

## Pueblo Chemical Depot April 2012 EDT EA Public Comments and ACWA Responses

Note: Comments were taken verbatim from the correspondence that was received.

The EA acronym list is provided at the end of this document.

### 1. Bruce Pringle

- a. Re the Draft FONSI: In the "Proposed Action" section you mention there are three separate commercial vendors. Then you go on to mention that these vendors are the SDC, TDC, and DAVINCH. These three are EDT Systems not commercial vendors. If it is important enough to mention commercial vendors then why not tell us who they are?  
**ACWA Response:** The names of the vendors can be found in the following sections of the EA: 2.1.1.1 SDC vendor is Dynasafe AB, 2.1.1.2 TDC vendor is CH2M Hill, and 2.1.1.3 DAVINCH vendor is Kobe Steel.
- b. In the "Determination" section you mention a fourth EDT System, i.e., EDS. In the "Proposed Action" only three EDT Systems warrant mention yet for some unknown reason you throw in a fourth. Why?  
**ACWA Response:** The EDS system appears in section 2 "Proposed Action". This EA includes all four systems under the term EDT, to include EDS. The EDS is treated exactly the same as the other EDT units in its analysis.
- c. In the EA at Page 2-1 (2nd para up from page bottom) you mention that the EDT(s) would help achieve dates specified in Public Law and the International Treaty. Have new PL dates been promulgated and/or have new Treaty dates been negotiated? If so what are they? I seem to recall that for all practical purposes these dates will be missed regardless of what the Army does to speed ACWA along. If my recollection is correct then the statement is off mark and should be modified.  
**ACWA Response:** The extended CWC deadline of 29 April 2012 has passed and there are no plans to negotiate a further extension to the CWC deadline. As to the Public Law, the December 31, 2017 deadline originally established by legislation in 2008 was reaffirmed last year by Public Law 111-383. The U.S. remains committed, however, to destroying its entire Chemical Weapons stockpile in the most expeditious manner practicable, consistent with its statutory and CWC obligations; assigning the highest priority to ensuring the safety of people, to protecting the environment, and to destroying CW, in accordance with national standards for safety and emissions. The ACWA is doing all it can to comply with Pub. L. 110-181, div. A, title IX, § 922, Jan. 28, 2008, 122 Stat. 282, as amended by Pub. L. 111-383, div. A, title XIV, § 1421(b)(10), Jan. 7, 2011, 124 Stat. 4420, "(b) Sense of Congress.—It is the sense of Congress that— (1) the United States is, and must remain, committed to making every effort to safely dispose of its entire chemical weapons stockpile by April 2012, the current destruction deadline provided under the Chemical Weapons Convention, or as soon thereafter as possible, and must carry out all of its other obligations under the Convention." "While our current schedule suggests that we will not meet the December 2017 deadline, the employment of EDT certainly suggests that we would complete destruction of the Pueblo stockpile sooner than we would without EDT, thereby drawing our actual completion date back closer to both the expired CWC deadline and the 2017 public law deadline.
- d. It is particularly unclear to me how Page 1-5 of the EA can draw on the 2002 EIS ROD (10 years old) for any basis for decision weighting in 2012 and by default this draft document. Based on the 10-year passage of time (and the clock is still ticking) and all that that involves in terms of new knowledge gained, I believe the EIS should have been thoroughly reassessed and a new decision document issued. Certainly the reason for not doing such an in depth review should be addressed and adequately supported. Stating that PCAPP cannot do the job it was designed to do is not really a sufficient basis to try and avoid the associated rigors of full, contemporary,

and timely NEPA compliance. This EA seems to me to be a mechanism to avoid ensuring the original decision is not questioned rather than strictly following NEPA requirements (process and procedure). Clearly the basis of the ROD is suspect now given the project's significant change in course, its age, and counterpoints the successes achieved at sites that no longer store agent (all except PCD and BG) can obviously be made. My thinking is that the interests of the Government and taxpayers are not being adequately protected from legal action if that were to occur. Surely these NEPA documents can be bolstered to better ensure a positive outcome if legal action was initiated. Recognizing that PCD locals are not likely to initiate such legal action and the Kentucky contingent have gained what they desired does not preclude the Government from what I suspect is not full NEPA compliance.

**ACWA Response:** This Supplemental EA and NEPA process is complete, contemporary and timely concerning NEPA compliance. Note the following:

- i. The March 2002 PCD FEIS stated, "Agent-contaminated energetics would be destroyed on-site using either a blast chamber or a deactivation furnace. A decision regarding the use of a blast chamber, such as the Donovan Chamber, or a deactivation furnace system is expected to be made after all evaluations are completed. "Response to Comment TI-5, Appendix K, K-48. The evaluation of EDT is the subject of the evaluations stated in the above reference.
- ii. The 2010 Record of Environmental Consideration (REC), "hard look" at ACWA NEPA documentation discussed the use of, "some form of explosive destruction technology (EDT) for leakers, rejects and other problem munitions." MFR, REC Background, 24 Aug 10, [Review of NEPA Documentation](#). Also section 4 of the above referenced document states, "There are no substantial changes in the proposed action that are relevant to environmental concerns." And, "EDT options are being evaluated at this time, to include environmental effects, which will be documented in appropriate NEPA documentation."
- iii. The EDT operation at PCAPP will treat approximately 1.7% of the stockpile at PCD.

## 2. **Margaret Barber, President Citizens for Clean Air and Water in Pueblo/Southern Colorado**

On behalf of Citizens for Clean Air and Water in Pueblo/Southern Colorado, I respectfully request that a 30-day extension be granted for submission of public comment. The health risk assessment alone is over 800 pages long and requires careful reading and analysis. Expecting ordinary citizens to be able to do this in a few days' time in addition to their regular jobs is unrealistic. Even a minimum 60-day comment period barely allows time to read and evaluate the document. One cannot evaluate the EA alone; data that is relevant to the EA is included in the MPHRA but not the EA, and must be cross-referenced by the reader in order to understand the implications of the conclusions of the EA. In an environmental justice community in which Internet access cannot be assumed, the printing out and circulation of over 1000 pages of assessment documents in hard copy, plus the time for reading them, takes far longer time than a 30-day comment period allows. If you genuinely wish to have public comment on these documents, you must allow for conditions (such as adequate time) that make it possible for people to provide it.

**ACWA Response:** Public Comment period was extended 30 additional days to June 7, 2012.

### 3. Southernguy@cox.net

You state that the public comment period is from April 9 through May 8, 2012. According to the National Contingency Plan (NCP), the public is to be provided a "minimum of 30 days to comment". It appears you have only provided 29 days.

The NCP states as follows: 40 CFR 300.7 Computation of time. "In computing any period of time . . . the day of the event from which the designated period begins to run shall not be included." If April 9 is not included in the computation of time, there are only 29 days provided for public comment, a clear violation of the NCP.

**ACWA Response:** The National Environmental Policy Act regulations for the US Army are spelled out in 32 CFR 651 where the 30-day comment period begins with the public notice in local news outlets. See 32 CFR 651.14 (b) (2) (ii): "...The 30-day waiting period begins at the time that the draft FNSI is publicized (40 CFR 1506.6(b))." The NEPA is not governed by NCP regulations. Also, the public comment period was extended 30 additional days to June 7, 2012.

### 4. Daniel Hobbs

I reviewed sections 3.1.5.5 and 3.1.5.6 on Agriculture and Cumulative effects and I am very concerned that the treatment of Agriculture is wholly inadequate. The question of public perception is a real one. In the past weapons have been stored, now with a new project (exploding munitions) it is a different set of circumstances and will no doubt be scrutinized by the public. With the incredible level of growth in demand for local and organic food, consumers are more concerned than ever about the safety of their food. I respectfully request that the Dept. Of Army withdraw the proposal to explode munitions & energetics. I believe my customer base (people in Pueblo and Colorado Springs) would negatively react to the integrity of my produce, whether through actual and detectable contamination of the food supply or having concern of potential contamination. This proposal to employ EDT is unacceptable and certainly has done an inadequate job of addressing impacts on local agriculture.

**ACWA Response:** EDT is a contained process where emissions are controlled by a pollution abatement system (PAS). It is not open burning/open detonation where the emissions do not go through a PAS. An additional level of analysis of the surrounding organic and other farmlands near PCD above and beyond what would normally be done in an EA was done in this EA because of the level of interest in the local community. Please see Section 3.1.3.1 of the 2012 MPHRA for the analysis of the potential risks at the locations of organic and other farmlands near the PCD. As part of the MPHRA, an Uncertainty Analysis of Risk Characterization was done. This analysis looks at uncertainties in the analysis that may cause the results to be more or less conservative than they actually are. The uncertainty analysis showed that the uncertainties identified in the Uncertainty Analysis of Risk Characterization caused either an overestimation of risk or was insignificant. In other words, the actual results will most likely be even lower than those shown in the MPHRA, which were not significant. As stated in Section 3.1.5.5, the PCD has been storing chemical weapons since the 1970's. Since then, the market value of agriculture products has increased in Pueblo County (See Table 3-12). Destroying the chemical weapons stored at PCD once and for all in a safe and environmentally responsible way and is a positive step for farmers and the local community as a whole.

## 5. Dan Sandoval

I am concerned about your instrumentation that will be monitoring all (safty) [*sic*] factors and the total (enviourment) [*sic*] are your test instruments (caibrated) [*sic*] (certified) and if yes too what level of standards and [traceable] to the National Bureau of standards?

**ACWA Response:** All instrumentation used to monitor safety and environmental factors are subject to permitting requirements which comply with all federal, state and local standards and conditions.

## 6. U.S. EPA Region 8 (EPA)

- a. **Ecological Risk Assessment:** We suggest that Section 3.1.4.3, Ecological Risk Assessment, could be strengthened by providing the soil concentrations for metals found in the MPHRA Appendices C-F, and comparing these values to available PCD background values. Based upon what we know about background concentrations in general, the modeled soil concentrations appear to be an insignificant percent of these values. This information could help support the EA's conclusion of negligible risk to terrestrial resources.

**ACWA Response:** While soil concentration values were predicted/estimated in the MPHRA's computational methodology, the end point of the calculations was the potential impact to human health (and not any numerical value of soil concentration). As noted in the comment, the soil concentration values are on display and available in Appendices C through F of the MPHRA. However, a review of the document, FINAL SITWIDE BACKGROUND DATA SET FOR SOILS, Pueblo Chemical Depot, Pueblo, Colorado June 1997, finds several differences in data and sampling protocol that will prevent a meaningful comparison of soil data with the MPHRA soil deposition model.

- b. **Waste Management Issues:** The EPA noted concerns with the very limited waste characterization discussion of the 2010 EA, and this issue continues to be a concern in the current version of the EA. Without a discussion of the potential waste remaining after destruction of munitions in each of the EDT systems, it is difficult to determine the significance of potential impacts (direct and cumulative). Although thorough discussions of amount of waste (pounds and gallons) and transportation issues associated with any offsite waste disposal have been provided, the fundamental questions regarding types of waste remaining after EDT operation are unanswered. Given that this data is also necessary for RCRA permitting of treatment and waste disposal, we recommend detailed information be provided, to the extent possible, regarding the types and amounts of hazardous and other waste generated from EDT treatment and disposal operations.

**ACWA Response:** Under "Waste Management Issues," the approach taken in the EA was a "bounding analysis" that examined the extent and magnitude of any impacts associated with the EDT wastes, including the cumulative impacts of such wastes in combination with the waste from the PCAPP and from the PCD. Examples of RCRA waste characterizations and waste management practices from previous Army EDT operations using SDC, TDC, and EDS can be found at Appendix A. 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 it would be similar to those identified in [Appendix A](#).

- c. **More significant typographical errors:** While the intention of our review was not to point out all typographical errors, we do want to draw your attention to those that are more significant and should be corrected to ensure results are not misleading and/or confusing for the reader.

**ACWA Response:** Under "More Significant Typographical Errors," there is no typographical error associated with the discussion in the EA regarding the analysis of dust generated by the disturbance of the area under construction. That is, the text on EA page 3-7 specifically refers to the analysis that was conducted for the 2002 EIS (in which a total of 30 acres was assumed

to be simultaneously disturbed during the construction of the PCAPP). The text on EA page 3-8 describes the analysis undertaken for this EA, in which a total of 25 acres (upper bound) was assumed to be disturbed during the construction of the proposed EDT facility. We regret any confusion the discussion on EA pages 3-7 and 3-8 has created, but the text in the EA is accurate as written.

- d. **MPHRA:** In addition, on page 3-30 of the EA discussion regarding the MPHRA, the section titled "2012 MPHRA for the EDT Units" references the Agency for Toxic Substances and Disease Registry's oral reference dose for dioxin. However, the MPHRA document references EPA's Integrated Risk Information System (IRIS) for the dioxin oral reference dose. For disclosure purposes, please insure that the EA is consistent internally and that the EA and MPHRA are consistent with respect to the dioxin reference dose utilized for this analysis.

**ACWA Response:** The comment notes an apparent discrepancy between the statements on page 3-30 in the EA and those in the MPHRA regarding the use of the ATSDR oral reference dose for dioxin. The existing statements in the first bullet on EA page 3-30 are, in fact, in agreement with those in MPHRA Table 1-1 (on MPHRA page 8; Rev.1, March 15, 2012). See the second row from the bottom of MPHRA Table 1-1. According to this table in the MPHRA, the ATSDR oral reference dose data for dioxins (PCDD/PCDF) are specifically mentioned and included in the MPHRA's method for characterizing risk and hazard.

## 7. State of CO

- a. **No-action alternative.** This section states maintaining inventory on site presents a continuing "low risk." Colorado notes that not all the potential accident scenarios are low-risk. Failure to address the leaking, unstable, and over-packed munitions means that the most potentially dangerous materials remain on-site indefinitely.

**ACWA Response:** The observations offered in the comment are noted. That is, the no-action alternative of continuing to store the leaking, unstable, and overpacked munitions is not without risk, and the need to dispose of these items will eventually become urgent. The continuing "low risk" is due to surveillance programs that the Army has instituted to monitor the conditions of the stockpile. Although the actual risk (hazard and probability) may be low due to surveillance programs, the actual consequences of a failure to address a leaking munition could be high. The no-action alternative would not be desirable from the perspective of the continued risk it would entail. The Army notes that the implementation of the proposed destruction actions in an EDT facility (as described in the EA) will fully address the issue raised in the comment.

- b. **Colorado Lead Standard.** The Colorado lead standard of  $1.5\mu\text{g}/\text{m}^3$  for a one-month average has been abolished, because the new federal lead standard is much lower.

**ACWA Response:** The information offered in the comment regarding the abolition of the Colorado standard for lead emissions is appreciated. As noted in EA Table 3-1, the current NAAQS level for lead emissions is  $0.15\mu\text{g}/\text{m}^3$ . As described in Tables 3.4 and 3.5 in the EA, lead emissions from the proposed EDT facility were evaluated to be substantially less than the NAAQS level.

- c. **PM<sub>10</sub>NAAQS in Pueblo.** Page 3-5 states that concentrations in Pueblo have been "well below the NAAQS". This is no longer true, as there have been recent PM<sub>10</sub> exceedances measured in and around Pueblo.

**ACWA Response:** The commenter did not provide any specific data concerning PM<sub>10</sub> exceedances and neither could ACWA find any data on PM<sub>10</sub> exceedances in the Pueblo area upon which to further analyze air quality. This EA used the information available on the EPA's AirData web site (including data posted to date for calendar year 2012) which does indicate that monitors have measured high values for PM<sub>10</sub> in the city of Pueblo, but no exceedances of the NAAQS are indicated. Notwithstanding any exceedances, the regulatory permitting

required by any EDT will be able to adequately ensure that the EDT will not adversely impact PM<sub>10</sub> levels for the local area.

