Appendix Q

Response to Comments

RESPONSE TO COMMENTS

Document: Draft MRS-16 Munitions and Explosives of Concern, Remedial Action Report, Former Fort Ord, California

Commenting Organization: U.S. Environmental Protection Agency (EPA)
Name: Lewis Mitani
Date of Comments: April 16, 2009

General Comment 1
The Draft MRS-16 Munitions and Explosives of Concern Remedial Action Report, dated February 2009 (hereinafter referred to as the Draft MRS-16 MEC RAR), includes what appears to be a recurring deficiency that results from the application of the Fort Ord Ordnance and Explosives Risk Assessment Protocol (the Protocol) (Appendix M) to the results of removal actions. This discussion of the assumed deficiency does not in any way suggest that the removal action was conducted in an inappropriate manner, nor is it intended to be a criticism of the results of that removal action or the application of the results to the Protocol process. Rather, it expresses a concern as to the ability of the Protocol to achieve results other than "E – Highest Risk" for any potential receptors unless a subsurface removal action is conducted to completion. This issue has been noted in comments on other documents related to the results of removal actions at the former Fort Ord.

The application of the Protocol to the results of the removal actions presented in the Draft MRS-16 MEC RAR provides a risk rating of "A – Lowest Risk" for those portions of MRS-16 where the removal to detection depth was completed. It assigns a rating of "E – Highest Risk" to all potential receptors for that portion of the site where the subsurface work was not prosecuted to completion. However, the work that was done in the incomplete area (the "saturated area") did result in a surface removal and the subsurface investigation of some portions of the area. Had none of this been accomplished, the risk rating of the area, which was potentially contaminated with munitions items on and beneath the surface, would have still been "E – Highest Risk."

It appears that the other risk ratings (i.e., B – Low Risk, C – Medium Risk, D – High Risk) can only be achieved within a very narrow range of circumstances, if some of them may be achieved at all. Because of this, most of the ratings previously noted on reports that present the removal results on a particular site have had risk ratings confined to A and E. This is of particular interest with respect to MRS-16 because the "E" rating assigned to all of the potential receptors in the "saturated area" does not reflect the relative reduction of the risk originally present in that area that resulted from the surface removal and the limited intrusive investigations performed therein. All concerned should note this protocol rating bias.

Response to General Comment 1
Protocol rating bias is noted with respect to letter risk rating. However, letter and narrative should be looked at in conjunction with each other (narratives are provided in Appendix M, Tables 2-15 through 17 and 2-19 through 2-21). Narrative portions have been updated to indicate risk has been reduced from initial state.

Text in Section 10.2 has been revised as follows:

"Areas where subsurface MEC removals were not completed show a score of E (the highest risk score) for all receptors. Surface MEC removal was completed within this area, which resulted in reduction of risk. The subsurface condition of this area has also been investigated as described in Section 10.1.4.2. It should be noted that the risk score represents the highest risk level for the receptors and does not necessarily represent the expected risk. "

(b) Narratives in Appendix M, Tables 2-19, 2-20 and 2-21 have been revised from:

"MEC items are not accessible on the surface but are accessible in the subsurface because a removal to depth was not completed."

To:

"Surface MEC removal has been completed. MEC items may be accessible in the subsurface if present."

Specific Comment 1
List of Photographs, Page vi: The line labeled "Photograph 25 M1A1 Practice at Mine (UXO)" should be revised to read "Photograph 25 M1 Practice AT Mine (UXO)." The listed practice mine does not have an A1 version. The M1A1 is a high explosives loaded antitank (AT) mine. Also, the abbreviation for antitank is normally presented using all uppercase letters. Please make this correction.

Response to Specific Comment 1
Correction Made.

Specific Comment 2
Section 3.3.1, Previous Investigation, Page 3-5: This section states that, "Pentaerythritol tetranitrate (PETN), a component of the high explosive antitank 2.36-inch rocket was detected at a concentration of 1.5 mg/kg in one sample." While this statement is correct, PETN is also a significant component of the Pentolite explosives loaded in the M9 series of high explosive antitank rifle grenades that evidence indicates were also used on MRS-16. Please modify the cited section to reflect this information.

Response to Specific Comment 2
Reference to PETN also being associated with Pentolite explosives loaded in M9 series HEAT rifle grenade has been added.

