

APPENDIX F

RESPONSE TO COMMENTS ON THE DRAFT FINAL TRACK 3 IMPACT AREA
MUNITIONS RESONSE AREA REMEDIAL INVESTIGATION/FEASIBILITY STUDY

APPENDIX F

**RESPONSES TO COMMENTS ON
DRAFT FINAL TRACK 3
IMPACT AREA MUNITIONS RESPONSE AREA
MUNITIONS RESPONSE REMEDIAL INVESTIGATION/FEASIBILITY STUDY
FORMER FORT ORD, CALIFORNIA
JANUARY 26, 2007**

Comments from U.S. Environmental Protection Agency (EPA) [February 22, 2007]

GENERAL COMMENTS

Comment 1. On August 8 and November 9, 2006, the EPA provided a series of comments on the Draft Track 3 Impact Area Munitions Response Area Munitions Response Remedial Investigation/Feasibility Study, Former Fort Ord, California. A number of the Army responses to these comments are either insufficient or have not been implemented as stated in the response document found at Appendix A in the Draft Final Track 3 Impact Area Munitions Response Area Munitions Response Remedial Investigation/Feasibility Study, Former Fort Ord, California (hereinafter referred to as the DF Track 3 Impact Area MRA MR RI/FS). The responses and the noted concerns are as follows:

August 8, 2006 comments:

- a. **General Comment 3 and Specific Comment 14 on Volume 1 of the DF Track 3 Impact Area MRA MR RI/FS: The responses are acceptable as written, but not implemented as stated. The deficiencies in the responses to these two comments are as follows;**

Responses to General Comment 3: The acronym FFA still has two different definitions – one in Volume 1 and another in Volume 2. Also, the definition of ITRC has not been corrected as stated in the response. The original incorrect definition remains in the Glossary Sources listed in the DF Track 3 Impact Area MRA MR RI/FS. This should be corrected.

Response to Specific Comment 14 on Volume 1: This comment noted that the term “buried” has a different connotation than the term “subsurface” when referring to ordnance material present under the surface of the ground, specifically with respect to how the ordnance came to be located underground. The Army response indicated that the word “buried” would be replaced with “subsurface” in the cited sentence. However, the term “buried” is still used a number of times in the same paragraph when referring to the ordnance material referenced in the cited sentence, negating

APPENDIX F

the effect of the change and reinforcing the confusion caused by the prior use of “buried.” The term “buried” should be replaced with the term “subsurface” throughout Section 3.5.3.2, Vertical Distribution, and at any other use in the document where ordnance material is present below ground and was not intentionally buried.

Response 1a: General Comment 3- The final text will be revised to correct the ITRC acronym as requested. The acronym FFA was changed to Federal Facility Agreement.

General Comment 14 The text will be revised to change the term “buried” to “subsurface” as appropriate.

November 9, 2006 comments:

b. General Comment #1: EPA agrees that the HMP allows for up to 400 acres of prescribed burns and appreciates Army’s response that the prescribed burns will be conducted in stages and consist of several small burns rather than one large burn. However, based on the experience of the last successful burn (50 acres) and the fact that no relocation will be offered for the future burns, EPA believes 100 acre burns would be more appropriate. EPA recommends that the following language be inserted after the second sentence on page 3-6 of the Draft Final FS, under the heading Potential Impacts to the Public: In general, each prescribed burn area will be 100 acres or less unless DTSC and EPA concur via the Implementation Work Plan that a larger burn can be effectively managed (fire control, smoke management, etc.) within the prescribed condition.

Response 1b: The text will be updated to provide additional clarification on vegetation clearance methods.

The Impact Area MRA is densely vegetated; therefore, in order to provide safe access for workers to conduct MEC removals, Alternatives 2, 3, and 4 all require vegetation clearance as a first step. Methods of vegetation clearance for different plant communities at the former Fort Ord were evaluated. The Impact Area MRA is designated habitat reserve, and is primarily covered by Central Maritime Chaparral (CMC), *The Evaluation of Vegetation Clearance Methods Technical Memorandum, Ordnance and Explosives Remedial Investigation/Feasibility Study, Former Fort Ord, California* (Vegetation Clearance Technical Memorandum; *Harding ESE, 2002*) identified prescribed burning as the only method that can be used on a large scale within CMC and Coastal Scrub plant communities.

The Vegetation Clearance Technical Memorandum evaluated several vegetation clearance methods that may be applicable in different plant communities, and identified prescribed burning as the only method that can be used on a large scale

APPENDIX F

within CMC and Coastal Scrub plant communities. Other vegetation clearance methods were evaluated, but their use is allowable on a limited basis only, or further study is required. The major elements of prescribed burning include:

- Preparation of a burn prescription/burn plan outlining the objectives of the burn, burn area, and the range of environmental conditions under which the burn will be conducted; workforce and equipment resources required to ignite, manage and contain the fire; and communication procedures;
- Site preparation, including establishment and maintenance of containment lines;
- Conducting the burn within the range of environmental conditions established in the burn prescription; and
- Follow-up operations to ensure that the fire is fully contained.

Based on past experience and habitat conservation considerations, it is anticipated that prescribed burns would be conducted in stages and consist of several smaller burns, approximately 100 acres in size (actual size could be more or less than 100 acres depending on site-specific considerations) over several days rather than one large burn.

Regularly-maintained roads and fuelbreaks that are accessible by vehicles and fire management equipment currently divide the site into several sections (300 to 500 acres in size). These sections would be further divided by utilizing established roads and trails that can be expanded as temporary fuel breaks (instead of creating brand new fuel breaks through thick vegetation that would involve higher level of effort and potential avoidable habitat impacts). The sizes of the burn areas are contingent on many factors, the most important being the location and condition of major fuelbreaks (well maintained, substantial fuel breaks where a fire could be held from spreading past that location). Other factors considered are topography, slope aspect, fuel type, fuel loading, fire behavior, and the proximity of urban/wildfire interface. The actual size and configuration of burn areas would be determined by the Army fire department in charge. The fire department would determine these parameters to minimize the size and duration of each burn, to best maintain control of the burn, to minimize smoke impacts, to be able to execute the burn within the narrow meteorological window, minding also explosives safety and other technical and practical considerations. The fire department also must select areas to strategically create a buffer between the Impact Area MRA and the surrounding communities to protect the communities from any potential wildfire or fire hazard. Proposed burn areas, containment lines, and supporting rationale would be described in site-specific implementation work plans (anticipated to be prepared for each year of planned cleanup work) that would be submitted for DTSC review and EPA concurrence.