- d. **NO<sub>2</sub> Impact of TDC Device.** The TDC unit has an impact of 27% of the one-hour NAAQS for NO<sub>2</sub> (page 3-13). If estimates of existing background levels are added, this impact become 69% of the NAAQS (page 3-14). Section 4.1.2 states that this is a “negligible” impact. Colorado does not agree. A single source that consumes over a quarter of the standard is a large source.

**ACWA Response:** The analysis of predicted NO<sub>2</sub> emissions from the TDC unit indicates that no exceedances of the NAAQS would occur at the maximally impacted location. The NAAQS levels were used in the EA to determine the threshold for significance; hence, no significant impact would occur. As noted in the comment, Section 4.1.2 does include the phrase “would produce negligible impacts on the ambient air quality.” The authors of the EA regret the confusion created by the use of the word “negligible” when the actual intent was to communicate the lack of significance. The analysis in the EA shows that the NO<sub>2</sub> impact of the TDC is adverse but less than significant.

- e. **Noise Impact of TDC.** The analysis states that the impact of the TDC device is 56 decibels at the site border and 52 decibels at the nearest residence (page 3-65). The noise “may slightly exceed such limits at the nearest PCD boundary” (page 3-66). The impact of the EDS is expected to be similar. An off-site impact of 56 decibels violates that Colorado Noise standard. An impact just below the standard, at a residential location, is not acceptable for a 12-hour/day project. The state does not agree with the statement that there will be “no significant impact from noise” (page 4-9). These proposed impacts would need to be mitigated.

**ACWA Response:** The noise impacts will be mitigated to a level less than applicable noise standards. The numerical sound levels presented in the EA were based on standardized acoustic modeling of the noise data provided by the respective EDT vendors. The text on p. 3-65 of the EA describes how the presence of the environmental protective structure around each EDT unit would be expected to dampen the noise emanating from the EDT units; however, no credit was taken in the noise analysis in the EA for any such dampening. The EA could have been clearer on this point. The environmental protective structure would be expected to contribute to the type of mitigation mentioned in the comment. The actual sound measurements to be taken during the actual operation of the EDT facility would be able to confirm or refute the sound levels predicted in the EA. Appropriate mitigation measures could be identified and implemented at that time, as necessary. In addition, Colorado Noise Statute 25-12-103 states that “between 7 am and 7 pm, the noise levels permitted may be increased by 10 dB (A) for a period of not to exceed 15 minutes in any 1-hour period”. The proposed EDT facility would be operated within this time window. Potential sound levels close to any State standard will be managed so they will not exceed any standard level.

- f. **MPHRA Table 5-3, Page 57.** The table heading, “Annual Water Body Air concentration” does not look correct.

**ACWA Response:** The heading in MPHRA Table 5-3 is intended to convey the airborne concentration that would exist above the location of the maximally impacted water body. This airborne concentration is then used in calculations involving deposition onto that water body and the subsequent mixing and propagation of the substance in question through the waterborne pathways and exposure scenarios that were used to determine potential human health impacts. The heading is therefore correct as written; however, a different phrase could have been used to convey the meaning more accurately, such as “Annual Air Concentration Above Water Body”.

## 8. Colorado Chemical Demilitarization Citizens' Advisory Commission (CAC)

- a. The CO CAC continues to maintain that a Supplemental Environmental Impact Statement (SEIS) is a more appropriate document to analyze the need for an EDS/EDT rather than the EA. The contemplated project is separate from the PCAPP facility and will have little in common with PCAPP facility and will have little in common with PCAPP with the exception of common utilities. The use of EDT/EDS is for the completion of the PCAPP project as outlined in the 2010 Final EIS.

**ACWA Response:** The determining factors in selecting the appropriate level of NEPA analysis hinge on the type of action proposed and the anticipated significance of the environmental effects associated with the action. See 40 CFR 651.27 Programmatic NEPA analyses. "These analyses, in the form of an EA or EIS, are useful to examine impacts of actions that are similar in nature or broad in scope. These documents allow the "tiering" of future NEPA documentation in cases where future decisions or unknown future conditions preclude complete NEPA analyses in one step." Also, See 40 CFR 651.12 (a)(4) "If the proposed action is not covered adequately in any existing EA or EIS, or is of a significantly larger scope than that described in the existing document, an EA is prepared, followed by either a FNSI or Notice Of Intent to prepare an EIS." The analysis in this EA is sufficient to draw the conclusion the proposed action does not have a significant impact therefore the appropriate determination is a Finding of No Significant Impact. See response to Sierra Club comment d.

- b. Since the ACWA program believes that the use of an EDT/EDS is a separate action as witnessed by the use of an EA and not a SEIS, the CO CAC would like written assurance that the EDT/EDS facility is covered by the Congressional language that requires the removal of all facilities that would come in contact with chemical agent.

**ACWA Response:** As discussed in Sections 2.1.6 and 4.1.1.6 in the EA, the current plans are to dismantle, decommission and close the EDT facility upon the completion of its mission to process problematic munitions and energetic components at the PCD. The National Defense Authorization Act for Fiscal Year 2000 (Public Law 106-65) amends Public Law 99-145 to limit the use of destruction facilities solely for the purpose of destroying the chemical stockpile where each facility is located. Upon completion of stockpile destruction, the facilities will be closed in accordance with applicable laws, regulations and mutual agreements between the Secretary of the Army and the governor of the state in which the facility is located. Any repurposing of buildings not involved in actual chemical demilitarization operations would be discussed as part of these mutual agreements. When each chemical weapons disposal facility completes its mission of safely destroying chemical munitions, it begins the process of plant closure in which the physical plant and equipment are decontaminated and decommissioned. During this closure phase, the property is restored to environmental standards that were set in the facility's original environmental permit. Depending on the needs of the U.S. Army, when some or all of the land meets regulatory standards for decontamination and cleanup, the site may be retained and restored to its natural condition, transferred to another federal government agency or transferred to local government or the private sector for reuse through the Base Realignment and Closure (BRAC) process.

- c. The CO CAC would like an explanation as to why and how the four technologies were chosen as the only technologies under consideration in the EA. Do these four technologies represent the total universe of viable technologies that could be used at PCD?

**ACWA Response:** The CEQ regulations require a proponent to consider reasonable alternatives, not the total universe of viable alternatives that would fulfill its purpose and need for the proposed action. Reasonable alternatives include those which are practical or feasible from a technical and economic standpoint, support the underlying purpose of and need for the proposed action, and are "ripe" for decision. These four technologies were determined by ACWA to be the reasonable alternatives for this proposed action using factors such as time constraints and proven technology that would safely destroy the munitions. See section 2.3 of the EA for the discussion on alternatives to the proposed action.

- d. The draft FONSI postpones any decision on the specific technology that will be used at Pueblo and merely states that the use of any of the four technologies will not have an adverse environmental impact. There is no information on: what process will be used to select the specific technology; who will select the technology; what criteria will be used for technology selection. Will the CO CAC and other stakeholders have any input into the selection criteria selection or will all decisions be made under the secrecy of the federal procurement process?  
**ACWA Response:** ACWA's mission is the safe and environmentally sound destruction of the chemical weapons stockpiles stored at Blue Grass Army Depot, Kentucky and US Army Pueblo Chemical Depot, Colorado. The SC will make the decision of which EDT to use based on the requirements of its performance-based contract. This decision is subject to approval by ACWA in accordance with Federal Acquisition Regulations. The government will provide the contractor with local stakeholder input to be considered in the decision. The CO CAC will provide stakeholder input to the government. This input was submitted to the ACWA Program Executive Officer (PEO) on June 27<sup>th</sup>, 2012 and has been provided to the SC for consideration into their solicitation.
- e. In reviewing the content of the EA concerning the technologies, very little information has been provided about the type of wastes that will remain following the destruction of the munitions. It is insufficient to merely state how much waste will remain.  
**ACWA Response:** The NEPA process is a decision making tool and is done early in the proposed action's schedule. Available data is used for the NEPA analysis. In some cases, not all the information is available or known yet. The three commercial EDT vendors and the Army for the EDS provided all the available information on the types of waste that they have and this is what was used in the EA. Section 2.1.4 in the EA describes the fate of the wastes associated with the construction and operation of the proposed EDT facility. Construction wastes would be transferred to a waste management vendor for off-site management or disposal. Wastes generated during operations would be appropriately characterized and containerized. Section 3.1.8 in the EA provides additional information about the types of wastes, including both solid and liquid wastes, as well as their management and disposition. All hazardous wastes would be shipped off-site as described in Section 3.1.8.4. Historically, the Army's treated munitions bodies in EDT units (EDS, TDC, and SDC) have been sent to nonhazardous waste landfills governed by RCRA sub title D or sent to recycling facilities under RCRA recycling rules. The EDT waste that was similar to the PCD stockpile has been disposed of without the application of RCRA waste codes. See response to EPA Region 8's comment b.

## 9. Sierra Club

- a. The EA fails to describe fully and accurately the decisions to be made.
- i. EA improperly describes the purpose and need for the proposed action.  
**ACWA Response:** The statement of purpose and need for the proposed action is properly given in Section 1.3 of the EA.
- ii. EA improperly defines the proposed action itself.  
**ACWA Response:** The proposed action is accurately described in Sections 1.2 and 2.1 in the EA.
- iii. EA fails to describe and analyze potentially viable alternatives adequately.  
**ACWA Response:** In order to understand the potential viable alternatives, a further discussion of the purpose and need is required. As stated in the EA, "The purpose of the proposed action is to provide for the destruction of the problematic chemical munitions and provide operational flexibility for the destruction of the explosive components currently being stored at the PCD by augmenting the planned chemical agent destruction capabilities of the PCAPP." Two key aspects of this purpose are the "destruction of the problematic chemical munitions" and "destruction of explosive

components.” Any viable alternative would need to address those two items. To address the destruction of the chemical munitions, this would require destruction of the agent, energetics, and decontamination of the metal parts. There are a number of potential options for gaining access to the material inside, however, accessing alone does not satisfy the stated purpose of destruction. The destruction therefore would need to occur via existing plant capabilities or through the stated alternatives. While there are agent destruction capabilities within the plant, they are integrated with a particular piece of equipment that would not support munitions accessed through other means. It would require an extensive redesign of the plant that is not sized to accept this level of redesign. This also would not account for the energetic components that, if contaminated, would be required to be processed on-site. There are no existing capabilities to process energetics within the plant and this becomes an even bigger redesign effort if treatment is performed in the plant. Treatment of energetics requires appropriate facility structure to protect against the effects of blasts in the event that the energetics explode. There is very limited space within the plant where there is that level of protection and currently no available space to put any additional destruction systems within that area. Thus when looking at an alternative that meets these aspects of the purpose and need, there is a need for a total solution. That is, a system that can not only access the agent and energetics, but also destroy those items as well. The EDT provides that total solution whereas alternative accessing methods do not. Specifically in the EA, the alternatives to the proposed action alternative are identified and addressed in Section 2.3. The potential alternatives identified in Section 2.3 were dismissed from detailed evaluation, in part, because of their inability to satisfy the stated purpose and need for action. Any method that is introduced into the plant would have to be compatible with the other processes to completely destroy the munition. It was determined that no viable alternatives to the proposed action existed that did not require additional integration with the plant requiring significant modification and build out of the plant. Section 2.3 has a list of constraints pertinent to potential alternatives. Several technologies that have been assessed over the life cycle of the ACWA program for their viability of destroying chemical weapons were considered. None of these technologies are total solutions, and all would require further treatment at the PCAPP which would introduce potential safety, programmatic and environmental risks because of the need to modify, develop, or construct new processes, facilities and handling procedures for these anticipated feeds. For example, the other potential alternatives would require the addition of explosive destruction capabilities that currently do not exist within PCAPP. These other potential alternatives to the proposed action were determined not to be viable alternatives and were not further evaluated in this EA. See response to Sierra Club comment d,i.

- iv. The real decision the Army is making is which EDT to use. That decision is explicitly and unlawfully excluded from consideration in this EA.

**ACWA Response:** The proposed action is not to select an EDT to use. See section 2.1 “However, it is not the intent of this EA to identify or select the “best” system from among the four types of EDT systems being evaluated in this EA.” The decision to be made is whether or not to use an EDT at PCD (see Section 1.2 of the EA). This current EA analyzes whether the use of EDT at the PCD would create any significant environmental impacts. As shown in the current EA, none of the four EDTs being considered to accomplish the purpose and need would have significant environmental impacts. If the decision is made to use an EDT at PCD, no additional NEPA documentation will be done on the selected EDT because the NEPA process has

already been completed for this action. The decision on which type of EDT unit to deploy would be based on considerations not limited to environmental concerns. The SC will make the decision of which EDT to use based on the requirements of its performance-based contract. This decision is subject to approval by ACWA in accordance with Federal Acquisition Regulations.

- v. The decision to proceed with EDT was made long ago, without NEPA review.  
**ACWA Response:** Section 3.3.3.1 in the 2002 FEIS discussed the possible use of a “blast chamber” to destroy the energetic components of any munitions that are found to be leaking or that are identified as “rejects” in regard to their inability to be processed through the PCAPP. The proposed use of EDT, as currently envisioned in the EA, is a logical follow on to the statements made in the 2002 FEIS. The Army has been aware of the issue of the damaged and overpacked rounds for some time and has been open and forthright about discussing this issue and solutions with the CO CAC on numerous occasions. Discussion of a solution does not constitute a decision. No irretrievable commitment of resources has been made.
- vi. Other methods to destroy the problem rounds or opening them to allow access to the agent so they can be processed at the “PBCDF” have never been fully described.  
**ACWA Response:** (Note: We assume the commenter is referring to PCAPP not the Pine Bluff Chemical Disposal Facility (PBCDF) which was in Arkansas.) The alternatives to the proposed action are identified and described in Section 2.3 in the EA. None of these alternatives were considered to be viable options because they do not meet the purpose and need. As explained in detail in the response to Sierra Club comment a.iii, any viable alternative would need to not only access the energetics and agent, but then be able to destroy these components. This requires equipment and a location protected against the possibility of explosions. There is limited space within the PCAPP that this could be accommodated and it would not be practical to try and incorporate this into the existing facility as it would require major deconstruction and reconstruction of reinforced concrete structures. The only viable approach is a system that can perform those functions outside the main plant. In doing so, however, this system must be self contained and able to process a whole munition or energetic components within it. This can be accommodated through the use of an EDT. While there is construction associated with each of the EDTs, it is relatively minor as all these systems are modular and only require a basic infrastructure to include a foundation and a temporary enclosure.
- vii. The real decision is to decide among a reasonable range of available methods and describe why one method was chosen over others. The Army attempts to obscure this decision by asserting that it is not the intention to identify or choose the best unit but to assess the potential environmental impacts for a proposed EDT that would be operated with any of these four types of EDT units.  
**ACWA Response:** The decision on which type of EDT unit to deploy belongs to the SC because of the performance based nature of its contract with the Government and would be based on considerations not limited to environmental concerns. The NEPA process is used to assess environmental impact. It is also used to aid in public disclosure and involvement and the agency’s decision making process, which in this case is limited to either approving or disapproving the contractor’s proposed subcontract.
- viii. The EA treats these differing EDT units as a single problem stating all the units have no significant environmental impact without any convincing evidence.  
**ACWA Response:** The analyses and findings in Chapter 3 in the EA support the conclusion that any one of the four types of EDT units could be deployed for use at the

PCD without causing any significant environmental impacts. Where differences exist between the EDT units and/or their potential impacts, such differences are noted in the analyses in Chapter 3. The EDT units are not treated as problems, single or otherwise, in the EA. They are presented as solutions to our purpose and need.

