209.46	0.39	0.36	2.32E-07	2.85E-07	1.27E-11	4.99E-14	5.80E-10	5.18E-07
1,2-dichloroethane	107-06-2	178.31	587498.13	201.20	0.39	0.36	7.06E-11	8.69E-11	3.90E-14	4.47E-17	4.51E-12	1.62E-10
1,4-dichlorobenzene	106-46-7	153.29	446296.05	173.67	0.39	0.36	5.74E-10	7.08E-10	8.46E-13	3.32E-14	1.29E-11	1.30E-09
1,4-dithiane	505-29-3	167.65	484504.19	70.00	0.39	0.36	6.51E-08	8.02E-08	2.88E-08	2.16E-10	2.89E-07	4.63E-07
1,4-oxathiane	15980-15-1	178.79	517259.07	79.07	0.39	0.36	1.38E-07	1.69E-07	1.48E-08	1.45E-11	6.29E-07	9.51E-07
2,4-dinitrotoluene	121-14-2	142.17	919637.13	3.87	0.39	0.36	8.41E-12	1.04E-11	4.00E-11	1.15E-12	1.09E-10	1.69E-10
2-butanone	78-93-3	177.10	496089.19	174.20	0.39	0.36	1.20E-07	1.47E-07	4.70E-09	4.46E-11	1.16E-07	3.88E-07
acetylene	74-86-2	332.05	959487.73	377.37	0.39	0.36	6.98E-02	8.59E-02	6.04E-07	4.64E-10	3.77E-04	1.56E-01
benzene	71-43-2	181.91	525288.08	206.51	0.39	0.36	6.95E-10	8.56E-10	1.81E-13	7.10E-16	7.97E-12	1.56E-09
chlorobenzene	108-90-7	163.52	463468.76	185.48	0.39	0.36	9.68E-10	1.19E-09	7.45E-13	1.07E-14	1.51E-11	2.18E-09
chloroform	67-66-3	179.51	587498.13	203.68	0.39	0.36	9.06E-08	1.12E-07	2.39E-11	6.26E-14	1.55E-09	2.04E-07
ethane	74-84-0	311.82	898267.57	354.52	0.39	0.36	3.09E-03	3.81E-03	6.04E-09	6.32E-11	6.82E-07	6.91E-03
HD	505-60-2	147.91	428791.43	133.93	0.39	0.36	4.36E-04	5.38E-04	1.07E-07	8.22E-09	5.51E-04	1.53E-03
methane	74-82-8	412.36	1192048.29	468.82	0.39	0.36	3.40E-02	4.19E-02	1.85E-08	5.27E-11	7.54E-06	7.60E-02
monoethanolamine	141-43-5	226.89	655628.01	0.99	0.39	0.36	2.76E-04	3.39E-04	7.17E-05	1.21E-09	2.60E-03	3.29E-03
nitrobenzene	98-95-3	162.26	476145.03	136.94	0.39	0.36	1.65E-11	2.03E-11	2.16E-12	8.39E-14	2.92E-11	6.82E-11
tetrachloroethene	127-18-4	157.16	459205.33	178.60	0.39	0.36	2.25E-08	2.77E-08	3.29E-12	3.34E-14	6.95E-11	5.03E-08
trichloroethene	79-01-6	168.52	488657.20	191.44	0.39	0.36	2.78E-07	3.42E-07	6.79E-11	7.33E-13	1.66E-09	6.22E-07
vinyl chloride	75-01-4	206.22	595044.00	234.39	0.39	0.36	2.26E-04	2.78E-04	4.65E-09	5.62E-12	6.10E-07	5.05E-04
ammonia	7664-41-7	401.91	1159889.25	299.40	0.39	0.36	2.94E-02	3.63E-02	1.95E-04	1.08E-07	1.70E-01	2.36E-01
hydrogen cyanide	74-90-8	326.32	940764.84	348.77	0.39	0.36	2.10E-02	2.59E-02	8.34E-06	1.55E-09	1.71E-02	6.41E-02
total mercury	NA	116.57	7366494.52	0.24	0.39	0.36	1.97E-18	2.43E-18			0.00E+00	2.68E-17
mercuric chloride	7487-94-7	116.57	7366494.52	0.24	0.39	0.36	0.00E+00	0.00E+00	1.16E-20	2.20E-17	0.00E+00	0.00E+00
methyl mercury	22967-92-6	129.05	8159012.80	80.49	0.39	0.36	0.00E+00	0.00E+00	1.41E-21	3.23E-19	0.00E+00	0.00E+00
elemental mercury	7439-97-6	375.61	129619.37	422.82	0.39	0.36	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

CONCENTRATIONS OF COPCS IN SURFACE WATER AND FISH FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS:
Adult Subsistence Farmer Exposure Scenario

		Waterbody Dissipation Rate Constant					Concentration in Water				Concentration in Fish
		Fraction in Water Column	Fraction in Benthic Sediment	Water Column Volatilization Rate Constant	Benthic Burial Rate Constant	Overall Total Waterbody Dissipation Rate Constant	Total Waterbody Concentration Including Water Column and Bed Sediment	Total Concentration in Water Column	Dissolved Phase Water Concentration	Concentration Sorbed to Bed Sediment	Fish Concentration
		(dimensionless)	(dimensionless)	(yr^{-1})	(yr^{-1})	(yr^{-1})	(mg/ℓ)	(mg/ℓ)	(mg/ℓ)	(mg/kg)	(mg/kg)
COPC	CAS Number	f_{wc}	f_{bs}	k_v	k_b	k_{wt}	C_{wtot}	C_{wctot}	C_{dw}	C_{sb}	C_{fish}
1,1-dichloroethene	75-35-4	9.81E-01	1.88E-02	41.64	1.95E-01	4.09E+01	1.10E-13	1.09E-13	1.09E-13		9.01E-13
1,2-dichloroethane	107-06-2	9.87E-01	1.26E-02	40.00	1.95E-01	3.95E+01	3.50E-17	3.47E-17	3.47E-17		9.90E-17
1,4-dichlorobenzene	106-46-7	8.69E-01	1.31E-01	34.51	1.95E-01	3.00E+01	3.38E-16	2.95E-16	2.95E-16		2.92E-14
1,4-dithiane	505-29-3	9.91E-01	8.98E-03	13.92	1.95E-01	1.38E+01	1.38E-13	1.38E-13	1.38E-13		3.17E-13
1,4-oxathiane	15980-15-1	9.96E-01	4.36E-03	15.72	1.95E-01	1.57E+01	2.75E-13	2.76E-13	2.76E-13		8.71E-13
2,4-dinitrotoluene	121-14-2	9.76E-01	2.42E-02	0.77	1.95E-01	7.54E-01	6.37E-17	6.25E-17	6.25E-17		4.18E-16
2-butanone	78-93-3	9.96E-01	4.06E-03	34.63	1.95E-01	3.45E+01	8.80E-14	8.82E-14	8.82E-14		2.79E-13
acetylene	74-86-2	9.96E-01	4.15E-03	75.02	1.95E-01	7.47E+01	2.43E-08	2.43E-08	2.43E-08		7.69E-08
benzene	71-43-2	9.82E-01	1.81E-02	41.05	1.95E-01	4.03E+01	3.34E-16	3.30E-16	3.30E-16		2.73E-15
chlorobenzene	108-90-7	9.46E-01	5.42E-02	36.87	1.95E-01	3.49E+01	5.08E-16	4.83E-16	4.83E-16		1.38E-14
chloroform	67-66-3	9.84E-01	1.59E-02	40.49	1.95E-01	3.98E+01	4.39E-14	4.35E-14	4.35E-14		3.01E-13
ethane	74-84-0	9.89E-01	1.13E-02	70.48	1.95E-01	6.97E+01	1.12E-09	1.12E-09	1.12E-09		5.51E-09
HD	505-60-2	9.44E-01	5.64E-02	26.62	1.95E-01	2.51E+01	4.02E-10	3.82E-10	3.82E-10		5.46E-09
methane	74-82-8	9.94E-01	5.67E-03	93.20	1.95E-01	9.27E+01	1.04E-08	1.04E-08	1.04E-08		1.43E-08
monoethanolamine	141-43-5	9.96E-01	3.60E-03	0.20	1.95E-01	1.96E-01	1.23E-09	1.23E-09	1.23E-09		3.89E-09
nitrobenzene	98-95-3	9.69E-01	3.12E-02	27.22	1.95E-01	2.64E+01	1.74E-17	1.69E-17	1.69E-17		8.98E-17
tetrachloroethene	127-18-4	9.37E-01	6.30E-02	35.50	1.95E-01	3.33E+01	1.20E-14	1.13E-14	1.13E-14		9.38E-13
trichloroethene	79-01-6	9.74E-01	2.55E-02	38.06	1.95E-01	3.71E+01	1.39E-13	1.36E-13	1.36E-13		1.92E-12
vinyl chloride	75-01-4	9.93E-01	7.27E-03	46.60	1.95E-01	4.63E+01	1.01E-10	1.01E-10	1.01E-10		2.42E-10
ammonia	7664-41-7	9.96E-01	4.02E-03	59.52	1.95E-01	5.93E+01	4.18E-08	4.19E-08	4.19E-08		1.32E-07
hydrogen cyanide	74-90-8	9.96E-01	3.72E-03	69.34	1.95E-01	6.91E+01	1.04E-08	1.04E-08	1.04E-08		3.30E-08
total mercury	NA	6.62E-03	9.93E-01	0.02	1.95E-01	1.94E-01	9.73E-22	6.49E-24	0.00E+00		
mercuric chloride	7487-94-7	6.62E-03	9.93E-01	0.02	1.95E-01	1.94E-01	0.00E+00	0.00E+00	2.76E-24		0.00E+00
methyl mercury	22967-92-6	1.00E-01	9.00E-01	8.00	1.95E-01	9.75E-01	0.00E+00	0.00E+00	4.86E-25		3.31E-18
elemental mercury	7439-97-6	5.31E-02	9.47E-01	83.23	1.95E-01	4.61E+00	0.00E+00	0.00E+00	0.00E+00		0.00E+00

CONCENTRATIONS OF COPCS IN SURFACE WATER AND FISH FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS:
Child Exposure Scenarios

		Diffusive Mass Transfer Coefficient			Erosion Loading Supporting Calculation		Contaminant Load To The Waterbody					
		Liquid Phase Transfer Coefficient	Gas Phase Transfer Coefficient	Overall Transfer Rate	Unit Soil Loss	Watershed Sediment Delivery Ratio	Due to Direct Deposition	Due to Impervious Runoff	Due to Pervious Runoff	Due to Erosion	Due to Diffusion	Due to All Processes
		(m/yr)	(m/yr)	(m/yr)	(kg/m^2-yr)	(dimensionless)	(g/yr)	(g/yr)	(g/yr)	(g/yr)	(g/yr)	(g/yr)
COPC	CAS Number	K_L	K_G	K_v	X_e	SD	L_{Dep}	L_{RI}	L_R	L_E	L_{Dif}	L_T
1,1-dichloroethene	75-35-4	184.29	533257.08	209.46	0.39	0.36	2.32E-07	2.85E-07	1.02E-10	3.99E-13	5.80E-10	5.18E-07
1,2-dichloroethane	107-06-2	178.31	587498.13	201.20	0.39	0.36	7.06E-11	8.69E-11	3.12E-13	3.57E-16	4.51E-12	1.62E-10
1,4-dichlorobenzene	106-46-7	153.29	446296.05	173.67	0.39	0.36	5.74E-10	7.08E-10	6.77E-12	2.66E-13	1.29E-11	1.30E-09
1,4-dithiane	505-29-3	167.65	484504.19	70.00	0.39	0.36	6.51E-08	8.02E-08	2.30E-07	1.73E-09	2.89E-07	6.65E-07
1,4-oxathiane	15980-15-1	178.79	517259.07	79.07	0.39	0.36	1.38E-07	1.69E-07	1.18E-07	1.16E-10	6.29E-07	1.05E-06
2,4-dinitrotoluene	121-14-2	142.17	919637.13	3.87	0.39	0.36	8.41E-12	1.04E-11	2.99E-10	8.59E-12	1.09E-10	4.35E-10
2-butanone	78-93-3	177.10	496089.19	174.20	0.39	0.36	1.20E-07	1.47E-07	3.76E-08	3.56E-10	1.16E-07	4.21E-07
acetylene	74-86-2	332.05	959487.73	377.37	0.39	0.36	6.98E-02	8.59E-02	4.83E-06	3.72E-09	3.77E-04	1.56E-01
benzene	71-43-2	181.91	525288.08	206.51	0.39	0.36	6.95E-10	8.56E-10	1.45E-12	5.68E-15	7.97E-12	1.56E-09
chlorobenzene	108-90-7	163.52	463468.76	185.48	0.39	0.36	9.68E-10	1.19E-09	5.96E-12	8.58E-14	1.51E-11	2.18E-09
chloroform	67-66-3	179.51	587498.13	203.68	0.39	0.36	9.06E-08	1.12E-07	1.91E-10	5.01E-13	1.55E-09	2.04E-07
ethane	74-84-0	311.82	898267.57	354.52	0.39	0.36	3.09E-03	3.81E-03	4.83E-08	5.06E-10	6.82E-07	6.91E-03
HD	505-60-2	147.91	428791.43	133.93	0.39	0.36	4.36E-04	5.38E-04	8.59E-07	6.57E-08	5.51E-04	1.53E-03
methane	74-82-8	412.36	1192048.29	468.82	0.39	0.36	3.40E-02	4.19E-02	1.48E-07	4.21E-10	7.54E-06	7.60E-02
monoethanolamine	141-43-5	226.89	655628.01	0.99	0.39	0.36	2.76E-04	3.39E-04	5.73E-04	9.67E-09	2.60E-03	3.79E-03
nitrobenzene	98-95-3	162.26	476145.03	136.94	0.39	0.36	1.65E-11	2.03E-11	1.72E-11	6.70E-13	2.92E-11	8.38E-11
tetrachloroethene	127-18-4	157.16	459205.33	178.60	0.39	0.36	2.25E-08	2.77E-08	2.63E-11	2.67E-13	6.95E-11	5.03E-08
trichloroethene	79-01-6	168.52	488657.20	191.44	0.39	0.36	2.78E-07	3.42E-07	5.43E-10	5.86E-12	1.66E-09	6.23E-07
vinyl chloride	75-01-4	206.22	595044.00	234.39	0.39	0.36	2.26E-04	2.78E-04	3.72E-08	4.50E-11	6.10E-07	5.05E-04
ammonia	7664-41-7	401.91	1159889.25	299.40	0.39	0.36	2.94E-02	3.63E-02	1.56E-03	8.68E-07	1.70E-01	2.37E-01
hydrogen cyanide	74-90-8	326.32	940764.84	348.77	0.39	0.36	2.10E-02	2.59E-02	6.67E-05	1.24E-08	1.71E-02	6.41E-02
total mercury	NA	116.57	7366494.52	0.24	0.39	0.36	1.97E-18	2.43E-18			0.00E+00	1.64E-17
mercuric chloride	7487-94-7	116.57	7366494.52	0.24	0.39	0.36	0.00E+00	0.00E+00	6.20E-21	1.18E-17	0.00E+00	0.00E+00
methyl mercury	22967-92-6	129.05	8159012.80	80.49	0.39	0.36	0.00E+00	0.00E+00	1.02E-21	2.33E-19	0.00E+00	0.00E+00
elemental mercury	7439-97-6	375.61	129619.37	422.82	0.39	0.36	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

CONCENTRATIONS OF COPCS IN SURFACE WATER AND FISH FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS:
Child Exposure Scenarios