Specific Comment 3
Section 6.6, MEC Removal, Page 6-13: The last paragraph of this section states that, "Three of the M48 hand grenade fuzes and thirteen 3-inch unfired Stokes mortars were stored in a safe holding area and will later be detonated." The identity of the "M48 hand grenade fuzes" may be in error, as attempts to identify a hand grenade fuze having this nomenclature in official Department of Defense documents were unsuccessful. Please provide the source of the M48 designation. If the designation is erroneous, please correct it at each appearance in the Draft MRS-16 MEC RAR and its appendices.

Response to Specific Comment 3
Designation was erroneous. Fuze designation has been corrected to M205 series.

Specific Comment 4
Section 10.3, Institutional Controls, Page 10-7: The second paragraph of this section indicates that, "Based on the proposed reuse (Section 10.1.1) it is likely that BLM will place no restrictions on access to the MRS-16 site for activities that do not involve subsurface intrusion. Following the remedial action the perimeter fence has been removed. A two-strand barbed wire fence has been constructed around the saturated area and government property signs have been placed. The purpose of this fence is to delineate the area in which subsurface removal was not completed. The fence location is shown on Figure 10-2. Any intrusive activities within the site should be accompanied by UXO support. The requirement for UXO support during intrusive activities has been coordinated with BLM and the regulatory agencies."

It is unclear as to whether the sentence that reads, "Any intrusive activities within the site should be accompanied by UXO support." refers to the entire MRS-16, or only to that portion of MRS-16 that is surrounded by the fence. Please revise the cited paragraph to remove this ambiguity.

Response to Specific Comment 4
Paragraph has been revised to indicate that sentence refers only to saturated area which is enclosed within the fence mentioned previously and included on Figure 10-2.

Specific Comment 5
Section 11.0, References, Page 11-1: The reference that reads, "DDESB TP 16, 2003 Department of Defense Explosives Safety Board Technical Paper 16, Methodologies for Calculating Primary Fragment Characteristics, Revision 1, December 2003." is not the most current version of the reference. Revision 2 is dated 17 October 2005. Please make this correction

Response to Specific Comment 5
Reference has been updated.

Specific Comment 6
Photographs, Page 15 of 17: Photograph 30 identifies the subject munition as "M63 HE 37mm Shrapnel Projectile (UXO)." There has never been a type-classified 37mm projectile in the Department of Defense munitions inventory. The M63 37mm HE projectile is not listed elsewhere in the document as a Shrapnel projectile. Please correct the title of the listed photograph.

Response to Specific Comment 6
Title of photograph has been corrected to 37mm HE Projectile.

Specific Comment 7
Appendix A, Task Order Statement of Objectives, Supplemental Scope of Work, Section 4.5.1, Page 2 of 10: This section references a Corps of Engineers (COE) onsite official entitled "MM Safety Specialist." This position does not appear to be defined in this appendix or elsewhere in the Draft MRS-16 MEC RAR or in the other appendices attached thereto. Based upon the functions of this position that are noted in Appendix A, it appears that this position title has replaced (or is synonymous with) the previously used "OE Safety Specialist." Please review the use of the two noted terms and, if they are synonymous, standardize the usage with one term. If they are not synonymous, please define the "MM Safety Specialist" term and explain the functions performed by this individual.

Response to Specific Comment 7
The term MM Safety Specialist is not currently in use. Scope of Work is a document provided prior to start date of project and included this term. For this SOW, MM Safety Specialist was intended to be synonymous with OE Safety Specialist. OE Safety Specialist is used throughout the remainder of the document. SOW is not being revised.

Specific Comment 8
Appendix A, Task Order Statement of Objectives, Supplemental Scope of Work, Section 5.6.1, MM Data Collection Requirements, Page 5 of 10: The last sentence in this section reads, "All mapping projects 'MXD' with data shall be submitted to USACE." It is unclear as to what is intended by the term "MXD" which is not defined in this appendix or elsewhere in the Draft MRS-16 MEC RAR or in the other appendices attached thereto. Please provide a definition of this acronym at an appropriate location in the Draft MRS-16 MEC RAR or its attached appendices.

Response to Specific Comment 8
The term mxd is a file extension meaning map exchange document. The acronym mxd has been added to the acronym section at the beginning of the report.

