

**REVIEW COMMENTS FORM Resolution Document 21 Oct. 13**

**REVIEWED DOCUMENT TITLE:** *Environmental Assessment for Proposed Installation and Operation of an Explosive Destruction Technology Facility at the Blue Grass Army Depot (BGAD), Richmond, Kentucky (June 2013)*

**REVIEWER: KDEP-Bill Lunsford**

Comment # PAGE NO.	LINE NO.	REVIEWER COMMENT	ACTION / RESOLUTION
<p><b>Comment 1:</b> General-Human Health and Safety</p>		<p>The Environmental Assessment does not adequately assess the overall environmental impact of chemical and conventional demilitarization activities conducted at BGAD and the respective total contribution to the ambient levels of the criteria air pollutants regulated by the NAAQS (National Ambient Air Quality Standards). The criteria air pollutants regulated are carbon monoxide, lead, nitrogen dioxide, ozone, particulate pollution, and sulfur dioxide. In recent years, EPA has placed increased attention on particulate matter, which may be an important consideration for any combustion (explosive destruction, etc.) process. The health effects of particulate matter (PM) are directly linked to their particle size. PM<sub>2.5</sub> and PM<sub>10</sub> refer to two distinct particle size ranges; 2.5 (particles less than 2.5 microns) known as “fine particles” that can be inhalable and enter the blood stream, and 10 (includes sizes between 2.5 and 10 microns) that are inhalable and primarily affect the lungs along with other health effects.</p>	<p>As described in Section 3.1.1.3 of the EA, the incremental contributions of each criteria pollutant (including PM<sub>10</sub> and PM<sub>2.5</sub>) from each type of EDT unit were calculated at the maximally impacted fence line location and were found to be very small (see Table 3-4 on page 3-15 of the EA). The PM<sub>2.5</sub> emissions from the operating facility were assumed to be equal to the PM<sub>10</sub> emissions in order to develop a highly conservative estimate.</p> <p>As discussed in Section 3.1.1.3 of the EA (see pages 3-14 and 3-16), an evaluation of cumulative air quality impacts from the operation of the proposed EDT facility was deemed not to be necessary in regard to a determination about significant impacts. This is due to the small incremental contribution from the EDT facility by itself. A detailed evaluation of the other sources of air emissions at the BGAD will be addressed as part of the RCRA Subpart X that would be required for the operation of the proposed EDT facility.</p>

<p><b>Comment 2:</b> General-Human Health and Safety</p>	<p>a.) The Environmental Assessment focused on the contributions of emissions and their impact on air quality for the proposed EDT facility and the present construction and development activities for BGCAPP. Significant contributors of airborne particulate matter at BGAD that were not included in the EA are the OB/OD (Open Burn/Open Detonation) conventional munitions treatment units located south of the EDT-BGCAPP footprints. The emission plumes from the OB/OD treatment activities travel north and contribute to the particulate emissions originating from the proposed EDT and BGCAPP activities.</p> <p>b.) To assess the cumulative (combined new sources plus existing sources) risk from the proposed EDT and BGCAPP activities, background ambient air quality data were obtained from regional monitoring sites. The background ambient air concentrations used in the cumulative assessment for the 24-hr average PM<sub>10</sub> were obtained from Lexington in Fayette County. The BGAD is located in the Richmond area of Madison County. Wind rose data previously reviewed by KDEP over a 4 year period indicated that the frequency distribution of wind directions between BGAD and Lexington met towers varied between 17 and 66% at elevations close to ground level while the upper air data was fairly consistent. OD produces a bimodal particle size distribution released at ground level and is a significant contributor to particles in the aerodynamic particle diameter size range that encompasses both PM<sub>2.5</sub> and PM<sub>10</sub>. Since BGAD incorporates a soil cover when conducting OD, PM<sub>10</sub> generation is significant. Considering the differences in wind direction between the Lexington and Richmond areas along with downwind particle deposition occurring, the Lexington PM<sub>10</sub> data is not representative of ambient air concentrations occurring in the vicinity of the BGAD.</p> <p>c.) In Table 3-3 on Page 3-10 titled: <u>Effects of EDT facility construction on ambient air concentrations of particulate matter at the point of maximum impact</u>, it was indicated that the “total EDT plus Background” expressed as a percent of NAAQS levels – the PM<sub>10</sub>, 24-hr was 39%; the PM<sub>2.5</sub>, 24-hr was 97%, and the PM<sub>2.5</sub>, annual was 77% respectively. Including the emissions from OB/OD treatment activities with the EDT projected emissions, it is anticipated that elevated local ambient air concentrations for PM above the NAAQS regulatory levels will occur in the downwind transport direction from the EDT and OB/OD facilities since the two emission plumes are superimposed on one another.</p>	<p>a.) Open burning/open detonation (OB/OD) activities at the BGAD were inadvertently omitted from the EA. These activities are conducted in an area approximately 3.5 miles due south of the location of the proposed EDT facility.</p> <p>b.) The atmospheric dispersion modeling for the EDT emissions has predicted that the location of maximum air quality impact would be near the middle of the northern BGAD installation fence line. The distance from the OB/OD area to this same location on the northern BGAD boundary is approximately 5 miles. A considerable amount of dispersion—i.e., a reduction in airborne concentrations by a factor of approximately 100,000—of the PM<sub>10</sub> and PM<sub>2.5</sub> emissions from OB/OD activities would be expected to occur over such distances. Furthermore, by design, OB/OD activities at the BGAD are conducted only during those times when atmospheric conditions are favorable for the wide dispersion of airborne particulates. For these reasons, emissions from OB/OD activities would not be expected to contribute significantly to the concentration of airborne particulates at the northern BGAD installation boundary.</p> <p>c.) The impacts from OB/OD operation are currently being evaluated as part of the RCRA Subpart X OB/OD permit submitted to KDEP.</p> <p>Because BGAD OB/OD activities are seasonal, subject to favorable weather criteria and restricted to daylight hours, any resulting impacts to air quality would be temporary and highly localized. The analysis conducted for the EA focused upon the NAAQS averaging times shown in Table 3-1 (page 3-5) of the EA. As shown in the table, there are no short-term (i.e., less than 24 hours) standards for either PM<sub>10</sub> or PM<sub>2.5</sub>.</p>
--	---	--

			<p>The Army is currently in the process of reevaluating OB/OD operations at the BGAD as part of a revised RCRA Permit (i.e., Part B, Subpart X). The revised permit application is expected to be available for submittal to KDEP in the Spring of 2014. A Human Health Risk Assessment of the cumulative impacts to air quality from the OB/OD activities will be addressed in the revised RCRA permit application.</p>
<p><b>Comment 3:</b> General-Noise</p>		<p>a.) In addition to the human health and safety issues, the noise assessment did not account for or recognize the presence of the OB/OD units at BGAD as evident from the statement in Section 3.1.7 titled Noise where it is stated “With the exception of on-going activities at the BGCAPP, no major noise producing activities exist within the BGAD installation boundaries.”</p> <p>b.) The noise from the EDT facility needs to be considered along with the noise contributions from the OB/OD treatment activities. As indicated in Table 3-14 titled: <u>Summary of Noise Levels that are Protective of Public Health and Welfare with a Margin of Safety</u>, levels are presented that include both outdoor and indoor activity interference and annoyance. In addition to noise levels impacting human comfort and behavior, noise levels can be disruptive to wildlife behavior affecting their foraging and roosting/nesting habitats, depending on species.</p>	<p>a.) An assessment of the noise associated with OB/OD activities was inadvertently omitted from the EA.</p> <p>b.) OB/OD activities at the BGAD are conducted in an area approximately 3.5 miles due south of the location of the proposed EDT facility. The noise analysis in Sections 3.1.7.1 and 3.1.7.2 (pages 3-67 and 3-68) of the EA focused on a hypothetical receptor located at the nearest BGAD installation boundary (i.e., near the central portion of the depot’s northern fence line). The distance from the OB/OD area to this same location on the northern BGAD boundary is approximately 5 miles. A considerable amount of sound attenuation—i.e., on the order of a 20- to 30-dB reduction—would be expected to occur over such distances.</p> <p>As stated in Sections 3.1.7.1 and 3.1.7.2 (pages 3-67 and 3-68) of the EA, sound pressure levels from several sources of noise (such as from the proposed EDT facility and the OB/OD activities) cannot be summed arithmetically. Even if the additional noise from the OB/OD activities were to increase the noise at the nearest BGAD installation boundary above the threshold of interference and annoyance, the effects would be of an extremely short duration. However, as noted in Section 3.1.7 of the EA, neither the Commonwealth of Kentucky nor Madison County has established any quantitative noise-limit</p>



<p><b>Comment 6:</b> 3-9</p>	<p>3.1.1.2</p>	<p>Air Quality: Section 3.1.1.2, Page 3-9: It is stated "...on-site PM<sub>10</sub> sources were also included in the modeling."  Provide clarification regarding what sources and respective emission factors were used.</p>	<p>As stated in Section 3.1.1.2 (page 3-9) of the EA, the modeled emissions due to construction were obtained from the 2002 FEIS. The sources included in the modeling of fugitive dust during construction were those associated with earth-moving activities. An emission factor of 1.2 tons/acre/month was used for the PM<sub>10</sub> emissions. Furthermore, in the modeling, one half of the PM<sub>10</sub> was assumed to also be PM<sub>2.5</sub>.</p>
<p><b>Comment 7:</b></p>	<p>2.1.5 and 3.1.2.1</p>	<p>Water: It is not clear from this document how stormwater from the new EDT site will be handled. Will the EDT site be added to the existing stormwater infrastructure or will it be a stand alone approach?</p>	<p>Plans are to add the EDT site to the existing KPDES permit as a permit modification.</p>
<p><b>Comment 8:</b> 2-23</p>	<p>2.1.6</p>	<p>Decommissioning and Closure: It is stated "At the conclusion of EDT operations, and upon the decommission and closure of the site of the EDT facility, the site would become available for other uses."  a.) Would other uses entail demilitarization of conventional munitions? This would be an alternative to the current practices of OB/OD (Open Burning/Open Detonation).  b.) Please keep in mind the requirements of KRS 224.50-135</p>	<p>a.) The EA analyzes the environmental impacts of the proposed action from construction to closure. The future use of the EDT unit following closure of the BGCAPP site is unknown at this time. The availability of any EDT unit for other use at the Depot following closure of the BGCAPP site would be dependent upon completion of property disposition and transfer.  b.) The KRS 224.50-135, or "Review requirement for proposed change in use of permitted site or facility" will be considered at the time of closure.</p>
<p><b>Comment 9:</b></p>	<p>3.1.3.1</p>	<p>Human Health Risk Assessment: Excess Individual Lifetime Cancer Risk. Please note that the KDEP <i>de minimis</i> level is 1.0E-06 rather than 1.0E-05.</p>	<p>The comment is noted. As outlined in the HHRA protocol for the BGCAPP, a risk benchmark of 1E-05 was established. All future Individual Lifetime Cancer Risk benchmarks will be 1E-06 (one in a million risks). Even if a risk benchmark of 1E-06 had been used in the HHRA for the proposed EDT facility, all of the numerical values for cancer risk would still fall below the 1E-06 value (see Table 3-8 in the EA).</p>
<p><b>Comment 10:</b> 3-38</p>	<p>3.1.3.1</p>	<p>Human Health Risk Assessment: The risk assessment appears to focus only on off-site receptors such as the nearby Eastern Kentucky University's Meadowbrook Farm located approximately 2.5 miles east of the proposed EDT site at the southwest corner of the BGCAPP footprint selected for evaluation.</p>	<p>Grazing cattle were not included as receptors in the HHRA. Only the receptors approved in the BGCAPP HHRA were used so that a cumulative assessment of both activities could be made. The receptor grid is described in Section 3.1.1.3</p>