- ix. The EA presents the EDT as the only alternative to no action – which would be illegal.  
**ACWA Response:** The NEPA regulations require identification and description of the range of reasonable alternatives to accomplish the purpose and need for the proposed action. No law or regulation requires the consideration of more than one alternative, other than the no action alternative.
  - x. The selection of the EDT unit is left to the prime contractor and deferred to a closed, secretive procurement process where the decisions will be hidden from public view.  
**ACWA Response:** As has been the case with the other technologies used within the plant, the Government has established performance criteria for which the SC then determines the best design, equipment, and processes to satisfy those requirements. This is referred to as performance based contracting. This assures that the SC takes ownership of the process and is financially obligated to its success. The SC will make the decision of which EDT to use based on the requirements of its performance-based contract. This decision is subject to approval by ACWA in accordance with Federal Acquisition Regulations. The acquisition process that the SC will follow has been briefed to the community as part of the Design Options Working Group as well as members of the Colorado CAC. The Government offered to allow the CAC to provide any issues, concerns, and criteria determined to be of importance to the community for consideration into the acquisition process. This input was submitted to the ACWA PEO on June 27<sup>th</sup>, 2012 and has been provided to the SC for consideration into their solicitation.
  - xi. These decisions are federal decisions and must undergo a fully adequate NEPA review which must be made available to the public.  
**ACWA Response:** As required under NEPA and under Army regulations, this EA was prepared to address the potential environmental impacts of the proposed action. The Army believes the environmental review documented in the EA is adequate, it was developed with oversight from EPA Region 8 and the standard setting agency, the Colorado Department of Public Health and Environment, and it has been made available to the public for review and comment prior to making any decisions on how to proceed.
- b. The EA does not describe and analyze an appropriate range of alternatives.  
**ACWA Response:** In regard to the range of alternatives as required under NEPA, see the responses to Item a.vi. above.
- i. Despite the Army's apparent plan to choose only one technology, the EA states that it will not analyze that decision.  
**ACWA Response:** The EA does analyze the environmental impacts from each of the systems. It was not the intent of the EA to result in the selection of any one system for implementation. The selection will be done through evaluation of a variety of criteria which will be developed by the SC.
  - ii. The NEPA analysis effectively and unlawfully reduces the alternatives to only one: the proposed action – deployment of an unidentified EDT.
  - iii. A number of potential options exist for gaining access to the agent and these were improperly dismissed in the EA.

- iv. EA states “None of these technologies are total solutions”. They need not be total solutions to facilitate destruction of the problem rounds.
- v. EA states these technologies “would require further treatment at the PCAPP”. Any system would simply prepare the round for further treatment at the PCAPP.  
**ACWA Response to ii, iii, iv, v:** While the EA provides a general characterization of what constitutes an EDT, there were four very distinct systems assessed with at least three different destruction mechanisms. That is by neutralization or electrically supplied thermal decomposition or decomposition through the use of supplemental explosives. Other technologies considered for this purpose and need were determined not to be viable because they did not provide complete destruction of the munitions (and produced products that were not suitable for further processing in the PCAPP facility) and did not provide energetic component destruction capabilities. The purpose and need recognizes requirements for treating both problematic munitions and explosive components.
- vi. EA states these technologies could introduce “potential safety, programmatic, and environmental risks”. This is why the results of the Army analysis of these alternatives should be included and supported with relevant data.
- vii. EA states these technologies might generate a “need to modify, develop, or construct new processes, facilities, and handling procedures for these unanticipated feeds”. The EDTs would also require significant construction, new processes, and handling procedures, probably at a much higher cost than the alternatives.

**ACWA Response to vi, vii:** As explained in detail in the response to comment 1.c., any viable alternative would need to not only access the energetics and agent, but then be able to destroy these components. This requires equipment and a location protected against the possibility of explosions. There is limited space within the PCAPP that this could be accommodated and it would not be practical to try and incorporate this into the existing facility as it would require major deconstruction and reconstruction of reinforced concrete structures. The only viable approach is a system that can perform those functions outside the main plant. In doing so, however, this system must be self contained and able to process a whole munition or energetic components within it. This can be accommodated through the use of an EDT. While there is construction associated with each of the EDTs, it is relatively minor as all these systems are modular and only require a basic infrastructure to include a foundation and a temporary enclosure.

- c. The EA improperly relies on dubious assurances of regulatory compliance to justify failure to analyze and disclose potential impacts.
  - i. Army’s record of violations and aggressive resistance to compliance with some federal and state regulatory requirements at the PCAPP and PDA render these assurances questionable at best.

**ACWA Response:** The Army is scrupulously complying with all applicable state and Federal environmental regulations and has a history of compliance at PCD and PCAPP. The Army works very closely with CDPHE and EPA in order to ensure compliance with these environmental laws and regulations.

- ii. Compliance with laws and regulations does not prove that a project will have no significant impact. The conclusion that compliance is equal to insignificance is unwarranted by the evidence presented in the EA.

**ACWA Response:** While it is true that NEPA analyses should not rely upon mere statements regarding regulatory compliance in order to reach conclusions about significance, the Pueblo EDT EA makes no such statements. Detailed analyses are included throughout Chapter 3 to support the conclusions and to describe the numerical magnitude of any projected impacts. Discussions about regulatory compliance (for example, in the discussion of the NAAQS in the air quality analyses in Section 3.1.1) are provided to show that the projected numerical values fall within prescribed regulatory limits, which are ultimately based on public health and welfare. It is important, however, to include reviews by independent regulators who have subject matter expertise. They are not dispositive in and of themselves.

- iii. Air Quality – The NAAQS apply to only a half dozen common pollutants
- iv. Air Quality – The EA does not disclose the amount of each air pollutant that will be released.

**ACWA Response to iii, iv:** NAAQS apply to six criteria pollutants: CO, NO<sub>2</sub>, SO<sub>2</sub>, particulate matter measured as PM<sub>10</sub> or PM<sub>2.5</sub>, lead (Pb), and O<sub>3</sub>. Refer to the Multiple Pathway Health Risk Assessment Report for Explosive Destruction Technology Alternatives at the Pueblo Chemical Depot (MPHRA) (Section 5) which has been included by reference in this current EA where in addition to the NAAQS, 83 Chemicals of Possible Concern (COPC) were analyzed in the March 2012 MPHRA. The following is a summary of the method used to perform this MPHRA:

1. An estimated emission rate was determined for each COPC for which data were available to base the estimate. Most emission rates were obtained from EDT vendors. These emission rates were used in combination with the required and desired munitions feed plan to obtain a maximum design emission rate for each COPC emitted by each EDT.
2. An air pollutant dispersion model (American Meteorological Society/Environmental Protection Agency Regulatory Model [AERMOD]) was then used to quantify atmospheric concentrations and deposition rates of the emitted COPCs in the areas in and around the facility. Impacts to on-site and off-site locations were used to evaluate exposure to human receptors under different exposure scenarios. As a conservative approach, the maximum total COPC-specific air concentrations and deposition rates were used to calculate exposure, even though they vary by location for each COPC.
3. A conceptual site model was developed to identify the various pathways by which human receptors would be potentially exposed to the emitted COPCs.
4. Direct and indirect exposure to COPCs via inhalation was evaluated for all of the off-site receptors for the 5 years of EDT operation.
5. Toxicity values were selected for each COPC using the hierarchical approaches recommended by EPA. These toxicity values were used in conjunction with the direct and indirect exposure estimates to calculate cumulative risk and hazard. Also, see section 3.1.1.3 of the EA for a discussion on potential air quality

impacts during operations (3.1.1.2 for those from construction). As discussed in 3.1.1.3 using data from each of the three vendors for the commercial EDTs and the Army for the EDS, “to simulate the worst-case scenario of impacts to air quality due to stack emissions from the proposed EDT facility. The modeling protocol was patterned after the one developed for use in the MPHRA for the PCAAP.” This MPHRA protocol was reviewed by EPA Region 8 and approved by the State of CO. The numerical values for the EDT emission source terms that were used in the air quality analyses in Section 3.1.1 in the EA were obtained from the data in Appendices A-1 and A-2 in the MPHRA. The numerical concentrations of these NAAQS pollutants as modeled at the location of maximum impact are on display in the EA in Tables 3-3, 3-4, and 3-5.

6. Water – Depending on the size and seniority of the Army’s water rights, this could still be a significant amount of water use, and needs to be disclosed in the EA.

**ACWA Response:** See Section 3.1.2.2 provides an explanation of existing groundwater resources at PCD. The existing wells at PCD have a pumping capacity of 284 million gal/yr. The most recent usage at PCD is 70.4 million gal/yr (includes PCAPP construction) therefore excess water capacity exists. In Section 3.1.2.5 we state that the combined bounded process water requirement (SDC has greatest requirement at 405,000 gal/yr) and the bounded non-process water requirement (EDS units have the greatest non-process water requirement at 931,000 gal/yr) equal 1.3 million gal/yr. This amount is only about 2% of the current annual use at the PCD. Clearly, adequate water supplies exist to support the operation of the proposed EDT facility. The quantities of water to be consumed are disclosed and quantified in Section 3.1.2.3 in the EA. The cumulative impacts of this water use in conjunction with the water to be used by the PCAPP are addressed in Section 3.1.2.4.

- v. Health & Safety: MPHRA do not “demonstrate” anything. They are a perceived tool, not a “bright line” assurance of anything. They are not a sufficient basis for hard conclusions.

**ACWA Response:** The use of MPHRA is an accepted part of identifying potential risks and developing appropriate risk management strategies. The findings of the MPHRA are relevant to the analysis of human health impacts in the EA. In addition, the MPHRA does provide an appropriate basis for drawing conclusions regarding the significance of any human health impacts. Support and concurrence was given to the MPHRA by EPA Region 8 and CDPHE.

- vi. Wildlife: Unsupported opinion of a federal agency that the survival of species covered by one narrowly crafted federal statute would not be jeopardized does not mean there will be no significant impact.

**ACWA Response:** The Army properly considers the expertise and regulatory authority of the U.S. Fish and Wildlife Service in regard to the potential for the proposed action to adversely affect federally protected species. The conclusion and finding in the EA

regarding federally protected species was taken directly from the correspondence received from the FWS, which is in Appendix B to the EA. There are no known federally listed endangered, threatened, proposed, or candidate species at PCD (see Appendix B to the EA). The FWS is the federal agency whose opinion is relevant and required for this type of consultation (16 USC 1531-1544). See Section 3.1.4.2 for a discussion on species of concern (5) and (1) threatened species in CO.

- d. Because the explosive detonation of chemical weapons is an inherently dangerous activity with significant potential for harm to human health and the environment, the Army should prepare a Supplemental EIS rather than an EA.

**ACWA Response:** While the use of explosive chambers to destroy chemical weapons may appear to be inherently dangerous, the use of explosive chambers has proven to be very safe. Explosive chambers have been used for many years throughout the world including the United States. The key factors that make them safe are similar to the factors for safe plant operations at PCAPP. It consists of a sound design and appropriate work processes. Each of the EDT chambers in which the destruction takes place are engineered and fabricated to withstand that particular environment. In fact, the American Society of Mechanical Engineers has established a new Code for impulsively loaded high pressure vessels specifically to address design aspects of these types of chambers. As an extra precaution, each EDT would be constructed inside a separate enclosure to capture any release from the main (and in some cases the secondary) vessel should that occur. For those systems that require additional handling of explosives, the types of explosives used are very insensitive to initiation from any stimulus associated with this handling. Use of explosives for this and other applications have demonstrated that this can be performed very safely. On the contrary, however, to have to try to destroy these problematic munitions or energetics without an EDT system would introduce far greater risks to the workers. Any time a munition needs to be disassembled in the presence of people (as has typically been the way these items have been handled), the risk of exposure to agent becomes much more of a concern. NEPA requires the preparation of an EIS for a federal action that has the potential to significantly impact human health and the environment. Significance is the key when determining what level of NEPA analysis to do. The issue of significance is precisely why an EA was done and not an EIS. The Army took a “hard look” at the affected environment and projected impacts in this EA. The use of an EDT type of unit was acknowledged in the site specific 2002 EIS. EDT has been used successfully at the Pine Bluff Chemical Agent Disposal Facility and Anniston Chemical Agent Disposal Facility Alabama. EDTs have also successfully been used to dispose of chemical weapons at Schofield Barracks, Hawaii and Aberdeen Proving Ground, Maryland. These units have also been used successfully abroad. See 40 CFR 651.27 Programmatic NEPA analyses. “These analyses, in the form of an EA or EIS, are useful to examine impacts of actions that are similar in nature or broad in scope. These documents allow the “tiering” of future NEPA documentation in cases where future decisions or unknown future conditions preclude complete NEPA analyses in one step.”

- i. The EA does not merely describe a new stage in the process analyzed by the 2002 FEIS but instead, discusses a significant change in the project design, using significantly different technology, and tiering to an EA is not appropriate.

**ACWA Response:** The potential for the use of an EDT at PCAPP has been discussed throughout the evolution of the PCAPP design. Section 3.3.3.1 in the 2002 FEIS

discusses the possible use of a “blast chamber” to destroy the energetic components of any munitions that are found to be leaking or that are identified as “rejects” in regard to their inability to be processed through the PCAPP. In addition, late in 2002, there was an effort to explore acceleration options for incorporation into the initial design of the PCAPP. This process was fully coordinated through a sub-group to the Colorado CAC known as the Acceleration Options Working Group. Although not fully explored, it was recognized that an EDT (at that time, the EDS and Donovan Chamber) could play a role in plant operations (Letter from CAC to ACWA Program Manager, 18 Aug, 2003). In 2004, the initial design for the PCAPP included the capability to process all the associated primary waste including energetic components. This was accomplished through the use of a concept known as the energetics batch hydrolyser (EBH). The PCAPP design however was determined not to be affordable by the Office of the Secretary of Defense. The SC was directed to stop work on the design in October, 2004 and ACWA then initiated a redesign effort with the goal of balancing cost, schedule, and performance. The community was also made a part of the process through the Acceleration Options Working Group and later the Design Options Working Group. A variety of trade studies were conducted that investigated all areas of the plant and processes to determine the most appropriate path forward. One of those trade studies again introduced the use of EDT and the final outcome from those trade studies was the incorporation of an EDT to treat contaminated energetics, overpacked leakers, and rejects. This, at the time, was referred to the Optimized Design. (Optimized Design Conceptual Design Report, 31 May 2005). Other technologies were also considered at that time (plasma arc, acid digestion), with the EDT determined to be the most feasible, safest, most efficient, and most cost-effective method of treating those types of items. (PCAPP Technical Position Paper on Reconfiguration, 23 June 2005). The discussion in the 2002 FEIS and considerations throughout the design evolution at PCAPP therefore establishes the need for additional or supplemental analysis, such as has been conducted in the current EA. Tiering is an appropriate mechanism under NEPA for conducting this type of supplemental analysis. Also see 40 CFR 651.12 (a)(4) “If the proposed action is not covered adequately in any existing EA or EIS, or is of a significantly larger scope than that described in the existing document, an EA is prepared, followed by either a FNSI or Notice Of Intent to prepare an EIS. Initiation of an EIS may proceed without first preparing an EA, if deemed appropriate by the proponent.”