RESPONSES TO COMMENTS

Document: Draft MRS-16 Munitions and Explosives of Concern, Remedial Action Report, Former Fort Ord, California

Commenting Organization:	Fort Ord Environmental Justice Network, inc. (FOEJN)
Name:	LeVonne Stone
Date of Comments:	April 17, 2009

General Comment 1
"The Fitch Park community consists of military families, schools, and other residents. FOEJN has commented on the affects of the burning and smoke in military and civilian housing areas on Fort Ord. Difficulty breathing, sinus and eye problems, children and adults developing Asthmas. But, we are not the decision makers, therefore our comments have been ignored. Leaving a munitions burial pit in this area or any other area where humans or animals may come in contact with the contents is not a good decision. Increase in any toxins should be evaluated by outside agencies who work for impacted communities and families."

Response to General Comment 1
The Army takes community comments to the cleanup process seriously, and considers them in developing cleanup work plans such as site-specific prescribed burn plans and reports. All community comments that are received are reviewed and evaluated carefully, and if warranted, documents are revised based on the comments. All comments are responded to in an appropriate manner.

A prescribed burn was conducted at MRS -16 in October 2006 in accordance with the site-specific prescribed burn plan. Based on the review of the burn operation and results of air monitoring, the Army considers that the prescribed burn at MRS-16 was planned and executed successfully. The direct community notification and voluntary temporary relocation program was also implemented for the MRS-16 prescribed burn. Community members were notified of the planned burn in advance and were advised of reasonable precautions they could take to reduce or avoid exposure to smoke, including an opportunity to temporarily relocate from the area during the burn under the Voluntary Temporary Relocation Program. Data indicates that the smoke generated by prescribed burn at MRS-16 was not a threat to healthy local residents nor those with respiratory or other illness provided that they take reasonable precautions when smoke is in the air. The results of the 2006 prescribed burn conducted at

MRS-16 are documented in *Draft Final Prescribed Burn 2006, MRS-16 After Action Report, Former Fort Ord, California*.

Three burial pits containing numerous inert practice rocket bodies (munitions debris) were found during the remedial action at MRS-16. Although all rocket debris was not excavated, a significant number of rockets were removed, inspected and were ascertained to be expended with no explosive hazard. No MEC items were recovered from these pits. The approximate extent of the pits has been delineated and entered into digital records associated with MRS-16. Please also see response to Specific Comment 2.

General Comment 2
"What local residents participated in 1990 or prior , when Fort Ord was added to the National Priorities List of Hazardous Waste Sites (55 Federal Register 6154). When the responsible agencies signed the Federal Facilities Agreement (July 1990) How was the local residents involved?? If they had been, I doubt that the Army would have been designated as the lead agency. In cases of Industrial Superfund sites, FOEJN doubt that the polluter would be appointed as the lead decision maker. This document goes on to say the Sampling and Analysis Plan also describes the field operations and the quality assurance program that will be used to ensure that the data gathered will define the nature, distributions, and concentrations of contaminants and be sufficient in quantity and quality to support remediation decisions. Has the plan been amended?"

Response to General Comment 2
The selection of Fort Ord as a National Priority List (NPL) site by U.S. Environmental Protection Agency, and subsequent environmental investigation and cleanup actions at the former Fort Ord, have been conducted consistent with Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the National Contingency Plan (NCP). The designation of the Army as the lead agency is made pursuant to CERCLA which designates the heads of Executive Departments and Agencies (e.g. the Army) as lead Agencies. The CERCLA process allows opportunities for stakeholder input regarding various decisions related to an NPL site. The decision to take interim remedial action at MRS-16 was made in accordance with CERCLA and the NCP; the Interim Action Record of Decision was signed in 2002 following an extensive public process including a regulatorily required formal public comment period.

It is not clear which Sampling and Analysis Plan the commenter is referring to. The MRS-16 Remedial Action was conducted in accordance with the *Final Work Plan, MRS-16 Munitions and Explosives of Concern Removal, Former Fort Ord, California.* Soil sampling activities were conducted in accordance with the *Final Sampling and Analysis Plan, Characterization of Small Arms and Multi-Use Ranges, Fort Ord, California* and vernal pool sampling was conducted in accordance with the *Final*

Sampling and Analysis Plan, Vernal Pool Sampling and Monitoring, Munitions Response Site 16, Former Fort Ord, CA.