		<p>Our understanding is that both hunting and leasing of tracts for grazing of cattle occurs within the BGAD facility boundaries. Were those potential receptors considered in the risk assessment?</p>	<p>(page 3-11) of the EA and is illustrated in Figure 3-2 of the EA. In accord with the protocol for the BGCAPP human health risk assessment, the receptor grid did not include any on-site locations within the BGAD installation boundaries with the exception of a single on-site receptor grid point located at Lake Vega which was used to determine the maximum waterborne concentrations of the emitted COPCs.</p>
<p><b>Comment 11:</b> 1-5</p>	<p>1.1.1</p>	<p>Inventory of Mustard-Filled Munitions: It is stated “Approximately 45 percent of the 80 overpacked munitions were found to have liquid agent outside the munition cavity, and 2.5 percent had heel outside the cavity, thus confirming the necessity of placing these munitions inside leaker overpacks.”</p> <p>This migration of agent outside the munition cavity is a concern that KDEP has also expressed for the rockets. Please explain the mechanism for this migration. An understanding of the mechanism will help clarify KDEP’s concerns about migration of agent for the rockets.</p>	<p>The H projectiles leak from around the fuze-well through the lifting plug/nose closure. The EA covers the H rounds.</p> <p>BG rocket overpacks will be processed in the BGCAPP. The government will provide this information outside of the EA since rockets will not be processed in the EDT.</p>

<p><b>Comment 12:</b> 1-7</p>	<p>1.2</p>	<p>Scheduling: It is stated "It is therefore envisioned that the mission and use of the proposed EDT facility to destroy the mustard-filled projectiles and the two mustard-filled DOT bottles would be completed before operations begin at the BGCAPP; nevertheless, the possibility does exist for the overlapping, simultaneous operation of the two facilities.</p> <p>What circumstances would warrant the overlapping use of EDT and BGCAPP?</p> <p>The proposed schedule of construction for the EDT presented in Section 2.1.1 states that "construction would take approximately 27 months, beginning in mid-2014 and finishing in late-2016." KDEP has been in discussions with BGAD historically on the overall permitting approach for the EDT but further coordination is needed.</p>	<p>The dates for completing operations at the EDT and starting operations of the BGCAPP Main Plant are within 3-6 months of each other. Should the schedule for the EDT be delayed or the schedule for the BGCAPP Main Plant be accelerated it is conceivable that the scheduled dates for operating these two facilities could overlap.</p> <p>For the purpose of analysis in the Environmental Assessment (EA), it was therefore assumed that operations and risk reduction would not be delayed and operations at the two facilities might possibly occur at the same time. This was included in the EA by assessing the health effects associated with air emissions from both facilities as though they were operating at the same time and by also including other environmental impacts of these two facilities operating at the same time.</p> <p>Likewise, potential impacts to other resources (e.g., water, socioeconomic resources, waste management) were evaluated in the EA as though both the BGCAPP and the proposed EDT facility would be in operation at the same time.</p>
<p><b>Comment 13:</b> 3-37</p>	<p>3.1.3.1</p>	<p>SDC: It is stated "Table 3-10 shows the <i>acute inhalation hazard</i> expressed as an HI (Hazard Index) value, for each type of EDT unit." It was noted that mustard is the individual COPC (Chemical of Potential Concern) that provided the greatest contribution to the HI (Hazard Index).</p> <p>a.) If mustard is the contaminant emitted from the unit of greatest concern, how efficient is the destruction of the agent in the chamber itself and how much is handled by the off-gas treatment train? Is the required destruction of the agent calculated and met based on both the initial destruction in the chamber and the secondary treatment and destruction of agent in the off-gas treatment system?</p>	<p>a.) A destruction and removal efficiency (DRE) of 99.9999 percent has been established for the processing of the mustard agent inventory at the BGAD. Each of the four types of EDT units (including the SDC) would be capable of achieving this level of destruction.</p>
<p>2-3</p>	<p>2.1.1</p>	<p>As stated in Section 2.1.1; Page 2-3; "A destruction and removal efficiency (DRE) for the treatment of mustard agent-containing munitions at the BGAD has been established by the Kentucky Department for Environmental Protection (KDEP) as 99.9999 percent for operation of agent treatment units such as the EDT units."</p>	

		<p>b.) To assist with our understanding of how mustard is the individual COPC emitted from the unit with the greatest contribution to the HI, KDEP desires to clarify how the emission factors were calculated and at what points in the processing steps for the EDT the mass balance was determined.</p> <p>c.) Please provide the following reference for KDEP's review: ERM (ERM Consulting Services) 2013. <i>Emission Estimates Documentation for Explosive Destruction Technologies – Blue Grass Chemical Agent-Destruction Pilot Plant</i>, SAIC/0174304, prepared by ERM, Cincinnati, Ohio, prepared for Science Applications International Corporation, Abingdon, Md., February.</p>	<p>b.) For the purpose of analysis in the human health risk assessment, a non-zero emission rate was assumed for mustard agent leaving the stack of the proposed EDT facility. The assumed continuous emission rate was set at 20 percent of the short-term exposure limit; therefore, this emission rate was not based on any DRE or mass balance of mustard agent</p> <p>c.) The reference requested in the comment provides additional information on how the aforementioned emission rate for mustard agent was derived. The reference by ERM was provided to KDEP.</p>
<b>Comment 14:</b> 2-22	2.1.5	<p>Systemization and Operation: It is stated "The initial test would be conducted with agent surrogates; then actual trials will be conducted with actual chemical munitions."</p> <p>a.) Is there a test plan or document that outlines these tests? When will that document be shared with KDEP</p>	<p>a.) An EDT test plan has not been completed at this time. It will be developed following the determination of which EDT technology will be employed at BGCAPP.</p>
2-3	2.1.1	<p>It is stated "A destruction and removal efficiency (DRE) has been established by the Kentucky Department for Environmental Protection (KDEP) as 99.9999 percent for operation of agent treatment units such as the EDT units."</p> <p>KRS 224.50-130 (3)(a) and 401 KAR 34:050 Section (2)(2)(a) require 99.9999 percent destruction efficiency.</p>	
2-12	2.1.1.3	<p>The Detonation of Ammunition in Vacuum Integrated Chamber (DAVINCH) Unit: It is stated on that "the DRE for the detonation product gas prior to any treatment has been determined to be greater than 99.9999 percent on nerve agent simulants for the DAVINCH EDT."</p>	
2-5	2.1.1.4	<p>The Army's Explosive Destruction System (EDS) Unit: It is stated "EDS system is capable of achieving a DRE of greater than 99.9999 percent for mustard agents."</p> <p>b.) Please confirm the destruction efficiencies for the TDC (Transportable Detonation Chamber) and the SDC (Static Detonation Chamber). For all of</p>	<p>b.) All EDT information in the EA is based on information received from the vendors. The</p>

2-12	2.2.3	<p>the EDT units, clarify how the DRE will be calculated, what monitoring points will be considered, and based on monitored data, at what point in the process agent destruction is accounted for including both the chamber and any associated OTS (Off-Gas Treatment System) and PAS (Pollution Abatement System) components.</p> <p>It is stated “The off-gas from the DAVINCH system would be monitored at the outlet of the oxidizer, and it would then pass through the off-gas retention tank where it would be tested to confirm that any residual concentrations of mustard agent are in compliance with levels established in the proposed EDT facility’s RCRA permit before the gas is discharged.”</p> <p>c.) The DAVINCH has a hold-test capability for off-gases, how often would potential emissions be monitored? What would happen if they don’t pass compliance levels?</p> <p>d.) Can hold-test capability be incorporated into the other technologies?</p>	<p>BGCAPP specific system design will be completed after the technology decision and will identify the monitoring points.</p> <p>The formula given to the BGCAPP, by KDEP regulation 401 KAR 34:350 for DRE calculates mass feed rate of waste compared to mass emission rate of the same waste present in exhaust emissions prior to release to atmosphere. A DRE of 99.9999 percent has been established for the processing of the mustard agent inventory at the BGAD. Each of the four types of EDT units, including TDC and SDC are capable of achieving this level of destruction.</p> <p>c.) The EDT monitoring plan has not been completed at this time. It will be developed following the determination of which EDT technology will be employed at BGCAPP.</p> <p>d.) The EDS is a hold, test and release system. In the EDS, all solid, gas, and liquid streams are monitored for agent prior to release from the EDS chamber. If results are positive, actions may be taken to further treat the chamber contents. Therefore, the EDS is a hold, test, and release technology for solids, gases, and liquids. Similar to the BGCAPP plant, the unit is contained in a structure under engineering controls (carbon filtration) with monitoring to prevent any inadvertent release of harmful vapors to the environment.</p> <p>The SDC is not a hold, test and release system. In the SDC, gases generated by the detonation pass to the off-gas treatment system that cleanses the gas of particulate matter, acid gases, and destroys/removes organic contaminants. The SDC produces no liquid waste; solid waste and salts from the off-gas</p>
------	-------	--	---