- ii. The proposed process change for thousands of chemical rounds – from hydrolysis/biotreatment to rapid incineration – is a major process change and should be subject to a thorough, integrated analysis in a fully adequate EIS, by replacing, amending, or supplementing the original 2002 EIS.

**ACWA Response:** Neither the existence of the problematic munitions nor the inability of the PCAPP to deal with these munitions represents a “major process change” as claimed in the comment. The primary mechanism for destruction of the vast majority of items in the Pueblo stockpile is still chemical neutralization followed by biotreatment. A small number (1.7%) of the munitions in storage at the Pueblo depot might present significant problems for their processing through the PCAPP. The EA

addresses these problematic munitions in order to complete the destruction of the entire Pueblo stockpile as envisioned in the 2002 FEIS and its associated Record of Decision. Although the commenter simply states that all that is needed is another way to access the agent, the PCAPP facility is built with specific processes that require appropriate integration and safeguards to minimize agent contamination and prevent workers from being exposed to unsafe conditions. It was determined that none of the other alternative methods for accessing the agents could be integrated into the plant without compromising this basic premise. Recognize also that the capability to destroy energetic components is also needed. The proposed use of EDT units would therefore provide a “total solution” in regard to the destruction of both the agent and the explosive components.

- e. The EA has several other flaws that need to be addressed
- i. Decommissioning & Closure – Potential for long-term future use of the EDT is not discussed or analyzed in the EA. ACWA is acting as the agent of the Department of the Army and the DoD and all actions by those agencies are within the scope of this EA.  
**ACWA Response:** ACWA is not an agent of the US Army but a separate agency established by Congress. In 1996 Congress established the Assembled Chemical Weapons Assessment program, known as ACWA, under Public Law 104-208 to identify and demonstrate at least two technologies as alternatives to incineration for the destruction of assembled chemical weapons (assembled chemical weapons meaning munitions containing chemical agent configured with fuzes, explosives and propellant). In its initial 1996 law, and again in follow-on legislation two years later (Public Law 105-261), Congress directed that the ACWA program be conducted independently from the Army’s chemical demilitarization effort under PMCD, and further stipulated that the ACWA program manager report directly to the Office of the Secretary of Defense.
  - ii. There is concern that facilities of this nature could become permanent dumping grounds for explosives and related hazardous wastes imported from other locations.  
**ACWA Response:** As discussed in Sections 2.1.6 and 4.1.1.6 in the EA, the current plans are to dismantle, decommission and close the EDT facility upon the completion of its mission to process problematic munitions and energetic components at the PCD. National Defense Authorization Act for Fiscal Year 2000 (Public Law 106-65) amends Public Law 99-145 to limit the use of destruction facilities solely for the purpose of destroying the chemical stockpile where each facility is located. Upon completion of stockpile destruction, the facilities will be closed in accordance with applicable laws, regulations and mutual agreements between the Secretary of the Army and the governor of the state in which the facility is located. Any repurposing of buildings not involved in actual chemical demilitarization operations would be discussed as part of these mutual agreements. When each chemical weapons disposal facility completes its mission of safely destroying chemical munitions, it begins the process of plant closure in which the physical plant and equipment are decontaminated and decommissioned. During this closure phase, the property is restored to environmental standards that were set in the facility’s original environmental permit. Depending on the needs of the U.S. Army, when some or all of the land meets regulatory standards for

decontamination and cleanup, the disposal site may be retained and restored to its natural condition, transferred to another federal government agency or transferred to local government or the private sector for reuse through the Base Realignment and Closure (BRAC) process.

- iii. Four types of EDT are described but only one decommissioning section exists, suggesting it makes no difference which method is employed. Four types of EDT are described but only one decommissioning section exists, suggesting it makes no difference which method is employed.

**ACWA Response:** The specific steps that would be required to decommission any one of the four types of EDT units would be similar and largely indistinguishable from one another.

- iv. Air Quality – The EA discusses only emission of 6 pollutants under the Clean Air Act. The MPHRA lists over 30 pollutants and these pollutants should be analyzed in the EA.  
**ACWA Response:** Section 3.1.1 in the EA addresses air quality as regulated under the NAAQS. Only six pollutants fall under the NAAQS regulations; hence, only these six are evaluated in the EA. These pollutants include CO, NO<sub>2</sub>, SO<sub>2</sub>, particulate matter measured as PM<sub>10</sub> or PM<sub>2.5</sub>, lead (Pb), and O<sub>3</sub>. A more comprehensive list of emitted chemicals was evaluated in the MPHRA to determine their human health effects; thus, air quality effects are indirectly evaluated as part of the inhalation pathway for the risk assessment. The results of the MPHRA are discussed in Section 3.1.3.1 in the EA. See response to Sierra Club comment c. iv.

- v. Air Quality – EA does not quantify greenhouse gas emissions.

**ACWA Response:** Greenhouse gas emissions are addressed in Section 3.1.1.4 in the EA. Page 3-16 in the EA provides a discussion on the impact of operation of the EDT at PCD relative to carbon dioxide emissions, one of the principal greenhouse gases.

- vi. MPHRA – The entire St. Charles Mesa is filled with farmers, including the areas close to the PCD. Even the perception of an impact to the farmers' crops and livestock would be damaging socioeconomically.

**ACWA Response:** Section 3.1.5.5 in the EA examines Census of Agriculture data from 2002 and 2007 for Pueblo County and the eight surrounding counties. The population of farmers identified in the comment is included in these data. While it would be impossible to address a perceived impact in any real and tangible manner, Section 3.1.5.5 in the EA attempts to address the stigma impacts associated with the destruction of chemical weapons at the Pueblo Depot. Based on the data examined, Section 3.1.5.5 concludes that there is no reason to expect that public or market perceptions of the proposed EDT facility would adversely affect the value of agricultural products in the region.

- vii. MPHRA – The scenario assumes that workers in the area do not eat “locally obtained foodstuffs”. There is no sensible reason to assume this. The EA should explain why this assumption is made or change the assumption.

**ACWA Response:** The exposure scenario for the hypothetical worker (as described in Section 3.1.3.1 in the EA) was defined and established as part of the MPHRA protocol that was developed in conjunction with the CDPHE and the EPA. The assumed exposure pathways for the worker scenario are specifically differentiated from those of the subsistence farmer in order to identify any health effects that would be

associated with the presence of an individual within the PCD boundaries and near the proposed EDT facility for 8 hours per day, 250 days per year, for 25 years.

- viii. MPHRA – Other realistic hypothetical individuals should be included, such as a public, post-market food consumer, individuals traveling through the area, etc.

**ACWA Response:** The exposure scenarios for the hypothetical individuals (as described in Section 3.1.3.1 in the EA) were identified and defined as part of the MPHRA protocol that was developed in conjunction with the CDPHE and EPA Region 8. The suite of hypothetically exposed individuals was intended to capture the potential health effects to a wide variety of potentially exposed individuals, including the types of people described in the comment.

- ix. MPHRA contains estimations of expected emissions of several pollutants but no quantitative data stating exactly what emissions will be. Furthermore, the EA itself does not include this quantitative information.

**ACWA Response:** The numerical values for the EDT emission source terms that were used in the air quality analyses in Section 3.1.1 in the EA were obtained from the data in Appendices A-1 and A-2 in the MPHRA.

- x. MPHRA, Appendix C - It is unrealistic to expect average citizens to find the information in an over 800 page document. Transporting the tables with the emission estimates to the EA itself would make the information much easier to find.

**ACWA Response:** The Army recognizes that the MPHRA is a voluminous document that may be difficult for the public to understand. For that reason, Section 3.1.3.1 in the EA provides a summary of the MPHRA approach and its findings. Because it is not clear from the comment what specific quantitative data is believed to be appropriate for tabulation or inclusion in the EA, no further response can be offered.

- xi. EA Table 3-8 indicates the overall combined risk is about 11% for the SDC, 57% for the TDC, 3% for the DAVINCH, and about 3% for the EDS. These are significant increases in health risk, and they constitute prima facie evidence that a FONSI is inappropriate.

**ACWA Response:** The numbers in Table 3-8 include the combined contributions of both the PCAPP and the proposed EDT facility. While the contribution of each type of EDT unit to the combined risk is important, the metric used to determine significance in the EA is the numerical value of the combined risk when compared to the threshold of concern as established by the CDPHE. As discussed in Section 3.1.3.1 in the EA, the highest combined risk in Table 3-8 (i.e., from the TDC unit in combination with the PCAPP) is nine times lower than the CDPHE acceptable risk value. The EDT MPHRA is a screening-level risk assessment conducted using the same general approach as had been employed for the 2008 screening-level PCAPP MPHRA. (BPT, 2004). The results of the PCAPP MPHRA demonstrated that exposures to PCAPP emissions would all be below CDPHE acceptable values for risks and hazards. Because the facility had not yet been built, PCAPP emissions data were estimated using design information, data acquired from sampling during bench-scale and pilot-scale process testing, and existing data from other similar facilities. Now that additional processing units (EDTs) are being contemplated, additional emissions must be assessed. An estimate of the combined risk due to the two processes can be obtained by simply adding the estimates obtained from the two independent MPHRA. This summation will produce

a conservative assessment of risk and hazard because two different locations for the reasonably maximally exposed (RME) individual will be identified. A more accurate estimate is obtained when both processes are included in the same MPHRA and a single composite RME location is identified. For the purpose of the EA, however, adding the two independent RME impacts is acceptable provided that the resulting impacts are below CDPHE acceptable levels.

- xii. Discussion of worker safety ignores additional handling risks. All of the EDT options appear to involve more manual handling of mustard agent rounds than the PCAPP.  
**ACWA Response:** As discussed in Sections 3.1.3.2 and 3.1.3.3 in the EA, the handling risks would be similar to, if not the same as, those from the handling of the munitions at the PCAPP. For those systems that require additional handling of explosives, the types of explosives used are very insensitive to initiation from any stimulus associated with this handling. Use of explosives for this and other applications have demonstrated that this task can be performed very safely. On the contrary, however, to access the energetics inside a 50 year old munition that is in a degraded condition would introduce far greater risks to the workers. Any time a munition needs to be disassembled in the presence of people (as has typically been the way these reject munitions have been handled), the risk of exposure to agent or potential of initiation of the explosive components becomes much more of a concern.
- xiii. EA does not provide adequate analysis of accident risks. No comparison of accident risks among the four technologies appears in the EA.  
**ACWA Response:** Section 3.1.3.3 in the EA describes the hazards analysis that would be conducted once an EDT unit is selected for deployment. It is expected that the accident risks would be similar among and between the types of EDT units because the same types of munitions and explosive components would be processed in each unit.
- xiv. EA does not provide any detail on cleanup protocols or give any indication of whether people could suffer ill effects before spill is contained.  
**ACWA Response:** The possibility of accidental mustard agent spills was analyzed in depth in the 2002 FEIS, and that analysis is incorporated by reference in the EA. The response to such spills and the associated environmental impacts is also discussed in the 2002 FEIS. The spill prevention plan is based on principles identified in the 2002 EIS.
- xv. EA does not describe appropriate communication protocols for informing surrounding communities and the public.  
**ACWA Response:** The emergency preparedness and emergency response procedures would be the same as for the PCAPP and as for the continued storage of the existing stockpile at the PCD. The 2002 EIS has been incorporated by reference and that includes the emergency preparedness and emergency response procedures presented there. These procedures are reviewed and exercised every year.
- xvi. EA does not discuss accident scenarios arising from explosions during handling.  
**ACWA Response:** The 2002 FEIS included a detailed analysis of the consequences of accidents involving either their continued storage or their processing in the PCAPP. Accidental explosions were included in that analysis, which is incorporated by reference in this EA.

- xvii. Socioeconomics – A proper socioeconomic study claiming potential socioeconomic benefits should provide actual dollar estimates regarding wages, taxes, local purchases, and other relevant information.  
**ACWA Response:** Section 3.1.5.1 in the EA contains a qualitative discussion of the potential employment impacts of the proposed action in terms of reducing unemployment, producing direct incomes, contributing to indirect jobs and incomes, and increasing purchases and tax revenues. Given the relatively small sizes and short durations of the workforces needed for facility construction (up to 50 workers) and operations (up to 200 workers), and given that the economic effects of these jobs would likely be positive, a more in-depth study is not warranted. This is particularly true because Section 3.1.5.1 in the EA does not try to exaggerate the economic benefits of the proposed action, but concludes that the overall beneficial impact is still likely to be minor and relatively short-term in the context of the regional economy.
- xviii. Socioeconomics – EA estimates that 150 to 200 employees will be employed. A personal email from R.W. Travis is used to support this claim. This email should be an attachment to the EA.  
**ACWA Response:** A copy of the personal e-mail that is referenced in the comment will be included in the complete file of reference materials that were used to develop the EA, and this file will become part of the administrative record for the EA. It would not be possible to include all such references and cited materials as an actual part of the EA itself.
- xix. Socioeconomics – EA should explain why 75% of the operations employees are expected to come from other areas. The project does not appear to provide employment benefits for the Pueblo area.  
**ACWA Response:** An assumption is made in Section 3.1.5.1 in the EA that 75 percent of the operations workforce would come from other areas. This assumption was made for the purposes of analysis in the EA, and it was not intended to define or describe where these employees might actually come from. In regard to the comment about employment benefits, Section 3.1.5.1 in the EA does not exaggerate the economic benefits of the proposed action, but concludes that the overall beneficial impact is still likely to be minor and relatively short-term in the context of the regional economy.
- xx. Socioeconomics – EA section 2.1.3 shows great difference in number of employees required for each of the proposed systems. The EA should not have assumed the highest possible number of employees would be employed, or at least made this assumption clear.  
**ACWA Response:** Section 3.1.5 assumes the largest workforce as an upper bound for assessing the potential for population growth and associated adverse impacts to housing, water and wastewater services, solid waste disposal, schools, and transportation. Use of the “peak” (or largest) estimated workforce to bound potential population growth and associated adverse socioeconomic impacts is common practice in NEPA documents. Furthermore, the analysis in Section 3.1.5 of the EA does assume the largest operations workforce (i.e., 200 workers) to highlight the economic benefits of the proposed action. On the contrary, Section 3.1.5.1 concludes that the overall beneficial impact is still likely to be minor and relatively short-term in the context of the regional economy.
- xxi. Section 2.1.3 – It is not clear whether emissions from the diesel generator were considered in the analysis of pollution risks.  
**ACWA Response:** The emissions from the emergency generators were not included. The diesel generators described in Section 2.1.3 in the EA would be used for back-up purposes in the event of loss of electrical power from the grid. These generators would

only need to be operated on an intermittent basis, and they would be tested for very short durations on a monthly basis. As such, the impact to air quality from the emissions from these generators would be expected to be very small.

- xxii. With regard to agriculture, the EA states there will be no stigma to agriculture because the area surrounding the PCD has seen growth. Because this is a new project with new potential for pollution and health risks, the past cannot and should not be used to predict the stigma that this project could create.

**ACWA Response:** The proposed action and location are so similar to other actions that have been proposed or implemented at PCD that it is legitimate to use past impacts to predict future impacts. This is especially true for a subjective and intangible impact such as “stigma,” which can only be measured using surrogate values such as the market value of agricultural products. In the case of this proposed action at PCD (and, in fact, for most proposed actions anywhere) it is not clear how stigma impacts could be predicted without looking for evidence of past stigma impacts from similar actions.

- xxiii. The reintroduction by this proposal of combustion technologies is very likely to have a dampening effect on local agriculture.