General Comment 3
"Recommendations:

- The burial pit that is described on page 5-3 need to be fully excavated and all the shells, expended through they may be, must be removed.
- The elevated chemical concentrations on soils have to be thoroughly investigated and remediated.

Document Summary

The Draft Remedial Action Report describes the process and results of the remedial actions taken for munitions and explosive of concern (MEC) within Munitions Response Site 16 (MRS-16). MRS-16 covers an area of about 80 acres at Fort Ord. The land around the property includes the Fitch Park neighborhood and land overseen by BLM where horseback riding and other recreational activities are permitted. MRS16 is intended for undeveloped habitat reserve after all remediation is completed.

The document explains the remedies used to make the site safe for humans and native organisms, which include: "(1) vegetation clearance via prescribed burning, (2) MEC remediation via surface and subsurface MEC removal, and (3) detonation of MEC with engineering controls" (2-3). The report indicated that the remedial action went mainly according to the plan and that the site is ready for the next step in the remediation process. During the remedial action, no injuries occurred as a direct result of contact with MEC. Also, the boundary fence around MRS-16 has been removed now that the RA is complete."

Response to General Comment 3
Characterization of the soil at MRS-16 occurred during the MEC remedial action according to the Basewide Range Assessment (BRA) Program. Appendix I of the *Final Sampling and Analysis Plan, Characterization of Small Arms and Multi-Use Ranges, Fort Ord, California* (MACTEC/Shaw, 2003) presents the sampling and analytical requirements for collecting soil samples from MRS-16. MRS-16 is designated as Historical Area (HA) -119 in the BRA Program. The results of samples of the remaining soil (e.g. rocket pit after excavation of debris) were below the established screening levels. A separate technical memorandum will be prepared to document the soil characterization data and conclusions. This is discussed in Section 3.3 of the MRS-16 Remedial Action Report.

Other comments are noted.

Specific Comment 1
"The report indicates that vernal pools within MRS-16, which provide unique habitat for species native to California, have shrunk and that constituents such as phosphorus, surfactants, and ammonia as nitrogen have all increased following

prescribed burning. The Army attributes these results to drought conditions from 2007 and 2008, and reports, on page 4-3, that "it is concluded that the prescribed burn activities had no effect on the water quality of the pool." While drought conditions is a possible explanation for increased concentration of constituents, it is possible that the heat from the fires could have had an effect on vernal pools. ESC contends that there is not enough evidence in this report to create a sole, causal link between droughts and vernal pool water quality."

Response to Specific Comment 1

Text will be revised to indicate drought may be the cause of the slight increase in ammonia and phosphorous concentrations. Water samples were taken to evaluate potential impacts to suspected California tiger salamander breeding habitat adjacent to the 2006 prescribed burn. Pre-burn water results were compared with the post-burn water results to assess any potential impact. There are no significant differences between the two results collected from the vernal pool.

Specific Comment 2

"On page 5-3, the report states that: "During investigation, depths of nine feet were reached in the pit in grid C3A2F3 with no indication of an end to the expended 2.36-inch rockets. Photos 13 through 15 document the excavation of these burial pits." The Army determined these rockets were not MEC but, rather, they are munitions debris (MD). Following this conclusion, the remedial personnel did not fully excavate the burial pits to remove all of the rockets, despite knowing they existed. Though MD may not pose *an* imminent threat to human health due to risk of explosion, they are often made of metals that are hazardous to the environment. When these metals leach into groundwater and soil, they can leave behind lead and other constituents that pose health risks to humans that may come into contact with them through drinking water, dust inhalation, etc. The only way that the Army can ascertain for certain that all the pit contents are expended is to excavate all the shells. ESC does not agree with leaving untold numbers of rockets unexcavated at the burial pits. This pit must be relocated and fully excavated."

Response to Specific Comment 2

Bodies of the 2.36" rocket primarily consist of steel. Lead is not a significant component of these items. Additionally, expended rockets are below ground and groundwater is quite deep in the vicinity of MRS-16. There is no exposure pathway through groundwater or dust inhalation. Although all rockets were not excavated, a significant number of rockets were removed, inspected and were ascertained to be expended with no explosive hazard. No MEC items were recovered from these pits. The approximate extent of the pits has been delineated and entered into digital records associated with MRS-16.