			<p>system are treated and disposed of in compliance with applicable state and federal regulations. The off-gas system operates continuously and gases are treated and released continuously while munitions are processed. Therefore, it does not have a hold, test and release capability for gases. Munition solid waste is held in the chamber at sufficient temperature and time to ensure destruction of the agent. After discharge from the chamber, the munition solid wastes are also monitored for agent prior to disposition. Similar to the BGCAPP plant, the unit is contained in a structure under engineering controls (carbon filtration) with monitoring to prevent any inadvertent release of harmful vapors to the environment.</p> <p>The TDC is not a hold, test and release system. In the TDC, resulting gases are vented to the expansion chamber where they can be tested before release to the emissions control system. In the emissions control system a catalytic oxidation unit oxidizes hydrogen, carbon monoxide and organic vapors before the gas stream is vented through a carbon filter bed and released. As there is no capability to reprocess the gas, it cannot be considered a hold, test and release capability. The TDC produces no liquid process waste; solid wastes are treated and disposed of in compliance with applicable federal and state regulations. If munition solid waste is determined to be contaminated, it can be further treated before discharge. Typically the chamber is opened and a “cleansing” shot of explosive is used to decontaminate the chamber. There is also the capability to flush the chamber with hot air if needed for decontamination. Similar to the BGCAPP plant,</p>
--	--	--	--

			<p>the unit is contained in a structure under engineering controls (carbon filtration) with monitoring to prevent any inadvertent release of harmful vapors to the environment.</p> <p>The DAVINCH is not a hold, test and release system. In the DAVINCH, resulting gases are collected in an off-gas retention tank. The gases are monitored for agent at the off-gas retention tank prior to release to the carbon filters. If gas is positive for agent, there is a capability for the off-gas to be rerouted through the chamber and gas treatment system. Therefore, it does have a hold, test and release capability for gases. If no agent is detected, the gases go through a treatment system that employs a cold plasma oxidizer which converts carbon monoxide to CO2. The DAVINCH produces a small amount of liquid waste from off-gas treatment and rinsate used to cleanse the vessel. Liquid wastes are monitored for agent prior to disposition. If the munition solid waste is positive for agent, there is no capability to treat it without opening chamber. As there is no capability to reprocess the munition waste without opening the chamber, it is not considered to be a hold, test and release system for the munition waste. Similar to the BGCAPP plant, the unit is contained in a structure under engineering controls (carbon filtration) with monitoring to prevent any inadvertent release of harmful vapors to the environment.</p>
<p><b>Comment 15:</b> 2-2</p>	<p>2.2.1</p>	<p>Transportation and Storage of Waste: Section 2.2.1, Page 2-2: It is stated "adequate munition storage will be provided near the proposed EDT facility to allow continued operation on weekends and holidays."</p> <p>a.) Clarify what storage is planned and the procedures that will be followed to protect worker safety and protection of the environment, particularly concerning transport.</p>	<p>a.) A Service Magazine is currently envisioned at the EDT Facility to temporarily store the mustard-filled munitions (containing a Kentucky listed</p>

2-19	2.2.1	<p>Section 2.1.2, Page 2-19: It is stated “Because permitted storage locations for BGCAPP secondary wastes may not be available when the proposed EDT operations commence, a RCRA-compliant storage area would be established prior to the generation of RCRA waste at the EDT.”</p> <p>b.) What is planned for the BGCAPP and if used simultaneously for the EDT, will adequate arrangements be in place to handle secondary wastes from both facilities? Clarify the specific secondary waste storage and transportation needs for the EDT facility.</p>	<p>hazardous waste) prior to treatment/destruction in the EDT. This magazine will be permitted as a RCRA container storage area.</p> <p>The mustard-filled 155mm projectiles will be transported from their storage location to the magazine in EONCs (enhanced onsite containers). The EONCs are sealed containers designed to receive pallets of munitions and protect the munitions and the general public, workers and environment during transport. These EONCs are designed to contain vapor emissions and protect munitions during transport, and allow air sampling and analysis of the interior prior to unloading the munitions.</p> <p>b.) The ultimate destination of any waste will be decided during waste management development as part of the permit process for the chosen EDT. Statements in the EA regarding previous waste handling and waste management activities are used only as a guide for predicting future waste handling practices.</p>
<b>Comment 16:</b> 2-7	2.2.2	<p><b>Waste &amp; Recycled Materials:</b> It is stated “Previous experience with operation of the SDC unit has indicated that the scrap metal from the munition bodies and explosive components coming from the treatment unit would be recycled under the provisions of 40 CFR 260.30 that would classify these materials as not being solid waste.”</p> <p>We noted that SDC metals will be recycled. TDC and EDS metals will be disposed of in RCRA landfill after headspace monitoring to the VSL (Vapor Screening Level), the concentration from air sampled less than 15 minutes.</p> <p>What will be the disposition of metals following DAVINCH treatment? Does this remain to be seen since it ultimately wasn’t utilized at Tooele?</p>	<p>The ultimate destination of any waste will be decided during waste management as part of the permit process for the chosen EDT.. Statements in the EA regarding previous waste handling and waste management activities are used only as a guide for predicting future waste handling practices.</p> <p>There is no historical reference for recycling of DAVINCH metals as the DAVINCH has not been operated under RCRA. The DAVINCH metals, as all EDT metals, would undergo RCRA evaluation before being considered recycled scrap metal. Additional treatment steps prior to recycling may be needed for any unit depending on each RCRA scrap metal evaluation.</p>
<b>Comment 17:</b>		It is stated “...regardless of which type EDT unit(s) were to be used in the	

3-72	3.1.8.2	<p>proposed EDT facility, this scrap metal would be shipped off-site to a metals recycling facility for smelting and would, therefore, not be considered to be a waste.”</p> <p>It is stated “This recycled scrap metal is therefore not included in the quantities of waste that are evaluated in this section for off-site management and disposal.”</p> <p>a.) If the scrap metal from the TDC and EDS units, etc. are not directly recyclable, would it not increase the total solid waste generated by the TDC and EDS units by ~ 675 tons?</p> <p>b.) How will the wastes be characterized and handled so they meet the requirements of 40 CFR 260.30 for recycling? Is interim storage of wastes from the TDC and EDS therefore required for the metal leaving the unit prior to characterization and/or additional treatment to meet the requirements for recycling?</p>	<p>a.) Up to 675 tons would be added to the solid waste generated by EDT operation if the scrap metal from the respective EDT unit could not be recycled due to either U.S. Army or KDEP requirements or regulations.</p> <p>b.) Metal characterization and handling will be in compliance with RCRA standards. However specific information on waste management will be available after an EDT technology is chosen as part of the permit process.</p>
<b>Comment 18:</b> 2-20	2.14	<p>It is stated “If laboratory analysis shows that mustard agent is present at concentrations higher than the release criteria, then the waste would be further treated or managed onsite as a hazardous waste prior to being shipped offsite for treatment or disposal.”</p> <p>How would the required destruction efficiency for this type of waste be confirmed?</p>	<p>The formula given to the BGCAPP for destruction efficiency (DRE) calculates mass feed rate of waste compared to mass emission rate of the same waste present in exhaust emissions prior to release to atmosphere. If a DRE is needed for any other waste stream, it will be negotiated with the KDEP during the RCRA permit development.</p>
<b>Comment 19:</b> 2-20	2.1.4	<p>It is stated “Solution and rinse waters which are determined to be non-hazardous and which meet the BGAD’s discharge requirements may be sent to the existing BGAD wastewater treatment facility or shipped offsite to an appropriate waste management facility.”</p> <p>How do we ensure the SDS (Spent Decontamination Solution) and non-hazardous rinse waters aren’t merely the product of dilution before release to the wastewater treatment facility?</p>	<p>All waste streams generated at the EDT facility will be screened using generator knowledge and/or laboratory analysis. If a liquid waste stream is characterized as a hazardous waste, it will be sent offsite for disposal at an appropriately permitted waste management facility. Other non-hazardous solutions and rinse waters may be disposed in the sanitary sewer if BGAD discharge limits are met.</p> <p>Decontamination solutions used for agent-related decontamination at the EDT facility would be a Kentucky listed hazardous waste (based upon the RCRA Derived from and Mixture Rules) after decontamination is complete. The dilution of this state listed hazardous waste (e.g., agent derived decontamination solution) to render it non-</p>

			hazardous would be a violation of 40 CFR 268.3 which prohibits the use of dilution as a treatment method in most instances. This prohibition applies if dilution is conducted in lieu of adequate treatment for purposes of attaining the applicable treatment standards. Thus, dilution will not be used for hazardous decontamination solutions or other hazardous waste streams at the EDT facility. Waste management procedures will address the proper management of solution and rinse waters.
<b>Comment 20:</b> 3-42	3.1.3.2	<p>Worker Safety: It is stated “Environmental permit conditions require storage igloo roof vents to be closed, and air monitoring through the igloo headwall is conducted, prior to worker entry into an igloo containing chemical agent.”</p> <p>The Environmental Assessment needs to be corrected to indicate what igloos presently have their vents open.</p>	Correction noted: Chemical Hazardous Waste Storage Units/igloos vents are open with the exception of three units closest to the BGCAPP containing GB. This is now a draft RCRA storage permit condition.
<b>Comment 21:</b>		<p>What is the estimated number of stuck bursters from the BGAD stockpile? What assumptions were used to arrive at the number?</p>	It has been estimated that up to 12% of the inventory could have stuck bursters. This is based upon stockpile history and information from baseline demilitarization facilities.
<b>Comment 22:</b> General Questions/Comments		<p>What is the plan for the overpacked GB rockets? Is EDT a possibility?</p>	Overpacked GB rocket treatment in the EDT is not under consideration as part of the proposed action and therefore out of scope for this EA. Overpacked GB rockets will be processed in the BGCAPP.
<b>Comment 23:</b>		<p>In several places within the document it is stated that agencies including but not limited to US Fish and Wildlife, Kentucky State Nature Preserves Commission, US Army Corps, and KDEP provided input, but no supporting documentation has been included.</p>	The input provided by agencies is documented in the references called out in citations throughout the EA. These documents include the previous EAs which were prepared by the U.S. Army Corps of Engineers for the Blue Grass Chemical Agent-Destruction Pilot Plant (BGCAPP) and which were deemed relevant for the EDT facility because the two possible locations for that facility are either within or immediately adjacent to the BGCAPP footprint. The latest (May 2012) Kentucky State Nature Preserves Commission (KSNPC) list of rare and extirpated biota and natural communities of Kentucky was consulted to gain further information on other state-listed fauna with occurrence records for BGAD. The 2011-2015 BGAD Integrated Natural Resources Management Plan—which was prepared in cooperation with the Kentucky Department of