Each contiguous prescribed burn area would not exceed 400 acres (separated by a minimum of 25 acres to allow a mosaic pattern consisting of different age classes

APPENDIX F

of vegetation) unless specifically coordinated with USFWS. Under the HMP, no more than 800 acres would be allowed to be prescribed burned in any given year.

The Army will provide public notification of planned prescribed burns. A prescribed burn will be started only when optimum burn conditions are confirmed. Mobilization of fire management personnel and equipment, and public notification, will occur when optimum burn conditions are reasonably expected. Once mobilized, fire and management personnel, equipment, and supplies may be in place and standing by for several days. Because the Army will be waiting for appropriate atmospheric conditions rather than trying to anticipate them, the Army will not know conclusively until moments before the fire is lit that the burn will occur that particular day. In addition, multiple burn events may be conducted over a period of several days that could be interrupted by one or more days of no burning. Through community notification, the public will be advised of reasonable precautions they can take to minimize exposure to smoke from prescribed burns, such as staying indoors with doors and windows closed, and limiting outdoor activity when smoke is present.

- c. Specific comment 5, 16, and 30 on Volume 2 of the DF Track 3 Impact Area MRA MR RI/FS: The responses are acceptable as written, but not implemented as stated. The deficiencies in the responses to these three comments are as follows:**

Response to Specific Comment 5 on Volume 2: The EPA comment requested that the term “visual surface clearance” be replaced with “surface clearance” to indicate that instrumentation would be used as needed during the removal. The Army response stated that the “surface only removal” would include use of a hand held instrument and this statement would be included in the description of the “surface removal” provided in the document. However, a review of the DF Track 3 Impact Area MRA MR RI/FS found the term “visual removal” used in the document in a number of instances. This is not in accordance with the Army response to the cited EPA comment, and should be corrected as requested.

Response to Specific Comment 16 on Volume 2: The EPA comment requested that the second sentence in Section 3.2.4 should have the words “may be” replaced with the words “will be.” This was not done as requested, and this should be corrected.

Response to Specific Comment 30 on Volume 2: The EPA comment requested that the Army provide information as to whether or not the 10% additional MEC clearance to depth mentioned in Section 4.4.4 would include the existing roads and trails. It also asked that the total acreage of the roads and trails be listed in the text. Neither of these

APPENDIX F

requests was answered in the response to the comment nor in the revised text in the DF Track 3 Impact Area MRA MR RI/FS. This should be corrected.

Response 1c: Comment 5: The text will be reviewed and the term “visual removal” will be changed to “technology-aided surface removal” instead of “surface removal” in accordance with subsequent discussions within the MR BCT.

Comment 16: The text will be modified as requested.

Comment 30: The existing roads and trails will receive a technology-aided surface removal as part of the remedial action in the associated polygon. The roads and trails would also geophysical mapping with the rest of the polygon. If anomalies are detected on the roads and trails they will be investigated and identified MEC will be removed.

- d. Specific Comment 11 on Volume 1 and Specific Comment 2 on Volume 2 of the DF Track 3 Impact Area MRA MR RI/FS: The responses are unacceptable as written. The deficiencies in the responses to these two comments are as follows:**

Response to Specific Comment 11 on Volume 1: The response indicates that there were 28 operational ranges at base closure, but the narrative in the fifth paragraph of Section 3.2, Track 3 Impact Area MRA Munitions Response Site History and Development (page 3-2), states that, “At the time of base closure twenty-nine ranges (numbered 18 through 48) were active or considered operational within the Impact Area [Army, 1992].” This number should be consistent throughout the DF Track 3 Impact Area MRA MR RI/FS.

Response to Specific Comment 2 on Volume 2: The response indicates that the intended terminology was “potentially remaining MEC risks.” However, the subject sentence in the DF Track 3 Impact Area MRA MR RI/FS still contains the phrase “potentially ARARs” instead of the intended terminology. This should be corrected.

Response 1d: The text will be reviewed and references to 29 ranges will be modified to 28 ranges. The text in Section 2.0 of the FS was reviewed again, and was corrected to state “(2) the RAOs, potential ARARs, and land use control guidelines will be considered in the development and analysis of remedial alternatives”.

- e. Specific Comment 13. Volume 1: EPA agrees with the Army that the 150-foot wide fuel break within MRS-16 was a temporary fuel break and served an important function in controlling the burn at MRS-16. EPA**

APPENDIX F

believes that 150-foot temporary fuel breaks are also necessary for the Track 3 burns. Please revise the Report to include 150-foot temporary fuel breaks.

Please respond to the cited deficient responses to the EPA comments on August 8 and November 9, 2006, by providing the additional information requested and/or by modifying the text of the DF Track 3 Impact Area MRA MR RI/FS in the final version thereof as necessary.

Response 1e: Please see Response to EPA Comment 1b.

Comment 2. The DF Track 3 Impact Area MRA MR RI/FS was provided for review in hard copy and on a disk (CD). The pagination between the two different formats varied. As a result, the comments provided in this review are based on the pagination found in the hard copy version of the DF Track 3 Impact Area MRA MR RI/FS. Also, the page numbering protocol was changed in the transition from the draft version to the draft final version. This resulted in some difficulty in tracking and comparing the changes and comment responses, as they are identified primarily by page numbers in the EPA supplementary comments of November 9, 2006.

Response 2: Formatting was lost during the creation of the disk. The electronic version of the document provided on the disk and the hard copy version were compared, and although the page numbers are different, there were no content differences between the electronic copy and the hard copy version.

SPECIFIC COMMENTS:

1. Acronym List, page x: The Acronym for the U.S. Naval School, Explosive Ordnance Disposal is listed as “NAVSCOLEDD.” This is incorrect. It should read “NAVSCOLEOD.” Please make this correction. Also, the acronym for cyclotrimethylenetrinitramine is incorrectly listed as “RPX.” It should read “RDX.” Please make this correction on page x and on page 1-1 in the second paragraph of Section 1.0, Introduction.