		Waterbody Dissipation Rate Constant					Concentration in Water				Concentration in Fish
		Fraction in Water Column	Fraction in Benthic Sediment	Water Column Volatilization Rate Constant	Benthic Burial Rate Constant	Overall Total Waterbody Dissipation Rate Constant	Total Waterbody Concentration Including Water Column and Bed Sediment	Total Concentration in Water Column	Dissolved Phase Water Concentration	Concentration Sorbed to Bed Sediment	Fish Concentration
		(dimensionless)	(dimensionless)	(yr^{-1})	(yr^{-1})	(yr^{-1})	(mg/ℓ)	(mg/ℓ)	(mg/ℓ)	(mg/kg)	(mg/kg)
COPC	CAS Number	f_{wc}	f_{bs}	k_v	k_b	k_{wt}	C_{wtot}	C_{wctot}	C_{dw}	C_{sb}	C_{fish}
1,1-dichloroethene	75-35-4	9.81E-01	1.88E-02	41.64	1.95E-01	4.09E+01	1.11E-13	1.09E-13	1.09E-13		9.01E-13
1,2-dichloroethane	107-06-2	9.87E-01	1.26E-02	40.00	1.95E-01	3.95E+01	3.50E-17	3.48E-17	3.48E-17		9.92E-17
1,4-dichlorobenzene	106-46-7	8.69E-01	1.31E-01	34.51	1.95E-01	3.00E+01	3.39E-16	2.96E-16	2.96E-16		2.93E-14
1,4-dithiane	505-29-3	9.91E-01	8.98E-03	13.92	1.95E-01	1.38E+01	1.99E-13	1.98E-13	1.98E-13		4.55E-13
1,4-oxathiane	15980-15-1	9.96E-01	4.36E-03	15.72	1.95E-01	1.57E+01	3.05E-13	3.05E-13	3.05E-13		9.65E-13
2,4-dinitrotoluene	121-14-2	9.76E-01	2.42E-02	0.77	1.95E-01	7.54E-01	1.64E-16	1.61E-16	1.61E-16		1.07E-15
2-butanone	78-93-3	9.96E-01	4.06E-03	34.63	1.95E-01	3.45E+01	9.56E-14	9.58E-14	9.58E-14		3.03E-13
acetylene	74-86-2	9.96E-01	4.15E-03	75.02	1.95E-01	7.47E+01	2.43E-08	2.43E-08	2.43E-08		7.69E-08
benzene	71-43-2	9.82E-01	1.81E-02	41.05	1.95E-01	4.03E+01	3.35E-16	3.31E-16	3.31E-16		2.73E-15
chlorobenzene	108-90-7	9.46E-01	5.42E-02	36.87	1.95E-01	3.49E+01	5.09E-16	4.84E-16	4.84E-16		1.38E-14
chloroform	67-66-3	9.84E-01	1.59E-02	40.49	1.95E-01	3.98E+01	4.40E-14	4.35E-14	4.35E-14		3.01E-13
ethane	74-84-0	9.89E-01	1.13E-02	70.48	1.95E-01	6.97E+01	1.12E-09	1.12E-09	1.12E-09		5.51E-09
HD	505-60-2	9.44E-01	5.64E-02	26.62	1.95E-01	2.51E+01	4.02E-10	3.82E-10	3.82E-10		5.46E-09
methane	74-82-8	9.94E-01	5.67E-03	93.20	1.95E-01	9.27E+01	1.04E-08	1.04E-08	1.04E-08		1.43E-08
monoethanolamine	141-43-5	9.96E-01	3.60E-03	0.20	1.95E-01	1.96E-01	1.41E-09	1.42E-09	1.42E-09		4.48E-09
nitrobenzene	98-95-3	9.69E-01	3.12E-02	27.22	1.95E-01	2.64E+01	2.14E-17	2.08E-17	2.08E-17		1.10E-16
tetrachloroethene	127-18-4	9.37E-01	6.30E-02	35.50	1.95E-01	3.33E+01	1.20E-14	1.13E-14	1.13E-14		9.38E-13
trichloroethene	79-01-6	9.74E-01	2.55E-02	38.06	1.95E-01	3.71E+01	1.39E-13	1.36E-13	1.36E-13		1.92E-12
vinyl chloride	75-01-4	9.93E-01	7.27E-03	46.60	1.95E-01	4.63E+01	1.01E-10	1.01E-10	1.01E-10		2.42E-10
ammonia	7664-41-7	9.96E-01	4.02E-03	59.52	1.95E-01	5.93E+01	4.20E-08	4.21E-08	4.21E-08		1.33E-07
hydrogen cyanide	74-90-8	9.96E-01	3.72E-03	69.34	1.95E-01	6.91E+01	1.04E-08	1.05E-08	1.05E-08		3.31E-08
total mercury	NA	6.62E-03	9.93E-01	0.02	1.95E-01	1.94E-01	5.96E-22	3.97E-24	0.00E+00		
mercuric chloride	7487-94-7	6.62E-03	9.93E-01	0.02	1.95E-01	1.94E-01	0.00E+00	0.00E+00	1.69E-24		0.00E+00
methyl mercury	22967-92-6	1.00E-01	9.00E-01	8.00	1.95E-01	9.75E-01	0.00E+00	0.00E+00	2.98E-25		2.03E-18
elemental mercury	7439-97-6	5.31E-02	9.47E-01	83.23	1.95E-01	4.61E+00	0.00E+00	0.00E+00	0.00E+00		0.00E+00

CONCENTRATIONS OF COPCS IN SURFACE WATER AND FISH FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS:
Infant Exposure Scenarios

		Diffusive Mass Transfer Coefficient			Erosion Loading Supporting Calculation		Contaminant Load To The Waterbody					
		Liquid Phase Transfer Coefficient	Gas Phase Transfer Coefficient	Overall Transfer Rate	Unit Soil Loss	Watershed Sediment Delivery Ratio	Due to Direct Deposition	Due to Impervious Runoff	Due to Pervious Runoff	Due to Erosion	Due to Diffusion	Due to All Processes
		(m/yr)	(m/yr)	(m/yr)	(kg/m^2-yr)	(dimensionless)	(g/yr)	(g/yr)	(g/yr)	(g/yr)	(g/yr)	(g/yr)
COPC	CAS Number	K_L	K_G	K_v	X_e	SD	L_{Dep}	L_{RI}	L_R	L_E	L_{Dif}	L_T
1,1-dichloroethene	75-35-4	184.29	533257.08	209.46	0.39	0.36	2.32E-07	2.85E-07	1.02E-10	3.99E-13	5.80E-10	5.18E-07
1,2-dichloroethane	107-06-2	178.31	587498.13	201.20	0.39	0.36	7.06E-11	8.69E-11	3.12E-13	3.57E-16	4.51E-12	1.62E-10
1,4-dichlorobenzene	106-46-7	153.29	446296.05	173.67	0.39	0.36	5.74E-10	7.08E-10	6.77E-12	2.66E-13	1.29E-11	1.30E-09
1,4-dithiane	505-29-3	167.65	484504.19	70.00	0.39	0.36	6.51E-08	8.02E-08	2.30E-07	1.73E-09	2.89E-07	6.65E-07
1,4-oxathiane	15980-15-1	178.79	517259.07	79.07	0.39	0.36	1.38E-07	1.69E-07	1.18E-07	1.16E-10	6.29E-07	1.05E-06
2,4-dinitrotoluene	121-14-2	142.17	919637.13	3.87	0.39	0.36	8.41E-12	1.04E-11	2.99E-10	8.59E-12	1.09E-10	4.35E-10
2-butanone	78-93-3	177.10	496089.19	174.20	0.39	0.36	1.20E-07	1.47E-07	3.76E-08	3.56E-10	1.16E-07	4.21E-07
acetylene	74-86-2	332.05	959487.73	377.37	0.39	0.36	6.98E-02	8.59E-02	4.83E-06	3.72E-09	3.77E-04	1.56E-01
benzene	71-43-2	181.91	525288.08	206.51	0.39	0.36	6.95E-10	8.56E-10	1.45E-12	5.68E-15	7.97E-12	1.56E-09
chlorobenzene	108-90-7	163.52	463468.76	185.48	0.39	0.36	9.68E-10	1.19E-09	5.96E-12	8.58E-14	1.51E-11	2.18E-09
chloroform	67-66-3	179.51	587498.13	203.68	0.39	0.36	9.06E-08	1.12E-07	1.91E-10	5.01E-13	1.55E-09	2.04E-07
ethane	74-84-0	311.82	898267.57	354.52	0.39	0.36	3.09E-03	3.81E-03	4.83E-08	5.06E-10	6.82E-07	6.91E-03
HD	505-60-2	147.91	428791.43	133.93	0.39	0.36	4.36E-04	5.38E-04	8.59E-07	6.57E-08	5.51E-04	1.53E-03
methane	74-82-8	412.36	1192048.29	468.82	0.39	0.36	3.40E-02	4.19E-02	1.48E-07	4.21E-10	7.54E-06	7.60E-02
monoethanolamine	141-43-5	226.89	655628.01	0.99	0.39	0.36	2.76E-04	3.39E-04	5.73E-04	9.67E-09	2.60E-03	3.79E-03
nitrobenzene	98-95-3	162.26	476145.03	136.94	0.39	0.36	1.65E-11	2.03E-11	1.72E-11	6.70E-13	2.92E-11	8.38E-11
tetrachloroethene	127-18-4	157.16	459205.33	178.60	0.39	0.36	2.25E-08	2.77E-08	2.63E-11	2.67E-13	6.95E-11	5.03E-08
trichloroethene	79-01-6	168.52	488657.20	191.44	0.39	0.36	2.78E-07	3.42E-07	5.43E-10	5.86E-12	1.66E-09	6.23E-07
vinyl chloride	75-01-4	206.22	595044.00	234.39	0.39	0.36	2.26E-04	2.78E-04	3.72E-08	4.50E-11	6.10E-07	5.05E-04
ammonia	7664-41-7	401.91	1159889.25	299.40	0.39	0.36	2.94E-02	3.63E-02	1.56E-03	8.68E-07	1.70E-01	2.37E-01
hydrogen cyanide	74-90-8	326.32	940764.84	348.77	0.39	0.36	2.10E-02	2.59E-02	6.67E-05	1.24E-08	1.71E-02	6.41E-02
total mercury	NA	116.57	7366494.52	0.24	0.39	0.36	1.97E-18	2.43E-18			0.00E+00	1.64E-17
mercuric chloride	7487-94-7	116.57	7366494.52	0.24	0.39	0.36	0.00E+00	0.00E+00	6.20E-21	1.18E-17	0.00E+00	0.00E+00
methyl mercury	22967-92-6	129.05	8159012.80	80.49	0.39	0.36	0.00E+00	0.00E+00	1.02E-21	2.33E-19	0.00E+00	0.00E+00
elemental mercury	7439-97-6	375.61	129619.37	422.82	0.39	0.36	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

CONCENTRATIONS OF COPCS IN SURFACE WATER AND FISH FOR EACH EXPOSURE SCENARIO

CARCINOGENIC EFFECTS:
Infant Exposure Scenarios

		Waterbody Dissipation Rate Constant					Concentration in Water				Concentration in Fish
		Fraction in Water Column	Fraction in Benthic Sediment	Water Column Volatilization Rate Constant	Benthic Burial Rate Constant	Overall Total Waterbody Dissipation Rate Constant	Total Waterbody Concentration Including Water Column and Bed Sediment	Total Concentration in Water Column	Dissolved Phase Water Concentration	Concentration Sorbed to Bed Sediment	Fish Concentration
		(dimensionless)	(dimensionless)	(yr^{-1})	(yr^{-1})	(yr^{-1})	(mg/ℓ)	(mg/ℓ)	(mg/ℓ)	(mg/kg)	(mg/kg)
COPC	CAS Number	f_{wc}	f_{bs}	k_v	k_b	k_{wt}	C_{wtot}	C_{wctot}	C_{dw}	C_{sb}	C_{fish}
1,1-dichloroethene	75-35-4	9.81E-01	1.88E-02	41.64	1.95E-01	4.09E+01	1.11E-13	1.09E-13	1.09E-13		9.01E-13
1,2-dichloroethane	107-06-2	9.87E-01	1.26E-02	40.00	1.95E-01	3.95E+01	3.50E-17	3.48E-17	3.48E-17		9.92E-17
1,4-dichlorobenzene	106-46-7	8.69E-01	1.31E-01	34.51	1.95E-01	3.00E+01	3.39E-16	2.96E-16	2.96E-16		2.93E-14
1,4-dithiane	505-29-3	9.91E-01	8.98E-03	13.92	1.95E-01	1.38E+01	1.99E-13	1.98E-13	1.98E-13		4.55E-13
1,4-oxathiane	15980-15-1	9.96E-01	4.36E-03	15.72	1.95E-01	1.57E+01	3.05E-13	3.05E-13	3.05E-13		9.65E-13
2,4-dinitrotoluene	121-14-2	9.76E-01	2.42E-02	0.77	1.95E-01	7.54E-01	1.64E-16	1.61E-16	1.61E-16		1.07E-15
2-butanone	78-93-3	9.96E-01	4.06E-03	34.63	1.95E-01	3.45E+01	9.56E-14	9.58E-14	9.58E-14		3.03E-13
acetylene	74-86-2	9.96E-01	4.15E-03	75.02	1.95E-01	7.47E+01	2.43E-08	2.43E-08	2.43E-08		7.69E-08
benzene	71-43-2	9.82E-01	1.81E-02	41.05	1.95E-01	4.03E+01	3.35E-16	3.31E-16	3.31E-16		2.73E-15
chlorobenzene	108-90-7	9.46E-01	5.42E-02	36.87	1.95E-01	3.49E+01	5.09E-16	4.84E-16	4.84E-16		1.38E-14
chloroform	67-66-3	9.84E-01	1.59E-02	40.49	1.95E-01	3.98E+01	4.40E-14	4.35E-14	4.35E-14		3.01E-13
ethane	74-84-0	9.89E-01	1.13E-02	70.48	1.95E-01	6.97E+01	1.12E-09	1.12E-09	1.12E-09		5.51E-09
HD	505-60-2	9.44E-01	5.64E-02	26.62	1.95E-01	2.51E+01	4.02E-10	3.82E-10	3.82E-10		5.46E-09
methane	74-82-8	9.94E-01	5.67E-03	93.20	1.95E-01	9.27E+01	1.04E-08	1.04E-08	1.04E-08		1.43E-08
monoethanolamine	141-43-5	9.96E-01	3.60E-03	0.20	1.95E-01	1.96E-01	1.41E-09	1.42E-09	1.42E-09		4.48E-09
nitrobenzene	98-95-3	9.69E-01	3.12E-02	27.22	1.95E-01	2.64E+01	2.14E-17	2.08E-17	2.08E-17		1.10E-16
tetrachloroethene	127-18-4	9.37E-01	6.30E-02	35.50	1.95E-01	3.33E+01	1.20E-14	1.13E-14	1.13E-14		9.38E-13
trichloroethene	79-01-6	9.74E-01	2.55E-02	38.06	1.95E-01	3.71E+01	1.39E-13	1.36E-13	1.36E-13		1.92E-12
vinyl chloride	75-01-4	9.93E-01	7.27E-03	46.60	1.95E-01	4.63E+01	1.01E-10	1.01E-10	1.01E-10		2.42E-10
ammonia	7664-41-7	9.96E-01	4.02E-03	59.52	1.95E-01	5.93E+01	4.20E-08	4.21E-08	4.21E-08		1.33E-07
hydrogen cyanide	74-90-8	9.96E-01	3.72E-03	69.34	1.95E-01	6.91E+01	1.04E-08	1.05E-08	1.05E-08		3.31E-08
total mercury	NA	6.62E-03	9.93E-01	0.02	1.95E-01	1.94E-01	5.96E-22	3.97E-24	0.00E+00		
mercuric chloride	7487-94-7	6.62E-03	9.93E-01	0.02	1.95E-01	1.94E-01	0.00E+00	0.00E+00	1.69E-24		0.00E+00
methyl mercury	22967-92-6	1.00E-01	9.00E-01	8.00	1.95E-01	9.75E-01	0.00E+00	0.00E+00	2.98E-25		2.03E-18
elemental mercury	7439-97-6	5.31E-02	9.47E-01	83.23	1.95E-01	4.61E+00	0.00E+00	0.00E+00	0.00E+00		0.00E+00