			Fish and Wildlife Resources—was consulted for further background information.
		<b>Reviewer: John Martin</b>	
<b>Comment 24:</b> ES 1		Is the inventory numbers no longer classified? The outreach office says 16,000. This says 15,492.	The inventory number of munitions to be destroyed by the proposed EDT facility is public knowledge. The correct number of munitions to be treated is 15,492 plus two DOT agent bottles. Any reference to 16,000 munitions was only used as an approximate number.
<b>Comment 25:</b> 1-6		There is no information on pressurized projectiles. Information on the internet indicates that mustard projectiles can have pressure build up in them. Why is this pressure not addressed? Or is there no pressure in the Blue Grass inventory?	There has been evidence at other chemical demilitarization facilities that some mustard rounds are under pressure. This elevated pressure can become an issue during an invasive procedure on the munition. This is avoided when processing in an EDT since the munition is only accessed after the explosive chamber has been sealed.
<b>Comment 26:</b> 2-3		Says that the EDS unit uses small shaped charges and page 2-13 also says shape charge. But table A-1 indicates uses donor explosives. Which is correct? Shaped charges or donor charges	Both statements are correct. The EDS unit uses small, shaped charges that are otherwise called donor charges.
<b>Comment 27:</b> 2-3		Information on the internet indicates that the Alabama unit processed 2,737 chemical weapons. It also indicates that a small number of 115mm rocket bursters were shipped form Pine Bluff, Arkansas and were processed. Are there any plans to ship bursters from the mustard projectiles from Pueblo, Colorado here to process them thru the EDT unit?	There are no plans to ship explosives from other locations to be treated in the EDT units proposed for deployment at the BGAD.
<b>Comment 28:</b> 2-5		Is this a picture of the Alabama EDT unit? Is this a picture of the SDC unit that would be used here? Is the Alabama unit is [sic] use?	This picture is the SDC 2000 C that was used in Germany; however, the SDC 2000C unit was not used at Anniston. The SDC 1200 unit was used at Anniston. Yes, the Anniston unit is being tested with conventional ammunition.
<b>Comment 29:</b> 2-8		Is this a picture of 1 of the 2 that would be used here?	We have no information on the actual unit that may be used at BGAD. The technology decision has not been made.
<b>Comment 30:</b> 2-9		The TDC is considered a transportable unit. Is the SDC unit a transportable unit?	The SDC can be configured to be a transportable unit.
<b>Comment 31:</b> 2-11		Is this a picture of 1 of the 2 that would be used here?	We have no information on the actual unit that may be used at BGAD. The technology decision has not been made.
<b>Comment 32:</b> 2-13		Is this a picture of 1 of the 7 that would be used here?	We have no information on the actual unit that may be used at BGAD. The technology decision has not been made.
<b>Comment 33:</b> 2-15		a.) What is the number of pounds of scrap metal that would be placed in the landfill?	a.)The weight of scrap metal that might be placed in a RCRA landfill is dependent on the

		<p>b.) What is the difference between a RCRA landfill and out [sic] Madison county dump?</p> <p>c.) Where is the RCRA landfill located at [sic]?</p>	<p>EDT unit selected and the requirements/regulations that the U.S. Army and KDEP apply to this material. The maximum weight of scrap metals expected to be generated during EDT operations is up to 675 tons and this entire weight may be placed into a landfill depending on the EDT unit procured and the requirements/regulations applied to this scrap metal.</p> <p>b.) A RCRA landfill is constructed and certified to receive hazardous waste as defined by federal and state hazardous waste regulations. Although it is not clear what landfill the commenter is referring to, a landfill, unless permitted for RCRA hazardous waste can only accept domestic and commercial non-hazardous waste.</p> <p>c.) The location of the RCRA landfill will be decided during waste management development for the EDT as part of the permit process.</p>
<p><b>Comment 34:</b> 2-21</p>		<p>a.) The internet says that the Alabama unit used calcium bicarbonate. What is the difference between the 2 chemicals? Why does this SDC made [sic] a different waste?</p> <p>b.) What is done with the EDS hydrolysate liquid?</p> <p>c.) How much in gallons and pounds does each type of waste is made [sic] by each of the 4 EDT systems</p>	<p>a.) Although it is not clear what internet reference the commenter is using, either calcium bicarbonate or sodium bicarbonate could be used as a feed material in the pollution abatement system (PAS) for the SDC unit. The chemical reactions inside the PAS would then generate either calcium carbonate or sodium carbonate as a waste product. Note that sodium bicarbonate is used in the PAS for the SDC unit at Anniston, Alabama. The PAS for the SDC unit being evaluated for possible use at the BGAD would operate similarly to the PAS at Anniston.</p> <p>b.) As described in Section 3.1.8.2 of the EA, the liquid waste (hydrolysate) from the EDS units would be tested and categorized according to its hazardous characteristics and would be disposed of appropriately at an offsite TSDF.</p> <p>c.) Table 3-16 (on page 3-71) in the EA shows the quantities of waste (both solid and liquid) that would be generated by each type of EDT unit.</p> <p>However, exact chemical species will be known</p>

			when the design effort commences after the technology decision is made.
<b>Comment 35:</b> 2-23		<p>a.) What does below applicable standards and limits mean?</p> <p>b.) You talk about the transportable units. What about the nontransportable unit? Will it be removed from BGAD?</p> <p>c.) The no-action does not sound like an option that is safe for the BCAPP workers. Why would you even consider this? If it is just for information say so.</p>	<p>a.) "Below applicable standards", means the levels of COPCs at closure will be in compliance with the closure permit, which will represent a clean or environmentally safe closure.</p> <p>b.) The continued use of any EDT unit on BGAD, after the proposed action is complete is not known at this time.</p> <p>c.) The commenter is correct in that the no-action alternative is not safe for BGCAPP workers. NEPA regulations require the analysis of the no action alternative even if the agency is under a court order or legislative command to act. This analysis provides a benchmark, enabling decision makers to compare the magnitude of environmental effects of the action alternatives compared to taking no action whatsoever.</p>
<b>Comment 36:</b> 3-15		Why does the EDS unit makes [sic] lead (PB) and the other 3 units do not?	All units have some lead emissions based on the munitions treated and not the unit itself. Note data under the "Predicted Maximum Concentration" column on Table 3-4 on page 3-15 of the EA. The emissions data were developed from information provided by the respective EDT unit vendors, and these data were developed by different waste feeds for each vendor test. The data were not normalized for a balanced comparison between units but have been presented in the EA to show each incremental discharge for the munitions tested.
<b>Comment 37:</b> 3-18		Why is making the high level of lead (Pb) in the 7 EDS units: What is making the high NOx in the TDC unit?	The level of lead released in the EDS unit represent 7 units as opposed to one or two of the other types of EDT units. The emissions (such as Pb and NO <sub>x</sub> ) differ among the types of EDT units for the reasons stated in the response immediately above to Comment 36.
<b>Comment 38:</b> 3-24		Does any of the water used for each EDT unit require any additional treating? If so how much is treated. And what is the final disposal method for it.	Waste water from the DAVINCH and EDS units will be generated. This waste water will be managed according to Federal and state regulatory standards. Waste management options will be decided after the EDT technology is chosen. Reference page 3-71 for liquid waste amounts.

<p><b>Comment 39:</b> 3-27</p>		<p>a.) What is the source of the inhalation hazard for each EDT unit?</p> <p>b.) Is this mustard gas vapors that are inhaled?</p> <p>c.) Where does this inhalation occur at?</p> <p>d.) How far outside the depot could it extend?</p>	<p>a.) The human health risk assessment for the proposed EDT facility included an evaluation of the inhalation hazard associated with the chemicals and compounds potentially emitted from each type of EDT unit as listed in Appendix A of the EA.</p> <p>b.) For the purpose of analysis in the HHRA, a non-zero emission rate for each EDT unit was assumed for mustard agent leaving the stack. In accord with the protocol established for the HHRA, the assumed continuous emission rate for mustard agent was set at 20 percent of the short-term exposure limit, even though the facility would be operated so that no detectable mustard agent would be emitted.</p> <p>c.) The maximally impacted location for the inhalation hazard was found to be near the middle of the northern BGAD installation boundary; however, no adverse effects were predicted at that location.</p> <p>d.) The HHRA evaluates inhalation hazard up to 10 kilometers (km) from the location of the proposed EDT facility. The grid extends 7.5 km outside of the Depot.</p>
<p><b>Comment 40:</b> 3-40</p>		<p>What is the operational period for each EDT unit?</p>	<p>The number of EDT units evaluated in the EA was determined by their through put rates to meet the 38 week campaign.</p>
<p><b>Comment 41:</b> 3-42</p>		<p>a.) What is the worker health impacts handling the projectiles and bottles?</p> <p>b.) What is the worker health impacts handling the explosives used for each EDT unit?</p> <p>c.) You only talk about leaking munitions at the storage igloo. What happens to leaking munitions during transport and at the EDY [sic] unit?</p>	<p>a. and b.) Worker health (safety) impacts can only be determined after the technology has been chosen and an execution plan has been developed. However, any EDT utilized will have a number of hazard analyses conducted specifically with respect to worker safety and have been or will be approved by DDESB for safety with respect to chemical munitions destruction and where applicable, to donor charges.</p> <p>c.) The operations are monitored similar to the primary BGCAPP facility and discovery of any leaker would be handled in a similar manner in</p>

			that upon leak detection, personnel would cease operations, evacuate the area, evaluate the situation and return in appropriate PPE to overpack or otherwise process the item and conduct decontamination activities.
<b>Comment 42:</b> 3-61		What does minority and low-income have to do with the environmental assessment? I take offense to this information. What am I missing here?	As explained in Section 3.1.6 of the EA, an assessment of any “disproportionately high and adverse human health or environmental effects on minority and low-income populations” is a required part of the Army’s compliance with Presidential Executive Order 12898. The analysis in Section 3.1.6 in the EA is therefore included to address the requirements of the Executive Order.
<b>Comment 43:</b> 3-71		The internet says that the Alabama unit used calcium bicarbonate. What is the difference between the 2 chemicals? Why does this SDC make a different waste? Does the water from the DAVINCH and EDS require further treating? If so how is this performed? Where is it disposed of at? What part of the total solid waste for each unit is from the projectiles and bottles? What is the other solid waste?	See responses to comments 16, 17, 19, 18, 34, 38
<b>Comment 44:</b> 3-79		Is the 660,000 pounds of scrap metal (munition parts) going to be recycled? It [sic] not why not?	There are plans to recycle all scrap metal. The scrap metal has to meet all regulatory requirements before it can be recycled.
<b>Comment 45:</b> 3-80		Why isn’t the transportation of secondary waste from the Alabama unit not included? Is there a report on the waste shipped from it?	Records of waste produced by the various EDT units were included in the preparation of the waste estimates included in the EA. Transportation of any waste from the proposed action is governed by Federal, State and local solid waste permits and regulations. The choice of waste management under those laws will be subject to negotiation with regulators, along with several options as to how this may be accomplished, during the permit stage of the selected unit. An example of RCRA waste management from each treatment unit is given on the attachment: Appendix A. The DAVINCH unit is excluded from this attachment since a RCRA permit was never issued.
<b>Comment 46:</b> 3-87		a.) What is the annual amount of diesel fuel and fuel oil used for each unit? What is this diesel fuel running each hour for each EDT unit?	a.) As stated in Section 2.1.3 (page 2-19) of the EA, diesel fuel would be used to power the back-up generators in the event of a power outage. These generators would be tested for short periods on a weekly basis and would only be operated in continuous mode in the event of a power outage for a control shutdown. Based on