Response to Specific Comment 1: The acronym will be revised as requested.

2. Glossary, page xii: In the definition for Explosive Soil, Subparagraph (b) contains a comma between the word “Lead” and the word “Azide.” This comma is in error and results in the primary explosive Lead Azide being improperly described and Lead being improperly listed as a primary explosive. Please remove the cited comma.

Response to Specific Comment 2: The correction will be made as requested.

APPENDIX F

- 3. Table B-8, MRS-15 BLM, Draft 3 Impact Area Munitions Response Area, Munitions Response Remedial Investigation/Feasibility Study, Former Fort Ord, California, pages 1 through 10 of 10: The title of this table is missing the words “Final” and “Track.” The title should read, “Table B-8, MRS-15 BLM, Draft Final Track 3 Impact Area Munitions Response Area, Munitions Response Remedial Investigation/Feasibility Study, Former Fort Ord, California.” Please make this correction.**

In addition, on page 3 of 10 of the subject table, one of the items listed in the column “MM Item Description” is described as “CLAYMORE CLACKER WITH WIRE (Model Unknown).” The term “Claymore Clacker” is a munitions slang term and is not the correct nomenclature for the items found. Please replace the term “Claymore Clacker” with “Firing Device, Antipersonnel Mine, Electric, M57,” which is the nomenclature for the firing device used with the M18A1 antipersonnel mine (also known as the “Claymore” mine).

Response to Specific Comment 3: The “Claymore Clacker” was identified in 1997 by EOD in response to a call from BLM personnel who were conducting erosion control activities in the Impact Area. Based on review of the Incident Report, the item was reclassified as range related debris and was removed from the data table.

APPENDIX F

Comments from California Department of Toxic Substances Control (DTSC) [March 9, 2007]

Comment 1. The document uses data from prior removal actions conducted mostly outside the Impact Area boundary. The Ranges 43-48 Interim Action Munitions Response data is extensive, but the data have not been validated by Quality Assurance. A large portion of acreage located within the Impact Area does not have adequate data collected or the data was collected without the benefit of Data Quality Objectives being in place at the time. The Impact Area has many unknowns regarding the density and location of Munitions and Explosives of Concern (MEC) that must be fully evaluated. The Feasibility study not be based on data that do not give an accurate representation of the entire site.

Army Response 1: The Army acknowledges that the available characterization data is limited to surface removals over a portion of the site, subsurface removal actions primarily on roads and trails, and site walks conducted as part of the basewide range assessment; however the Army maintains that there is sufficient data to prepare a risk assessment using the Fort Ord Risk Protocol and to prepare a feasibility study for removal of MEC. Much of the subsurface data was gathered during fuel break and roads and trails removal actions. The fuel breaks cross east west and north south and are similar to running transects across the site. The fuel break data in conjunction with the surface removal data, historical records, and basewide range assessment data do provide data from across the Impact Area and indicate that MEC is present throughout the Impact Area. Based on the constraints of the HMP it is not feasible to collect additional characterization data to further refine characterization areas. Much of the Impact Area not previously visited, sampled, or cleared is within thick maritime chaparral which would require burning to access. Once burned, the area could not be burned again to facilitate removal for more than a decade. This would greatly impact the ability to complete a timely characterization or removal action. To address concerns raised on the characterization of the site, the report will be revised to better represent the current conceptual site model and the probable distribution of MEC based on historical documentation and sampling and surface and subsurface removals conducted within the Impact Area. In addition, the historical sampling, removal actions and site walks will be illustrated on additional plates.

DTSC Response: DTSC does not agree with the Army rationale used in evaluating the distribution of MEC throughout the Impact Area. Utilizing the fuel break data only indicates MEC found in fuel breaks and trails and are not

APPENDIX F

a substitute for characterizing within each defensible polygon. Transects can be useful to evaluate MEC distribution for large areas, when adequate characterization is not complete; however, transects require an equally spaced number of data points within the transect line to accurately represent the site characteristics. The data points from fuel breaks, roads and trails are located several hundreds and/or thousands of feet apart. Please provide information as to the spatial distribution and location of MEC along these transects. If this information has been added to the Draft Final document, please indicate the location of this text.

Response 1: Data was collected along the entire length and removal width of the roads and trails where removal actions were completed. The data shown on Plates 6 through 13 that show where a MEC or munitions debris item was found during removal actions. Plate 2 shows the grids that were 100 percent surveyed as part of each of the investigation and removal actions and the areas where visual surface removals were performed. These grids represent the “transect” that was sampled. Additional information on the nature of the roads and trails removals and the visual surface removals will be added to Section 3.5.3 prior to the discussion of the nature and extent of munitions and explosives of concern.

Comment 2: DTSC recommends that the Impact Area be divided into operable units of a more manageable size. The “plug-in” concept may be appropriate, in this case. One possibility would be to use the existing defensible polygons as area boundaries. Once the first of these areas is surface cleared, then the evaluation of that area can occur. The MEC found on the surface should guide the additional investigation and cleanup work. The cleanup work should be based upon the amount of MEC found, proximity to popular trails and population, the explosive hazard of the MEC items, etc. Characterization of each area in this manner will provide more meaningful data versus a generalized assumption of unknowns based on incomplete data. The BCT can learn from each subsequent area investigated and cleaned up. The intensity of the investigation and cleanup can be modified as the areas are addressed.

Army Response 2: The response actions will be conducted in stages as described in the FS. A site specific implementation work plan will be developed for each phase of work. The plan will describe the anticipated distribution of MEC, the vegetation clearance plan, and the method for completion of the response. It is anticipated that following the surface removal, the digital geophysical scan will be completed and the data will be presented to the BCT. The BCT will review the data and determine if additional actions (subsurface removal) are necessary. The review will include an evaluation of whether additional actions are consistent with the ARARs including the HMP and Biological Opinions. The text of the FS will be revised to include additional information on this proposed approach. A Technical Memorandum will be prepared documenting the decision reached

APPENDIX F

in the BCT. To avoid impacts to the rare, threatened and endangered species seed bank, completion of the TM will need to be expedited to allow any additional actions to be executed before the next growing season. Additional details on the BCT review step will be added to the FS. In general, factors that would be considered when determining whether additional action, such as subsurface removal are required, include, but are not limited to:

- Type of MEC encountered and danger associated with the MEC
- Proximity to potential receptors
- Density of items
- Consistency with ARARs.