CONCENTRATIONS OF COPCS IN SURFACE WATER AND FISH FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS: All Exposure Scenarios												
		Diffusive Mass Transfer Coefficient			Erosion Loading Supporting Calculation		Contaminant Load To The Waterbody					
		Liquid Phase Transfer Coefficient	Gas Phase Transfer Coefficient	Overall Transfer Rate	Unit Soil Loss	Watershed Sediment Delivery Ratio	Due to Direct Deposition	Due to Impervious Runoff	Due to Pervious Runoff	Due to Erosion	Due to Diffusion	Due to All Processes
		(m/yr)	(m/yr)	(m/yr)	(kg/m^2-yr)	(dimensionless)	(g/yr)	(g/yr)	(g/yr)	(g/yr)	(g/yr)	(g/yr)
COPC	CAS Number	K_L	K_G	K_v	X_e	SD	L_{Dep}	L_{RI}	L_R	L_E	L_{Dif}	L_T
1,1-dichloroethene	75-35-4	184.29	533257.08	209.46	0.39	0.36	2.32E-07	2.85E-07	1.02E-10	3.99E-13	5.80E-10	5.18E-07
1,2-dichloroethane	107-06-2	178.31	587498.13	201.20	0.39	0.36	7.06E-11	8.69E-11	3.12E-13	3.57E-16	4.51E-12	1.62E-10
1,4-dichlorobenzene	106-46-7	153.29	446296.05	173.67	0.39	0.36	5.74E-10	7.08E-10	6.77E-12	2.66E-13	1.29E-11	1.30E-09
1,4-dithiane	505-29-3	167.65	484504.19	70.00	0.39	0.36	6.51E-08	8.02E-08	2.30E-07	1.73E-09	2.89E-07	6.66E-07
1,4-oxathiane	15980-15-1	178.79	517259.07	79.07	0.39	0.36	1.38E-07	1.69E-07	1.18E-07	1.16E-10	6.29E-07	1.05E-06
2,4-dinitrotoluene	121-14-2	142.17	919637.13	3.87	0.39	0.36	8.41E-12	1.04E-11	3.20E-10	9.22E-12	1.09E-10	4.57E-10
2-butanone	78-93-3	177.10	496089.19	174.20	0.39	0.36	1.20E-07	1.47E-07	3.76E-08	3.56E-10	1.16E-07	4.21E-07
acetylene	74-86-2	332.05	959487.73	377.37	0.39	0.36	6.98E-02	8.59E-02	4.83E-06	3.72E-09	3.77E-04	1.56E-01
benzene	71-43-2	181.91	525288.08	206.51	0.39	0.36	6.95E-10	8.56E-10	1.45E-12	5.68E-15	7.97E-12	1.56E-09
chlorobenzene	108-90-7	163.52	463468.76	185.48	0.39	0.36	9.68E-10	1.19E-09	5.96E-12	8.58E-14	1.51E-11	2.18E-09
chloroform	67-66-3	179.51	587498.13	203.68	0.39	0.36	9.06E-08	1.12E-07	1.91E-10	5.01E-13	1.55E-09	2.04E-07
ethane	74-84-0	311.82	898267.57	354.52	0.39	0.36	3.09E-03	3.81E-03	4.83E-08	5.06E-10	6.82E-07	6.91E-03
HD	505-60-2	147.91	428791.43	133.93	0.39	0.36	4.36E-04	5.38E-04	8.59E-07	6.57E-08	5.51E-04	1.53E-03
methane	74-82-8	412.36	1192048.29	468.82	0.39	0.36	3.40E-02	4.19E-02	1.48E-07	4.21E-10	7.54E-06	7.60E-02
monoethanolamine	141-43-5	226.89	655628.01	0.99	0.39	0.36	2.76E-04	3.39E-04	5.74E-04	9.68E-09	2.60E-03	3.79E-03
nitrobenzene	98-95-3	162.26	476145.03	136.94	0.39	0.36	1.65E-11	2.03E-11	1.73E-11	6.71E-13	2.92E-11	8.39E-11
tetrachloroethene	127-18-4	157.16	459205.33	178.60	0.39	0.36	2.25E-08	2.77E-08	2.63E-11	2.67E-13	6.95E-11	5.03E-08
trichloroethene	79-01-6	168.52	488657.20	191.44	0.39	0.36	2.78E-07	3.42E-07	5.43E-10	5.86E-12	1.66E-09	6.23E-07
vinyl chloride	75-01-4	206.22	595044.00	234.39	0.39	0.36	2.26E-04	2.78E-04	3.72E-08	4.50E-11	6.10E-07	5.05E-04
ammonia	7664-41-7	401.91	1159889.25	299.40	0.39	0.36	2.94E-02	3.63E-02	1.56E-03	8.68E-07	1.70E-01	2.37E-01
hydrogen cyanide	74-90-8	326.32	940764.84	348.77	0.39	0.36	2.10E-02	2.59E-02	6.67E-05	1.24E-08	1.71E-02	6.41E-02
total mercury	NA	116.57	7366494.52	0.24	0.39	0.36	1.97E-18	2.43E-18			0.00E+00	2.84E-17
mercuric chloride	7487-94-7	116.57	7366494.52	0.24	0.39	0.36	0.00E+00	0.00E+00	1.24E-20	2.35E-17	0.00E+00	0.00E+00
methyl mercury	22967-92-6	129.05	8159012.80	80.49	0.39	0.36	0.00E+00	0.00E+00	2.00E-21	4.58E-19	0.00E+00	0.00E+00
elemental mercury	7439-97-6	375.61	129619.37	422.82	0.39	0.36	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

CONCENTRATIONS OF COPCS IN SURFACE WATER AND FISH FOR EACH EXPOSURE SCENARIO

NONCARCINOGENIC EFFECTS:
All Exposure Scenarios

		Waterbody Dissipation Rate Constant					Concentration in Water				Concentration in Fish
		Fraction in Water Column	Fraction in Benthic Sediment	Water Column Volatilization Rate Constant	Benthic Burial Rate Constant	Overall Total Waterbody Dissipation Rate Constant	Total Waterbody Concentration Including Water Column and Bed Sediment	Total Concentration in Water Column	Dissolved Phase Water Concentration	Concentration Sorbed to Bed Sediment	Fish Concentration
		(dimensionless)	(dimensionless)	(yr^{-1})	(yr^{-1})	(yr^{-1})	(mg/ℓ)	(mg/ℓ)	(mg/ℓ)	(mg/kg)	(mg/kg)
COPC	CAS Number	f_{wc}	f_{bs}	k_v	k_b	k_{wt}	C_{wtot}	C_{wctot}	C_{dw}	C_{sb}	C_{fish}
1,1-dichloroethene	75-35-4	9.81E-01	1.88E-02	41.64	1.95E-01	4.09E+01	1.11E-13	1.09E-13	1.09E-13		9.01E-13
1,2-dichloroethane	107-06-2	9.87E-01	1.26E-02	40.00	1.95E-01	3.95E+01	3.50E-17	3.48E-17	3.48E-17		9.92E-17
1,4-dichlorobenzene	106-46-7	8.69E-01	1.31E-01	34.51	1.95E-01	3.00E+01	3.39E-16	2.96E-16	2.96E-16		2.93E-14
1,4-dithiane	505-29-3	9.91E-01	8.98E-03	13.92	1.95E-01	1.38E+01	1.99E-13	1.98E-13	1.98E-13		4.56E-13
1,4-oxathiane	15980-15-1	9.96E-01	4.36E-03	15.72	1.95E-01	1.57E+01	3.05E-13	3.05E-13	3.05E-13		9.65E-13
2,4-dinitrotoluene	121-14-2	9.76E-01	2.42E-02	0.77	1.95E-01	7.54E-01	1.72E-16	1.69E-16	1.69E-16		1.13E-15
2-butanone	78-93-3	9.96E-01	4.06E-03	34.63	1.95E-01	3.45E+01	9.56E-14	9.58E-14	9.58E-14		3.03E-13
acetylene	74-86-2	9.96E-01	4.15E-03	75.02	1.95E-01	7.47E+01	2.43E-08	2.43E-08	2.43E-08		7.69E-08
benzene	71-43-2	9.82E-01	1.81E-02	41.05	1.95E-01	4.03E+01	3.35E-16	3.31E-16	3.31E-16		2.73E-15
chlorobenzene	108-90-7	9.46E-01	5.42E-02	36.87	1.95E-01	3.49E+01	5.09E-16	4.84E-16	4.84E-16		1.38E-14
chloroform	67-66-3	9.84E-01	1.59E-02	40.49	1.95E-01	3.98E+01	4.40E-14	4.35E-14	4.35E-14		3.01E-13
ethane	74-84-0	9.89E-01	1.13E-02	70.48	1.95E-01	6.97E+01	1.12E-09	1.12E-09	1.12E-09		5.51E-09
HD	505-60-2	9.44E-01	5.64E-02	26.62	1.95E-01	2.51E+01	4.02E-10	3.82E-10	3.82E-10		5.46E-09
methane	74-82-8	9.94E-01	5.67E-03	93.20	1.95E-01	9.27E+01	1.04E-08	1.04E-08	1.04E-08		1.43E-08
monoethanolamine	141-43-5	9.96E-01	3.60E-03	0.20	1.95E-01	1.96E-01	1.41E-09	1.42E-09	1.42E-09		4.48E-09
nitrobenzene	98-95-3	9.69E-01	3.12E-02	27.22	1.95E-01	2.64E+01	2.14E-17	2.08E-17	2.08E-17		1.10E-16
tetrachloroethene	127-18-4	9.37E-01	6.30E-02	35.50	1.95E-01	3.33E+01	1.20E-14	1.13E-14	1.13E-14		9.38E-13
trichloroethene	79-01-6	9.74E-01	2.55E-02	38.06	1.95E-01	3.71E+01	1.39E-13	1.36E-13	1.36E-13		1.92E-12
vinyl chloride	75-01-4	9.93E-01	7.27E-03	46.60	1.95E-01	4.63E+01	1.01E-10	1.01E-10	1.01E-10		2.42E-10
ammonia	7664-41-7	9.96E-01	4.02E-03	59.52	1.95E-01	5.93E+01	4.20E-08	4.21E-08	4.21E-08		1.33E-07
hydrogen cyanide	74-90-8	9.96E-01	3.72E-03	69.34	1.95E-01	6.91E+01	1.04E-08	1.05E-08	1.05E-08		3.31E-08
total mercury	NA	6.62E-03	9.93E-01	0.02	1.95E-01	1.94E-01	1.03E-21	6.88E-24	0.00E+00		
mercuric chloride	7487-94-7	6.62E-03	9.93E-01	0.02	1.95E-01	1.94E-01	0.00E+00	0.00E+00	2.92E-24		0.00E+00
methyl mercury	22967-92-6	1.00E-01	9.00E-01	8.00	1.95E-01	9.75E-01	0.00E+00	0.00E+00	5.16E-25		3.51E-18
elemental mercury	7439-97-6	5.31E-02	9.47E-01	83.23	1.95E-01	4.61E+00	0.00E+00	0.00E+00	0.00E+00		0.00E+00

CONCENTRATIONS OF COPCS IN BREAST MILK FOR INFANT EXPOSURE SCENARIOS

CARCINOGENIC EFFECTS: Infant Resident Exposure Scenario										
COPC	CAS Number	Fraction Stored in Maternal Fat (dimensionless) f_1	Biological Half-Life (days) h	Concentration in Milk Fat (mg/kg) $C_{milkfat}$	Fraction Stored in Whole Blood (dimensionless) f_{bl}	Red Blood Cells-Blood Plasma Partition Coefficient (dimensionless) Pc_{RBC}	Fraction Stored in Blood Plasma (dimensionless) f_{pl}	Blood Plasma-Breast Milk Partition Coefficient (dimensionless) Pc_{bm}	Concentration in Milk Aqueous Phase (mg/kg) $C_{aqueous}$	Concentration in Milk (mg/kg) C_{milk}
1,1-dichloroethene	75-35-4									
1,2-dichloroethane	107-06-2	0.5000	5.0000	8.91E-16	0.5000	1	0.325	1	3.78E-15	3.66E-15
1,4-dichlorobenzene	106-46-7	0.5000	5.0000	9.58E-15	0.5000	1	0.325	1	4.06E-14	3.94E-14
1,4-dithiane	505-29-3									
1,4-oxathiane	15980-15-1									
2,4-dinitrotoluene	121-14-2									
2-butanone	78-93-3									
acetylene	74-86-2									
benzene	71-43-2	0.5000	5.0000	8.50E-15	0.5000	1	0.325	1	3.60E-14	3.49E-14
chlorobenzene	108-90-7									
chloroform	67-66-3	0.5000	5.0000	1.11E-12	0.5000	1	0.325	1	4.70E-12	4.56E-12
ethane	74-84-0									
HD	505-60-2									
methane	74-82-8									
monoethanolamine	141-43-5									
nitrobenzene	98-95-3									
tetrachloroethene	127-18-4	0.5000	5.0000	2.96E-13	0.5000	1	0.325	1	1.26E-12	1.22E-12
trichloroethene	79-01-6	0.5000	5.0000	3.42E-12	0.5000	1	0.325	1	1.45E-11	1.40E-11
vinyl chloride	75-01-4									
ammonia	7664-41-7									
hydrogen cyanide	74-90-8									
total mercury	NA									
mercuric chloride	7487-94-7									
methyl mercury	22967-92-6									
elemental mercury	7439-97-6									

CONCENTRATIONS OF COPCS IN BREAST MILK FOR INFANT EXPOSURE SCENARIOS

NONCARCINOGENIC EFFECTS: Infant Resident Exposure Scenario										
COPC	CAS Number	Fraction Stored in Maternal Fat (dimensionless) f_1	Biological Half-Life (days) h	Concentration in Milk Fat (mg/kg) $C_{milkfat}$	Fraction Stored in Whole Blood (dimensionless) f_{bl}	Red Blood Cells-Blood Plasma Partition Coefficient (dimensionless) Pc_{RBC}	Fraction Stored in Blood Plasma (dimensionless) f_{pl}	Blood Plasma-Breast Milk Partition Coefficient (dimensionless) Pc_{bm}	Concentration in Milk Aqueous Phase (mg/kg) $C_{aqueous}$	Concentration in Milk (mg/kg) C_{milk}
1,1-dichloroethene	75-35-4									
1,2-dichloroethane	107-06-2	0.5000	5.0000	8.91E-16	0.5000	1	0.325	1	3.78E-15	3.66E-15
1,4-dichlorobenzene	106-46-7	0.5000	5.0000	9.58E-15	0.5000	1	0.325	1	4.06E-14	3.94E-14
1,4-dithiane	505-29-3									
1,4-oxathiane	15980-15-1									
2,4-dinitrotoluene	121-14-2									
2-butanone	78-93-3	0.5000	5.0000	3.86E-12	0.5000	1	0.325	1	1.64E-11	1.59E-11
acetylene	74-86-2									
benzene	71-43-2	0.5000	5.0000	8.50E-15	0.5000	1	0.325	1	3.60E-14	3.49E-14
chlorobenzene	108-90-7									
chloroform	67-66-3	0.5000	5.0000	1.11E-12	0.5000	1	0.325	1	4.70E-12	4.56E-12
ethane	74-84-0									
HD	505-60-2									
methane	74-82-8									
monoethanolamine	141-43-5									
nitrobenzene	98-95-3									
tetrachloroethene	127-18-4	0.5000	5.0000	2.96E-13	0.5000	1	0.325	1	1.26E-12	1.22E-12
trichloroethene	79-01-6	0.5000	5.0000	3.42E-12	0.5000	1	0.325	1	1.45E-11	1.40E-11
vinyl chloride	75-01-4									
ammonia	7664-41-7									
hydrogen cyanide	74-90-8									
total mercury	NA									
mercuric chloride	7487-94-7	0.5000	5.0000	5.38E-22	0.5000	1	0.325	1	2.28E-21	2.21E-21
methyl mercury	22967-92-6	0.5000	5.0000	5.92E-20	0.5000	1	0.325	1	2.51E-19	2.43E-19
elemental mercury	7439-97-6									