		b.) Are the diesel fumes included in the emissions information?	<p>the data in Table 3-21 of the EA, the quantity of diesel fuel to be consumed during the operational lifetime of the proposed EDT facility would be less than 1500 gallons (if the seven EDS units were to be deployed).</p> <p>b.) The diesel emissions were not included in the emissions information in the EA due to their anticipated small and intermittent emitted quantities. Such emissions would be of similar magnitude to the emissions from construction vehicles as discussed in Section 3.1.1.2 (page 3-9) of the EA.</p>
<b>Comment 47:</b> 3-88		You say that the site would become available for other use. Define other use? Does this mean just the land or the EDT unit to? Can I get a copy of the Attachment 9 of the RCRA permit to read the details for the closure of the EDT unit?	The future use of the EDT unit following closure of the BGCAPP site is unknown at this time. The availability of any EDT unit for other use at the Depot following closure of the BGCAPP site would be dependent upon completion of property disposition and transfer. A request for review of the RCRA permit must be made at the BGAD Environmental office. The PEO ACWA NEPA team is not the releasing authority for that document. However, detailed documents for EDT closure will not be developed until after the proposed action is in its final stages.
<b>Comment 48:</b> A-2		Can I get a copy of all the references listed? Can they be made available thru the outreach office?	See attachment: Appendix B which contains a list of the references and their location.
<b>Comment 49:</b> A-3		<p>a.) The SDC says each stack has its own agent monitoring.</p> <p>b.) How many stacks does the SDC have? The EDS words indicate the stack. There are to be 7 EDSs. Does the unit have only one stack or 7?</p> <p>c.) On page ES-1 you said 15,492 mustard-filled munitions. Here in this table a-1 you are showing 15,492 155mm projectiles and approximately 200 overpacked munitions/leakers; 155mm projectiles and 2 DOT 3A transportations [sic] bottles. I am confused as to the number of projectiles. I understand this table to mean that there are approximately 15,692 projectiles and 2 DOT 3A bottles for a total of 15,694 total items. Is this correct?</p>	<p>a.) The SDC unit would have two stacks: a separate process emission stack and a building ventilation stack.</p> <p>b.) Each individual EDS unit would have its own stack; hence, there would be a total of seven stacks if the EDS units were selected for use at the proposed EDT facility.</p> <p>c.) The 200 overpacked munitions are a subset of the 15,492 munitions in the BGAD inventory. Therefore, the total number of items to be treated in the proposed EDT facility is 15,494 (= two DOT bottles plus 15,492 munitions).</p>

<p><b>Comment 50:</b> A-4</p>		<p>For the DAVINCH unit where does the PCB come from? What is the source and can it be eliminated?</p>	<p>The source of the PCBs is from the waste that was treated by the DAVINCH. This data was supplied by the vendor as proof of treatment of this type of waste. Vendors were requested to provide emission rates for all pollutants known to be emitted from their respective system. However, each vendor's units had varying types of waste as feed to their process. No PCBs are expected from the proposed action stated in this EA.</p>
<p><b>Comment 51:</b> A-5</p>		<p>a.) For the DAVINCH unit where does the mercury come from?</p> <p>b.) What is the source and can it be eliminated?</p>	<p>a.) The source of mercury is from the detonators (i.e., explosive components) in the fuzes and bursters that would be destroyed as part of the mustard-filled munitions. Mercury can also be found in some mustard rounds.</p> <p>b.) Information provided by the vendor indicates that the off-gas treatment system of the DAVINCH system is capable of removing more than 99.9 percent of this mercury.</p>
<p><b>Comment 52:</b> General Questions</p>		<p>Other questions that I had as I was reading this environmental assessment that I did not find in it.</p> <p>a.) Why not just move the one in Alabama here and use it? Form [sic] the information on the internet it worked just fine to get rid of their mustard munitions. It would likely save us taxpayers some money I would guess to [sic].</p> <p>b.) What happens with leaking projectiles and bottles at each of the EDT units? Who handles them and what is done with them?</p> <p>c.) Will the explosives to be used with 3 of the 4 EDT units be shipped thru town on the bypass or on highways 421 or on highway 25 or on highway 52?</p> <p>d.) How much explosives are needed for each EDT unit to get rid of all</p>	<p>a.) The Anniston EDT unit is not available. It is currently under contract to perform conventional ammunition destruction operations for the Anniston Defense Ammunition Center (ADMC).</p> <p>b.) Vapor emitting projectiles and bottles regardless of the EDT unit type will be over-packed. Like vapor emitting operations previously performed within the chemical storage area, ammunition workers trained to perform over-pack operations will place the vapor emitting projectile into an approved container. The container is then sealed, monitored, and placed into storage until the over-packed projectile can be processed. The over-packed projectiles are treated in the EDT units without further preparation.</p> <p>c and e): The explosive shipment routes will be similar to those currently used for the transport of conventional ammunition and explosives to and from BGAD and travel will, therefore, be through or near a portion of the town. The final</p>

	<p>these projectiles and bottles? What type of explosive will be used for each EDT unit?</p> <p>e.) Will these explosives be shipped at night thru our community?</p> <p>f.) How much explosives will each semi-truck hold and move thru our community?</p>	<p>configuration for shipping explosives is not yet determined. This information will be gained after a technology is picked and a BGCAPP specific design developed.</p> <p>d) The estimated amount of explosives for each EDT technology to dispose of the entire BGAD mustard inventory is shown below:</p> <p>DAVINCH: 934,047 pounds of explosives  EDS: 180 pounds of explosives  SDC: None -- No explosives are required  TDC: UNKNOWN</p> <p>The types of explosives used by EDT technology is shown below:</p> <p>DAVINCH, EDS, and TDC: Requires both donor and shaped charge explosives  SDC: None required</p> <p>f). The size of the truck, the type of explosive, and Transportation Regulations determine how much explosive each truck can safely transport. Until the EDT technology is selected, the amount of explosives required, if any, is unknown.</p>
	<b>Reviewer: James K. Woosley, Ph.D.</b>	
<b>Comment 53:</b> General Comments:	The EA presents the estimated risk to the public in terms of concentration of criteria pollutants at the BGAD perimeter. These values are stated to be computed conservatively. Do they consider the instantaneous peak concentration for batch operation, or an average concentration based on the operating lifetime of the plant and the mass balance of vapor effluents?	The modeled concentrations of the criteria pollutants were evaluated in accord with the "averaging time" that is associated with the primary or secondary standard for each such pollutant (see Table 3-1 on page 3-5 of the EA). That is, for the 1-hour, 8-hour, and 24-hour periods (see Table 3-4 on page 3-15 of the EA), the peak concentration emitted from each type of EDT unit was used in the calculations. For the annual time period in Table 3-4, an average concentration based on the assumed 9-month operating lifetime was used in the calculations.
<b>Comment 54:</b>	Is the capability of each technology for hold, test, and release of vapor effluents, together with an effective method of secondary treatment of residual agent if detected, captured?	See comment response 14 (d) It is not clear what the commenter means by "... an effective method of secondary treatment of residual agent if detected"
<b>Comment 55:</b>	The EA provides an assessment of the risk due to liquid and solid waste	An evaluation of the vapor risk as described in

		management which demonstrates that the highest-risk technology is acceptable under the regulatory criteria. However, since the vapor effluent risk (both criteria pollutants and potential carcinogenic risk) is assessed for each EDT individually, even though the worst-case EDT meets the stated regulatory requirements, it would seem appropriate to assess the relative risk for the liquid and solid waste management, storage, and transportation individually. Can such an analysis be added to the Environmental Assessment?	the comment was conducted in anticipation of permit requirements that are likely to be imposed by the Commonwealth of Kentucky for the proposed EDT facility. The vapor risk was evaluated separately for each type of EDT unit because each type of unit would generate a different set of emitted compounds (see Appendix A of the EA). In regard to why a similar analysis was not conducted on the wastes from each specific type of EDT unit, the same general categories of waste would be generated by each of the four types of EDT units; hence, a separate evaluation of waste was deemed not to be necessary, and a bounding analysis was instead conducted for the management of those wastes.
		<b>Reviewer: Concerned local Richmond Resident</b>	
<b>Comment 56:</b> General comments		What is the amount of mustard agent that is in the 155 mm M110 projectiles? Jeff Brubaker said that it was 11.5 pounds at the public meeting on July 16, 2013. Wikipedia and the PEO ACWA websites says that the M110 155mm projectile contains 11.7 pounds of sulfur mustard H or HD. Which is correct?	The M110, 155mm projectile contains nominally 11.7 pounds of mustard.
<b>Comment 57:</b>		What is the difference from H and HD mustard? The MSDS is available for HD mustard gas. How can I obtain the MSDS for H mustard gas? Can I obtain the official army MSDSs from each of the Blue Grass agent types from the Outreach Office or can you post them on the PEO ACWA website?	Mustard "HD" represents a refined distilled version of Mustard whereas the lesser refined version is represented as "H". The MSDS distribution is authorized to the Department of Defense and U.S. DoD contractors only. FOIA requests can be made to <a href="http://www.army.mil/article/105181/">http://www.army.mil/article/105181/</a>
<b>Comment 58:</b>		a.) Jeff Brubaker said that DOT bottles contained agent from sampling in the early 80's. Why was this sampling [sic] performed for? How was this sampling performed?  b.) Did anyone get hurt or exposed during this sampling? I remember my dad telling me that a soldier got exposed to mustard at our depot.	a.) The agent contained in the two DOT bottles is stockpile-derived mustard agent collected during an Army's 1980s surveillance program to determine the purity of the agent stored within the munitions. The sampling was performed during a time when the U.S. chemical munitions stockpile was a deterrent during the Cold War era by drilling holes in the projectiles.  b.) On 7 June 1983, an incident occurred at the Drill and Transfer System (DATS) operating at Lexington-Blue Grass Depot Activity (Blue Grass Facility) Richmond, KY, which resulted in the exposure to the finger of an enlisted man (name withheld) assigned to the United States Army Technical Escort Unit (USATEU), APG, MD, on