**ACWA Response:** The opinion offered in the comment is noted. Section 3.1.5.5 in the EA examines publicly-available data in reaching its conclusions about past and future stigma impacts, and does not rely on conjecture to make assertions about what is likely to happen.

- xxiv. No reasonable arguments are presented to support the claim there will be no adverse impact to agriculture.

**ACWA Response:** Section 3.1.5.5 in the EA examines Census of Agriculture data from 2002 and 2007 for Pueblo County and the eight surrounding counties in reaching its conclusions. That section also examined the potential for emissions from the proposed EDT units to affect livestock and crops in both the short-term (i.e., airborne concentrations of emitted by-products) and the long-term (i.e., deposition of emitted chemicals). Contrary to the claims made in the comment, the conclusions in Section 3.1.5.5 were based on data and on multiple lines of evidence.

- xxv. Environmental Justice – Special care should have been taken to ensure that the community had ample time to review this EA and close to 900-page HRA. This project could have an adverse effect on property values and/or agricultural jobs. The social, cultural, and environmental impacts to this minority and low-income population have not been evaluated as required by federal law.

**ACWA Response:** Special care was taken to ensure that the entire Pueblo-area community had ample time to review the documents, not only in the granting of an additional 30 days for public review of the EA and the MPHRA, and the holding of three EDT-EA specific public meetings on 24 and 25 April 2012 in both Pueblo and Avondale, but also in distributing a 7-page fact sheet to help the community navigate the EDT EA. Beginning in the fall of 2009, when EDT was first discussed with the community in some detail, more than 29 EDT-oriented meetings have been held at locations throughout Pueblo County, to include the communities of Boone and Avondale, all of which have been recognized by the EPA as “environmental justice” communities. All three communities have well-advertised public information repositories where EDT and other project-related information is readily available in the event community members might not have Internet access to the many EDT-related documents found on the ACWA website [www.pmacwa.army.mil](http://www.pmacwa.army.mil). A record of specific EDT public involvement activities that have taken place in the greater Pueblo community from November 2009 through June 2012 may be found at [Appendix B](#). This is in addition to the literally hundreds of chemical weapons destruction outreach

initiatives that have occurred throughout Southern Colorado even before construction of the Pueblo plant began in 2004. Sections 3.1 through 3.1.7 in the EA assess the potential environmental and health impacts to the local population, including the potential for stigma impacts. Section 3.1.5.1 specifically acknowledges that the employment-related economic benefits of the proposed action would be relatively small and short-term. Potential impacts to minority and low-income populations are discussed in EA Section 3.1.6 by referring to the other resource-specific discussions elsewhere in Chapter 3 of the EA.

- xxvi. Waste – No onsite waste management options are described or analyzed; this is another significant violation of NEPA.

**ACWA Response:** No on-site waste management options are available at the PCD, because no such on-site hazardous waste disposal capability exists.

- xxvii. Waste – The EA fails to describe the composition of the wastes generated from the candidate EDTs making understanding of the risks involved impossible.

**ACWA Response:** Table 3-16 in the EA describes the different types of wastes associated with each type of EDT unit. Additional details about the different waste streams for each of the EDT units are discussed in Section 3.1.8.2 in the EA. See response to EPA Region 8's comment on waste management issues.

- xxviii. Waste from the two TDCs when combined with PCAPP wastes would amount to 7% of the total amount of hazardous waste disposal in Colorado hazardous waste landfills. The EA describes this increase as a "small" amount. In fact, this is a significant amount of hazardous waste.

**ACWA Response:** As discussed in Section 3.1.8.3 in the EA, the numerical value of hazardous solid waste from the TDC unit represents an upper bound on the amount of such waste that would be generated. The determination in the EA of a "small increase" accounts for the upper-bound nature of the numerical estimate, as well as the larger capacity of such waste management facilities within the state of Colorado and the surrounding states. All of the hazardous waste may not be disposed of in CO. Part or all may be shipped off-site therefore the waste from the two TDCs combined with PCAPP will not be 7% of the total amount of hazardous waste disposed in CO hazardous waste landfills. The assumption was made in this EA that all would be disposed of in CO for the purposes of bounding and to give an overly conservative analysis of the potential impacts.

- xxix. Offsite waste disposal impacts should be disclosed and analyzed for each potential destruction method.

**ACWA Response:** Off-site waste management impacts are discussed in Section 3.1.8.3, in the EA and off-site waste transportation impacts are discussed in Section 3.1.8.4. In each section, a bounding analysis was employed to capture the impacts of any of the possible EDT units. Because the results of the bounding analysis indicated there would be no significant impacts, no further differentiation or distinction between or among the four types of EDT units was necessary.

- xxx. Although the EA describes substantially different waste production by the various technologies, Table 3-18 provides no separate figures for offsite waste shipment, volumes, or composition of wastes, or risks to people.

**ACWA Response:** The data for the EDT facility in Table 3-18 in the EA represent an upper bound for the purposes of analysis in the EA. Data on waste volumes is contained in Footnote "a" in Table 3-18. Also, as indicated in Footnote "b" in Table 3-18, the PCAPP wastes are described in detail in the 2002 FEIS. The risks of off-site shipments of waste from the PCD are specifically discussed in Section 3.1.8.4.

Therefore, hazards from operations of this type have been mitigated over a substantial period by the Army safety, surety and security programs.

- xxxi. Worker Health & Safety – The simple fact that workers will be required to engage in significantly increased handling of damaged rounds, including the manual placement of explosives on or around the damaged rounds, is prima facie evidence of significant and increased risk to workers, or perhaps to the public.

**ACWA Response:** Army experience with the use of explosive charges for accessing munitions as in the case of the EDS and the destruction charges in the case of the TDC are routine, if hazardous, operations. DOD and Army Regulations are in place to ensure whichever specific system is used that the activities will be evaluated for and be conducted safely. The rounds processed by these systems have often been in worse physical shape than those stored at PCD. Finally, regardless of the specific type of process used, similar levels of additional handling will be required to bring the munitions to the technology and prepare it for processing.

- xxxii. Worker Health & Safety - EA (focusses) [*sic*] exclusively on agent exposure risk while ignoring potential for exposure to a variety of toxic by-products likely to be produced by detonation. These risks cannot be dismissed by claiming that precautions will be taken and training/PPE will be provided.

**ACWA Response:** Contrary to the claim made in the comment, the EA does not focus exclusively on the agent exposure risk while ignoring the risk of by-products from the EDT-unit detonations. As discussed in Sections 3.1.3.1 and 3.1.3.2 in the EA, the worker scenario that was evaluated in the MPHRA specifically included exposure to the chemicals to be emitted from each type of EDT unit.

- xxxiii. EA attempts to dismiss the significance of explosives and other serious accident risks by citing Army procedures. EA fails to describe these procedures and provides no evidence of their effectiveness.

**ACWA Response:** As discussed in Section 2.1, approval of the EDT Site Safety Submission Document by the DDESB is a prerequisite to operation of the selected EDT systems. A primary function of the DDESB is to review and approve the safety aspects of all plans for siting, construction, or modification of ammunition and explosives DOD facilities to include possible impacts on nearby structures and activities. In addition, the U.S. Department of Health and Human Services would continue its advisory role, reviewing data and making appropriate recommendations concerning public health and safety before operations begin with actual mustard agents. For those systems that require additional handling of explosives, the types of explosives used are very insensitive to initiation from any stimulus associated with this handling. Use of explosives for this and other applications have demonstrated that this can be performed very safely. On the contrary, however, to access the energetics inside a 50 year old munition that is in a degraded condition would introduce far greater risks to the workers. Any time a munition needs to be disassembled in the presence of people (as has typically been the way these reject munitions have been handled), the risk of exposure to agent or potential of initiation of the explosive components becomes much more of a concern.

- xxxiv. EA asserts that risks unique to the specific EDT ultimately selected will not be known until after the selection decision is made and a risk analysis is conducted. Yet, the Army concludes the deployment of an EDT would not create any significant additional impacts.

**ACWA Response:** The Army has successfully used the EDS, TDC, and SDC at Army locations that were subject to DoD and Army site safety protocols as described above in response to Sierra Club comment xxxiii. The DAVINCH technology would also have

to meet the same requirements before any agent operations would take place. While these devices vary in their specific operational procedures, throughput rates, supporting infrastructure, etc. their general similarities, e.g. requirement for total containment, movement and handling of munitions, etc. and those associated hazards are known and can be assessed.

#### 10. Better Pueblo

- a. To start, the EA improperly and untruthfully states the purpose of the proposed action. The action is the decision whether or not to deploy Explosive Detonation Technology (EDT) to destroy a number of munitions at the PCD. The history of subsequent behavior and decisions of the Army bear this out. By way of explanation, a cursory review is offered.  
**ACWA Response:** The statement of purpose and need for the proposed action is given in Section 1.3 of the EA. "The purpose of the proposed action is to provide for the destruction of the problematic chemical munitions and provide operational flexibility for the destruction of the explosive components...."
- b. The NEPA process was followed over ten years ago to determine a method of destruction for the chemical stockpile at PCD. That method was water neutralization followed by biotreatment. At the onset of the construction plans for the plant, design was built in to deal with what was called then, and in this EA under comment here is called, "problem munitions." We in the community watched for years how the agreements reached following the ROD were breached or undercut by a series of budget cuts, calls for reconsideration of method of destruction including shipping off site, and scaling back the plant design. The public record bears this out and unfortunately cost the taxpayer (exorbitant) [*sic*] amounts of money and duplicitous delay in meeting the nation's obligations.  
**ACWA Response:** The Army notes the observations and opinions of the commenter; however, the Army does not agree with this assessment. The Army is committed to following the NEPA process and complies with both the letter of the law and implementing regulations as well as the intent. The problem munitions exist at PCD as they have at other chemical stockpile sites. The Army has been forthright and open about these munitions with the public and has used the NEPA process as well as CAC meetings to relay information about how these munitions can be destroyed safely. See the response to Sierra Club comment d. i.
- c. If the Army disagrees with this assessment, what is the explanation?  
**ACWA Response:** See response to Better Pueblo comment b.
- d. The issue of "problem munitions" became just that, problematic. With the PCAPP lacking the capacity to deal with these munitions, itself a breach in the FEIS and ROD, the Army had to, in essence, correct its mistakes.  
**ACWA Response:** Neither the existence of the problematic munitions nor the inability of the PCAPP to deal with these munitions is a breach of the Record of Decision (ROD) for the 2002 FEIS. The ROD stated that the decision was to use chemical neutralization followed by biotreatment at the Pueblo depot to destroy the mustard agent in storage at the depot. This is still the case; however, a small number of the munitions in storage at the Pueblo depot (i.e., up to 13,000 items out of a total of over 780,000 items) might present significant problems for their processing through the PCAPP. This EA addresses these problematic munitions in order to complete the destruction of the entire Pueblo stockpile.
- e. Any new decision on how to destroy these munitions, by law, requires a new and thorough environmental impact analysis. (An) [*sic*] Supplemental EIS would be the proper response. Instead the Army issues an Environmental Assessment (EA) that was determined to be defective. Hence this new EA has been released. We grant the challenge of getting on with the task of destruction of the munitions under the current dilemma following the series of (inappropriate) [*sic*], illegal and immoral actions by the Army.

**ACWA Response:** Section 3.3.3.1 in the 2002 FEIS discusses the possible use of a “blast chamber” to destroy the energetic components of any munitions that are found to be leaking or that are identified as “rejects” in regard to their inability to be processed through the PCAPP. This discussion in the 2002 FEIS sets up the need for additional or supplemental analysis, as conducted in the current EA. The comment is not clear as to what “inappropriate, illegal and immoral actions” are believed to have been taken by the Army; hence, no response can be offered. The February 2010 EA was withdrawn due to a change in purpose and need to focus on the originally planned use of explosive destruction technology for destroying overpacked and reject munitions.

- f. Reluctantly accepting the reality of an EA instead of (an) [*sic*] SEIS, the EA fails to address the alternatives to destruction of the problem munitions. What are the alternatives to EDT? Where are these discussed and vetted, as per NEPA guidelines, and why are they not part of the decision to be made in the EA? Instead, it starts with the assumption of EDT, with an appearance of a decision from among four different EDTs.

**ACWA Response:** Section 2.3 in the EA discusses the alternatives that were considered for the destruction of the problematic munitions. Contrary to what is stated in the comment, the EDT units are not an “assumption,” but rather are part of the proposed action for accomplishing the purpose and need as given in Section 1.3 in the EA. See the response to Sierra Club comment d i.

- g. The decision should be how to access the agent in these munitions. We see no discussion of alternatives for accessing the agent. If that was determined, the PCAAP is capable of destroying the mustard agent.

**ACWA Response:** The purpose and need goes well beyond the need for alternative accessing methods. The purpose and need includes both the destruction of problematic munitions as well as some of the energetic components, none of which can be processed in the plant. Just providing alternative agent accessing would introduce additional hazards during the process. Any method that is introduced into the plant would have to be compatible with the other processes to completely destroy the munition. It was determined that no alternatives existed that did not require additional integration with the plant, thus requiring significant modification and build out of the plant. This would also require addition of explosive destruction capabilities that currently do not exist within PCAPP.

- h. The EA makes it sound, on the one hand, like the choice is between 4 different EDTs, yet on the other hand the EA is designed to determine a choice of which one of the four, leaving it to the prime contractor to determine. This obfuscation renders the EA somewhat senseless and leaves the community out of the process entirely, yet faced with having to respond to an inappropriate EA and over a thousand pages of material.

**ACWA Response:** Contrary to the statements in the comment, the EA does not attempt to identify or support a choice as to which of the four EDT units would be preferable. In fact, Section 1.4.1 of the EA states “it is not the intention of this EA to identify or select the ‘best’ unit from the [four types of EDT units].” The SC will make the decision of which EDT to use based on the requirements of its performance-based contract. This decision is subject to approval by ACWA in accordance with Federal Acquisition Regulations. The Government offered to allow the CAC to provide any issues, concerns, and criteria determined to be of importance to the community for consideration into the acquisition process. This input was submitted to the ACWA PEO on June 27th, 2012 and has been provided to the SC for consideration into their solicitation.

- i. Why is the community left out of the decision process to determine which of the 4 EDTs should be employed, if in fact one is to be employed? The EA reads like it is saying that an EDT is the definite general technology to be used and sorry, the choice of which specific one

will be determined behind (close) [*sic*] doors in secrecy? What is the reason for this in terms of the responsibilities of the Army to follow NEPA?

**ACWA Response:** As described in Section 1.5 in the EA, the Army has engaged the public at various steps in the development of this EA. While some members of the community may believe they have been “left out of the decision process,” NEPA decisions are never made by the public. The purpose of the NEPA document is to provide the Army’s decision-maker with a full set of environmental impact information upon which he/she can base his/her decision of whether the four EDT options have the potential to significantly impact human health and the environment. The acquisition process that the SC will follow has been briefed to the community as part of the Design Options Working Group as well as to members of the Colorado CAC. The Government offered to allow the CAC to provide any issues, concerns, and criteria determined to be of importance to the community for consideration into the acquisition process. This input was submitted to the ACWA PEO on June 27th, 2012 and has been provided to the SC for consideration into their solicitation.

- j. Alternatives to the proposed action of EDT are not offered, with specious reasons why not. We keep in mind that the real purpose of the Army and the PCAPP is to destroy the mustard agent and the real purpose of the EA should be to access the agent in the problem munitions.

**ACWA Response:** Alternatives are discussed and addressed in Section 2.3 in the EA. Similar comments are addressed above.