CONCENTRATIONS OF COPCS IN BREAST MILK FOR INFANT EXPOSURE SCENARIOS

CARCINOGENIC EFFECTS: Infant Subsistence Farmer Exposure Scenario										
COPC	CAS Number	Fraction Stored in Maternal Fat (dimensionless) f_1	Biological Half-Life (days) h	Concentration in Milk Fat (mg/kg) $C_{milkfat}$	Fraction Stored in Whole Blood (dimensionless) f_{bl}	Red Blood Cells-Blood Plasma Partition Coefficient (dimensionless) Pc_{RBC}	Fraction Stored in Blood Plasma (dimensionless) f_{pl}	Blood Plasma-Breast Milk Partition Coefficient (dimensionless) Pc_{bm}	Concentration in Milk Aqueous Phase (mg/kg) $C_{aqueous}$	Concentration in Milk (mg/kg) C_{milk}
1,1-dichloroethene	75-35-4									
1,2-dichloroethane	107-06-2	0.5000	5.0000	9.48E-16	0.5000	1	0.325	1	4.02E-15	3.90E-15
1,4-dichlorobenzene	106-46-7	0.5000	5.0000	1.28E-14	0.5000	1	0.325	1	5.43E-14	5.27E-14
1,4-dithiane	505-29-3									
1,4-oxathiane	15980-15-1									
2,4-dinitrotoluene	121-14-2									
2-butanone	78-93-3									
acetylene	74-86-2									
benzene	71-43-2	0.5000	5.0000	8.62E-15	0.5000	1	0.325	1	3.66E-14	3.54E-14
chlorobenzene	108-90-7									
chloroform	67-66-3	0.5000	5.0000	1.13E-12	0.5000	1	0.325	1	4.77E-12	4.63E-12
ethane	74-84-0									
HD	505-60-2									
methane	74-82-8									
monoethanolamine	141-43-5									
nitrobenzene	98-95-3									
tetrachloroethene	127-18-4	0.5000	5.0000	3.10E-13	0.5000	1	0.325	1	1.31E-12	1.27E-12
trichloroethene	79-01-6	0.5000	5.0000	3.47E-12	0.5000	1	0.325	1	1.47E-11	1.43E-11
vinyl chloride	75-01-4									
ammonia	7664-41-7									
hydrogen cyanide	74-90-8									
total mercury	NA									
mercuric chloride	7487-94-7									
methyl mercury	22967-92-6									
elemental mercury	7439-97-6									

CONCENTRATIONS OF COPCS IN BREAST MILK FOR INFANT EXPOSURE SCENARIOS

NONCARCINOGENIC EFFECTS: Infant Subsistence Farmer Exposure Scenario										
COPC	CAS Number	Fraction Stored in Maternal Fat (dimensionless) f_1	Biological Half-Life (days) h	Concentration in Milk Fat (mg/kg) $C_{milkfat}$	Fraction Stored in Whole Blood (dimensionless) f_{bl}	Red Blood Cells-Blood Plasma Partition Coefficient (dimensionless) Pc_{RBC}	Fraction Stored in Blood Plasma (dimensionless) f_{pl}	Blood Plasma-Breast Milk Partition Coefficient (dimensionless) Pc_{bm}	Concentration in Milk Aqueous Phase (mg/kg) $C_{aqueous}$	Concentration in Milk (mg/kg) C_{milk}
1,1-dichloroethene	75-35-4									
1,2-dichloroethane	107-06-2	0.5000	5.0000	9.48E-16	0.5000	1	0.325	1	4.02E-15	3.90E-15
1,4-dichlorobenzene	106-46-7	0.5000	5.0000	1.28E-14	0.5000	1	0.325	1	5.43E-14	5.27E-14
1,4-dithiane	505-29-3									
1,4-oxathiane	15980-15-1									
2,4-dinitrotoluene	121-14-2									
2-butanone	78-93-3	0.5000	5.0000	7.48E-12	0.5000	1	0.325	1	3.17E-11	3.07E-11
acetylene	74-86-2									
benzene	71-43-2	0.5000	5.0000	8.62E-15	0.5000	1	0.325	1	3.66E-14	3.54E-14
chlorobenzene	108-90-7									
chloroform	67-66-3	0.5000	5.0000	1.13E-12	0.5000	1	0.325	1	4.77E-12	4.63E-12
ethane	74-84-0									
HD	505-60-2									
methane	74-82-8									
monoethanolamine	141-43-5									
nitrobenzene	98-95-3									
tetrachloroethene	127-18-4	0.5000	5.0000	3.10E-13	0.5000	1	0.325	1	1.31E-12	1.27E-12
trichloroethene	79-01-6	0.5000	5.0000	3.47E-12	0.5000	1	0.325	1	1.47E-11	1.43E-11
vinyl chloride	75-01-4									
ammonia	7664-41-7									
hydrogen cyanide	74-90-8									
total mercury	NA									
mercuric chloride	7487-94-7	0.5000	5.0000	1.29E-21	0.5000	1	0.325	1	5.46E-21	5.30E-21
methyl mercury	22967-92-6	0.5000	5.0000	5.93E-20	0.5000	1	0.325	1	2.51E-19	2.44E-19
elemental mercury	7439-97-6									

CONCENTRATIONS OF COPCS IN BREAST MILK FOR INFANT EXPOSURE SCENARIOS

CARCINOGENIC EFFECTS: Infant Subsistence Fisher Exposure Scenario										
COPC	CAS Number	Fraction Stored in Maternal Fat (dimensionless) f_1	Biological Half-Life (days) h	Concentration in Milk Fat (mg/kg) $C_{milkfat}$	Fraction Stored in Whole Blood (dimensionless) f_{bl}	Red Blood Cells-Blood Plasma Partition Coefficient (dimensionless) Pc_{RBC}	Fraction Stored in Blood Plasma (dimensionless) f_{pl}	Blood Plasma-Breast Milk Partition Coefficient (dimensionless) Pc_{bm}	Concentration in Milk Aqueous Phase (mg/kg) $C_{aqueous}$	Concentration in Milk (mg/kg) C_{milk}
1,1-dichloroethene	75-35-4									
1,2-dichloroethane	107-06-2	0.5000	5.0000	8.93E-16	0.5000	1	0.325	1	3.79E-15	3.67E-15
1,4-dichlorobenzene	106-46-7	0.5000	5.0000	1.03E-14	0.5000	1	0.325	1	4.38E-14	4.24E-14
1,4-dithiane	505-29-3									
1,4-oxathiane	15980-15-1									
2,4-dinitrotoluene	121-14-2									
2-butanone	78-93-3									
acetylene	74-86-2									
benzene	71-43-2	0.5000	5.0000	8.57E-15	0.5000	1	0.325	1	3.63E-14	3.52E-14
chlorobenzene	108-90-7									
chloroform	67-66-3	0.5000	5.0000	1.12E-12	0.5000	1	0.325	1	4.73E-12	4.59E-12
ethane	74-84-0									
HD	505-60-2									
methane	74-82-8									
monoethanolamine	141-43-5									
nitrobenzene	98-95-3									
tetrachloroethene	127-18-4	0.5000	5.0000	3.20E-13	0.5000	1	0.325	1	1.36E-12	1.31E-12
trichloroethene	79-01-6	0.5000	5.0000	3.47E-12	0.5000	1	0.325	1	1.47E-11	1.42E-11
vinyl chloride	75-01-4									
ammonia	7664-41-7									
hydrogen cyanide	74-90-8									
total mercury	NA									
mercuric chloride	7487-94-7									
methyl mercury	22967-92-6									
elemental mercury	7439-97-6									

CONCENTRATIONS OF COPCS IN BREAST MILK FOR INFANT EXPOSURE SCENARIOS

NONCARCINOGENIC EFFECTS: Infant Subsistence Fisher Exposure Scenario										
COPC	CAS Number	Fraction Stored in Maternal Fat (dimensionless) f_1	Biological Half-Life (days) h	Concentration in Milk Fat (mg/kg) $C_{milkfat}$	Fraction Stored in Whole Blood (dimensionless) f_{bl}	Red Blood Cells-Blood Plasma Partition Coefficient (dimensionless) Pc_{RBC}	Fraction Stored in Blood Plasma (dimensionless) f_{pl}	Blood Plasma-Breast Milk Partition Coefficient (dimensionless) Pc_{bm}	Concentration in Milk Aqueous Phase (mg/kg) $C_{aqueous}$	Concentration in Milk (mg/kg) C_{milk}
1,1-dichloroethene	75-35-4									
1,2-dichloroethane	107-06-2	0.5000	5.0000	8.93E-16	0.5000	1	0.325	1	3.79E-15	3.67E-15
1,4-dichlorobenzene	106-46-7	0.5000	5.0000	1.03E-14	0.5000	1	0.325	1	4.38E-14	4.24E-14
1,4-dithiane	505-29-3									
1,4-oxathiane	15980-15-1									
2,4-dinitrotoluene	121-14-2									
2-butanone	78-93-3	0.5000	5.0000	3.87E-12	0.5000	1	0.325	1	1.64E-11	1.59E-11
acetylene	74-86-2									
benzene	71-43-2	0.5000	5.0000	8.57E-15	0.5000	1	0.325	1	3.63E-14	3.52E-14
chlorobenzene	108-90-7									
chloroform	67-66-3	0.5000	5.0000	1.12E-12	0.5000	1	0.325	1	4.73E-12	4.59E-12
ethane	74-84-0									
HD	505-60-2									
methane	74-82-8									
monoethanolamine	141-43-5									
nitrobenzene	98-95-3									
tetrachloroethene	127-18-4	0.5000	5.0000	3.20E-13	0.5000	1	0.325	1	1.36E-12	1.31E-12
trichloroethene	79-01-6	0.5000	5.0000	3.47E-12	0.5000	1	0.325	1	1.47E-11	1.42E-11
vinyl chloride	75-01-4									
ammonia	7664-41-7									
hydrogen cyanide	74-90-8									
total mercury	NA									
mercuric chloride	7487-94-7	0.5000	5.0000	5.38E-22	0.5000	1	0.325	1	2.28E-21	2.21E-21
methyl mercury	22967-92-6	0.5000	5.0000	1.48E-19	0.5000	1	0.325	1	6.27E-19	6.08E-19
elemental mercury	7439-97-6									

APPENDIX G

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ACUTE HAZARD INDEX

ACUTE HAZARD INDEX

COPC	CAS No.	Acute Inhalation Exposure Criteria			SDC		TDC		Davinch		EDS	
					Acute Air Concentration	Acute Hazard Quotent	Acute Air Concentration	Acute Hazard Quotent	Acute Air Concentration	Acute Hazard Quotent	Acute Air Concentration	Acute Hazard Quotent
		(mg/m^3)	Basis	Ave. Time	(µg/m^3)	(dimensionless)	(µg/m^3)	(dimensionless)	(µg/m^3)	(dimensionless)	(µg/m^3)	(dimensionless)
		AIEC			$C_{(air)i,\ acute}$	HQ_{Ai}	$C_{(air)i,\ acute}$	HQ_{Ai}	$C_{(air)i,\ acute}$	HQ_{Ai}	$C_{(air)i,\ acute}$	HQ_{Ai}
1,1,1,2-tetrachloroethane	630-20-6	60	TEEL-1	15 minute								
1,1,1-trichloroethane	71-55-6	68	Cal/EPA Acute REL	1 hour	0.000362722	5.33415E-09						
1,1,2,2-tetrachloroethane	79-34-5	20	TEEL-1	15 minute								
1,1-dichloroethane	75-34-3	3000	TEEL-1	15 minute	0.000171984	5.73281E-11						
1,1-dichloroethene	75-35-4	250	TEEL-1	15 minute	0.000157805	6.31219E-10					0.000499073	1.99629E-09
1,2,3-trichlorobenzene	87-61-6	10	TEEL-1	15 minute								
1,2,4-trichlorobenzene	120-82-1	5	TEEL-1	15 minute								
1,2,4-trimethyl benzene	95-63-6	687.8512	AEGL-1	1 hour								
1,2-bis(ethylthio)-ethene	13105-10-7											
1,2-bis(vinylthio)-ethane	63938-34-1											
1,2-dichlorobutane	616-21-7											
1,2-dichloroethane	107-06-2	202.2507	AIHA ERPG-1	1-hour	0.000174271	8.6166E-10					1.48743E-06	7.35441E-12
1,2-dichloropropane	78-87-5	1000	TEEL-1	15 minute	0.000209949	2.09949E-10						
1,3-butadiene	106-99-0	1481.611	AEGL-1	1 hour	0.000150944	1.01878E-10						
1,4-dichlorobenzene	106-46-7	60	TEEL-1	15 minute							1.23545E-06	2.05909E-11
1,4-dioxane	123-91-1	3	Cal/EPA Acute REL	1 hour			0.258374335	0.000				
1,4-dithiane	505-29-3											
1,4-oxathiane	15980-15-1	50	TEEL-1	15 minute							0.000296019	5.92038E-09
1-chlorobutane	109-69-3	75	TEEL-1	15 minute								
1-hexene	592-41-6	250	TEEL-1	15 minute								
2,2-dimethyl-trans-thiirane	3772-13-2											
2,3-dimethyl-thiophene	632-16-6											
2,4,6-trinitrotoluene	118-96-7	1.25	TEEL-1	15 minute								
2,4-dinitrotoluene	121-14-2	7.5	TEEL-1	15 minute							1.81281E-08	2.41708E-12
2,6-dinitrotoluene	606-20-2	15	TEEL-1	15 minute								
2-butanone	78-93-3	13	Cal/EPA Acute REL	1 hour	0.001797601	1.38277E-07	0.495217476	0.000	0.000141253	1.08656E-08	0.000256876	1.97597E-08
2-chlorobutane	78-86-4	5	TEEL-1	15 minute								
2-chloroethoxyethane	112-26-5	3	TEEL-1	15 minute								
2-ethyl 1,3-butadiene	3404-63-5											
2-hexanone	591-78-6	40	TEEL-1	15 minute								
2-methyl-1,3-dithiacyclopentane	5616-51-3											
2-methyl-1,3-dithiane	6007-26-7											
2-methyl-1,3-oxathiolane	17642-74-9											
2-methyl phenol	95-48-7	20	TEEL-1	15 minute								
3-methyl phenol	108-39-4	20	TEEL-1	15 minute								
4-methyl phenol	106-44-5	20	TEEL-1	15 minute								
4-methyl-2-pentanone	108-10-1	300	TEEL-1	15 minute								
acetaldehyde	75-07-0	0.47	Cal/EPA Acute REL	1 hour								
acetone	67-64-1	474.807	AEGL-1	1 hour	0.002675819	5.63559E-09	7.105294216	0.000	0.000252513	5.31822E-10		
acetylene	74-86-2	350	TEEL-1	15 minute							24.12188236	6.89197E-05
acrolein	107-02-8	0.0025	Cal/EPA Acute REL	1 hour								
alpha-methylstyrene	98-83-9	500	TEEL-1	15 minute								
benzene	71-43-2	1.3	Cal/EPA Acute REL	1 hour	0.001020013	7.84625E-07	2.799055297	0.002	0.723110056	0.000556239	1.49233E-06	1.14794E-09
benzoic acid	65-85-0	12.5	TEEL-1	15 minute	0.008873655	7.09892E-07						