		<p>c.) From the presentation I took away that no sampling will be performed at the EDT. Is this correct? It sound like that manual intrusive sampling of these projectiles would both present an “unacceptable avoidable risk” to the workforce and would simply be stupid to do it, based on the prior mustard exposure accident at the depot. If you are planning to expose workers to agent sampling, please explain in detail just how you will sample these projectiles and bottles?</p>	<p>temporary duty at LBDA, to agent mustard (H).</p> <p>c.) No agent sampling of the H-agent is required from an environmental perspective. However, agent sampling and analysis will be required to fulfill U.S. Government obligation and requirement to comply with the Chemical Weapons Convention (CWC) Treaty. The details of the munition sampling method to be used to fulfill the CWC Treaty requirements have not yet been determined. These details will be agreed to when the EDT Facility Agreement (FA) is agreed to between the U.S. Government and the OPCW which is the oversight organization for that Treaty. Treaty sampling will most likely be performed within a ventilated glove box conducted under the strictest toxic chemical agent safety standards to ensure that the EDT workforce, the community, and the environment are protected. The number of H projectiles to be sampled will be extremely small.</p>
<b>Comment 59:</b>		<p>The KY CAC/CDCAB wish to have a “Hold-test-release” capability with emissions of any EDT considered for the Blue Grass disposal effort. Please explain and expand on how the “hold-test-release” concept is applied to each of the EDT technologies being considered.</p>	<p>Although a BGCAPP specific design has not been developed yet, not all EDT technologies have been operated with a hold, test and release capability before all waste products are released to the environment. It may be possible for a technology to be redesigned for this purpose.</p> <p>See comment response #14 (d).</p>
<b>Comment 60:</b>	2.1.1.2	<p>States that the TDC unit is used form [sic] both chemical and conventional munitions. The others [sic] EDT units do not state this. Can the other three EDT unit [sic] process both chemical and conventional munitions?</p>	<p>All four EDT units can treat conventional as well as chemical rounds. The use of the EDT units to treat conventional rounds is out of scope for this EA.</p>
<b>Comment 61:</b> 2-12	2.1.1.3	<p>States that the DAVINCH system has previously been given DDEAB [sic] approval for use at Deseret Chemical Depot (DCD) to process selected mustard-filled munitions (DCD 2009); however, the unit was never used due to issues related to schedule. During the July 16<sup>th</sup> presentation it was stated that the TOCDF EDT did not operate due to “EDT permitting issues and other problems”. It was further stated that manual accessing of the projectiles were perform [sic]. The EA reason and the presentation information are in conflict with each other as to why the DAVINCH EDT system at DCD was not used. Please clearly explain, in detail why the DAVINCH was not use [sic]? To address each of the reasons presented (schedule, permitting issues, and other problems). The “other problems” concern me and I would like to know what they are [sic]. How are these</p>	<p>The goal at the TOCDF was to process 300 – plus remaining problematic munitions in the DACVINCH by the original international treaty deadline of April 29, 2012. However, as the deadline approached, the DAVINCH was suffering unexpected delays due to contractual issues, installation, and systemization difficulties. As such, it fell significantly behind its initial schedule. To regain schedule and meet the treaty deadline, a parallel processing plan was put in place to use both the DAVINCH and the TOCDF facility to destroy the remaining</p>

		<p>schedule, permitting issues and other problems going to be avoided here at Richmond if the DAVINCH EDT unit is selected? Would the other three EDT units have singular schedule, permitting issues, and the other problems as the DAVINCH EDT units had at DCD?</p>	<p>problematic munitions. Even though the processing through the TOCDF of the problematic munitions was slow, they found they could meet the treaty deadline using only that process. With continued delays in DAVINCH systemization due to factors such as weather and procedural problems, the TOCDF decided not to use the DAVINCH. Conditions at the BGAD are different than at TOCDF therefore similar issues are not expected with the BGAD operation.</p>
<p><b>Comment 62:</b> 2-23</p>	2.1.6	<p>States that the EDT unit “would be dispositioned [sic] in agreement with the facility’s closure plan. Jeff Brubaker said that there was “no planned re-use at this time” at the public meeting. Crain [sic] William [sic] stated that the EDT would be used by Blue Grass Army Depot proper [sic] for conventional weapons. What are the words in the Battelle-Parsons document for proposal regarding re-use or any subsequent use of the EDT unit? It sounds like there are planes [sic] for re-use of the EDT unit and everyone is using fancy lawyer words to not say it. So stop beating around the bush. Is it or is it not going to be re-used on the depot? I hope so. Will the re-use of the EDT unit eliminate the OBOD demo pit use and stop the clouds of smoke and dirt from being put in our air?</p>	<p>The EA analyzes the environmental impacts of the proposed action from construction to closure. The future use of the EDT unit following closure of the BGCAPP site is unknown at this time. The availability of any EDT unit for other use at the Depot following closure of the BGCAPP site would be dependent upon completion of property disposition and transfer</p>
<p><b>Comment 63:</b> General comment</p>		<p>I have a permitting question. Is the EDT unit going to be permitted solely for chemical weapons? Or is it being permitted for both chemical and conventional weapons? This was unclear from the words in the Blue Grass EDT Environmental Assessment paper and the words spoken at the meeting.</p>	<p>If the NEPA process results in a decision to proceed with the EDT project, the EDT Facility will be environmentally permitted under the Resource Conservation and Recovery Act and the Clean Air Act only for the processing of the 155mm mustard-filled, M110 projectiles (to include overpacked projectiles) and the two DOT bottles. Any other use of the selected EDT would require additional permit actions.”</p>
<p><b>Comment 64:</b></p>		<p>In a past community meeting you discussed processing uncontaminated rocket motors in the EDT and as I recall it was the SDT [sic] 2000 EDT unit. I’m OK with this if there is not nerve gas on them. Are all four of these EDT units capable of processing these motors? Are there any plans [sic] these motors to be processed in the EDT unit?</p>	<p>The processing of rocket motors is out of scope for this EA. There are no known plans for processing rocket motors in the EDT at this time.</p>
<p><b>Comment 65:</b> 3-7</p>	3.1.1.2	<p>During the public meeting the KDEP rep said that there was no airborne pollution particulate matter meter located at the depot and that old modeling data was being used vs. actual air data. EA-3.1.1.2 page 3-7 talks about PM<sub>10</sub> that the KDEP rep was talking about. Is one of these particulate matter meters going to being [sic] installed as part of the EDT unit’s equipment? Why is one not installed at the demo pit? Is one going to be installed at the demo pit or at the depot anywhere to determine how much dust and dirt we are breathing in?</p>	<p>The BGAD environmental office is addressing OB/OD activities through the RCRA Part B Subpart X permit process with KDEP. Specific information on OB/OD operations cannot be answered until permit discussions with KDEP are complete.</p>

<b>Comment 66:</b> General comment		More questions. I likely have more questions that I have not asked yet but have to limit myself to those to meet the July 24 cutoff date. If the date is extended for public comments please post that on your website.	NOTED
		<b>Reviewer: David DeVore</b>	
<b>Comment 67:</b> Intro. to Comments		Thank you for your interest in gathering the requirements from citizens in Madison County, KY upon the impending destruction of the Mustard Agent Problematic Shells. The Richmond Register has done a good job on behalf of AP News/BGCSEPP to keep the public aware of the next steps for the problematic shells that will be [Bypassing] the future expansion project using the water oxidation pressure vessels. I have read the environmental impact reports and do have some questions regarding this report on Thursdays meeting (August 8th, 2013 - ECU CPA ). However, I have a very direct and formal request that I will ask to be a requirement for this to proceed forward in the destruction of these problematic shells.	NOTED
<b>Comment 68:</b> Formal Request 1		Requirement that the public has [7 days] warning of any Chemical [or other major] Munition destroyed outside of the [water oxidation robotic facility]	The PEO ACWA has noted your request. However, a request of this nature cannot be entertained by a NEPA analytical document. This type of request must be directed at the permit holder for the subject action. Please get in contact with the BGAD and or BGCAPP outreach office.
<b>Comment 69:</b> Formal Request 2		<p>- Requirement that a website be provided to describe the following:  Date/Time [ 7 days in advance] of said Munition destroyed [ including type of shell [Standard / Mustard / etc in correlation with the date/time ]  Progress report [ in population count ] of [said problematic mustard shells] vs. [remaining said problematic mustard shells] via public website [ and refreshed in 7 day increments ]</p> <p>I would recommend using a public BGCSEPP website for the above required communications and should take very little overhead to do so. I have contacted the Public Relations office, here at the BG Army depot with my request and left a message and have not received a return phone call on the above. Again, we in Madison County, KY appreciate the information that you are providing to the public and believe this to be a solid/reasonable request prior to moving forward with this specific program. I will be available and make my request noted in the meeting notes via public comment on August 8th, 2013, per news article below. Thank you and you are more than welcome to contact me via email or by phone prior to our meeting.</p>	See comment response #68.
		<b>Reviewer: Blue Grass Army Depot Ammunition Worker</b>	

<b>Comment 70:</b>		The adjacent resolution addresses comments relating to acquisition, technology review/evaluation, and regulatory compliance.	The BGCAPP documentation has been prepared in accordance with all applicable regulations to the Chemical Demilitarization Program. ACWA is an acquisition program but the purchase of individual components such as the EDT is not an acquisition purchase specifically subject to acquisition programmatic controls so no procurement performance reports were generated. The EDT units are similar to the purchase of a heat exchanger or chemical reactor vessel. The PEO ACWA is responsible for the overall acquisition strategy of the entire BGCAPP program, to include EDT. Benefits to BGAD are considered in the decision of the EDT chosen, however the PEO's primary focus is on the BGCAPP chemical demilitarization mission requirements.
<b>Comment 71:</b>		Have all four of these EDT technologies been evaluated in accordance with AR 70-1 (Army Acquisition Policy), DA Pam 70-3 (Army Acquisition Procedure), and DOD Directive 5000.01 (The Defense Acquisition System), and DOD instruction 5000.02 (Operation of the Defense Acquisition System)? If so, who performed the evaluations for each reference?	See comment response #70.
<b>Comment 72:</b>		IAW the above references, have all four of these EDT technologies been evaluated to ensure that each EDT unit; and ultimately the one selected; that it will meet the Army's (and the Depot's) acquisition strategy for future Army use and capabilities?	See comment response #70.
<b>Comment 73:</b>		Has the design for these EDT ammunition demilitarization units been reviewed by the Product Manager for Demilitarization (PM-Demil)?	See comment response #70.
<b>Comment 74:</b>		Where can copies of the above review reports be obtained from [sic]?	See comment response #70.
<b>Comment 75:</b>		Has [sic] these four EDT designs been reviewed to proactively minimize the DODs future demilitarization liability and assuring [sic] complete life cycle management for these EDT systems?	See comment response #70.
<b>Comment 76:</b>		Was a total system approach evaluation performed for each EDT technology? If so, who performed the total system approach evaluations [sic] for each EDT technology? Where can copies of the above evaluation reports be obtained from?	See comment response #70.
<b>Comment 77:</b>		Has [sic] these EDT designs been coordinated through the Demilitarization Technology R&D Program for Conventional Ammunition Energetics, Warheads and Environmental Technology Division, Armaments Engineering and Technology Center, ARDEC?	See comment response #70.