The text of the FS will be revised to include additional information on this proposed approach.

DTSC Response: DTSC's position is that response action stages (including prescribed burns) should be conducted as parcels of approximately 100 acres or less. The Army should also state that there will be an evaluation of whether additional actions are consistent with the ARARs, the HMP, Biological Opinions, future land use and adjacent parcel use. The Technical Memorandum must be a primary document and be subject to dispute resolution pursuant to the FFA and as such include input from the public. The BCT does not provide a forum for public involvement. The additional actions must have performance standards included in the Record of Decision. The BCT review step process could not be found in the FS text. Please indicate where the additional information on the proposed approach for determination of further action is located within the FS.

Response 2: The process for recommending additional removal while the cleanup is already in-progress was developed with BCT input, and was described in the Draft Final FS under Remedial Alternative 4 (Section 4.4.4). In response to the comment above, the process is further updated as follows.

The Remedial Design/Remedial Action Work Plan (RD/RAWP) and site-specific work plans will be FFA primary documents. Under Alternative 4, areas proposed for subsurface MEC removal (e.g. "buffer") would be identified in the site-specific work plans. During the remedial action, based on the results of the surface removal and digital mapping, if additional work (e.g. subsurface removal) is proposed, the Army would submit to EPA and DTSC a technical memorandum outlining the proposed work and supporting rationale, and request their concurrence. In general, factors that would be considered when determining whether additional action, such as subsurface removal, are required, include, but are not limited to:

- Type of MEC encountered and danger associated with the MEC,
- Proximity to potential receptors,

APPENDIX F

- Density of items, and
- Consistency with ARARs.

Each technical memorandum would be an addendum to the site-specific work plan, therefore associated with a primary document and is disputable under the Fort Ord FFA. To avoid impacts to the rare, threatened and endangered species seed bank, completion of the technical memoranda will be expedited to allow any additional actions to be executed before the next growing season. Therefore, the regulatory agencies would respond in writing within 14 days of the Army's request for concurrence. Absence of such correspondence after 14 days would be considered concurrence by the regulatory agency. Each technical memorandum and associated correspondence would be made available to the public in the Administrative Record.

Please also see response to EPA General Comment 1b for discussion about the anticipated sizes of prescribed burns.

Comment 3. The document states that the Army will clear MEC to depth in a 200 foot "buffer zone" around each defensible polygon. DTSC's position is that the width of this "buffer zone" may not be adequate to be protective of proposed nearby development, including residential. Please provide more information regarding how proposed residential and commercial development will be protected during prescribed burns and Munitions Removal actions.

Army Response 3: It is anticipated that temporary fuel breaks will be cut and surface cleared around each burn area prior to burning. This could include cutting a wider fuel break along the development boundary prior to conducting the burn. In addition, safety set back distances will be identified that will protect the public during vegetation clearance activities. The details of these measures will be documented in the Implementation Work Plan. In addition, the Army proposes a removal to depth in a 100 foot wide zone adjacent to development areas to reduce the potential impacts of wildfires on the surrounding area.

DTSC Response: A 100 foot wide removal to depth adjacent to development areas is not protective. There will most likely remain a large number of MEC items within the subsurface beyond the 100 foot wide removal to depth areas. The fencing adjacent to the proposed development areas currently is four strand barbed wire enhanced by razor wire and signage. Proposed development adjacent to the Impact Area will significantly increase the probability of trespass incidents. A 6 foot high chain link fence topped with three strand barbed wire should be erected to replace the current fence adjacent to development areas. As we understand it, the proposed development areas are located in an arc beginning at MRS-15 SEA.04 southward to include MRS-15 SEA.03, MRS-15 SEA.02, MRS-15 SEA.01, MRS-15DRO.01, MRS-15DRO.02, MRS-15MOCO.01, MRS-46, South Boundary Road to approximately the

APPENDIX F

intersection of Darwin and Orion Road. The fence construction should be adjusted to new or changed development areas.

Response 3: The fencing for the Impact Area MRA will be selected, constructed and maintained based on reuse and the potential for MEC risks. For this FS, it is assumed that existing fencing surrounding the Impact Area (4-strand barbed wire fence w/concertina wire in some portions) and signs would be maintained during MEC removal. In addition, temporary fencing may be constructed and maintained as necessary for public safety for the duration of the MEC removal around the perimeter of each of the areas where MEC remedial actions are conducted. The design of the perimeter fence may be modified based on site-specific considerations.

Comment 4. In its preferred remedy, the Army proposes to provide a surface clearance and limited (10 percent) clearance to depth for most of the Impact Area. Because these cleared areas will be subject to erosion and other soil moving forces, frequent “operation and maintenance”, in the form of additional surface clearance, will be needed. If the areas are cleared to depth, this additional surface clearance will not be needed. Please include this analysis in the Feasibility Study.

Army Response 4: The description and estimated costs for Alternative 2 in the FS will be revised to include a post-removal erosion survey and monitoring for each area. The initial survey within 1 year of MEC removal would be performed to identify areas where erosion may be occurring and MEC may be present at the surface. Follow up monitoring would be conducted yearly until the vegetation grows back. Any areas where erosion and/or MEC were identified would then be placed in a monitoring program and additional surface removal would be conducted as appropriate.

DTSC Response: DTSC agrees with the post-removal erosion survey and monitoring proposed by the Army. In addition, monitoring of subsequent burns, including a surface clearance after each burn, will be required to ensure that MEC has not been exposed. Recent observations at Ranges 44 Special Case Areas indicates that Munitions Debris, and the potential presence MEC items, will require continued operation and maintenance until vegetation growth renders the areas inaccessible. In addition, the Army must provide a 1000 foot clearance to depth adjacent to the development areas referred to in the previous comment. This would account for approximately 700 acres cleared to depth. This clearance would provide a wider “buffer” safety zone for the proposed development areas.

Response 4: As described in the Draft Final FS, the Army plans to complete a MEC removal to depth within the 100 foot buffer zone around the border of the Impact Area that is adjacent to developed areas. However, the width of the buffer could be widened based on area-specific conditions that will be specified in the site-specific

APPENDIX F

Remedial Action Work Plan. The Final FS will be revised accordingly for clarification.