ACUTE HAZARD INDEX

COPC	CAS No.	Acute Inhalation Exposure Criteria			SDC		TDC		Davinch		EDS	
					Acute Air Concentration	Acute Hazard Quotent	Acute Air Concentration	Acute Hazard Quotent	Acute Air Concentration	Acute Hazard Quotent	Acute Air Concentration	Acute Hazard Quotent
		(mg/m^3)	Basis	Ave. Time	(µg/m^3)	(dimensionless)	(µg/m^3)	(dimensionless)	(µg/m^3)	(dimensionless)	(µg/m^3)	(dimensionless)
		AIEC			$C_{(air)i,\ acute}$	HQ_{Ai}	$C_{(air)i,\ acute}$	HQ_{Ai}	$C_{(air)i,\ acute}$	HQ_{Ai}	$C_{(air)i,\ acute}$	HQ_{Ai}
benzyl alcohol	100-51-6	600	TEEL-1	15 minute	0.001097772	1.82962E-09			0.000529284	8.8214E-10		
bis(2-ethylhexyl)-phthalate	117-81-7	10	TEEL-1	15 minute	0.00134477	1.34477E-07	0.094737256	0.000	0.004449908	4.44991E-07		
bromodichloromethane	75-27-4	4	TEEL-1	15 minute	0.000471127	1.17782E-07			4.92069E-05	1.23017E-08		
bromoform	75-25-2	250	TEEL-1	15 minute								
bromomethane	74-83-9	100	TEEL-1	15 minute	0.000878217	8.78217E-09						
carbon disulfide	75-15-0	6.2	Cal/EPA Acute REL	1 hour	0.00064151	1.03469E-07			0.0003093	4.98872E-08		
carbon tetrachloride	56-23-5	1.9	Cal/EPA Acute REL	1 hour	0.000942254	4.95923E-07			1.26367E-05	6.65087E-09		
chlorobenzene	108-90-7	46.0257	AEGL-1	1 hour	0.000174729	3.79633E-09			1.1115E-05	2.41495E-10	2.08192E-06	4.52338E-11
chloroethane	75-00-3	600	TEEL-1	15 minute								
chloroform	67-66-3	0.15	Cal/EPA Acute REL	1 hour	0.002744429	1.82962E-05			3.26833E-05	2.17889E-07	0.000190822	1.27215E-06
chloromethane	74-87-3	200	TEEL-1	15 minute	0.00093768	4.6884E-09	0.053827986	0.000	0.00029662	1.4831E-09		
chloromethoxyethane	3188-13-4											
cis-1,3-dichloropropene	10061-01-5	0.6	TEEL-1	15 minute	0.000210864	3.51439E-07						
dibromochloromethane	124-48-1	125	TEEL-1	15 minute	0.000344426	2.75541E-09			6.07023E-05	4.85618E-10		
dichlorodifluoromethane	75-71-8	15000	TEEL-1	15 minute	0.000446427	2.97618E-11	0.062440464	0.000				
diethyl ether	60-29-7	1500	TEEL-1	15 minute								
diethyl phthalate	84-66-2	15	TEEL-1	15 minute								
dimethyl phthalate	131-11-3	15	TEEL-1	15 minute	0.001088624	7.25749E-08			0.000524874	3.49916E-08		
di-n-butyl phthalate	84-74-2	10	TEEL-1	15 minute	0.001317326	1.31733E-07	0.006889982	0.000	0.001223725	1.22372E-07		
di-n-octyl phthalate	117-84-0	50	TEEL-1	15 minute			0.094737256	0.000				
ethane	74-84-0	3500	TEEL-1	15 minute			81.81853945	0.000	2.948064075	8.42304E-07	1.069093569	3.05455E-07
ethene	74-85-1	600	TEEL-1	15 minute								
ethylbenzene	100-41-4	143.2519	AEGL-1	1 hour	0.000222756	1.555E-09			9.79176E-06	6.83534E-11		
Freon 113	76-13-1	10000	TEEL-1	15 minute	0.000461979	4.61979E-11						
HD	505-60-2	0.065022	AEGL-1	1 hour	0.01420732	0.000218501	0.016921145	0.000	0.003715708	5.71456E-05	0.011476184	0.000176497
hexachlorobutadiene	87-68-3	10.65875	AIHA ERPG-1	1-hour								
hexachloroethane	67-72-1	300	TEEL-1	15 minute								
hexane	110-54-3	1500	TEEL-1	15 minute	0.000390166	2.60111E-10			2.75228E-05	1.83485E-11		
HMX (cyclotetramethylenetetranitramine)	2691-41-0	0.125	TEEL-1	15 minute								
methane	74-82-8	2000	TEEL-1	15 minute			258.3743351	0.000	66.74862057	3.33743E-05	11.76736857	5.88368E-06
methyl tert-butyl ether	1634-04-4	180.2605	AEGL-1	1 hour								
methylene chloride	75-09-2	14	Cal/EPA Acute REL	1 hour	0.00221384	1.58131E-07			4.26184E-05	3.04417E-09		
monoethanolamine	141-43-5	15	TEEL-1	15 minute							0.670324114	4.46883E-05
naphthalene	91-20-3	75	TEEL-1	15 minute			0.094737256	0.000				
nitrobenzene	98-95-3	15	TEEL-1	15 minute							3.54734E-08	2.36489E-12
nitroglycerin	55-63-0	0.1	TEEL-1	15 minute								
octane	111-65-9	1250	TEEL-1	15 minute								
pentane	109-66-0	350	TEEL-1	15 minute								
propene	115-07-1	2500	TEEL-1	15 minute			2.799055297	0.000	0.723110056	2.89244E-07		
RDX (cyclonite)	121-82-4	3	TEEL-1	15 minute								
styrene	100-42-5	21	Cal/EPA Acute REL	1 hour	0.000225043	1.07163E-08			0.000108503	5.16682E-09		
tert-butyl alcohol	75-65-0	400	TEEL-1	15 minute								
tetrachloroethene	127-18-4	20	Cal/EPA Acute REL	1 hour	0.000203088	1.01544E-08			1.15119E-05	5.75597E-10	4.84395E-05	2.42197E-09
thiirane	420-12-2											

ACUTE HAZARD INDEX

COPC	CAS No.	Acute Inhalation Exposure Criteria			SDC		TDC		Davinch		EDS	
					Acute Air Concentration	Acute Hazard Quotent	Acute Air Concentration	Acute Hazard Quotent	Acute Air Concentration	Acute Hazard Quotent	Acute Air Concentration	Acute Hazard Quotent
		(mg/m^3)	Basis	Ave. Time	(µg/m^3)	(dimensionless)	(µg/m^3)	(dimensionless)	(µg/m^3)	(dimensionless)	(µg/m^3)	(dimensionless)
		AIEC			$C_{(air)i,\ acute}$	HQ_{Ai}	$C_{(air)i,\ acute}$	HQ_{Ai}	$C_{(air)i,\ acute}$	HQ_{Ai}	$C_{(air)i,\ acute}$	HQ_{Ai}
thiodiglycol	111-48-8	75	TEEL-1	15 minute								
toluene	108-88-3	37	Cal/EPA Acute REL	1 hour	0.000132647	3.58507E-09	1.184215703	0.000	0.122372471	3.30736E-06		
trans-1,3-dichloropropene	10061-02-6	75	TEEL-1	15 minute	0.000223671	2.98228E-09						
trichloroethene	79-01-6	698.1746	AEGL-1	1 hour	0.000201716	2.88919E-10			1.46215E-05	2.09424E-11	0.000596931	8.54988E-10
trichlorofluoromethane	75-69-4	5000	TEEL-1	15 minute	0.000232819	4.65638E-11	0.027990553	0.000				
vinyl chloride	75-01-4	180	Cal/EPA Acute REL	1 hour	0.000260263	1.44591E-09			0.002646421	1.47023E-08	0.484394798	2.69108E-06
xylenes	1330-20-7	22	Cal/EPA Acute REL	1 hour	0.000535164	2.43256E-08	0.017224956	0.000	0.004449908	2.02269E-07		
2,3,7,8-TCDD	1746-01-6	0.0015	TEEL-1	15 minute								
1,2,3,7,8-PeCDD	40321-76-4	0.0015	TEEL-1	15 minute								
1,2,3,4,7,8-HxCDD	39227-28-6	0.00125	TEEL-1	15 minute								
1,2,3,6,7,8-HxCDD	57653-85-7	0.00015	TEEL-1	15 minute								
1,2,3,7,8,9-HxCDD	19408-74-3	0.015	TEEL-1	15 minute								
1,2,3,4,6,7,8-HpCDD	35822-46-9	0.5	TEEL-1	15 minute			3.16864E-08	0.000				
1,2,3,4,6,7,8,9-OCDD	3268-87-9	0.01	TEEL-1	15 minute			1.93691E-07	0.000				
2,3,7,8-TCDF	51207-31-9	0.0006	TEEL-1	15 minute	5.74148E-10	9.56914E-10						
1,2,3,7,8-PeCDF	57117-41-6	0.0025	TEEL-1	15 minute								
2,3,4,7,8-PeCDF	57117-31-4	0.0006	TEEL-1	15 minute								
1,2,3,4,7,8-HxCDF	70648-26-9	0.0006	TEEL-1	15 minute								
1,2,3,6,7,8-HxCDF	57117-44-9	0.0006	TEEL-1	15 minute								
1,2,3,7,8,9-HxCDF	72918-21-9	0.125	TEEL-1	15 minute								
2,3,4,6,7,8-HxCDF	60851-34-5	0.0015	TEEL-1	15 minute								
1,2,3,4,6,7,8-HpCDF	67562-39-4	0.15	TEEL-1	15 minute			1.84813E-08	0.000				
1,2,3,4,7,8,9-HpCDF	55673-89-7	0.25	TEEL-1	15 minute								
1,2,3,4,6,7,8,9-OCDF	39001-02-0	0.0075	TEEL-1	15 minute			6.2846E-08	0.000				
Total PCDDs and PCDFs	NA											
3,4,4',5-TCB (PCB 81)	70362-50-4	0.125	TEEL-1	15 minute								
3,3',4,4'-TCB (PCB 77)	32598-13-3	0.125	TEEL-1	15 minute					1.47023E-11	1.17619E-13		
3,3',4,4',5-PeCB (PCB 126)	57465-28-8	0.125	TEEL-1	15 minute								
3,3',4,4',5,5'-HxCB (PCB 169)	32774-16-6	0.125	TEEL-1	15 minute								
2',3,4,4',5-PeCB (PCB 123)	65510-44-3	0.125	TEEL-1	15 minute								
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	0.125	TEEL-1	15 minute					3.67558E-11	2.94047E-13		
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	0.125	TEEL-1	15 minute					1.47023E-11	1.17619E-13		
2,3,4,4',5-PeCB (PCB 114)	74472-37-0	0.125	TEEL-1	15 minute								
2,3',4,4',5,5'-HxCB (PCB 167)	52663-72-6	0.125	TEEL-1	15 minute								
2,3,3',4,4',5-HxCB (PCB 156)	38380-08-4	0.125	TEEL-1	15 minute								
2,3,3',4,4',5'-HxCB (PCB 157)	69782-90-7	0.125	TEEL-1	15 minute								
2,3,3',4,4',5,5'-HpCB (PCB 189)	39635-31-9	0.125	TEEL-1	15 minute								
total coplanar PCBs	NA											
ammonia	7664-41-7	3.2	Cal/EPA Acute REL	1 hour			0.021531195	0.000	0.005562385	1.73825E-06	16.02417134	0.005007554
aluminum	91728-14-2	3	TEEL-1	15 minute			0.081818539	0.000	0.021137063	7.04569E-06		
antimony	7440-36-0	1.5	TEEL-1	15 minute	2.96856E-06	1.97904E-09	0.007320606	0.000				
arsenic	7440-38-2	0.0002	Cal/EPA Acute REL	1 hour								
barium	7440-39-3	1.5	TEEL-1	15 minute			0.001464121	0.000				
beryllium	7440-41-7	0.0035	TEEL-1	15 minute			0.000688998	0.000				

ACUTE HAZARD INDEX

COPC	CAS No.	Acute Inhalation Exposure Criteria			SDC		TDC		Davinch		EDS	
					Acute Air Concentration	Acute Hazard Quotent	Acute Air Concentration	Acute Hazard Quotent	Acute Air Concentration	Acute Hazard Quotent	Acute Air Concentration	Acute Hazard Quotent
		(mg/m^3)	Basis	Ave. Time	(µg/m^3)	(dimensionless)	(µg/m^3)	(dimensionless)	(µg/m^3)	(dimensionless)	(µg/m^3)	(dimensionless)
		AIEC			$C_{(air)i,\ acute}$	HQ_{Ai}	$C_{(air)i,\ acute}$	HQ_{Ai}	$C_{(air)i,\ acute}$	HQ_{Ai}	$C_{(air)i,\ acute}$	HQ_{Ai}
boron	7440-42-8	4	TEEL-1	15 minute								
cadmium	7440-43-9	0.1	AEGL-1	1 hour	4.26301E-06	4.26301E-08	0.006244046	0.000	0.000161309	1.61309E-06		
chlorine	7782-50-5	0.21	Cal/EPA Acute REL	1 hour			0.258374335	0.001	0.066748621	0.000317851		
chromium (3+)	16065-83-1	1	TEEL-1	15 minute	4.27674E-05	4.27674E-08	0.008181854	0.000	0.000444991	4.44991E-07		
chromium (6+)	18540-29-9											
cobalt	7440-48-4	0.3	TEEL-1	15 minute			0.002583743	0.000				
copper	744-50-8	0.1	Cal/EPA Acute REL	1 hour	6.03774E-05	6.03774E-07	0.064593584	0.001	0.016687155	0.000166872		
hydrogen fluoride	7664-39-3	0.24	Cal/EPA Acute REL	1 hour								
hydrogen chloride	7647-01-0	2.1	Cal/EPA Acute REL	1 hour			0.861247784	0.000	0.244744942	0.000116545		
hydrogen cyanide	74-90-8	0.34	Cal/EPA Acute REL	1 hour							7.265921968	0.021370359
iron	7439-89-6	6	TEEL-1	15 minute			10.7655973	0.002	0.061186236	1.01977E-05		
lead	7439-92-1	0.15	TEEL-1	15 minute	2.49286E-05	1.6619E-07	0.002799055	0.000	0.000667486	4.44991E-06		
manganese	7439-96-5	3	TEEL-1	15 minute			0.301436724	0.000	0.077873391	2.59578E-05		
total mercury	NA											
mercuric chloride	7487-94-7	4	TEEL-1	15 minute								
methyl mercury	22967-92-6	0.0322	TEEL-1	15 minute								
elemental mercury	7439-97-6	0.0006	Cal/EPA Acute REL	1 hour								
nickel	7440-02-0	0.006	Cal/EPA Acute REL	1 hour	9.74272E-05	1.62379E-05	0.003229679	0.001	0.000261432	4.3572E-05		
phosphorus	7723-14-0	3.7	AEGL-1	1 hour								
selenium	7782-49-2	0.6	TEEL-1	15 minute			0.020239323	0.000				
silver	7440-22-4	0.3	TEEL-1	15 minute			0.001787089	0.000				
thallium	7440-28-0	0.06	TEEL-1	15 minute								
tin	7440-31-5	20	TEEL-1	15 minute								
vanadium	7440-62-2	1.5	TEEL-1	15 minute			0.013779965	0.000	0.000834358	5.56239E-07		
zinc	7440-66-6	3	TEEL-1	15 minute	0.001015439	3.3848E-07	0.12057469	0.000	0.027811925	9.27064E-06		
					Total HI_A	0.00026	**Total HI_A**	0.0079	**Total HI_A**	0.00136	**Total HI_A**	0.02668