<b>Comment 78:</b>		From the information available within the Environmental Assessment document and of that available on the internet, the EDS and the TDC come in just one size. And it appears that the DAVINCH and SDC come in various sizes. What is the maximum high-explosive capability for each of the four EDT units and for various sizes [sic] units for each type?	See attachment: Appendix C
<b>Comment 79:</b>		If the DAVINCH or SDC is selected, is the size of the unit being evaluated for future Army missions? If so, what organizations performed these evaluations?	The evaluations of the EDT units are carried out by procurement officials only for the purpose of the proposed action in the EA. The future use of any EDT will be evaluated for any new purpose at the end of closure.
<b>Comment 80:</b>		Why hasn't the Joint Munitions Command at the Blue Grass Army Depot had the chance to have input on the EDT units being considered? The JMC has thousands of tons of unserviceable and obsolete ammunition stored in our igloo. How [sic] is looking beyond the initial production contract award to dispose of the chemical stockpile, into post-production to dispose of the Depot's conventional ammunitions with this unit? Why hasn't my organization at the Joint Munitions Command at the Bluegrass [sic] Army Depot had the chance to have input on the EDT units being considered?	See comment response #70.
<b>Comment 81:</b>		Who within the EDT acquisition process has addressed the strategy that must address the PM's total life cycle management responsibility, ending in a consideration of the disposal/demilitarization of the system? Who has coordinated with, in which coordination must occur within the Joint acquisition community when other Services and Joint programs may be affected.	See comment response #70.
<b>Comment 82:</b>		Regarding explosive safety. Has [sic] the three EDT system [sic] that require donor charges coordinated with the PM to establishes [sic] an explosives safety program that ensures that munitions (including insensitive munitions), explosives, and energetic are properly hazard classified and safely developed, manufactured, tested, transported, handled, stored, maintained, demilitarized, and disposed? These program requirements must be in accordance with AR 385-64, Technical Bulletin (TB) 700-2, and other applicable Army and DOD regulations, directives, and standards.	Site planning and safety assessments at BGCAPP with respect to the EDT will be based on past and updated characteristics of the specific EDT chosen and will require approval from US Army Technical Center for Explosives Safety and Department of Defense Explosives Safety Board. As part of that approval process the safety submission is reviewed by personnel at PEO ACWA, BGAD, JMC, then to USATCES and finally to DDESB. This is to assure compliance with Army safety requirements for explosive and chemical agent operations.
		<b>Reviewer: Kentucky Chemical Demilitarization Citizens' Advisory Commission and Kentucky Chemical Destruction Community Advisory Board</b>	
<b>Comment 83:</b> Ex. Sum.	ES-3	a.) CAC/CDCAB points out that the use of the term "significant" in regards to environmental impacts is a term that can be interpreted differently by	a.) It is agreed that the term "significant" can be interpreted differently by different readers.

		<p>government agencies vs. the general public vs. environmental organizations.</p> <p>b.) The CAC/CDCAB also recognizes the existing burden already present in the Central Kentucky environment from other contributors to its general ecological degradation. Thus we approach this action with the focus on limiting negative environmental impact as opposed to simply accepting the “lack of significant environmental effects” as an acceptable standard. This applies multi-fold to potential public health effects. Therefore, we seek clarification on what, in the context of this EA, ACWA considers “significant”.</p>	<p>In concert with general NEPA practice, the term “significant” as used in this EA focuses upon the context, intensity, scale, and magnitude of a potential environmental impact.</p> <p>When used to describe potentially adverse impacts, the term “significant” should generally be interpreted to mean “above levels of concern.” Impacts that are characterized as not being significant would therefore be undetectable or would be sufficiently minor that they would not noticeably alter any important attribute of the resources.</p> <p>No specific or precise metrics exist for determining when a potential environmental impact crosses the threshold of significance. Because the plausible set of activities and range of potential impacts that may be associated with a proposed action (such as the action contemplated in this EA) is so broad, any attempt to develop a quantifiable definition of “significant” that could be applied across all resource categories would be difficult, if not impossible.</p> <p>b.) In regard to existing factors that may have contributed to general ecological degradation, this EA examines the cumulative impacts of the proposed action in conjunction with other past, present and future actions.</p> <p>The phrase “lack of significant adverse environmental effects” is only used in the EA in those sections summarizing the overall conclusions of the document. The potential impacts upon individual environmental resources are documented elsewhere in the EA in regard to whether they would be significant or not, and also as to whether those impacts would be adverse or beneficial.</p>
<p><b>Comment 84:</b> Introduction</p>	<p>1-1 § 1</p>	<p>CAC/CDCAB believe that the simultaneous issuance of a draft FONSI based on the findings within the EA is inappropriate. According to CEQ Regulation 1506, “ A FONSI is a public <u>decision</u> document that briefly describes why the project will not have any significant environmental effect and will not require the preparation of an EIS.” (emphasis added)</p>	<p>The PEO ACWA follows regulatory guidance on the management of developing NEPA documents. The process of releasing the draft FONSI simultaneously with the EA follows CEQ regulation 40 CFR 1508.13. Note: “<i>Finding of no</i></p>

		Until such time as submitted comments are reviewed and responded to by ACWA the inclusion of a draft FONSI at this stage of the NEPA process is not warranted and indicates a decision point has already been reached by the agency.	<i>significant impact</i> means a document by a Federal agency briefly presenting the reasons why an action, not otherwise excluded (§ 1508.4), will not have a significant effect on the human environment and for which an environmental impact statement therefore will not be prepared. It shall include the <u>environmental assessment or a summary of it and shall note any other environmental documents related to it (§ 1501.7(a)(5))</u> . If the assessment is included, the finding need not repeat any of the discussion in the assessment but may incorporate it by reference. All comments received during the public comment period are considered before issuing a Final FONSI. The comment response document will be appended to the EA in its final form.
<b>Comment 85:</b> Overview of Proposed action	1-7 § 1.2	Assuming TDC and EDS are not viable options due to proposal withdrawal and long lead time for fabrication of the necessary units respectively; and, based on RCRA approval timeframes for the remaining two options of between 24-32 months after award; and, based on a projected 38 week operational period plus 20% additional operational time for uncertainties, the CAC/CDCAB believes an award must be made by late 2015 or early 2016 to complete "H" disposal prior to BGCAPP operations, anticipated to begin in early 2020. (Also see page 2-2 § 2.1.1) Please provide the projected timeframe for each incremental milestone identified in this comment.	Incremental milestone dates for procurement and permitting were not a consideration in this EA. This data will be available at the PEO ACWA Field Office once an EDT is chosen and the data is developed for the selected EDT. This information can be reported at CAC meetings once it is available.
<b>Comment 86:</b>	1-8 § 1.2	Identifying the capability of each system to "hold-test-release" (hereafter referred to as HTR) prior to release of the flue gas to the environment, as noted on page 2-12 Para.3, is a critical criteria point for the CAC/CDCAB as consistently identified in the ACWA process since its conception and as reflected throughout the BGCAPP process. Therefore, we request a description, evaluation and comparison of HTR capabilities of each EDT being considered.	See comment response #14(d).
<b>Comment 87:</b> Proposed EDT facility and its assoc. Equip.	2-2§ 2.1.1	<b>Thermal Destruction:</b> Explain the technical difference between "pyrolized by detonation/deflagration and temperatures that exist within the chamber" and "destroyed by combustion". <b>Detonation Technology:</b> "The detonation process destroys both the Mustard agent and the munition's explosive components" is not specific enough. For both, (Note: this is the end of the sentence in the comment)	Combustion requires the presence of oxygen. The process of pyrolysis destroys the mustard agent by the detonation/deflagration of the explosives within the chamber at very high temperatures without oxygen. The explosive energy release consumes the agent.
<b>Comment 88:</b> SCD Chamber Unit	2-3§ 2.1.1.1	Explain how the SDC OTS differs from incineration of any residual agent that might be present post detonation.	Specific sections of the Off-Gas Treatment System (OTS) cannot be discussed at this time. A BGCAPP specific technology has not been designed. The specific technology selected could affect what type of OTS is used on any unit.