- k. To say that alternatives considered earlier were not viable for consideration in the NEPA process and in the EA because they were not total solutions, that the munitions would still require further treatment, that they might require modifications or that safety issues prevent serious consideration are all specious and misleading. Once the agent was access it would of course require further treatment – at PCAAP. All the questions and concerns mentioned, whether they be modifications or safety, should be addressed in the public document for review and comment by the public. All should be alternatives, with EDT being one of them, or perhaps four of them. The Army's analysis should be part of the NEPA process. Why did this not happen? How can the current EA be viewed as credible?

**ACWA Response:** In regard to alternatives to the EDT units, the Army believes the EA is credible and adequate for the purpose of making decisions about the problematic munitions and energetic components at the Pueblo depot. In order to become a viable alternative, an alternative would have to satisfy the stated purpose and need as given in Section 1.3 of the EA. Although the commenter simply states that all that is needed is another way to access the agent, the PCAPP facility is built with specific processes that require appropriate integration and safeguards to minimize agent contamination and prevent workers from being exposed to unsafe conditions. It was determined that none of these alternative accessing methods could be integrated into the plant without compromising this basic premise. Recognize also that the capability to destroy energetic components is also needed. The proposed use of EDT units would therefore provide a “total solution” in regard to the destruction of both the agent and the explosive components.

- l. The EA fails to deal with a comprehensive assessment of environmental impacts as required by NEPA? Only criteria pollutants are addressed. What about other pollutants that result in impacts? Why are greenhouse gasses not addressed?

**ACWA Response:** Section 3 in the EA, documents the “comprehensive assessment of environmental impacts” that is being sought in the comment. Only criteria pollutants were addressed in Sections 3.1.1.2 and 3.1.1.3 because the EPA has established air quality standards for these specific pollutants. The impacts of other emissions from the proposed EDT units are addressed in Section 3.1.3. Greenhouse gases are specifically addressed in Section 3.1.1.4.

- m. The EA and the Health Risk Assessment fails to give quantitative information digestible to the public for understanding. The voluminous document is (practially) [*sic*] inaccessible to the general public.  
**ACWA Response:** The Army recognizes that the MPHRA is a voluminous document that may be difficult for the public to understand. For that reason, Section 3.1.3.1 in the EA provides a summary of the MPHRA approach and its findings. It should also be noted that the MPHRA was prepared in conjunction with a highly detailed protocol for human health risk assessments that was developed in concert with the State of Colorado and the EPA Region 8. The MPHRA is incorporated into the EA by reference. See response to Sierra Club c. iv.
- n. As an identified environmental justice community, the EA lacks evidence that this is taken seriously. Double talk, technical pages on end, and lack of readable material brought to the community fails to meet the requirements of NEPA.  
**ACWA Response:** Environmental justice is addressed in Section 3.1.6 of the EA. It is not clear what “double talk, technical pages on end, and lack of readable material” are being referred to in the comment. Section 3.1.6 in the EA is five pages in length, and it discusses the regulatory framework of environmental justice analyses, as well as the relevant minority population and low-income data for the potentially impacted region. Because it is not clear why the commenter believes the analysis in the EA “lacks evidence” or that it “fails to meet the requirements of NEPA,” no response can be offered. The ACWA EDT public outreach record can be found at [Appendix B](#). See response to Sierra Club comment e. xxv.
- o. The EA fails to consider socioeconomic impacts on the community by its decisions, particularly the agricultural community and in the area of employment. Were the local farmers and organic farmers reached out to? What would they say about the perception of additional emissions from the alternatives. Remember, they were engaged in the NEPA process that brought about the ROD in 2002.  
**ACWA Response:** Section 3.1.5 in the EA addresses potential impacts to socioeconomic resources. The analyses include impacts to agriculture (see Section 3.1.5.5) and to employment (see Section 3.1.5.1). The perception of impacts due to additional atmospheric emissions from an EDT facility is addressed in Section 3.1.5.5 in the EA. See response to Sierra Club e.xxv.
- p. There is a lot of local talk about employment and why some three-fourths of the workers are projected to be workers who will migrate here to fill the jobs. Is this necessary? Why or why not? Should not impacts on employment be fully studied and disclosed and be a factor on choosing an action? This too is an environmental justice issue that needs more attention and does not get it.  
**ACWA Response:** The “three-fourth of the workers . . . who will migrate here to fill the jobs” that is mentioned in the comment was not intended to be the Army’s firm or final estimate of what would actually happen, but rather, this number was used in the analysis in order to bound the impacts of large numbers of workers who might migrate into the area. In other words, this number was used in order to capture the greatest possible environmental impact. Such impacts (for example, to housing, traffic, public services, and schools) would be larger for any additional in-migrating population than for any workforce population that already resides in the area. Thus, the analyses in the EA provide an upper bound on the anticipated impacts (if any). If a greater percentage of local workers were used in the analysis, the potential environmental impact would have been lower. The determination of the actual number of local workers used is not a part of this NEPA analysis.
- q. Is there an assumed goal or motive to find work for workers at other locations that is priority to filling jobs from the local population? What commitments, formal or informal, have been made with contractors or workers the Army has some business relationship with outside the area? Whatever the reasons, they (sould) [*sic*] be disclosed for review and comment?

**ACWA Response:** The Bechtel Pueblo Team (BPT) provides job opportunities for both local residents, and, for workers from other chemical demilitarization sites that are closing. All job positions available are posted on the PCAPP Jobs Website at: [www.pueblo.bechtel.com](http://www.pueblo.bechtel.com). Links to BPT's teaming partners' web sites, URS Corp.; Battelle; and General Physics, can be found here and job seekers can find available positions for the PCAPP project. The jobs available will be mainly in the operations, maintenance, laboratory, and safety departments. Some of these jobs will require previous experience and others will not. There have been no commitments, formal or informal, with the Army to hire from outside the Pueblo area. The PCAPP project hires its own personnel and will hire the best individuals suited for the positions. Locally, the BPT has held job fairs and has encouraged local residents to apply for positions. More than 165 non-manual staff and many more craft workers have been hired locally to date, and, that number will grow if there are interested and qualified applicants when hiring ramps up in early 2013.

- r. Are there any commitments or motives, apart from the specific task of destroying the stockpile at PCD and at the PCAPP, regarding the EDT contractors? For instance, are there expectations within the Army to deploy and use the EDTs for any reason, including justification for funding of EDT design or technology to date? Are there any outside forces, people, organizations that have made it known to the Army that they must demonstrate further use of EDT in Pueblo?

**ACWA Response:** The answer to all of these questions is no.

- s. Has there been any consideration given to potentially leaving an EDT facility at the PCD past the destruction of the problem munitions or for destroying any other material? Is there commitment to removing the EDT facility after the task is done?

**ACWA Response:** The decommissioning and closure of the proposed EDT facility is described in Sections 2.1.6 and 4.1.1.6 in the EA. The analysis assumes that the proposed EDT facility would be closed and the equipment removed at the end of the mustard-munitions campaign at the PCD. Any future use of the EDT facility at the PCD would become the subject of a future environmental review under NEPA, and as a result of the Governor of the State of Colorado requesting the follow-on use. See response to CAC comment b.

- t. Back to the four EDTs considered in the EA. What are the criteria for choosing which EDT will eventually be chosen? Will that criteria be revealed to the public? Will the public be able to comment and have any role in the decision? Is one of the criteria that the EDT is portable and can be disassembled and moved after the job at PCD is done?

**ACWA Response:** As has been the practice throughout the contracting of the PCAPP facility, the Government has established performance objectives for which the SC then determines the best design, equipment, and processes to satisfy those requirements. This is referred to as performance based contracting. This assures that the takes ownership of the process and is financially obligated to its success. The SC will be developing a request for proposal that includes the criteria established for assessing any of the EDT systems that are proposed. Therefore, after the SC has conducted their technical evaluation of viable proposals, they will submit a request for Government Consent to Award which must be approved by the Government before an EDT contract award takes place. The Government will conduct a thorough review of the SC's procurement process before this consent is granted. The acquisition process that the SC will follow has been briefed to the community as part of the Design Options Working Group as well as to members of the Colorado CAC. The Government offered the CAC an opportunity to provide any issues, concerns, and criteria determined to be of importance to the community for consideration into the acquisition process. This input was submitted to the ACWA PEO on June 27<sup>th</sup>, 2012 and has been provided to the SC for consideration into their solicitation.

- u. The EA fails to delineate the differences in waste stream from the four EDTs. Again, the EA posits that EDT will be employed, that there are four possible types, but offers scant information about the different types and their impacts. Which of the four produces the least waste or the more waste and of what type? What are the differences in what would be expected in terms of off-site shipment of waste? Of impact to the ground it will be on?  
**ACWA Response:** Table 3-16 in the EA describes the different types of wastes for each of the EDT units, and it presents the type of quantification data being sought in the comment. Additional details about the different waste streams for each of the EDT units are discussed in Section 3.1.8.2 in the EA.
- v. What measures, if any, will be taken to ensure that the problem munitions to be destroyed in the EDT will only be those that cannot be handled by the PCAPP facility currently being built? Is there any pressure, directive, suggestion being made by those in authority, or who have influence, to see that a certain number of munitions will be destroyed by the EDT regardless of the matter of necessity described here? In other words, all management discussion over the number of munitions to be (destroyed) [*sic*] by EDT – apart from necessity due to PCAPP not being capable – should be shared with the public in this process and in reply to these comments.  
**ACWA Response:** During normal operations, the PCAPP can process munitions much quicker than any EDT. There is no advantage in processing any more munitions than absolutely necessary in the EDT. Therefore the intent is to process only those munitions that cause a disruption to normal plant operations as well as the energetic components that are not easily processed off-site, due to size reducing operations or the risk of shipping burster-fuse combinations that increase hazard handling outside of the EDT/PCAPP facility.
- w. In the final analysis, we find the EA fails to evidence integrity of quality and purpose. As it is likely to go through, at a minimum the choice of EDT facility must be part of the public process, both in terms of sufficient information, the criteria for choosing, and the decision itself. The Citizens Advisory Committee should have full engagement.  
**ACWA Response:** The Army believes the analyses in the EA are adequate and appropriate for providing information regarding potential environmental impacts that would be needed to make a fully informed decision. As has been the case throughout the ACWA program, the Colorado CAC will be fully informed on activities not only associated with the outcome of this process, but in all PCAPP activities. For this specific action, the CAC was given the opportunity to provide criteria associated with the EDT that will be considered in the acquisition process. This input was submitted to the ACWA PEO on June 27<sup>th</sup>, 2012 and has been provided to the SC for consideration into their solicitation.  
**Better Pueblo Final Opinion:** These comments clearly reveal a level of frustration and disappointment with the Army in the way it has carried out its responsibilities. This need not be the case. Here in Pueblo, the community offered support and a consensus on technology and a worthy goal of destroying the chemical weapons. We remain committed to this goal. We are disappointed at the institutional habit of just not doing the job right when it comes to the law and NEPA. We remain convinced that following NEPA with competence and commitment is the right way to go. We believe that respecting the right of information for the public and the right of constructive participation of the public, and of keeping the commitments to local communities, engenders greater trust. The result is better government both in quality work and in money saved. We remain committed to the successful destruction of the chemical stockpile and to working constructively with all those who have the responsibility of making it happen in a manner for the best of all.  
**ACWA RESPONSE:** The concerns of the commenter are noted. The ACWA program was started with an enhanced public outreach effort to include a nationwide dialog group that considered public input to programmatic standards. This process continues with regularly scheduled discussions on all issues and concerns of local stakeholders. See response to Sierra Club e. xxv.

**11. Citizens for Clean Air and Water in Pueblo/Southern Colorado (Margaret Barber)**

- a. **Comment Excerpt:** “contains very little actual info about what emissions to air, land and water would result”

**ACWA Response:** Contrary to the claim in the comment regarding “very little information about emissions,” Appendices A-1 and A-2 in the MPHRA provide detailed data and information on the source terms (i.e., chemicals potentially emitted) and their numerical quantities/emission rates for the various EDT units. Furthermore, the modeled media concentrations are presented in Appendices C through G to provide numerical estimates of the effects of these emissions as measured by their concentrations in soil, produce, animal feed, animal products, surface water, and breast milk. The overall set of data and information presented in these appendices is both detailed and comprehensive.

- b. **Comment Excerpt:** “false conclusions about those who will be most affected”

**ACWA Response:** See the response to Item e. below.

- c. **Comment Excerpt:** “no significant impact”

**ACWA Response:** The MPHRA makes no claim as to the significance or insignificance of any potential impact. Rather, the MPHRA includes statements regarding the numerical magnitude of the estimated risks and hazards as compared to numerical thresholds of concern as established by the CDPHE. The MPHRA findings indicate that the modeled risks and hazards fall within these acceptable limits; however, no statements are made in regard to the significance of this finding. The EA takes the information and conclusions from the MPHRA and uses in the context of NEPA to help determine whether or not there will be a significant impact to human health and the environment by implementing the proposed action. The NEPA impact analysis is based on the risk analysis of the MPHRA. The MPHRA is incorporated into the EA by reference.

- d. **Comment Excerpt:** “without indicating the number of weapons to be exploded” or “what method of detonation would be used” and “by omitting some pollutants from consideration”

**ACWA Response:** Appendices A-1 and A-2 in the MPHRA include tables showing the estimated schedule for processing the overpacked munitions, as well as the energetic components, in each of the EDT units. These tables include the numerical quantity of each type of munition or energetic component to be processed in the EDT units. The list of potentially emitted chemicals and substances that was used for analysis in the MPHRA was derived from a detailed risk assessment protocol developed in conjunction with the CDPHE and the EPA Region 8. Because the comment provides no information about why the list of pollutants appears to be incomplete, no response can be offered. The development of the COPC list was developed for the 2008 MPHRA that was accepted by the CDPHE for the analysis of risk due to emissions from the PCAPP facility. This level of oversight, with the addition of EPA Region 8, was continued in the development of the COPC list for the EDT EA.

- e. **Comment Excerpt:** “the finding that subsistence farmers will be the most likely to be affected is not based on the reality of life in Pueblo.”

**ACWA Response:** The MPHRA provides information about the estimated magnitude of potential risks and hazards by evaluating several credible exposure scenarios that could affect hypothetical individuals. While it is true that the MPHRA found the hypothetical subsistence farmer to be affected by the highest risk and hazard values, the magnitude of such risk was found to be below the thresholds of concern as established by the CDPHE. In addition, this hypothetical individual was assumed to be located at the point of greatest concentration of

pollutants in each media applicable to the subsistence-farmer exposure scenario. Thus, the maximum potential impact to the hypothetical subsistence farmer was investigated. Actual impacts (as measured by risks and hazards) to farmers at other locations would be much smaller than those estimated at the maximally impacted location that was examined in the MPHRA. It is completely incorrect to state that the subsistence farmers in the area around the Pueblo depot would be “the most likely to be affected” and/or to state that subsistence farmers “will be the only ones likely to be in any kind of danger.”

- f. **Comment Excerpt:** “no mention of particulate matter of all sizes”

**ACWA Response:** By agreement with the State of Colorado, the protocol for the MPHRA did not explicitly include particulate matter primarily because there are no specific numerical values applicable to either the chronic or acute toxicity of particulate matter suspended in the atmosphere. Nevertheless, the analysis in the EA did consider the impacts of particulate matter upon air quality and human health (see Section 3.1.1 in the EA).

- g. **Comment Excerpt:** “submitted this report to a toxicologist” and “it contained too little information”

**ACWA Response:** Because the comment does not identify or describe what additional information or data would be required, no response can be offered. In addition, the Army cannot adequately interpret or respond to the opinion of an anonymous toxicologist.