As described in the Draft Final FS, annual surface reconnaissance/monitoring will be conducted following the prescribed burns and MEC removal actions by the Army until vegetation regrowth is sufficient to stabilize the site. In addition, after the property is reassigned UXO-qualified personnel will be available for long term support of reuse activities. The Final FS will be revised to clarify that after property transfer, the UXO-qualified personnel could perform additional surface reconnaissance if/as needed following prescribed burns that may be conducted by the property recipient.

Comment 5: The Conceptual Site Model assumptions are based on limited sampling and transect surveys in the Impact Area. We question whether there is enough information to construct the Conceptual Site Model.

Army Response 5: The conceptual site models presented in the RI/FS are based on the existing historical information (maps, aerial photographs, reports, and range SOPs) and the surface and subsurface removals completed within and adjacent to the site boundaries. The Army maintains that this is sufficient information to construct a CSM. The CSM may be refined as new information becomes available from remedy implementation.

DTSC Response: The Conceptual Site Model must be changed as data are generated. The proposed remedy could be changed as additional stage specific data is obtained.

Response 5: As stated in the Army Response, it is anticipated that the conceptual site model will be revised as additional data are reviewed.

Comment 6. Volume 2, Feasibility Study, Pages 19-21. Please revise the first sentence in the last partial paragraph to read: "...Section 1472, which allows an owner of ..."

Army Response 6: The text will be revised as suggested.

DTSC Response: Response is accepted. In addition, please correct the Section quoted as 1472 to read Section 1471.

Response 6: The text will be revised as requested.

Comment 7. Please revise the first sentence in the first full paragraph on Page 20 to read: "These regulations specify that a Land Use Covenant..."

Army Response 7: The text will be revised to be consistent with the regulations.

APPENDIX F

DTSC Response: Response is accepted.

Response 7: Comment noted.

Comment 8. Please revise the last partial paragraph on page 20 to read: “For sites requiring land use covenants, DTSC policy and Title 22, Division 4.5, Chapter 39, Section 67391.1 require that the property owner...”

Army Response 8: The text will be revised to be consistent with the regulations.

DTSC Response: Response is accepted.

Response 8: Comment noted.

Comment 9: Please revise the last paragraph on page 21 to read: “...would be described in further detail in the Record of Decision and in the Land Use Control...”

Army Response: The text will be revised as suggested.

DTSC Response: Response is accepted.

Response 9: Comment noted.

Comment 10: Please add a final sentence to last paragraph on page 21: “The Army intends that this will comply with Title 22, Division 4.5, Chapter 39, Section 67391.1(e)(2).”

Army Response 10: The text will be revised as suggested.

DTSC Response: Response is acceptable with inclusion of the following text. The Army will assure that other mechanisms, such as the BLM Master Plan and agreement between DTSC and BLM will ensure that future land use will be compatible with the levels of MEC which remain on the property. Refer to Title 22, Division 4.5, Chapter 39, Section 67391.1(e)(2). In addition, Title 22, Division 4.5, Chapter 39, Section 67391.1(h) states that responsible parties, facility owners or operators, or project proponents involved in land use covenants to pay all costs associated with the administration of such controls.

Response 10: The Final FS will be revised to include the information regarding Sec.67391.1(e)(2) and clarify that because the property transfer will be from one

APPENDIX F

federal agency (the Army) to another federal agency (BLM), the land use covenant described in Section 67391.1(h) does not apply.

Comment 11: Special Case Areas (SCAs) and Pending Areas in the Impact Area have not been fully evaluated. The Interim Action Munitions removal at Ranges 43-48 identified approximately 264 acres of SCAs and Pending Areas. The Army states that Ranges 43-48 can be assumed to be the worst case example of what might be in the Impact Area, so it is realistic to assume that other areas within the Impact Area will also be designated as Special Case or Pending Area. How will the Army address SCAs?

Army Response 11: It is possible that additional areas of high anomaly density will be identified within the Impact Area. As described in response to EPA Comments 1 and 2 and DTSC Comment 2, a process will be developed to evaluate areas after the surface removal is completed to determine whether additional removals are required. High density areas identified in the future would be addressed through this process.

DTSC Response: This process should be developed and provided to regulatory agencies such as BLM, Cal Fish and Game and US Fish and Wildlife Services for review, prior to completion of the Record of Decision. Any documents provided post-ROD to evaluate areas after surface removal must be provided as a primary document, subject to dispute resolution pursuant to the FFA.

Response 11: Please see Response to Comment 2 above. The process for recommending additional removal while the cleanup is already in-progress was developed with BCT input, and was described in the Draft Final FS under Remedial Alternative 4 (Section 4.4.4), and was reviewed by USFWS, BLM, and CDFG. .

Comment 12: The current fence and signage is a deterrent that cannot be considered adequate to protect the community. The Army states that the fences and signs will be maintained in addition to security patrols. Given that significant additional human population will move to the developments adjacent to the Impact Area, additional site security measures (enhanced fencing, patrols, etc.) will likely be needed. Please elaborate on how these security measures will be enhanced.

Army Response 12: Site security will continue as an Army function until the property is transferred. The site security program is updated as necessary to reflect any additional security measures that may be needed in the future to ensure the safety of nearby populations. At the time the property is transferred or reassigned, it is expected that a site security plan will also be prepared by the property recipient and that the agencies will have an opportunity to review and comment on the plan. The text will be revised to

APPENDIX F

indicate that the site security plan will be modified as necessary due to changes in the nearby human populations.

DTSC Response: Site security is part of the remedy and needs to be evaluated in the Feasibility Study. Army states that site security is a retained function until the property is transferred; however, the Bureau of Land Management (current proposed recipient) has not indicated a willingness to accept this responsibility. Without a confirmed site security program, the proposed remedy does not satisfy the NCP criterion of long term effectiveness. How will the Army assure that site security is continued? Will BLM be signatory to the Record of Decision, accepting this responsibility?

Response 12: The Draft Final FS described the remedial alternatives that all include maintenance of the existing perimeter fence as land use control components. The Final FS will be revised to include the additional land use control components of security (law enforcement) to reinforce the access management feature of the existing land use controls. Area-specific aspects of implementation will be decided at the time of property reassignment. The Army, EPA, and DTSC will be signatories to the ROD under the FFA; the future property recipient (BLM) is not a signatory to the ROD under the FFA.