SUMMARY OF ACUTE INHALATION EXPOSURE GUIDELINES FOR ALL ACUTE INHALATION HIERARCHICAL REFERENCE SOURCES

SUMMARY OF ACUTE INHALATION EXPOSURE GUIDELINES FOR ALL ACUTE INHALATION HIERARCHICAL REFERENCE SOURCES

		Molecular Weight	Cal/EPA Acute REL					AEGL-1						AIHA ERPG-1	TEEL-1		AEGL-2					
COPC	CAS Number	(g/mol)	(µg/m3)	Ave. Time	Species	Toxicity Endpoints	Severity	ppm (10 min. ave. time)	ppm (30 min. ave. time)	ppm (1 hour ave. time)	ppm (4 hour ave. time)	ppm (8 hour ave. time)	Proposed, Interim, or Final Value	ppm (1 hour ave. time)	mg/m3 (15 min. ave. time)		ppm (10 min. ave. time)	ppm (30 min. ave. time)	ppm (1 hour ave. time)	ppm (4 hour ave. time)	ppm (8 hour ave. time)	Proposed, Interim, or Final Value
1,1,1,2-tetrachloroethan	630-20-6	167.9													60							
1,1,1-trichloroethane	71-55-6	133.4	68000	1 hour	Human	Nervous system		230	230	230	230	230	Interim	350	1250	A	930	670	600	380	310	Interim
1,1,2,2-tetrachloroethan	79-34-5	167.8498													20							
1,1-dichloroethane	75-34-3	98.9596													3000							
1,1-dichloroethene	75-35-4	96.5													250							
1,2,3-trichlorobenzene	87-61-6	181.4487													10							
1,2,4-trichlorobenzene	120-82-1	181.449													5							
1,2,4-trimethyl benzene	95-63-6	120.2						180	180	140	90	45	Interim		688	A	460	460	360	230	150	Interim
1,2-bis(ethylthio)-ethene	13105-10-7	148.3																				
1,2-bis(vinylthio)-ethane	63938-34-1	146.3																				
1,2-dichlorobutane	616-21-7	127.01																				
1,2-dichloroethane	107-06-2	98.9596												50	202	E						
1,2-dichloropropane	78-87-5	113													1000							
1,3-butadiene	106-99-0	54.1						670	670	670	670	670	Interim	10	1480	A	6700	6700	5300	3400	2700	Interim
1,4-dichlorobenzene	106-46-7	147.0													60							
1,4-dioxane	123-91-1	88.106	3000	1 hour	Human	Eye and respiratory irritatio	Mild	17	17	17	17	17	Interim		61.2	A	580	400	320	200	100	Interim
1,4-dithiane	505-29-3	120.2272																				
1,4-oxathiane	15980-15-1	104.1666													50							
1-chlorobutane	109-69-3	92.5681													75							
1-hexene	592-41-6	84.1608												NA	250							
2,2-dimethyl-trans-thiiran	3772-13-2	88.2																				
2,3-dimethyl-thiophene	632-16-6	112.2																				
2,4,6-trinitrotoluene	118-96-7	227.13													1.25							
2,4-dinitrotoluene	121-14-2	182.1													7.5							
2,6-dinitrotoluene	606-20-2	182.2													15							
2-butanone	78-93-3	72.1066	13000	1 hour	Human	Eye and respiratory irritatio	Mild	200	200	200	200	200	Interim		590	A	4900	3400	2700	1700	1700	Interim
2-chlorobutane	78-86-4	92.5681													5							
2-chloroethoxyethan	112-26-5	187.0656													3							
2-ethyl 1,3-butadiene	3404-63-5	82.14																				
2-hexanone	591-78-6	100.1602													40							
2-methyl-1,3-dithiacyclopentan	5616-51-3	120.2																				
2-methyl-1,3-dithiane	6007-26-7	134.3																				
2-methyl-1,3-oxathiolan	17642-74-9	104.2																				
2-methyl pheno	95-48-7	108.1													20							
3-methyl pheno	108-39-4	108.1396													20							
4-methyl pheno	106-44-5	108.1396													20							
4-methyl-2-pentanone	108-10-1	100.1602													300							
acetaldehyde	75-07-0	44.1	470	1 hour	Human	Sensory irritation; bronchi, eyes, nose throat		45	45	45	45	45	Interim	10	81	A	340	340	270	170	110	Interim
acetone	67-64-1	58.0798						200	200	200	200	200	Interim		475	A	9300	4900	3200	1400	950	Interim
acetylene	74-86-2	26													350							
acrolein	107-02-8	56.1	2.5	1 hour	Human	Eye irritan	Mild	0.03	0.03	0.03	0.03	0.03	Final	0.05	0.0687	A	0.44	0.18	0.1	0.1	0.1	Interim
alpha-methylstyrene	98-83-9	118													500							
benzene	71-43-2	78.1134	1300	1 hour	Rat	Reproductive / developmenta	Severe	130	73	52	18	9	Interim	50	166	A	2000	1100	800	400	200	Interim
benzoic acid	65-85-0	122.13													12.5							
benzyl alcoho	100-51-6	108.138													600							
bis(2-ethylhexyl)-phthalat	117-81-7	390.56													10							
bromodichloromethan	75-27-4	163.83													4							
bromoform	75-25-2	252.73													250							
bromomethane	74-83-9	94.94											Interim		100		940	380	210	67	67	Interim
carbon disulfide	75-15-0	76.1	6200	1 hour	Rat	Reproductive / developmenta	Severe	17	17	13	8.4	6.7	Final	1	40.5		200	200	160	100	50	Final
carbon tetrachloride	56-23-5	154.8	1900	1 hour	Rat	Reproductive/ Developmental; nervous system		58	58	44	25	19	Interim	20	277	A	380	250	190	100	81	Interim
chlorobenzene	108-90-7	112.6						10	10	10	10	10	Interim		46	A	430	300	150	150	150	Interim
chloroethane	75-00-3	64.5													600							
chloroform	67-66-3	119.3779	150	1 hour	Rat	Reproductive / developmenta	Severe	NR	NR	NR	NR	NR	Interim	NA	10		120	80	64	40	29	Interim
chloromethane	74-87-3	50.4877						NR	NR	NR	NR	NR	Interim	NA	200		1100	1100	910	570	380	Interim
chloromethoxyethan	3188-13-4	94.5407																				
cis-1,3-dichloropropene	10061-01-5	110.97													0.6							
dibromochloromethan	124-48-1	208.28													125							
dichlorodifluoromethan	75-71-8	120.9													15000							
diethyl ethe	60-29-7	74.1224													1500							
diethyl phthalate	84-66-2	222.24													15							
dimethyl phthalate	131-11-3	194.18													15							
di-n-butyl phthalate	84-74-2	278.34													10							
di-n-octyl phthalate	117-84-0	390.62													50							
ethane	74-84-0	30.0694													3500							
ethene	74-85-1	28.1													600							
ethylbenzene	100-41-4	106.2						33	33	33	33	33	Interim		143	A	2900	1600	1100	660	580	Interim
Freon 113	76-13-1	187.4													10000							
HD	505-60-2	159.0732						0.06	0.02	0.01	0.003	0.001	Final		0.065	A	0.09	0.03	0.02	0.004	0.002	Final
hexachlorobutadiene	87-68-3	260.762												1	10.7	E						
hexachloroethan	67-72-1	236.74													300							
hexane	110-54-3	86.2						NR	NR	NR	NR	NR	Interim		1500		4800	3300	3300	3300	3300	Interim
HMX	2691-41-0	296.16													0.125							
methane	74-82-8	16.04													2000							
methyl tert-butyl ethe	1634-04-4	88.2						50	50	50	50	50	Interim	5	180	A	1400	800	570	400	400	Proposed
methylene chloride	75-09-2	84.9328	14000	1 hour	Human	CNS-mild	Mild	290	230	200	NR	NR	Interim	300	694	A	1700	1200	560	100	60	Interim
monoethanolamine	141-43-5	61.08													15							
naphthalene	91-20-3	128.1732													75							
nitrobenzene	98-95-3	123.06													15							
nitroglycerin	55-63-0	227.09													0.1							
octane	111-65-9	114.2													1250							
pentane	109-66-0	72.2													350							

SUMMARY OF ACUTE INHALATION EXPOSURE GUIDELINES FOR ALL ACUTE INHALATION HIERARCHICAL REFERENCE SOURCES

		Molecular Weight	Cal/EPA Acute REL					AEGL-1						AIHA ERPG-1	TEEL-1		AEGL-2					
COPC	CAS Number	(g/mol)	(µg/m3)	Ave. Time	Species	Toxicity Endpoints	Severity	ppm (10 min. ave. time)	ppm (30 min. ave. time)	ppm (1 hour ave. time)	ppm (4 hour ave. time)	ppm (8 hour ave. time)	Proposed, Interim, or Final Value	ppm (1 hour ave. time)	mg/m3 (15 min. ave. time)		ppm (10 min. ave. time)	ppm (30 min. ave. time)	ppm (1 hour ave. time)	ppm (4 hour ave. time)	ppm (8 hour ave. time)	Proposed, Interim, or Final Value
propene	115-07-1	42.1													2500							
RDX	121-82-4	222.12													3							
styrene	100-42-5	104.2	21000	1 hour	Human	Respiratory system; eyes; reproductive/development		20	20	20	20	20	Interim	50	85.1	A	230	160	130	130	130	Interim
tert-butyl alcoho	75-65-0	74.1													400							
tetrachloroethene	127-18-4	165.834	20000	1 hour	Human	CNS-mild; eye and respiratory irritatior	Mild	35	35	35	35	35	Interim	100	237	A	230	230	230	120	81	Interim
thiirane	420-12-2	60.1136																				
thiodiglyco	111-48-8	122.1818													75							
toluene	108-88-3	92.1402	37000	1 hour	Human	CNS-mild; eye and respiratory irritatior	Mild	200	200	200	200	200	Interim	50	753	A	3100	1600	1200	790	650	Interim
trans-1,3-dichloropropene	10061-02-6	110.97													75							
trichloroethene	79-01-6	131.3889						260	180	130	84	77	Interim	100	698	A	960	620	450	270	240	Interim
trichlorofluoromethane	75-69-4	137.4													5000							
vinyl chloride	75-01-4	62.4987	180000	1 hour	Human	CNS-mild; eye and respiratory irritatior	Mild	450	310	250	140	70	Interim	500	639	A	2800	1600	1200	820	820	Interim
xylenes	1330-20-7	106.16	22000	1 hour	Human	Eye and respiratory irritatio	Mild	130	130	130	130	130	Final		564	A	2500	1300	920	500	400	Final
2,3,7,8-TCDD	1746-01-6	321.97													0.0015							
1,2,3,7,8-PeCDD	40321-76-4	356.4													0.0015							
1,2,3,4,7,8-HxCDD	39227-28-6	390.84													0.00125							
1,2,3,6,7,8-HxCDD	57653-85-7	390.84													0.00015							
1,2,3,7,8,9-HxCDD	19408-74-3	390.84													0.015							
1,2,3,4,6,7,8-HpCDD	35822-46-9	425.28													0.5							
1,2,3,4,6,7,8,9-OCDD	3268-87-9	459.72													0.01							
2,3,7,8-TCDF	51207-31-9	305.97													0.0006							
1,2,3,7,8-PeCDF	57117-41-6	340.4													0.0025							
2,3,4,7,8-PeCDF	57117-31-4	340.4													0.0006							
1,2,3,4,7,8-HxCDF	70648-26-9	374.84													0.0006							
1,2,3,6,7,8-HxCDF	57117-44-9	374.84													0.0006							
1,2,3,7,8,9-HxCDF	72918-21-9	374.84													0.125							
2,3,4,6,7,8-HxCDF	60851-34-5	374.84													0.0015							
1,2,3,4,6,7,8-HpCDF	67562-39-4	409.28													0.15							
1,2,3,4,7,8,9-HpCDF	55673-89-7	409.28													0.25							
1,2,3,4,6,7,8,9-OCDF	39001-02-0	443.72													0.0075							
Total PCDDs and PCDFs	NA																					
3,4,4',5-TCB (PCB 81)	70362-50-4	291.99													0.125							
3,3',4,4'-TCB (PCB 77)	32598-13-3	291.99													0.125							
3,3',4,4',5-PeCB (PCB 126)	57465-28-8	326.44													0.125							
3,3',4,4',5,5'-HxCB (PCB 169)	32774-16-6	360.88													0.125							
2',3,4,4',5-PeCB (PCB 123)	65510-44-3	326.44													0.125							
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	326.44													0.125							
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	326.44													0.125							
2,3,4,4',5-PeCB (PCB 114)	74472-37-0	326.44													0.125							
2,3',4,4',5,5'-HxCB (PCB 167)	52663-72-6	360.88													0.125							
2,3,3',4,4',5-HxCB (PCB 156)	38380-08-4	360.88													0.125							
2,3,3',4,4',5'-HxCB (PCB 157)	69782-90-7	360.88													0.125							
2,3,3',4,4',5,5'-HpCB (PCB 189)	39635-31-9	395.33													0.125							
total coplanar PCBs	NA																					
ammonia	7664-41-7	17	3200	1 hour	Human	Eye and respiratory irritatio	Mild	30	30	30	30	30	Final	25	20.9	A	220	220	160	110	110	Final
aluminum	7429-90-5	27													3							
antimony	7440-36-0	121.8													1.5							
arsenic	7440-38-2	74.9	0.2	1 hour	Mouse	Development (teratogenicity); cardiovascular system; nervous system									0.35							
barium	7440-39-3	137.3													1.5							
beryllium	7440-41-7	9.01													0.0035							
boron	7440-42-8	10.81													4							
cadmium	7440-43-9	112.4						0.13 Values in mg/m3	0.13	0.02176565	0.063	0.041	Interim		0.1	A	1.4	0.96	0.16541896	0.4	0.2	Interim
chlorine	7782-50-5	70.91	210	1 hour	Human	Respiratory system; eye		5	0.5	0.5	0.5	0.5	Final	1	1.45	A	2.8	2.8	2	1	0.71	Final
chromium (3+)	7440-47-3	52													1							
chromium (6+)	18540-29-9	52																				
cobalt	7440-48-4	58.93													0.3							
copper	7440-50-8	63.5	100	1 hour	Human	Respiratory system									3							
hydrogen fluoride	7664-39-3	20.01	240	1 hour	Human	Respiratory system; eye		1	1	1	1	1	Final	2	0.818	A	95	34	24	12	12	Final
hydrogen chloride	7647-01-0	36.5	2100	1 hour	Human	Respiratory system; eye		1.8	1.8	1.8	1.8	1.8	Final	3	2.68	A	100	43	22	11	11	Final
hydrogen cyanide	74-90-8	27.03	340	1 hour	Human	Nervous system; endocrine system; cardiovascular system		2.5	2.5	2	1.3	1	Final	NA	2.21	A	17	10	7.1	3.5	2.5	Final
iron	7439-89-6	55.8													6							
lead	7439-92-1	207.2													0.15							
manganese	7439-96-5	54.94													3							
total mercury	NA																					
mercuric chloride	7487-94-7	0													4							
methyl mercury	22967-92-6	215.63													0.0322							
elemental mercury	7439-97-6	200.6	0.6	1 hour	Rat	Nervous system		NR	NR	NR	NR	NR	Interim	NA	0.25		3.1 mg/m3	2.1	0.20732706	0.67	0.33	Interim
nickel	7440-02-0	58.7	6	1 hour	Human	Respiratory, immune systems									4.5							
phosphorus	7723-14-0	30.97						6.7 mg/m3	4.7	2.92279611	0.93	0.47	Proposed		0.4		20	14	8.68939385	2.8	1.4	Proposed
selenium	7782-49-2	79													0.6							
silver	7440-22-4	107.9													0.3							
thallium	7440-28-0	204.38													0.06							
tin	7440-31-5	118.7													20							
vanadium	7440-62-2	50.94													1.5							
zinc	7440-66-6	65.4													3							