- h. **Comment Excerpt:** “give us a real health risk assessment . . . once you know what method of detonation will be used and how many weapons will be destroyed”

**ACWA Response:** There is a commitment to develop a follow-on MPHRA, as part of the permitting process, to focus on the EDT unit eventually selected for deployment at PCD.

- i. **Comment Excerpt:** “not enough to base a finding of no significant impact upon”

**ACWA Response:** The Army believes the analyses in the EA are adequate and appropriate for providing information regarding potential environmental impacts that would be needed to make a fully informed decision. The information upon which the analyses are based, as found in the EA itself and the supporting documentation are sufficient to make a finding of no significant impact.

## ACRONYMS AND ABBREVIATIONS

µg	microgram
AADT	annual average daily traffic
ac-ft	acre-foot
ACWA	Assembled Chemical Weapons Alternatives
AERMOD	American Meteorological Society/Environmental Protection Agency Regulatory Model (an atmospheric dispersion computer model)
AFSS	advanced fragment suppression system
ANAD	Anniston Army Depot (in Alabama)
APCD	Air Pollution Control Division
AR	Army Regulation
atm	standard atmospheric pressure
ATSDR	Agency for Toxic Substances and Disease Registry
BG	Blue Grass
BMPs	best management practices
BPT	Bechtel Pueblo Team
BRAC	Base Realignment and Closure
°C	degrees Centigrade (or Celsius)
CAA	Clean Air Act
CAC	Citizens' Advisory Commission
CD	Certificate of Designation (Pueblo County, Colorado)
CDP	census designated place
CDPHE	Colorado Department of Public Health and Environment
CEQ	Council on Environmental Quality
CFR	<i>Code of Federal Regulations</i>
CMA	U.S. Army Chemical Materials Agency
CO	carbon monoxide
COPC	chemical of potential concern
CT	census tract
CWA	Clean Water Act
CWC	Chemical Weapons Convention
DA	U.S. Department of the Army
DAVINCH	Detonation of Ammunition in Vacuum Integrated Chamber
dB	decibel

DCD	Deseret Chemical Depot (in Utah)
DDESB	Department of Defense Explosives Safety Board
DOD	U.S. Department of Defense
DOT	U.S. Department of Transportation
DRE	destruction and removal efficiency
EA	environmental assessment
EBH	Energetics Batch Hydrolyser
EDS	Explosive Destruction System
EDT	explosive destruction technology
EIS	Environmental Impact Statement
EPA	U.S. Environmental Protection Agency
°F	degrees Fahrenheit
FARS	Fatality Analysis and Reporting System
FEIS	final environmental impact statement
FMCSA	Federal Motor Carrier Safety Administration
FNSI	finding of no significant impact
FONSI	finding of no significant impact
FR	<i>Federal Register</i>
ft	feet
ft <sup>3</sup>	cubic feet
FWS	U.S. Fish and Wildlife Service
g	gram
gal	gallon
GCRP	U.S. Global Change Research Program
GHG	greenhouse gas
gpm	gallons per minute
GWh	gigawatt-hour
HD	mustard agent, also called “distilled mustard”
HI	hazard index
HQ	hazard quotient
hr	hour
HT	mustard agent, a mixture of agent HD and an organic compound
HVAC	heating, ventilation and air conditioning (system)
IBD	inhabited building distance (applies to non-participating personnel)

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ILD	intra-line distance
in.	inch
ISCST3	Industrial Source Complex Short-Term (a computer model)
°K	degrees Kelvin
kg	kilogram
kW	kilowatt
lb	pound
m	meter
m <sup>3</sup>	cubic meter
MEA	monoethanolamine
MFR	Memorandum for Record
mg	milligram (one thousandth of a gram)
mgd	million gallons per day
min	minute
mm	millimeter (one thousandth of a meter)
MPHRA	multiple pathway health risk assessment
NAAQS	National Ambient Air Quality Standards
NCP	National Contingency Plan
NEPA	National Environmental Policy Act
NEW	net explosive weight
NO <sub>2</sub>	nitrogen dioxide
NO <sub>x</sub>	oxides of nitrogen
NPDES	National Pollutant Discharge Elimination System
O <sub>3</sub>	ozone
PACOG	Pueblo Area Council of Governments
PAED	public access exclusion distance
PAS	pollution abatement system
Pb	the element lead
PBCDF	Pine Bluff Chemical Disposal Facility
PCAPP	Pueblo Chemical Agent-Destruction Pilot Plant
PCD	Pueblo Chemical Depot (in Colorado)
PCDD	Polychlorinated dibenzodioxins
PCDF	Polychlorinated dibenzofurans
PEO	Program Executive Officer

PM <sub>10</sub>	particulate matter with a diameter equal to or less than 10 µm
PM <sub>2.5</sub>	particulate matter with a diameter equal to or less than 2.5 µm PMCD Program Manager for Chemical Demilitarization (a predecessor of the U.S. Army Chemical Materials Agency)
PPE	personal protective equipment
ppb	parts per billion
ppm	parts per million
PTR	public transportation route
RCRA	Resource Conservation and Recovery Act
REC	Record of Environmental Consideration
RFP	request for proposal
RME	reasonably maximally exposed
ROD	Record of Decision
s	second
SC	Systems Contractor
SCC	secondary combustion chamber
SDC	Static Detonation Chamber
SEIS	Supplementary Environmental Impact Statement
SLERA	screening-level ecological risk assessment
SO <sub>2</sub>	sulfur dioxide
SWPPP	Storm Water Pollution Prevention Plan
TDC	Transportable Detonation Chamber
TEF	toxicity equivalence factor (for dioxins and furans)
TSDF	treatment, storage, and disposal facility
U.S.	United States
U.S.C.	United States Code
USAE ACWA	U.S. Army Element, Assembled Chemical Weapons Alternatives
VOC	volatile organic compound
VMT	vehicle miles traveled
VSL	vapor screening level
WWE	Wright Water Engineers, Inc.
WPL	worker population limit
yr	year

## APPENDIX A: RCRA Hazardous Waste Designation, Rationale, and Disposition\*

### SDC Waste Management Examples

Waste Material	Source	EPA Waste Codes	Basis for Designation	Disposition of Waste Material
Brine from Off Gas Treatment System	SDC Treatment Process	D002, D004-D011	Generator Analysis	Shipped to CHES-Chattanooga, TN
Spray Dryer Dust (sludge)	SDC Treatment Process	D004-D011	Generator Analysis	Shipped to CHES/Cincinnati, OH
Sodium Bicarbonate from SDC Baghouse (pollution abatement system)	SDC Treatment Process	D008 & Cadmium as UHC	Generator Analysis	Transported to the Anniston WWTP
SDC Baghouse Dust (pollution abatement system)	SDC Treatment Process	D006,D008,D009	Generator Analysis	Shipped to offsite TSDF
Salts from Water Recycle System	SDC Treatment Process	D004-D011	Generator Analysis	Shipped to CHES/Cincinnati, OH
Ash from Scrap Metal Conveyor Dust	SDC Treatment Process	D004-D011	Generator Analysis	Shipped to offsite TSDF
Sulfur Impregnated Carbon	SDC Treatment Process	D004-D011	Generator Analysis	Shipped to offsite TSDF
Scrap Munitions Casings	SDC Deactivation and treatment of mustard rounds	N/A,	Monitored for Agent	Recycled under RCRA regulations

Source of data: SDC Waste Inventory Anniston Army Depot, 2011

### EDS Waste Management Examples

Waste Material	Source	EPA Waste Codes	Basis for Designation	Disposition of Waste Material
Mustard Agent/MEA Neutralant	Generated from detonation of recovered munition and chemical neutralization of chemical fill	D002, D004--D011, D018, D019, D022, D028, D034, D039, D040, D043	MEA and water mixture is corrosive and may have a pH greater than 12.5. Liquid waste may contain organics and RCRA metals from the munitions casings/components.	Shipped to a permitted Treatment Storage and Disposal Facility (TSDF) after Characterization
Rinsewater	Generated from rinsing the EDS Containment Vessel following Treatment	D004-D011, D022 D028, D034, D039 D040, D043	May contain TC organics and metals from residues in the EDS Containment Vessel following treatment.	Shipped to a permitted Treatment Storage and Disposal Facility (TSDF) after Characterization
Decontaminated Munition Casings, Fragments, Components	Generated from Treatment of recovered munitions in the EDS	D004-D011	Munition casings, fragments, and components are composed of metal alloys and may contain TC metals.	Shipped to a permitted Treatment Storage and Disposal Facility (TSDF) after Characterization
Miscellaneous Solid Waste (Overpacks, Hoses, Valves, Packing Material, Absorbent Rags and Wipes)	Generated during EDS operations	S022, D028, D034, D039, D040, D043	TC organics may be present as a result of chemical agent mustard contamination.	Shipped to a permitted Treatment Storage and Disposal Facility (TSDF) after Characterization
Miscellaneous Liquid Wastes	Liquids such as chemical or supply spill, or other fluids including waste oil and solvents from routine maintenance operations	D001, D002, D003, D004-D043, F001-F005	Liquids may contain TC metals/organics. Maintenance operations may generate waste oils and solvents. Liquids may be ignitable, corrosive, or reactive.	Shipped to a permitted Treatment Storage and Disposal Facility (TSDF) after Characterization
Spent Carbon (from PAS, PPE Gas Mask)	Generated from changeout activities	D004-D011, D022, D028, D034, D039, D040, D043	Carbon may contain TC metals and organics	
Used PPE (Includes Gloves, Masks, and Other Protective Gear)	Generated from personnel use in providing worker protection from chemical agent	D022, D028, D034, D039, D040, D043	Carbon may contain TC metals and organics	Shipped to a permitted Treatment Storage and Disposal Facility (TSDF) after Characterization

Source of data: Pine Bluff RCRA Application, April 2006 Revision No.4

### TDC Waste Management Examples

Waste Material	Source	EPA Waste Codes	Basis for Designation	Disposition of Waste Material
Spent Bleach	Used to treat and deactivate residual chloropicrin and chloropicrin lab standards and phosgene lab standards	D001	Generator Knowledge for TCLP metals - Generator analysis on VOC, TOC, Sulfides, Phenolics, Cyanides, and PCBs	TSDF
Spent Non-contaminated Drager Tubes	Drager Tubes used to monitor atmosphere for phosgene; No positive hits were revealed.	Non-Hazardous	Generator Knowledge	Kent, WA Columbia Ridge Landfill
Spent Lime	Spent lime is generated from the deactivation of phosgene and chloropicrin rounds	Non-Hazardous	TCLP metals waste characterization and Generator analysis on VOC, TOC, Sulfides, Phenolics, Cyanides, and PCBs	Kent, WA Columbia Ridge Landfill
Spent Pea Gravel	Deactivation of phosgene and chloropicrin rounds	Non-Hazardous	TCLP metals waste characterization and Generator analysis on VOC, TOC, Sulfides, Phenolics, Cyanides, and PCBs	Kent, WA Columbia Ridge Landfill
Spent Small Filters/Candle Filters	Deactivation of phosgene and chloropicrin rounds	Non-Hazardous	Generator Knowledge for TCLP metals - Generator analysis on VOC, TOC, Sulfides, Phenolics, Cyanides, and PCBs	Kent, WA Columbia Ridge Landfill
Waste Water	Water collected from Cooling Tank/Tower at end of Treatment/Processing	Non-Hazardous	Total metals waste characterization and Generator analysis on VOC, TOC, Sulfides, Phenolics, Cyanides, and PCBs	Wheeler Army Airfield Waste Water Treatment Plant
Contaminated Metal Scrap fragments	Deactivation and Treatment of phosgene and chloropicrin rounds	Non-Hazardous	Agent Monitored	Kent, WA Columbia Ridge Landfill

Source of data: US Army Garrison Hawaii, Schofield Barracks Generator's Waste Profiles 2008, 2009, - Waste Manifest 2008, - Burlington Environmental, LLC Kent Facility, Certificate of treatment, recycling and/or disposal, 2008, - Schofield Barrack's EA, PROPOSED DESTRUCTION OF RECOVERED CHEMICAL MUNITIONS AT SCHOFIELD BARRACKS, O`AHU, HAWAI`I, January 2008

**\*Note:** Waste management examples on appendix A are examples only of how other Army sites handled waste from their EDT operations. Waste management on the PCD site will be subject to waste management regulations, negotiations with regulators, and waste handling conditions in applicable permits.

## APPENDIX B: Explosive Destruction Technology (EDT) Pueblo Chemical Agent-Destruction Pilot Plant (PCAPP) Record of Public Involvement November 2009 Through June 2012

DATE	PUBLIC MEETINGS ON EDT*
26 June 2012	<ul style="list-style-type: none"> <li>ACWA's Scott Susman presented an EDT overview to the Chemical Stockpile Emergency Preparedness Program annual meeting in Pueblo, CO.</li> </ul>
30 May 2012	<ul style="list-style-type: none"> <li>Colorado (CO) Citizens' Advisory Commission (CAC) member Ross Vincent presented a summary of the EDT discussion that occurred earlier in the day at the Design Options Working Group.</li> </ul>
30 May 2012	<ul style="list-style-type: none"> <li>At the CO CAC's Design Options Working Group, discussion on the EDT EA included a presentation from Nancy Schiff, air emissions expert from the CO Department of Public Health &amp; Environment.</li> </ul>
25 April 2012	<ul style="list-style-type: none"> <li>EDT EA and National Environmental Policy Act (NEPA) are briefed to the regularly scheduled monthly meeting of the CO CAC held this month in Avondale, CO.</li> </ul>
25 April 2012	<ul style="list-style-type: none"> <li>At both CO CAC's Permitting Working Group and Design Options Working Group meetings, the EDT EA and the Multiple Pathway Health Risk Assessment were extensively discussed.</li> </ul>
24 April 2012	<ul style="list-style-type: none"> <li>EDT EA public meeting held in Pueblo, CO to afford the community the opportunity to learn about and participate in the NEPA process. An informal poster session was held following the meeting.</li> </ul>
9 April 2012	<ul style="list-style-type: none"> <li>The EDT EA, Multiple Pathway Health Risk Assessment and Finding of No Significant Impact (FNSI) are released for public comment along with a command transmittal letter, a fact sheet, a news release and paid newspaper ads.</li> </ul>
28 March 2012	<ul style="list-style-type: none"> <li>At a special joint meeting of the CO CAC's Permitting Working Group and Design Options Working Group, ACWA's Scott Susman provided detailed instructions on navigating the EDT EA and the associated Multiple Pathway Health Risk Assessment.</li> </ul>
12 March 2012	<ul style="list-style-type: none"> <li>"Pre-release" draft copies of the EDT EA, the Multiple Pathway Health Risk Assessment and the draft FNSI are provided to members of the CO CAC.</li> </ul>
29 February 2012	<ul style="list-style-type: none"> <li>Program Executive Officer ACWA in discussions with CO CAC Leadership acknowledges his intention to provide the CAC draft copies of the EDT EA 30 days in advance of public release.</li> </ul>
7 December 2011	<ul style="list-style-type: none"> <li>A summary of the presentations described below was presented by CAC member Ross Vincent to the regular monthly CO CAC meeting.</li> </ul>
7 December 2011	<ul style="list-style-type: none"> <li>At the CO CAC's Design Options Working Group, ACWA's Scott Susman discussed the status of the EDT EA Multiple Pathway Health Risk Assessment and provided an update on the progress of the EDT EA. Mark Swager, Bechtel, presented an overview of Bechtel's Request-for-Proposal for the EDT.</li> </ul>
26 October 2011	<ul style="list-style-type: none"> <li>CO CAC Leadership requests that PEO ACWA provide them copies of the draft EDT EA 30 days in advance of public release.</li> </ul>
10 October 2011	<ul style="list-style-type: none"> <li>At the CO CAC's Design Options Working Group, ACWA's Scott Susman provided an update on the EDT EA and presented a slide program on the feasibility of rinsate from the Army's Explosive Destruction System.</li> </ul>
23 August 2011	<ul style="list-style-type: none"> <li>ACWA's Scott Susman presented slides discussing the various EDTs being studied under the EA to the CO CAC's Design Options Working Group.</li> </ul>