Comment 13: Volume 2, Feasibility Study, Section 3.3.1, Vegetation Clearance via Prescribed Burning. The Army lists additional vegetation clearance activities that have been studied or require further study, such as Crush and Burn; however, for the purposes of this Feasibility Study the Army assumes that prescribed burning will be implemented using a phased approach of burns and MEC removal of up to 800 acres per year of the 6,560 acre Impact Area. Each prescribed burn would not exceed 400 acres with a minimum of 25 acres of separation. Previous discussions in BCT and SMART meetings, following the 2003 prescribed burn at Ranges 43-48, have focused on conducting more frequent smaller (100 acres or less) burns per year. Please explain the rationale for the increase in acreage.

Army Response 13: Please see response to Supplemental EPA Comment 1.

DTSC Response: DTSC does not agree with this response. A smaller burn of around 100 acres per event is required.

Comment 13: Please see response to EPA General Comment 1b.

Comment 14: Volume 2, Feasibility Study, Section 3.3.2.1.2 Removal to Depth and Section 3.3.2.3 Digital Mapping of Anomalies. Section 3.3.2.3 states that a digital geophysical survey will be provided to the future recipient, yet Section 3.3.2.1.2 states that a digital geophysical survey may not be conducted due to site conditions and difficult terrain features that would prevent equipment

APPENDIX F

use. Please discuss how will these areas be addressed in the future to support reuse, since MEC can be expected in shallow soils below the surface?

Army Response 14: The text will be revised as suggested to clarify that any areas where a digital survey can not be conducted will be noted in the record provided for planning purposes for future reuses, and additional long term management measures will be evaluated for the area.

DTSC Response: Response is accepted.

Comment 14: Comment noted.

APPENDIX F

Comments from Department of Toxic Substances Control, Brian K. Davis, Ph.D., Human and Ecological Risk Division, dated March 7, 2007

COMMENTS

Comment 1. DESCRIPTION OF THE SUBJECT AREAS.

- A. This report only addresses part of the Impact area. Our comments on the draft report (*DTSC, 2006*) stated that it was difficult for a reader to determine what is included and what is excluded. The description of the subject areas has been greatly improved, both in the text and in Plate 2.

Response 1a: Comment Noted.

- B. The text in Section 1.0 states that the portion of the Impact Area addressed in this report is the “*Habitat Reserve in the Installation-Wide Multispecies Habitat Management Plan (HMP) (Plate 2)*”. Based on the Responses to Comments (Responses 2A and 2B on page 39 of Appendix E), the Habitat Reserve is that portion of the Impact Area which will be transferred to the Bureau of Land Management (BLM). Thus, the Munitions Response Area (MRA), the Habitat Reserve, and the land to be transferred to the BLM all three appear to be synonymous. If this is correct, it should be stated explicitly. If it is incorrect, then please clarify the definitions.

Response 1b: The Final RI will be modified to clarify this issue. There are Habitat Reserves inside the Impact Area that are not being transferred to BLM and Habitat Reserves outside of the Impact Area that will be transferred to BLM. A statement will be added indicating that the Impact Area MRA only includes the portion of Habitat Reserve that is identified to be transfer to BLM and is located within the historical Impact Area. Please see Plate 2.

- C. The text in Section 3.1 lists areas that are excluded from the Impact Area MRA. One of the exclusions is “the Habitat Reserve parcels”. This appears to contradict the text in Section 1.0 quoted above.

Response 1c: The text will be modified as discussed above in Response 1b.

- D. The response (page 40 of the Responses to Comments in Appendix E) to our Comment 2 E (*DTSC, 2006*) states that “A different color will be used for the fuel breaks [in Plate 2] so they stand out.” The term “Fuel Breaks” continues to appear in the legend for Plate 2, but now there is no color associated. The locations of the “Fuel Breaks” remains unknown.

APPENDIX F

The locations of the “Fuel Breaks” are also ambiguous in other plates (e.g. 3, 4, 7, 8).

Response 1d: There are two types of fuel break removals shown on Plate 2. The dark blue represents the four-foot removal portions of the fuel break. The white (no color) grid pattern represents areas where only a surface removal was completed. The legend shows these patterns under the heading “Fuel Breaks”

E. Our comment 2 F noted that the discussion of the locations of the firing ranges (Section 2.2.1) incorrectly reference Plate 2. The response (page 40 of the Responses to Comments in Appendix E) states that the reference will be changed to Plates 3 and 4. Instead, the discussion of the firing range locations has been deleted.

Response 1e: Plates 3 and 4 are referenced in Section 2.2.1 (end of first paragraph). This paragraph has the discussion on the location of the range fans. A second paragraph was added to Section 2.2.1 which contains additional descriptive information about the Impact Area MRA.

Comment 2. SITE CHARACTERIZATION. Our Comment 4 (DTSC, 2006) noted that the site characterization is based on only 33% of the total 6560 acres in the impact area for surface removal and only 405 acres for subsurface removal. Furthermore, most of the 405 acres are outside the area addressed in this report. Therefore, the site characterization on which the risk assessment is based is tenuous. The response (pages 41-42 of the Responses to Comments in Appendix E) argues that the density of high explosives in the area on which the risk assessment was based “...is expected to be one of, if not the highest, in the historical Impact Area...” The response also argues that the risk for other areas “...would still be an E [the category with the most severe risk] based on the presence of some Type 3 items.”

It is true that the Fort Ord Protocol is structured so that the risk from MEC for a particular area is characterized by a letter ranging from A to E. Therefore, unlike the open ended risk estimates for risk assessment of hazardous chemicals, an area cannot receive any worse rating than a letter E.

Nonetheless, we continue to question the premise that risk assessment can be based on sample data from outside the area of interest, with assumptions about the outcome if data from the actual area of interest had been used. It is our opinion, as risk assessors, that the application of such an assessment is questionable. Ultimately, the purpose of risk assessment is to provide useful information for risk management. The risk managers for this project will have to determine whether this risk assessment provides sufficient information for decision making.

APPENDIX F

Response 2: As stated in the previous response, the rationale for using the Ranges 43-48 data was specifically discussed by the BCT when its use was approved. The risk assessment included in the Track 3 RI/FS provides useful information that can be utilized to construct and evaluate remedial alternatives, which is its intended purpose.