SELECTION OF AIEC BASED ON ACUTE INHALATION HIERARCHICAL APPROACH

SELECTION OF AIEC BASED ON ACUTE INHALATION HIERARCHAL APPROACH

COPC	CAS No.	Molecular Weight (g/mol)	Cal/EPA Acute REL (mg/m^3)	AEGL-1 (mg/m^3)	AIHA ERPG-1 (mg/m^3)	TEEL-1 (mg/m^3)	AEGL-2 (mg/m^3)	SCAPA (Tier 5) Method Developed Factor (mg/m^3)	Selected AIEC (mg/m^3)	Basis	Ave. Time	Notes
1,1,1,2-tetrachloroethane	630-20-6	167.9				6.0E+01			**6.0E+01**	**TEEL-1**	**15 minute**	
1,1,1-trichloroethane	71-55-6	133.4	6.8E+01	1.3E+03	1.9E+03	1.3E+03	3.3E+03		**6.8E+01**	**Cal/EPA Acute REL**	**1 hour**	
1,1,2,2-tetrachloroethane	79-34-5	167.8				2.0E+01			**2.0E+01**	**TEEL-1**	**15 minute**	
1,1-dichloroethane	75-34-3	99.0				3.0E+03			**3.0E+03**	**TEEL-1**	**15 minute**	
1,1-dichloroethene	75-35-4	96.5				2.5E+02			**2.5E+02**	**TEEL-1**	**15 minute**	
1,2,3-trichlorobenzene	87-61-6	181.4				1.0E+01			**1.0E+01**	**TEEL-1**	**15 minute**	
1,2,4-trichlorobenzene	120-82-1	181.4				5.0E+00			**5.0E+00**	**TEEL-1**	**15 minute**	
1,2,4-trimethyl benzene	95-63-6	120.2		6.9E+02		6.9E+02	1.8E+03		**6.9E+02**	**AEGL-1**	**1 hour**	
1,2-bis(ethylthio)-ethene	13105-10-7	148.3										
1,2-bis(vinylthio)-ethane	63938-34-7	146.3										
1,2-dichlorobutane	616-21-7	127.0										
1,2-dichloroethane	107-06-2	99.0			2.0E+02	2.0E+02			**2.0E+02**	**AIHA ERPG-1**	**1-hour**	
1,2-dichloropropane	78-87-5	113.0				1.0E+03			**1.0E+03**	**TEEL-1**	**15 minute**	
1,3-butadiene	106-99-0	54.1		1.5E+03	2.2E+01	1.5E+03	1.2E+04		**1.5E+03**	**AEGL-1**	**1 hour**	
1,4-dichlorobenzene	106-46-7	147.0				6.0E+01			**6.0E+01**	**TEEL-1**	**15 minute**	
1,4-dioxane	123-91-1	88.1	3.0E+00	6.1E+01		6.1E+01	1.2E+03		**3.0E+00**	**Cal/EPA Acute REL**	**1 hour**	
1,4-dithiane	505-29-3	120.2										
1,4-oxathiane	15980-15-1	104.2				5.0E+01			**5.0E+01**	**TEEL-1**	**15 minute**	
1-chlorobutane	109-69-3	92.6				7.5E+01			**7.5E+01**	**TEEL-1**	**15 minute**	
1-hexene	592-41-6	84.2				2.5E+02			**2.5E+02**	**TEEL-1**	**15 minute**	
2,2-dimethyl-trans-thiirane	3772-13-2	88.2										
2,3-dimethyl-thiophene	632-16-6	112.2										
2,4,6-trinitrotoluene	118-96-7	227.1				1.3E+00			**1.3E+00**	**TEEL-1**	**15 minute**	
2,4-dinitrotoluene	121-14-2	182.1				7.5E+00			**7.5E+00**	**TEEL-1**	**15 minute**	
2,6-dinitrotoluene	606-20-2	182.2				1.5E+01			**1.5E+01**	**TEEL-1**	**15 minute**	
2-butanone	78-93-3	72.1	1.3E+01	5.9E+02		5.9E+02	8.0E+03		**1.3E+01**	**Cal/EPA Acute REL**	**1 hour**	
2-chlorobutane	78-86-4	92.6				5.0E+00			**5.0E+00**	**TEEL-1**	**15 minute**	
2-chloroethoxyethane	112-26-5	187.1				3.0E+00			**3.0E+00**	**TEEL-1**	**15 minute**	
2-ethyl 1,3-butadiene	3404-63-5	82.1										
2-hexanone	591-78-6	100.2				4.0E+01			**4.0E+01**	**TEEL-1**	**15 minute**	
2-methyl-1,3-dithiacyclopentane	5616-51-3	120.2										
2-methyl-1,3-dithiane	6007-26-7	134.3										
2-methyl-1,3-oxathiolane	17642-74-9	104.2										
2-methyl phenol	95-48-7	108.1				2.0E+01			**2.0E+01**	**TEEL-1**	**15 minute**	
3-methyl phenol	108-39-4	108.1				2.0E+01			**2.0E+01**	**TEEL-1**	**15 minute**	
4-methyl phenol	106-44-5	108.1				2.0E+01			**2.0E+01**	**TEEL-1**	**15 minute**	
4-methyl-2-pentanone	108-10-1	100.2				3.0E+02			**3.0E+02**	**TEEL-1**	**15 minute**	
acetaldehyde	75-07-0	44.1	4.7E-01	8.1E+01	1.8E+01	8.1E+01	4.9E+02		**4.7E-01**	**Cal/EPA Acute REL**	**1 hour**	
acetone	67-64-1	58.1		4.7E+02		4.8E+02	7.6E+03		**4.7E+02**	**AEGL-1**	**1 hour**	
acetylene	74-86-2	26				3.5E+02			**3.5E+02**	**TEEL-1**	**15 minute**	
acrolein	107-02-8	56.1	2.5E-03	6.9E-02	1.1E-01	6.9E-02	2.3E-01		**2.5E-03**	**Cal/EPA Acute REL**	**1 hour**	
alpha-methylstyrene	98-83-9	118.0				5.0E+02			**5.0E+02**	**TEEL-1**	**15 minute**	
benzene	71-43-2	78.1	1.3E+00	1.7E+02	1.6E+02	1.7E+02	2.6E+03		**1.3E+00**	**Cal/EPA Acute REL**	**1 hour**	
benzoic acid	65-85-0	122.1				1.3E+01			**1.3E+01**	**TEEL-1**	**15 minute**	
benzyl alcohol	100-51-6	108.1				6.0E+02			**6.0E+02**	**TEEL-1**	**15 minute**	
bis(2-ethylhexyl)-phthalate	117-81-7	390.6				1.0E+01			**1.0E+01**	**TEEL-1**	**15 minute**	
bromodichloromethane	75-27-4	163.8				4.0E+00			**4.0E+00**	**TEEL-1**	**15 minute**	
bromoform	75-25-2	252.7				2.5E+02			**2.5E+02**	**TEEL-1**	**15 minute**	
bromomethane	74-83-9	94.94				1.0E+02	8.1E+02		**1.0E+02**	**TEEL-1**	**15 minute**	
carbon disulfide	75-15-0	76.1	6.2E+00	4.0E+01	3.1E+00	4.1E+01	5.0E+02		**6.2E+00**	**Cal/EPA Acute REL**	**1 hour**	
carbon tetrachloride	56-23-5	154.8	1.9E+00	2.8E+02	1.3E+02	2.8E+02	1.2E+03		**1.9E+00**	**Cal/EPA Acute REL**	**1 hour**	
chlorobenzene	108-90-7	112.6		4.6E+01		4.6E+01	6.9E+02		**4.6E+01**	**AEGL-1**	**1 hour**	
chloroethane	75-00-3	64.5				6.0E+02			**6.0E+02**	**TEEL-1**	**15 minute**	
chloroform	67-66-3	119.4	1.5E-01			1.0E+01	3.1E+02		**1.5E-01**	**Cal/EPA Acute REL**	**1 hour**	
chloromethane	74-87-3	50.5				2.0E+02	1.9E+03		**2.0E+02**	**TEEL-1**	**15 minute**	
chloromethoxyethane	3188-13-4	94.5										
cis-1,3-dichloropropene	10061-01-5	111.0				6.0E-01			**6.0E-01**	**TEEL-1**	**15 minute**	
dibromochloromethane	124-48-1	208.3				1.3E+02			**1.3E+02**	**TEEL-1**	**15 minute**	
dichlorodifluoromethane	75-71-8	120.9				1.5E+04			**1.5E+04**	**TEEL-1**	**15 minute**	
diethyl ether	60-29-7	74.1				1.5E+03			**1.5E+03**	**TEEL-1**	**15 minute**	
diethyl phthalate	84-66-2	222.2				1.5E+01			**1.5E+01**	**TEEL-1**	**15 minute**	

SELECTION OF AIEC BASED ON ACUTE INHALATION HIERARCHAL APPROACH

COPC	CAS No.	Molecular Weight (g/mol)	Cal/EPA Acute REL (mg/m^3)	AEGL-1 (mg/m^3)	AIHA ERPG-1 (mg/m^3)	TEEL-1 (mg/m^3)	AEGL-2 (mg/m^3)	SCAPA (Tier 5) Method Developed Factor (mg/m^3)	Selected AIEC (mg/m^3)	Basis	Ave. Time	Notes
dimethyl phthalate	131-11-3	194.2				1.5E+01			**1.5E+01**	**TEEL-1**	**15 minute**	
di-n-butyl phthalate	84-74-2	278.3				1.0E+01			**1.0E+01**	**TEEL-1**	**15 minute**	
di-n-octyl phthalate	117-84-0	390.6				5.0E+01			**5.0E+01**	**TEEL-1**	**15 minute**	
ethane	74-84-0	30.1				3.5E+03			**3.5E+03**	**TEEL-1**	**15 minute**	
ethene	74-85-1	28.1				6.0E+02			**6.0E+02**	**TEEL-1**	**15 minute**	
ethylbenzene	100-41-4	106.2		1.4E+02		1.4E+02	4.8E+03		**1.4E+02**	**AEGL-1**	**1 hour**	
Freon 113	76-13-1	187.4				1.0E+04			**1.0E+04**	**TEEL-1**	**15 minute**	
HD	505-60-2	159.1		6.5E-02		6.5E-02	1.3E-01		**6.5E-02**	**AEGL-1**	**1 hour**	
hexachlorobutadiene	87-68-3	260.8			1.1E+01	1.1E+01			**1.1E+01**	**AIHA ERPG-1**	**1-hour**	
hexachloroethane	67-72-1	236.7				3.0E+02			**3.0E+02**	**TEEL-1**	**15 minute**	
hexane	110-54-3	86.2				1.5E+03	1.2E+04		**1.5E+03**	**TEEL-1**	**15 minute**	
HMX	2691-41-0	296.2				1.3E-01			**1.3E-01**	**TEEL-1**	**15 minute**	
methane	74-82-8	16.0				2.0E+03			**2.0E+03**	**TEEL-1**	**15 minute**	
methyl tert-butyl ether	1634-04-4	88.2		1.8E+02	1.8E+01	1.8E+02	2.1E+03		**1.8E+02**	**AEGL-1**	**1 hour**	
methylene chloride	75-09-2	84.9	1.4E+01	6.9E+02	1.0E+03	6.9E+02	1.9E+03		**1.4E+01**	**Cal/EPA Acute REL**	**1 hour**	
monoethanolamine	141-43-5					1.5E+01			**1.5E+01**	**TEEL-1**	**15 minute**	
naphthalene	91-20-3	128.2				7.5E+01			**7.5E+01**	**TEEL-1**	**15 minute**	
nitrobenzene	98-95-3					1.5E+01			**1.5E+01**	**TEEL-1**	**15 minute**	
nitroglycerin	55-63-0	227.1				1.0E-01			**1.0E-01**	**TEEL-1**	**15 minute**	
octane	111-65-9	114.2				1.3E+03			**1.3E+03**	**TEEL-1**	**15 minute**	
pentane	109-66-0	72.2				3.5E+02			**3.5E+02**	**TEEL-1**	**15 minute**	
propene	115-07-1	42.1				2.5E+03			**2.5E+03**	**TEEL-1**	**15 minute**	
RDX	121-82-4	222.1				3.0E+00			**3.0E+00**	**TEEL-1**	**15 minute**	
styrene	100-42-5	104.2	2.1E+01	8.5E+01	2.1E+02	8.5E+01	5.5E+02		**2.1E+01**	**Cal/EPA Acute REL**	**1 hour**	
tert-butyl alcohol	75-65-0	74.1				4.0E+02			**4.0E+02**	**TEEL-1**	**15 minute**	
tetrachloroethene	127-18-4	165.8	2.0E+01	2.4E+02	6.8E+02	2.4E+02	1.6E+03		**2.0E+01**	**Cal/EPA Acute REL**	**1 hour**	
thiirane	420-12-2	60.1										
thiodiglycol	111-48-8	122.2				7.5E+01			**7.5E+01**	**TEEL-1**	**15 minute**	
toluene	108-88-3	92.1	3.7E+01	7.5E+02	1.9E+02	7.5E+02	4.5E+03		**3.7E+01**	**Cal/EPA Acute REL**	**1 hour**	
trans-1,3-dichloropropene	10061-02-6	111.0				7.5E+01			**7.5E+01**	**TEEL-1**	**15 minute**	
trichloroethene	79-01-6	131.4		7.0E+02	5.4E+02	7.0E+02	2.4E+03		**7.0E+02**	**AEGL-1**	**1 hour**	
trichlorofluoromethane	75-69-4	137.4				5.0E+03			**5.0E+03**	**TEEL-1**	**15 minute**	
vinyl chloride	75-01-4	62.5	1.8E+02	6.4E+02	1.3E+03	6.4E+02	3.1E+03		**1.8E+02**	**Cal/EPA Acute REL**	**1 hour**	
xylenes	1330-20-7	106.2	2.2E+01	5.6E+02		5.6E+02	4.0E+03		**2.2E+01**	**Cal/EPA Acute REL**	**1 hour**	
2,3,7,8-TCDD	1746-01-6	322.0				1.5E-03			**1.5E-03**	**TEEL-1**	**15 minute**	
1,2,3,7,8-PeCDD	40321-76-4	356.4				1.5E-03			**1.5E-03**	**TEEL-1**	**15 minute**	
1,2,3,4,7,8-HxCDD	39227-28-6	390.8				1.3E-03			**1.3E-03**	**TEEL-1**	**15 minute**	
1,2,3,6,7,8-HxCDD	57653-85-7	390.8				1.5E-04			**1.5E-04**	**TEEL-1**	**15 minute**	
1,2,3,7,8,9-HxCDD	19408-74-3	390.8				1.5E-02			**1.5E-02**	**TEEL-1**	**15 minute**	
1,2,3,4,6,7,8-HpCDD	35822-46-9	425.3				5.0E-01			**5.0E-01**	**TEEL-1**	**15 minute**	
1,2,3,4,6,7,8,9-OCDD	3268-87-9	459.7				1.0E-02			**1.0E-02**	**TEEL-1**	**15 minute**	
2,3,7,8-TCDF	51207-31-9	306.0				6.0E-04			**6.0E-04**	**TEEL-1**	**15 minute**	
1,2,3,7,8-PeCDF	57117-41-6	340.4				2.5E-03			**2.5E-03**	**TEEL-1**	**15 minute**	
2,3,4,7,8-PeCDF	57117-31-4	340.4				6.0E-04			**6.0E-04**	**TEEL-1**	**15 minute**	
1,2,3,4,7,8-HxCDF	70648-26-9	374.8				6.0E-04			**6.0E-04**	**TEEL-1**	**15 minute**	
1,2,3,6,7,8-HxCDF	57117-44-9	374.8				6.0E-04			**6.0E-04**	**TEEL-1**	**15 minute**	
1,2,3,7,8,9-HxCDF	72918-21-9	374.8				1.3E-01			**1.3E-01**	**TEEL-1**	**15 minute**	
2,3,4,6,7,8-HxCDF	60851-34-5	374.8				1.5E-03			**1.5E-03**	**TEEL-1**	**15 minute**	
1,2,3,4,6,7,8-HpCDF	67562-39-4	409.3				1.5E-01			**1.5E-01**	**TEEL-1**	**15 minute**	
1,2,3,4,7,8,9-HpCDF	55673-89-7	409.3				2.5E-01			**2.5E-01**	**TEEL-1**	**15 minute**	
1,2,3,4,6,7,8,9-OCDF	39001-02-0	443.7				7.5E-03			**7.5E-03**	**TEEL-1**	**15 minute**	
Total PCDDs and PCDFs	NA											
3,4,4',5-TCB (PCB 81)	70362-50-4	292.0				1.3E-01			**1.3E-01**	**TEEL-1**	**15 minute**	
3,3',4,4'-TCB (PCB 77)	32598-13-3	292.0				1.3E-01			**1.3E-01**	**TEEL-1**	**15 minute**	
3,3',4,4',5-PeCB (PCB 126)	57465-28-8	326.4				1.3E-01			**1.3E-01**	**TEEL-1**	**15 minute**	
3,3',4,4',5,5'-HxCB (PCB 169)	32774-16-6	360.9				1.3E-01			**1.3E-01**	**TEEL-1**	**15 minute**	
2',3,4,4',5-PeCB (PCB 123)	65510-44-3	326.4				1.3E-01			**1.3E-01**	**TEEL-1**	**15 minute**	
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	326.4				1.3E-01			**1.3E-01**	**TEEL-1**	**15 minute**	
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	326.4				1.3E-01			**1.3E-01**	**TEEL-1**	**15 minute**	
2,3,4,4',5-PeCB (PCB 114)	74472-37-0	326.4				1.3E-01			**1.3E-01**	**TEEL-1**	**15 minute**	
2,3',4,4',5,5'-HxCB (PCB 167)	52663-72-6	360.9				1.3E-01			**1.3E-01**	**TEEL-1**	**15 minute**	