DATE	PUBLIC MEETINGS ON EDT* (CONTINUED)
18 August 2011	<ul style="list-style-type: none"> <li>At a special meeting of the CO CAC, Acting ACWA Program Manager noted that the Army's Explosive Destruction System would be considered by the EA along with the commercial EDT.</li> </ul>
29 June 2011	<ul style="list-style-type: none"> <li>At the regular monthly meeting of the CO CAC, Ross Vincent summarized Susman's report on the EDT EA and the Multiple Pathway Health Risk Assessment</li> </ul>
29 June 2011	<ul style="list-style-type: none"> <li>At a joint meeting of the CO CAC's Permitting Working Group and Design Options Working Group, ACWA's Scott Susman reported on the EDT EA and the associated Multiple Pathway Health Risk Assessment and discussed the possibility that the Army's Explosive Destruction System might be unsuited for use at the PCAPP</li> </ul>
27 April 2011	<ul style="list-style-type: none"> <li>A summary of Scott Susman's presentations to the joint working groups (below) was given at the CO CAC's regular monthly meeting</li> </ul>
27 April 2011	<ul style="list-style-type: none"> <li>CO CAC's joint Permitting Working Group/Design Options Working Group received an update from ACWA's Scott Susman on the progress of the EDT EA and a revised projection of the number of rounds likely to be processed by EDT. Using EDT to destroy explosive components was also discussed</li> </ul>
30 March 2011	<ul style="list-style-type: none"> <li>At a special meeting of the CO CAC's Design Options Working Group, ACWA representatives Scott Susman and Jon Ware answered a list of formal questions pertaining to the proposed use of EDT at PCAPP</li> </ul>
26 January 2011	<ul style="list-style-type: none"> <li>Briefing on plans for new EDT EA presented at regular CO Citizens' Advisory Group meeting</li> </ul>
26 January 2011	<ul style="list-style-type: none"> <li>Two briefings at CO CAC's joint Permitting Working Group/Design Options Working Group: Path forward on processing problem rounds and an in-depth review of the NEPA process, timeline for the new EA, and a discussion with Oak Ridge National Laboratory on the adequacy of an EA vs. an Environmental Impact Statement</li> </ul>
8 December 2010	<ul style="list-style-type: none"> <li>At the regular monthly CO CAC meeting, CAC member Ross Vincent summarized the EDT discussion from the DOWG meeting earlier in the day</li> </ul>
8 December 2010	<ul style="list-style-type: none"> <li>Two briefings at CO CAC's Design Options Working Group: Proposed calendar for future EDT discussions and overview of alternative methods of processing problem munitions</li> </ul>
29 September 2010	<ul style="list-style-type: none"> <li>Briefing at CO CAC Meeting, Boone, CO</li> </ul>
27 April 2010	<ul style="list-style-type: none"> <li>Facilitated Poster Session/Public Meeting, Pueblo, CO</li> </ul>
18 March 2010	<ul style="list-style-type: none"> <li>Facilitated Poster Session/Public Meeting, Pueblo, CO</li> </ul>
9 December 2009	<ul style="list-style-type: none"> <li>Briefing at CO CAC Meeting, Pueblo, CO</li> </ul>
	<p>* <b>Note:</b> All briefing material and public meeting posters were posted to the ACWA Web site <a href="http://www.pmacwa.army.mil">www.pmacwa.army.mil</a></p>

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DATE	WRITTEN COMMUNICATIONS ON EDT
6 May 2012	<ul style="list-style-type: none"> <li>• Notification Ad in <i>Pueblo Chieftain</i> announcing Environmental Assessment (EA) comment period extension</li> </ul>
4 May 2012	<ul style="list-style-type: none"> <li>• Press Release – “Public Comment Period Extended to June 7 on Pueblo Chemical Depot Environmental Assessment”</li> </ul>
9 April 2012	<ul style="list-style-type: none"> <li>• Press Release – “Pueblo Chemical Depot Completes Environmental Assessment”</li> <li>• Fact Sheet and Navigation Guide – Environmental Assessment of Proposed Installation and Operation of Explosive Destruction Technology Facility at U.S. Army Pueblo Chemical Depot</li> <li>• Notification Ad in <i>Pueblo Chieftain</i> announcing EA comment period and details of 24 Apr 12 public meeting (also ran on 11, 15, 22 and 24 Apr 12)</li> </ul>
13 September 2010	<ul style="list-style-type: none"> <li>• Press Release – “New Path Forward Charted for Explosive Destruction Technologies at Pueblo Chemical Depot”</li> <li>• Letter/Email to Stakeholders from PCAPP Site Project Manager (SPM)</li> <li>• Notification Ad in <i>Pueblo Chieftain</i> announcing withdrawal of Environmental Assessment (EA) and details of 29 Sep 10 CAC meeting</li> </ul>
30 June 2010	<ul style="list-style-type: none"> <li>• Pueblo <i>exchange</i> Newsletter Article – “Environmental Assessment Examines Possible Use of Explosive Destruction Technologies at PCAPP”</li> </ul>
1 April 2010	<ul style="list-style-type: none"> <li>• Press Release – “Public Comment Period Extended to April 30 on Pueblo Chemical Depot Environmental Assessment”</li> <li>• Notification Ad in <i>Pueblo Chieftain</i> announcing EA comment period extension and details of 27 Apr 10 public meeting</li> </ul>
26 February 2010	<ul style="list-style-type: none"> <li>• Press Release – “Pueblo Chemical Depot Completes Environmental Assessment”</li> <li>• Letter/Email to Stakeholders from Pueblo Chemical Depot Commander and PCAPP SPM with accompanying fact sheet</li> <li>• Notification Ad in <i>Pueblo Chieftain</i> announcing EA public comment period and details of 18 Mar 10 public meeting</li> </ul>
DATE	WEBSITE POSTINGS ON EDT
7 June 2012	<ul style="list-style-type: none"> <li>• Web page updated to include information that the public comment period is closed and that the Department of Defense is reviewing the comments received.</li> </ul>
22 May 2012	<ul style="list-style-type: none"> <li>• Public meeting documents posted to web page.</li> </ul>
9 May 2012	<ul style="list-style-type: none"> <li>• E-newsletter distributed to stakeholders announcing extension of comment period.</li> </ul>
7 May 2012	<ul style="list-style-type: none"> <li>• Web page updated to announce extension of public comment period.</li> </ul>
4 May 2012	<ul style="list-style-type: none"> <li>• Facebook post announcing extension of public comment period.</li> </ul>
9 April 2012	<ul style="list-style-type: none"> <li>• Web page announcing public release of 2012 EA and public comment period. Includes link to submit public comments online, electronic versions of the EA, FNSI and Multiple Pathway Health Risk Assessment, as well as information on the 24 Apr 12 public meeting.</li> <li>• Facebook post regarding public release of the 2012 EA and public comment period.</li> <li>• E-newsletter message distributed to stakeholders advising of public release of EA and public comment period.</li> </ul>
7 April 2011	<ul style="list-style-type: none"> <li>• Interactive Facebook session on EDT with ACWA’s Scott Susman responding to questions submitted by community stakeholders. Subsequent Q&amp;A with Susman article posted on ACWA website.</li> </ul>

DATE	WEBSITE POSTINGS ON EDT (CONTINUED)
13 September 2010	<ul style="list-style-type: none"> <li>• Web page announcing new EDT path forward and withdrawal of Feb 10 EA is posted with details of 29 Sep 10 CAC meeting and links to Press Release and earlier published EDT informational material</li> <li>• ACWA Facebook and Twitter sites and RSS feeds were simultaneously posted with the information listed above</li> </ul>
1 April 2010	<ul style="list-style-type: none"> <li>• Web page announcing extension of public comment period is posted with details of 27 Apr 10 public meeting</li> </ul>
26 February 2010	<ul style="list-style-type: none"> <li>• Web page explaining continuity of chemical demilitarization initiative is posted with details of 18 Mar 10 public meeting and links to Press Release, EA, and EDT fact sheets</li> </ul>
DATE	PUBLIC INFORMATION REPOSITORIES*
9 April 2012	<ul style="list-style-type: none"> <li>• Robert Hoag Rawlings Public Library, 100 E. Abriendo Ave, Pueblo, CO</li> <li>• McHarg Park Community Center, 405 2nd Ln., Avondale, CO</li> <li>• Boone Community Center, 421 E. 1<sup>st</sup> St., Boone, CO</li> <li>• Pueblo Chemical Stockpile Outreach Office, 104 W. B St., Pueblo, CO</li> </ul> <p><b>*Note:</b> Copies of the April 2012 EA, the draft FNSI and the Multiple Pathway Health Risk Assessment were placed in the repositories on 9 April 12</p>
26 February 2010	<ul style="list-style-type: none"> <li>• Robert Hoag Rawlings Public Library, 100 E. Abriendo Ave, Pueblo, CO</li> <li>• Avondale Water and Sanitation District, 321 3<sup>rd</sup> St., Avondale, CO</li> <li>• Boone Community Center, 421 E. 1<sup>st</sup> St., Boone, CO</li> <li>• Pueblo Chemical Stockpile Outreach Office, 104 W. B St., Pueblo, CO</li> </ul> <p><b>*Note:</b> Copies of the February 2010 EA and the draft FNSI were placed in the repositories on 26 Feb 10 and subsequently withdrawn on 13 Sep 10.</p>
DATE	MEDIA INTERACTIONS ON EDT
29 September 2010	<ul style="list-style-type: none"> <li>• Interview with Associated Press Denver, CO Bureau</li> </ul>
17 June 2010	<ul style="list-style-type: none"> <li>• PCAPP Visit/Tour with Pueblo Chieftain Editorial Board</li> </ul>
5 April 2010	<ul style="list-style-type: none"> <li>• Meeting with Pueblo Chieftain Editorial Board</li> </ul>
23 March 2010	<ul style="list-style-type: none"> <li>• Interview with KCSJ Talk Radio AM 590</li> </ul>
18 March 2010	<ul style="list-style-type: none"> <li>• Interview with KRDO Channel 13 News, Colorado Springs, CO</li> </ul>
1 March 2010	<ul style="list-style-type: none"> <li>• Interview with Associated Press Denver, CO Bureau</li> </ul>
21 January 2010	<ul style="list-style-type: none"> <li>• PCAPP Visit/Tour with Associated Press, Denver CO Bureau</li> </ul>
7 January 2010	<ul style="list-style-type: none"> <li>• Interview with Global Security Newswire</li> </ul>
29 December 2009	<ul style="list-style-type: none"> <li>• Interview with Associated Press Lexington, KY Bureau</li> </ul>
DATE	MEETINGS WITH CITIZENS ON EDT
29 September 2010	<ul style="list-style-type: none"> <li>• PMACWA meeting with CO CAC chair, vice chair and one commission member prior to CAC meeting to discuss EDT “path forward” and respond to questions</li> </ul>
16-17 August 2010	<ul style="list-style-type: none"> <li>• Invitational travel to Colorado Springs, CO to attend 17<sup>th</sup> Chemical Demilitarization Environmental Forum, at which EDT was briefed</li> </ul>
29 April 2010	<ul style="list-style-type: none"> <li>• Assistant to the Secretary of Defense (Nuclear and Chemical and Biological Defense Programs) meeting with the “Colorado Forum,” a group of non-partisan civic and business leaders, Washington, DC</li> </ul>

DATE	MEETINGS WITH CITIZENS ON EDT (CONTINUED)
14-15 April 2010	<ul style="list-style-type: none"> <li>• Invitational travel to Aberdeen Proving Ground, MD to attend information sessions with three commercial EDT vendors: CH2M Hill, Dynasafe/UXB and Kobe/Versar/Geomet</li> </ul>
30 March 2010	<ul style="list-style-type: none"> <li>• Invitational travel to Pine Bluff Arsenal, AR to observe Explosive Destruction System operations</li> </ul>
17 November 2009	<ul style="list-style-type: none"> <li>• PMACWA meeting with CO CAC chair, vice chair and two commission members to discuss EDT and continuity of chemical demilitarization initiative</li> </ul>
10 November 2009	<ul style="list-style-type: none"> <li>• PCAPP SPM, Bechtel Pueblo Project Manager and PCAPP environmental managers meeting with CO Department of Public Health &amp; Environment officials to discuss EDT and continuity of chemical demilitarization study</li> </ul>
9 November 2009	<ul style="list-style-type: none"> <li>• PCAPP SPM and Bechtel Pueblo Project Manager meeting with CO CAC chair and vice chair to discuss EDT and continuity of chemical demilitarization study</li> </ul>
DATE	ACWA PROGRAM MANAGER MEETINGS WITH CONGRESSIONAL STAFF ON EDT
8 September 2010	<ul style="list-style-type: none"> <li>• PCAPP Visit/Tour with Staff of Sen. Mark Udall</li> </ul>
30 July 2010	<ul style="list-style-type: none"> <li>• Meetings with staff of Sen. Mitch McConnell and Sen. Mark Udall to provide an ACWA program update</li> </ul>
19 May 2010	<ul style="list-style-type: none"> <li>• Meeting with staff of Sen. Mitch McConnell to provide an ACWA program update</li> <li>• Meeting with staff of Sen. Mark Udall and Sen. Michael Bennet to provide an ACWA program update and discuss EDT-related initiatives</li> </ul>
7 May 2010	<ul style="list-style-type: none"> <li>• Meeting with staff of Sen. Mark Udall, Sen. Michael Bennet, Rep. John Salazar to provide an ACWA program update and discuss EDT-related initiatives</li> </ul>
15 April 2010	<ul style="list-style-type: none"> <li>• Meeting with Senate and House Appropriations Committee staff to provide an ACWA program update and discuss EDT</li> </ul>
9 April 2010	<ul style="list-style-type: none"> <li>• Meeting with staff of Sen. Mitch McConnell and Sen. Mark Udall to provide an ACWA program update and discuss EDT</li> </ul>
23 March 2010	<ul style="list-style-type: none"> <li>• Meetings with Senate and House Armed Services Committee to provide an ACWA program update</li> </ul>
11 December 2009	<ul style="list-style-type: none"> <li>• Meeting with staff of Rep. Ben Chandler (D-KY-6<sup>th</sup>) to provide an ACWA program update and discuss EDT-related initiatives</li> <li>• Meeting with House Armed Services Committee staff for the same purpose as above</li> <li>• Meeting with staff of Sen. Mark Udall for the same purpose as above</li> </ul>
3 December 2009	<ul style="list-style-type: none"> <li>• Meeting with staff of Sen. Jim Bunning to provide an ACWA program update and discuss EDT-related initiatives</li> </ul>
19 November 2009	<ul style="list-style-type: none"> <li>• Meeting with staff of Sen. Mark Udall and Sen. Michael Bennet to provide an ACWA program update and discuss EDT-related initiatives</li> <li>• Meeting with Senate Armed Services Committee professional staff for the same purpose as above</li> <li>• Meeting with staff of Sen. Mitch McConnell for the same purpose as above</li> </ul>