<p><b>Comment 89:</b> Sum. of EDT Systems</p>	<p>2-4 Table 2-1</p> <p>2-6</p>	<p>a.) Explain how the SDC validates compliant DRE via continuous emissions.</p> <p>b.) Explain the advantages/disadvantages of a batch process vs. continuous feed.</p> <p>c.) Explain the difference between Thermal Oxidation and Cold-Plasma oxidation.</p> <p>d.) What happens to the agent if a munition fails to detonate, or explosive charge fails to detonate, and “sufficient” energy is not released to destroy the agent? (i.e. duds).</p>	<p>a.) All EDT units validate compliant Destruction Removal Efficiency (DRE) by following the standard for computation of DRE given by KY regulations. The DRE is calculated by measuring the amount of pollutant at the input of the treatment unit and comparing that with emissions released to the atmosphere. Regulated agent removal is measured between carbon banks in the OTS. If any level of agent is detected operations are shut down and the carbon is replaced. SDC in Anniston operated successfully destroying 2,700 problem rounds.</p> <p>b.) It is not understood in what context the commenter is referring to concerning batch or continuous processing. To compare and contrast the advantages and disadvantages of all aspects of both engineering processes without a BGCAPP specific design is beyond the scope of this document.</p> <p>c.) Thermal oxidation takes place on a thin layer of oxide (usually silicon dioxide) on the surface of a wafer. The technique forces an oxidizing agent to diffuse into the wafer at high temperature and react with it.</p> <p>The term <i>cold plasma</i> has been recently used as a convenient descriptor to distinguish the one-atmosphere, near room temperature plasma discharges from other plasmas operating at hundreds or thousands of degrees above ambient temperature.</p> <p>d.) Contingency plans for technology operations will be developed at the time of the EDT selection and design. There are standard explosive ordnance disposal procedures for dealing with failed detonation. Those procedures will be written for the specific EDT chosen. If sufficient energy is not released additional explosives are added and detonated again.</p>
<p><b>Comment 90:</b> DAVINCH</p>	<p>2-11 Figure 2-6</p>	<p>Does the depiction of the dotted line returning post retention tank flow back to the cold plasma Oxidizer represent a HTR capability? What HTR capabilities exist in the EDT’s under consideration? (See also 2-12 Para.</p>	<p>Yes. See comment response #14(d).</p>

		3).	
<b>Comment 91:</b> Waste mgmt	2-20§ 2.1.4	Detail how the “munitions bodies and other metal parts would be treated to remove residual agent”. This seems to conflict with representations made that agents would be destroyed in the respective detonation chambers.	The ultimate destination of any waste will be decided during waste management development. All wastes must be characterized prior to final disposition or disposal. Statements in the EA regarding previous waste handling and waste management activities are used only as a guide for predicting future waste handling practices. Contingency plans for technology operations will be developed at the time of the EDT selection and design.
<b>Comment 92:</b>	2-21 Table 2-2 and 3- 24 Table 3-7	Types of waste common to each EDT System and Process Water Requirements respectively seem in conflict with 3-71 Table 3-16 footnote <i>d</i> . Please explain.	The nature of the conflict in the types of waste is not clearly stated in the comment; hence, no specific response can be offered. Nevertheless, Footnote “d” in Table 3-16 refers only to liquid waste. Also, as explained in Footnote “a” in Table 3-16, neither the SDC unit nor the TDC unit would generate any liquid waste. The details behind the numerical entries in Table 3-16 are further explained on pages 3-73 and 3-74 of the EA for each type of EDT unit.
<b>Comment 93:</b> Surface water	3-24 Table 3-7	If SDC requires annual H2O of 145,000 gal and DAVINCH requires annual H2O of 26,000 gal how is it that SDC has zero liquid waste while DAVINCH has liquid waste requiring permitted disposal?	As explained in Section 3.1.2.3 of the EA (on page 3-24) and as indicated in Footnote “a” in Table 3-16 on page 3-71 of the EA, the SDC unit would not generate any liquid waste, since all process water used by the SDC unit would be exhausted out the stack in the form of water vapor. This is not the case with the DAVINCH unit, which would generate liquid waste.
<b>Comment 94:</b>		What happens to the “miscellaneous liquid wastes, such as fluids containing laboratory wastes, waste oils and solvents” (2-20 § 2.1.4) associated with the SDC EDT? This is a separate question from the process water issue.	All liquid wastes will be properly handled within federal, state and local regulatory and permit guidelines. This pertains to miscellaneous waste, as stated, as well as any process water generated by the treatment process.
<b>Comment 95:</b> Human Health and Safety	3-32 Para 5	Provide emissions rates for the following emissions listed in Appendix A Table A-2 by CAS #: 71-43-2; 108-90-7; 100-41-4; 108-88-3; 75-01-4; 505-60-2; 51207-31-9; 32598-13-3; 31508-00-6; 32598-14-4; 7440-38-2; 7440-43-9; 7439-92-1; and, footnote <i>a</i> – the mercury group	The emission rates vary according to the type of EDT unit being evaluated. The report by ERM, as cited in the reference list for Appendix A of the EA (i.e., ERM 2013), contains a complete listing of all such emission rates for all COPCs that were included in the human health risk assessment for the proposed EDT facility.
<b>Comment 96:</b>	A-6 /A-9 Table A-2	If CAS # 505-60-2, Mustard is indicated not to be emitted from any EDT’s why combine it with BGCAPP operations via √ in the Table. This only serves to confuse the evaluation of COPC’s associated with EDT operations, particularly since, if EDT proceeds there will be zero Mustard	The commenter has misinterpreted the information provided in Table A-2 of the EA. That is, the check marks do not indicate that the COPCs would be emitted by each facility during

		<p>processed in the BGCAPP.</p> <p>For example: CAS# 71-43-2 shows no emission via EDT only, but emitted with EDT and BGCAPP. Yet SDC shows 71-43-2 emitted with BGCAPP while DAVINCH shows no emissions when combined with BGCAPP. Since all 71-43-2 emissions emanate from BGCAPP....DAVINCH combined with BGCAPP MUST emit 71-43-2 at similar levels to SDC. Please explain.</p>	<p>simultaneous operation, but rather that the COPCs were included in the respective human health risk assessments (HHRAs) that were conducted on each facility separately. The check mark for CAS No. 505-60-2 (mustard agent) in the column “Both EDT and BGCAPP” therefore indicates that the COPC was included in each of the two separate HHRAs. No credit was taken in the EA in regard to revising the HHRA results for the BGCAPP to reflect the fact that mustard agent would not be processed in the BGCAPP if the EDT facility were to be constructed and operated.</p> <p>For the purpose of analysis in the HHRAs, a non-zero emission rate was assumed for mustard agent leaving the stack. In accord with the protocol established for each HHRA, the assumed continuous emission rate for mustard agent was set at 20 percent of the vapor screening level, even though the facility would be operated so that no detectable mustard agent would be emitted.</p> <p>For CAS No. 71-43-2 (benzene), the check marks in Table A-2 of the EA indicate that this COPC was included in the emissions evaluated in the HHRA for the BGCAPP, as well as in the HHRA for the proposed EDT facility. However, only the SDC, TDC, and EDS units would be expected to emit this COPC. The DAVINCH unit would not.</p>
<b>Comment 97:</b>	3-42/3-44 § 3.1.3.3	<p>Provide details on ETD’s capability to meet the requirements found in KRS224.50-130(3)(a). <i>“During the occurrence of malfunctions, upsets, or unplanned shutdowns, all quantities of any compound listed in subsection (2) of this section shall be contained, reprocessed or otherwise controlled so as to ensure that the required efficiency is attained prior to any release to the environment”.</i></p>	<p>Details of the requirements of KRS224.50-130(3)(a) can only be demonstrated after a technology is selected and a BGCAPP specific design is developed. All KDEP regulatory requirements will be satisfied while under the RCRA permit.</p>
<b>Comment 98:</b> Waste Generated		<p>Explain the discrepancy between 2-15: <i>“Previous experience with operations of the EDS unit has indicated that the scrap metal from the munition bodies and explosive components coming from the unit would be head-space monitored to the VSL concentration for mustard agent (0.003 mg/m3) and disposed of in a RCRA landfill”;</i> and, 3-72 <i>“.....regardless of which type of EDT unit were to be used in the</i></p>	<p>The text in the comment that references page 2-15 of the EA is describing the Army’s previous experience with the EDS unit, most of which was associated with the treatment of range-recovered rounds. As stated in the EA, The scrap metal resulting from those previous operations was packaged, monitored appropriately, and</p>

		<i>proposed EDT facility, this scrap metal would be shipped off-site to a metals recycling facility for smelting and would, therefore, not be considered to be waste”.</i>	eventually disposed of in a RCRA landfill.  The text in the comment that references page 3-72 of the EA is describing the Army’s intent to recycle all scrap metal generated by whichever EDT unit is selected for use in the proposed EDT facility, However, in the event that the hazardous waste regulations of the Commonwealth of Kentucky, or other federal regulations, prevent the recycling of this scrap metal, then disposal in a RCRA landfill would be considered as an option.
<b>Comment 99:</b>	3-73 Para 1	The 2007 NRC report recommendation for off-site shipment of secondary waste is cited. Missing from this section are the repeated collective statements/positions of both the Colorado and Kentucky CAC’s that every effort should be made to minimize the amount of secondary waste leaving PCAPP/BGCAPP.	The statement/position expressed in the comment is noted.
<b>Comment 100:</b> General Comments		Commenters request a more detailed list of secondary waste generated by what is presumed to be the two EDT’s considered viable for award (SDC and DAVINCH). If felt necessary, include EDS secondary waste descriptions as well.	The information regarding the types and characteristics of secondary waste as presented in the EA are sufficient for the purpose of analyzing potential environmental impacts; nevertheless, examples of RCRA waste characterizations and waste management practices from previous Army EDT operations using the SDC unit, the TDC unit, and the EDS unit can be found at Appendix A of this set of comment responses. Since the DAVINCH was never operational in the United States, it does not have any specific RCRA waste characterization or waste management practice confirmation. However, the waste generation analysis in Section 3.1.8.2 of the EA indicates that the wastes from the DAVINCH unit would be similar to those identified in Appendix A.
<b>Comment 101:</b>		Commenters have requested to be involved in developing the criteria around which an EDT would be selected. That has not happened. We repeat that request here.	The criteria for technology selection are performance based under a performance based contract with the Bechtel Parsons Blue Grass Joint Venture. Procurement regulations preclude any extra participation in this process.
<b>Comment 102:</b>		Commenters recommend CAC/CDCAB be provided the opportunity to appoint no less than 2 nor more than 4 of it’s voting members to participate in the procurement process after signing the appropriate confidentiality agreements associated with the process. This would replicate the Citizens Advisory Technical Team (CATT) associated with the original ACWA (Assembled Chemical Weapons Assessment) process.	The procurement process is not available to those who have not been designated as procurement officials to protect the bidding process. The original ACWA association with the CATT was to facilitate a programmatic public participation process that cannot be replicated in

			the procurement process.
<b>Comment 103:</b>		Commenters assume any consideration of EDT processing of contaminated rocket motors would require a separate EA/FONSI. Please clarify.	The processing of rocket motors is out of scope for this EA. There are no known plans for processing rocket motors in the EDT at this time.
<b>Comment 104:</b>		Commenters assume that the EDT's under consideration would be used for overpacked "H" munitions as well as non-overpacked. Please clarify.	As explained in the final paragraph of Section 1.1 of the EA (see page 1-7), the proposed action would destroy the non-overpacked mustard-filled 155mm projectiles, as well as the overpacked 155mm projectiles and the two DOT bottles.