Comment 3. DATA QUALITY.

A. Our Comment 5 (DTSC, 2006) discussed issues with respect to data quality. We noted that Data Quality Objectives (DQOs) are not mentioned in Section 4.1.1. The response (page 43 of the Responses to Comments in Appendix E) acknowledges that there were no DQOs for the Munitions Response activities. The response states that “The QA/QC and contractual requirements fulfill the same purpose as DQO sections in HTW work plans.” We do not agree. DQOs serve a broader function than QA/QC and contractual requirements.

Response 3a: The Army agrees that DQOs serve a broader function than QA/QC and contractual requirements; however, as stated above, the BCT discussed and approved the use of the Ranges 43 through 48 data set for performing the risk assessment.

B. Our Comment 5 (DTSC, 2006) requested an explicit statement of whether the BRAC Cleanup Team (BCT) has evaluated the QC/QA. Our comment was that if there was an evaluation, its conclusions should be summarized and a reference to document the BCT decisions should be provided. The response lists documents that were reviewed by the BCT, but doesn't address the BCT's evaluation of the QC/QA.

Response 3b: QA and QC of munitions response work are typically documented in work plans and after-action reports. These documents are provided to EPA and DTSC for review and comment. In addition, the agencies reviewed the RI/FS that described the data used, QA/QC of the work from which data was generated, and how the data was used and evaluated. Various BCT decisions that have been made throughout the development and review of the RI/FS are documented in meeting minutes and e-mails; that information is on file with the Army and has been provided to the respective agency remedial project managers.

C. The questions about DQOs and QC/QA need to be answered. During the development of the Fort Ord Ordnance and Explosives Risk Assessment Protocol (Malcolm Pirnie, 2002), the team identified the importance of DQOs. It was recognized that some investigations and removals were

APPENDIX F

done without DQOs. Under those circumstances, the Protocol accepts the surrogate use of QC/QA with BCT approval.

Response 3c: As stated above in Response to Comment 3A, the BCT approved the use of this data set for preparation of the conceptual site model and the risk assessment. Data quality objectives will be described in the Remedial Action Work Plans for future cleanup activities so that post-remediation risk can be assessed.

Comment 4. CONSERVATISM

A. Our Comment 6 (DTSC, 2006) discussed issues with the repeated characterization of the risk assessment for MEC as “conservative” throughout the report. The responses to Comment 6 indicate that the Army continues to believe that the risk assessment is “conservative” and that the use of data from these ranges provides adequate risk assessment information. The representativeness of the data is a basic question (Comment 2).

Response 4a: As stated in response to comments on the Draft report, the Ranges 43 through 48 is likely more representative of the Impact Area than the limited road and trail removal data and the surface removal data. The road and trail removal data were collected along established travel paths that were likely cleared throughout the use of the Impact Area to allow safe travel and the remaining data sets are primarily surface only data.

B. We noted that the description of the data Ranges 43 through 48 evolved from careful wording in Section 4.1.1, through looser wording in Section 4.1.5.1, and finally resulting in overstated wording in the Conclusions (Section 4.4). The response is “The text will be revised to use consistent terminology throughout the report.” In fact, the text in Section 4.1.5.1 was revised to the careful wording in Section 4.1.1. Unfortunately, the overstated wording in the Conclusions remains unchanged.

Response 4b: The text in Section 4.4 will be modified as requested.

Comment 5. FUTURE LAND USE. Our Comment 8 (DTSC, 2006) identified inconsistencies in the descriptions of future land use. Section 3.6.2 is titled “Identified Reuse”. It identifies seven categories of future land use identified for the Bureau of Land Management areas. The seven categories are somewhat different from those listed in Section 3.6.2 of the earlier version of this document. Of particular note is that “Oil/gas/mineral management” appeared on the previous list but is absent on the current list. Please account for the changes in the list. If these represent changes in future land use

APPENDIX F

between the previous version and the present version of this document, are additional changes in land use likely in the near future?

Response 5: Since base closure, the Army has been coordinating with BLM regarding the management of habitat reserve within the former Impact Area. The 1995 SUMP and 1997 HMP outline agreements on conceptual reuse and management of the Impact Area based on MEC cleanup expectations at the time. Since then, BLM has provided several updates on its plans for reuse and habitat management. These documents include the 2004 draft Proposed Management Plan, 2006 Proposed Resource Management Plan/Final Environmental Statement, and 2006 draft HCP (provided as part of the BLM comments to the draft Track 3 MR RI/FS). The Army recognizes that detailed plan for managing the habitat reserve in the Impact Area may change as new information becomes available during the HCP process. However, this RI/FS considers all currently available information in order to construct a remedial alternative that ensures habitat management requirements of the HMP/HCP can be implemented within the Impact Area habitat reserve. The text of the draft final RI/FS was revised to include additional information on the SUMP as well as the draft HCP which replaces the Draft BLM 2004 plan. The deletion of oil and gas management as a proposed activity was based on the draft HCP provided by BLM. It is not anticipated that modifications to the HCP will result in changes to the proposed site reuse.

Comment 6. RECEPTORS. Our Comment 9 (DTSC, 2006) discussed receptors. The response to 9 D states “The text will be revised to identify the possibility that construction may occur following initial development, but would not be expected to be as intensive as the initial development phase.” Unfortunately, no revision was done to this text.

Response 6: The text will be modified as suggested.

Comment 7. ECOLOGICAL RECEPTORS AND MEC

A. Our Comment 10 (DTSC, 2006) discussed risk assessment for potential harm to ecological receptors from MEC. Whether it is necessary to evaluate ecological receptors was not discussed in the development of the Fort Ord Ordnance and Explosives Risk Assessment Protocol (Malcolm Pirnie, 2002).

Response 7a: Comment noted.

B. The response to Comment 9 is that “Observational data will be provided to support the statement [that risks are expected to be low].” The text in

APPENDIX F

Section 4.1 has been expanded and now includes the following statements: (1) “Plant and animal communities appear to be healthy.” and (2) “No evidence has been observed that indicate ecological receptors are being impacted by physical hazards associated with MEC. The site was used as a multi-range impact area for over 80 years, yet it still supports high diversity of plants and animals, including species considered rare, threatened and endangered.”