SELECTION OF AIEC BASED ON ACUTE INHALATION HIERARCHAL APPROACH

COPC	CAS No.	Molecular Weight (g/mol)	Cal/EPA Acute REL (mg/m^3)	AEGL-1 (mg/m^3)	AIHA ERPG-1 (mg/m^3)	TEEL-1 (mg/m^3)	AEGL-2 (mg/m^3)	SCAPA (Tier 5) Method Developed Factor (mg/m^3)	Selected AIEC (mg/m^3)	Basis	Ave. Time	Notes
2,3,3',4,4',5-HxCB (PCB 156)	38380-08-4	360.9				1.3E-01			**1.3E-01**	**TEEL-1**	**15 minute**	
2,3,3',4,4',5'-HxCB (PCB 157)	69782-90-7	360.9				1.3E-01			**1.3E-01**	**TEEL-1**	**15 minute**	
2,3,3',4,4',5,5'-HpCB (PCB 189)	39635-31-9	395.3				1.3E-01			**1.3E-01**	**TEEL-1**	**15 minute**	
total coplanar PCBs	NA											
ammonia	7664-41-7	17.0	3.2E+00	2.1E+01	1.7E+01	2.1E+01	1.1E+02		**3.2E+00**	**Cal/EPA Acute REL**	**1 hour**	
aluminum	7429-90-5	27.0				3.0E+00			**3.0E+00**	**TEEL-1**	**15 minute**	
antimony	7440-36-0	121.8				1.5E+00			**1.5E+00**	**TEEL-1**	**15 minute**	
arsenic	7440-38-2	74.9	2.0E-04			3.5E-01			**2.0E-04**	**Cal/EPA Acute REL**	**1 hour**	
barium	7440-39-3	137.3				1.5E+00			**1.5E+00**	**TEEL-1**	**15 minute**	
beryllium	7440-41-7	9.0				3.5E-03			**3.5E-03**	**TEEL-1**	**15 minute**	
boron	7440-42-8	10.8				4.0E+00			**4.0E+00**	**TEEL-1**	**15 minute**	
cadmium	7440-43-9	112.4		1.0E-01		1.0E-01	7.6E-01		**1.0E-01**	**AEGL-1**	**1 hour**	
chlorine	7782-50-5	70.9	2.1E-01	1.4E+00	2.9E+00	1.5E+00	5.8E+00		**2.1E-01**	**Cal/EPA Acute REL**	**1 hour**	
chromium (3+)	7440-47-3	52.0				1.0E+00			**1.0E+00**	**TEEL-1**	**15 minute**	
chromium (6+)	18540-29-9	52.0										
cobalt	7440-48-4	58.9				3.0E-01			**3.0E-01**	**TEEL-1**	**15 minute**	
copper	7440-50-8	63.5	1.0E-01			3.0E+00			**1.0E-01**	**Cal/EPA Acute REL**	**1 hour**	
hydrogen fluoride	7664-39-3	20.0	2.4E-01	8.2E-01	1.6E+00	8.2E-01	2.0E+01		**2.4E-01**	**Cal/EPA Acute REL**	**1 hour**	
hydrogen chloride	7647-01-0	36.5	2.1E+00	2.7E+00	4.5E+00	2.7E+00	3.3E+01		**2.1E+00**	**Cal/EPA Acute REL**	**1 hour**	
hydrogen cyanide	74-90-8	27.0	3.4E-01	2.2E+00		2.2E+00	7.8E+00		**3.4E-01**	**Cal/EPA Acute REL**	**1 hour**	
iron	7439-89-6	55.8				6.0E+00			**6.0E+00**	**TEEL-1**	**15 minute**	
lead	7439-92-1	207.2				1.5E-01			**1.5E-01**	**TEEL-1**	**15 minute**	
manganese	7439-96-5	54.9				3.0E+00			**3.0E+00**	**TEEL-1**	**15 minute**	
total mercury	NA											
mercuric chloride	7487-94-7	0.0				4.0E+00			**4.0E+00**	**TEEL-1**	**15 minute**	
methyl mercury	22967-92-6	215.6				3.2E-02			**3.2E-02**	**TEEL-1**	**15 minute**	
elemental mercury	7439-97-6	200.6	6.0E-04			2.5E-01	1.7E+00		**6.0E-04**	**Cal/EPA Acute REL**	**1 hour**	
nickel	7440-02-0	58.7	6.0E-03			4.5E+00			**6.0E-03**	**Cal/EPA Acute REL**	**1 hour**	
phosphorus	7723-14-0	31.0		3.7E+00		4.0E-01	1.1E+01		**3.7E+00**	**AEGL-1**	**1 hour**	
selenium	7782-49-2	79.0				6.0E-01			**6.0E-01**	**TEEL-1**	**15 minute**	
silver	7440-22-4	107.9				3.0E-01			**3.0E-01**	**TEEL-1**	**15 minute**	
thallium	7440-28-0	204.4				6.0E-02			**6.0E-02**	**TEEL-1**	**15 minute**	
tin	7440-31-5	118.7				2.0E+01			**2.0E+01**	**TEEL-1**	**15 minute**	
vanadium	7440-62-2	50.9				1.5E+00			**1.5E+00**	**TEEL-1**	**15 minute**	
zinc	7440-66-6	65.4				3.0E+00			**3.0E+00**	**TEEL-1**	**15 minute**	

AERMOD MODELING RESULTS

AERMOD MODELING RESULTS

	SDC	TDC	Davinch	EDS
Max Unit Response Concentrations	457.40488	3414.63879	220.53509	1939.90708
SDC MAX HD Adjusted Concentration:	1.42E-02			

Compound	CAS Number	SDC	TDC	Davinch	EDS
1,1,1,2-tetrachloroethane	630-20-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,1,1-trichloroethane	71-55-6	3.63E-04	0.00E+00	0.00E+00	0.00E+00
1,1,2,2-tetrachloroethane	79-34-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,1-dichloroethane	75-34-3	1.72E-04	0.00E+00	0.00E+00	0.00E+00
1,1-dichloroethene	75-35-4	1.58E-04	0.00E+00	0.00E+00	4.99E-04
1,2,3-trichlorobenzene	87-61-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2,4-trichlorobenzene	120-82-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2,4-trimethyl benzene	95-63-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2-bis(ethylthio)-ethene	13105-10-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2-bis(vinylthio)-ethane	63938-34-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2-dichlorobutane	616-21-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2-dichloroethane	107-06-2	1.74E-04	0.00E+00	0.00E+00	1.49E-06
1,2-dichloropropane	78-87-5	2.10E-04	0.00E+00	0.00E+00	0.00E+00
1,3-butadiene	106-99-0	1.51E-04	0.00E+00	0.00E+00	0.00E+00
1,4-dichlorobenzene	106-46-7	0.00E+00	0.00E+00	0.00E+00	1.24E-06
1,4-dioxane	123-91-1	0.00E+00	2.58E-01	0.00E+00	0.00E+00
1,4-dithiane	505-29-3	0.00E+00	0.00E+00	0.00E+00	1.40E-04
1,4-oxathiane	15980-15-1	0.00E+00	0.00E+00	0.00E+00	2.96E-04
1-chlorobutane	109-69-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1-hexene	592-41-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2,2-dimethyl-trans-thiirane	3772-13-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2,3-dimethyl-thiophene	632-16-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2,4,6-trinitrotoluene	118-96-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2,4-dinitrotoluene	121-14-2	0.00E+00	0.00E+00	0.00E+00	1.81E-08
2,6-dinitrotoluene	606-20-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-butanone	78-93-3	1.80E-03	4.95E-01	1.41E-04	2.57E-04
2-chlorobutane	78-86-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-chloroethoxyethane	112-26-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-ethyl 1,3-butadiene	3404-63-5	0.00E+00	2.58E-02	6.67E-03	0.00E+00
2-hexanone	591-78-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-methyl-1,3-dithiacyclopentane	5616-51-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-methyl-1,3-dithiane	6007-26-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-methyl-1,3-oxathiolane	17642-74-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-methyl phenol	95-48-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3-methyl phenol	108-39-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4-methyl phenol	106-44-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4-methyl-2-pentanone	108-10-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00
acetaldehyde	75-07-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
acetone	67-64-1	2.68E-03	7.11E+00	2.53E-04	0.00E+00
acetylene	74-86-2	0.00E+00	0.00E+00	0.00E+00	2.41E+01
acrolein	107-02-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00
alpha-methylstyrene	98-83-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00
benzene	71-43-2	1.02E-03	2.80E+00	7.23E-01	1.49E-06
benzoic acid	65-85-0	8.87E-03	0.00E+00	0.00E+00	0.00E+00
benzyl alcohol	100-51-6	1.10E-03	0.00E+00	5.29E-04	0.00E+00
bis(2-ethylhexyl)-phthalate	117-81-7	1.34E-03	9.47E-02	4.45E-03	0.00E+00
bromodichloromethane	75-27-4	4.71E-04	0.00E+00	4.92E-05	0.00E+00
bromoform	75-25-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00
bromomethane	74-83-9	8.78E-04	0.00E+00	0.00E+00	0.00E+00
carbon disulfide	75-15-0	6.42E-04	0.00E+00	3.09E-04	0.00E+00
carbon tetrachloride	56-23-5	9.42E-04	0.00E+00	1.26E-05	0.00E+00
chlorobenzene	108-90-7	1.75E-04	0.00E+00	1.11E-05	2.08E-06
chloroethane	75-00-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chloroform	67-66-3	2.74E-03	0.00E+00	3.27E-05	1.91E-04
chloromethane	74-87-3	9.38E-04	5.38E-02	2.97E-04	0.00E+00
chloromethoxyethane	3188-13-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cis-1,3-dichloropropene	10061-01-5	2.11E-04	0.00E+00	0.00E+00	0.00E+00
dibromochloromethane	124-48-1	3.44E-04	0.00E+00	6.07E-05	0.00E+00
dichlorodifluoromethane	75-71-8	4.46E-04	6.24E-02	0.00E+00	0.00E+00

AERMOD MODELING RESULTS

	SDC	TDC	Davinch	EDS
Max Unit Response Concentrations	457.40488	3414.63879	220.53509	1939.90708
SDC MAX HD Adjusted Concentration:	1.42E-02			

Compound	CAS Number	SDC	TDC	Davinch	EDS
diethyl ether	60-29-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00
diethyl phthalate	84-66-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00
dimethyl phthalate	131-11-3	1.09E-03	0.00E+00	5.25E-04	0.00E+00
di-n-butyl phthalate	84-74-2	1.32E-03	6.89E-03	1.22E-03	0.00E+00
di-n-octyl phthalate	117-84-0	0.00E+00	9.47E-02	0.00E+00	0.00E+00
ethane	74-84-0	0.00E+00	8.18E+01	2.95E+00	1.07E+00
ethene	74-85-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ethylbenzene	100-41-4	2.23E-04	0.00E+00	9.79E-06	0.00E+00
Freon 113	76-13-1	4.62E-04	0.00E+00	0.00E+00	0.00E+00
HD	505-60-2	1.42E-02	1.69E-02	3.72E-03	1.15E-02
hexachlorobutadiene	87-68-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00
hexachloroethane	67-72-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00
hexane	110-54-3	3.90E-04	0.00E+00	2.75E-05	0.00E+00
HMX (cyclotetramethylenetetranitramine)	2691-41-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methane	74-82-8	0.00E+00	2.58E+02	6.67E+01	1.18E+01
methyl tert-butyl ether	1634-04-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methylene chloride	75-09-2	2.21E-03	0.00E+00	4.26E-05	0.00E+00
monoethanolamine	141-43-5	0.00E+00	0.00E+00	0.00E+00	6.70E-01
naphthalene	91-20-3	0.00E+00	9.47E-02	0.00E+00	0.00E+00
nitrobenzene	98-95-3	0.00E+00	0.00E+00	0.00E+00	3.55E-08
nitroglycerin	55-63-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
octane	111-65-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00
pentane	109-66-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
propene	115-07-1	0.00E+00	2.80E+00	7.23E-01	0.00E+00
RDX (cyclonite)	121-82-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00
styrene	100-42-5	2.25E-04	0.00E+00	1.09E-04	0.00E+00
tert-butyl alcohol	75-65-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
tetrachloroethene	127-18-4	2.03E-04	0.00E+00	1.15E-05	4.84E-05
thiirane	420-12-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00
thiodiglycol	111-48-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00
toluene	108-88-3	1.33E-04	1.18E+00	1.22E-01	0.00E+00
trans-1,3-dichloropropene	10061-02-6	2.24E-04	0.00E+00	0.00E+00	0.00E+00
trichloroethene	79-01-6	2.02E-04	0.00E+00	1.46E-05	5.97E-04
trichlorofluoromethane	75-69-4	2.33E-04	2.80E-02	0.00E+00	0.00E+00
vinyl chloride	75-01-4	2.60E-04	0.00E+00	2.65E-03	4.84E-01
xylenes	1330-20-7	5.35E-04	1.72E-02	4.45E-03	0.00E+00
2,3,7,8-TCDD	1746-01-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2,3,7,8-PeCDD	40321-76-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2,3,4,7,8-HxCDD	39227-28-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2,3,6,7,8-HxCDD	57653-85-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2,3,7,8,9-HxCDD	19408-74-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2,3,4,6,7,8-HpCDD	35822-46-9	0.00E+00	3.17E-08	0.00E+00	0.00E+00
1,2,3,4,6,7,8,9-OCDD	3268-87-9	0.00E+00	1.94E-07	0.00E+00	0.00E+00
2,3,7,8-TCDF	51207-31-9	5.74E-10	0.00E+00	0.00E+00	0.00E+00
1,2,3,7,8-PeCDF	57117-41-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2,3,4,7,8-PeCDF	57117-31-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2,3,4,7,8-HxCDF	70648-26-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2,3,6,7,8-HxCDF	57117-44-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2,3,7,8,9-HxCDF	72918-21-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2,3,4,6,7,8-HxCDF	60851-34-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2,3,4,6,7,8-HpCDF	67562-39-4	0.00E+00	1.85E-08	0.00E+00	0.00E+00
1,2,3,4,7,8,9-HpCDF	55673-89-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2,3,4,6,7,8,9-OCDF	39001-02-0	0.00E+00	6.28E-08	0.00E+00	0.00E+00
Total PCDDs and PCDFs	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3,4,4',5-TCB (PCB 81)	70362-50-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3,3',4,4'-TCB (PCB 77)	32598-13-3	0.00E+00	0.00E+00	1.47E-11	0.00E+00
3,3',4,4',5-PeCB (PCB 126)	57465-28-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3,3',4,4',5,5'-HxCB (PCB 169)	32774-16-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2',3,4,4',5-PeCB (PCB 123)	65510-44-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00

AERMOD MODELING RESULTS

	SDC	TDC	Davinch	EDS
Max Unit Response Concentrations	457.40488	3414.63879	220.53509	1939.90708
SDC MAX HD Adjusted Concentration:	1.42E-02			

Compound	CAS Number	SDC	TDC	Davinch	EDS
2,3',4,4',5-PeCB (PCB 118)	31508-00-6	0.00E+00	0.00E+00	3.68E-11	0.00E+00
2,3,3',4,4'-PeCB (PCB 105)	32598-14-4	0.00E+00	0.00E+00	1.47E-11	0.00E+00
2,3,4,4',5-PeCB (PCB 114)	74472-37-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2,3',4,4',5,5'-HxCB (PCB 167)	52663-72-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2,3,3',4,4',5-HxCB (PCB 156)	38380-08-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2,3,3',4,4',5'-HxCB (PCB 157)	69782-90-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2,3,3',4,4',5,5'-HpCB (PCB 189)	39635-31-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00
total coplanar PCBs	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ammonia	7664-41-7	0.00E+00	2.15E-02	5.56E-03	1.60E+01
aluminum	91728-14-2	0.00E+00	8.18E-02	2.11E-02	0.00E+00
antimony	7440-36-0	2.97E-06	7.32E-03	0.00E+00	0.00E+00
arsenic	7440-38-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00
barium	7440-39-3	0.00E+00	1.46E-03	0.00E+00	0.00E+00
beryllium	7440-41-7	0.00E+00	6.89E-04	0.00E+00	0.00E+00
boron	7440-42-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cadmium	7440-43-9	4.26E-06	6.24E-03	1.61E-04	0.00E+00
chlorine	7782-50-5	0.00E+00	2.58E-01	6.67E-02	0.00E+00
chromium (3+)	16065-83-1	4.28E-05	8.18E-03	4.45E-04	0.00E+00
chromium (6+)	18540-29-9	4.28E-05	8.18E-03	4.45E-04	0.00E+00
cobalt	7440-48-4	0.00E+00	2.58E-03	0.00E+00	0.00E+00
copper	744-50-8	6.04E-05	6.46E-02	1.67E-02	0.00E+00
hydrogen fluoride	7664-39-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00
hydrogen chloride	7647-01-0	0.00E+00	8.61E-01	2.45E-01	0.00E+00
hydrogen cyanide	74-90-8	0.00E+00	0.00E+00	0.00E+00	7.27E+00
iron	7439-89-6	0.00E+00	1.08E+01	6.12E-02	0.00E+00
lead	7439-92-1	2.49E-05	2.80E-03	6.67E-04	0.00E+00
manganese	7439-96-5	0.00E+00	3.01E-01	7.79E-02	0.00E+00
total mercury	NA	0.00E+00	2.80E-03	1.84E-07	8.78E-14
mercuric chloride	7487-94-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00
methyl mercury	22967-92-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00
elemental mercury	7439-97-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00
nickel	7440-02-0	9.74E-05	3.23E-03	2.61E-04	0.00E+00
phosphorus	7723-14-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
selenium	7782-49-2	0.00E+00	2.02E-02	0.00E+00	0.00E+00
silver	7440-22-4	0.00E+00	1.79E-03	0.00E+00	0.00E+00
thallium	7440-28-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
tin	7440-31-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00
vanadium	7440-62-2	0.00E+00	1.38E-02	8.34E-04	0.00E+00
zinc	7440-66-6	1.02E-03	1.21E-01	2.78E-02	0.00E+00