As a general matter, such anecdotal statements are not particularly useful for ecological risk assessment. The observations are attributed to “onsite personnel”. Whether plant and animal communities are healthy requires some investigation by a qualified biologist. This also applies to conclusions about the level of diversity.

We are not recommending that an assessment for ecological receptors be added to this report. We do recommend that any statement about ecological receptors should be defensible. We suggest deletion of both the anecdotal statements and the statement that the risks are expected to be low. The fact that the Fort Ord protocol doesn’t include ecological receptors and that the BCT decided that such assessment wouldn’t be done appears to be all that can be said.

Response 7b: The Army appreciates the clarification of the previous comment on this matter. However, to be responsive to other commentators, a general statement about the level of risk to ecological receptors was added to the report. Based on many years of site experience, the presence of MEC in the Impact Area MRA does not appear to be a concern in terms of physical risks to ecological receptors. Several iterations of biological resource evaluations and many years of monitoring show that the ecological environment in the Impact Area MRA is healthy and thriving. In fact, the USFWS has designated the entire Impact Area MRA as critical habitat necessary for the continued existence of Monterey spineflower, a federally threatened annual plant.

C. Our Comment 10 (DTSC, 2006) requested a reference to document the BCT concurrence with excluding ecological receptors. The response states that this decision was made in an August 30, 2005 meeting. Are there meeting minutes and do the minutes document the decision?

Response 7c: Various BCT decisions that have been made throughout the development and evaluation of the RI/FS are documented in meeting minutes and e-mails; this information is on file with the Army and has been provided to the respective agency remedial project managers.

APPENDIX F

Comment 8. AFTER ACTION RISK ASSESSMENT.

A. Our Comment 11 (DTSC, 2006) requested that the report state explicitly that both after action risk assessments are hypothetical, based on assumed actions and assumed results. This was marginally addressed by inserting the word “hypothetical” in the first sentence of Section 4.1.4.2.

Response 8a: Additional text will be added to clarify why the results are hypothetical.

B. Our Comment 11 also asked for clarification of the statement in Section 4.1.4.2 that “The use of a ‘6’ for receptors below 1 foot and use of a ‘1’ for MEC below ground surface is based on BCT concurrence for use of this assumption for the Track 2 Parker Flats site.” The response states that “The text will be modified to make the score selection more clear.” Unfortunately, the text is unchanged.

Response 8b: Additional text was provided in the Draft Final RI/FS in Section 4.1.4.2. The text addressed the rationale for not using a score of “1” for density and depth for all receptors including those expected to intrude below 1 foot.

C. Our Comment 11 also asked for a reference to document the BCT concurrence with the choices of parameters. The response states that concurrence was received following discussions with the BCT on June 26, 2006. Please document the form of this concurrence. If it was written, please document that.

Response 8c: The concurrence with the choice of parameters was discussed in a phone conversation between the Army and DTSC on June 29, 2006. The results of this phone conversation were then documented in a July 3, 2007 email.

D. The responses to Comment 11 illustrate the extent to which these risk assessments are hypothetical. The utility of the results of these risk assessments is questionable.

Response 8d: The Army disagrees that the utility of the results of these risk assessments is questionable. The data from Ranges 43 through 48 that were used to prepare the risk assessment provide a conservative data set for evaluating risks. The risk assessment results are qualitative and only one factor considered in preparing the FS. As part of the post remediation evaluation of the site, it is anticipated the risk assessment will be reviewed and modified as appropriate using the data set from the completed removal action to obtain a more accurate post remediation risk score.

APPENDIX F

CONCLUSIONS

Comment 1. The Responses to Comments in Appendix E state that certain changes will be made in the document. Some of these changes have been made in the current document and some have not been made (see Comments 1, 4, 6, and 8).

Response 1. The changes related to Comment 1 and 8 were made. The changes related to Comments 4 and 6 will be provided in the Final Report.

Comment 2. Numerous decisions within the document are justified BCT concurrence. It is important that BCT concurrence be documented. Several of the responses to comments refer to meetings or agreements in other settings, but fail to state whether there are minutes or correspondence or any form of documentation, and if there is documentation, where it can be accessed.

Response 2. Various BCT decisions that have been made throughout the development and evaluation of the RI/FS are documented in meeting minutes and e-mails; this information is on file with the Army and have been provided to the respective agency remedial project managers.

Comment 3. The adequacy of site characterization remains a concern. We remain skeptical about the premise that baseline risk assessment can be based on data from outside the area of interest, with assumptions about the outcome if data from the actual area of interest had been used. It is our opinion, as risk assessors, that the application of such a baseline assessment is questionable.

Response 3. Please see response to Comment 2 above.

Comment 4. Two “After Action Risk Assessments” were conducted. Both are hypothetical, based on assumptions about future clearance of MEC. From the point of view of risk assessment, the application of assessments based on hypothetical results is also questionable.

Response 4. Comment noted.

Comment 5. Ultimately, the purpose of risk assessment is to provide useful information for risk management. The risk managers for this project will have to determine whether the baseline risk assessment and the “After Action Risk Assessments” are adequate for decision making.

Response 5. The Army believes that the Baseline and After Action Risk Assessments are adequate for decision making.

APPENDIX F

Comments from Regina Donohoe, Ph.D., Staff Toxicologist, Patty Velez, Staff Environmental Scientist, California Department of Fish and Game, Office of Spill Prevention and Response, Resource Assessment Program [March 16, 2007]

INTRODUCTION

The California Department of Fish and Game, Office of Spill Prevention and Response (DFG-OSPR) received the subject document on January 29, 2007. The document was prepared for the U.S. Department of the Army (Army) by MACTEC Engineering and Consulting, Inc.

BACKGROUND

The Impact Area occupies approximately 8,000 acres in the southwestern portion of Former Fort Ord, Monterey County. A variety of unique habitat types, including central maritime chaparral, and special status species are present. The Impact Area was used for live fire training exercises with a variety of weapons. The Draft Final Track 3 Impact Area, Munitions Response Area (MRA), Munitions Response Remedial Investigation/Feasibility Study (RI/FS) addresses the physical or explosive risks from munitions and explosives of concern (MEC) in the portion of the Impact Area that is designated as habitat reserve in the Installation-Wide Multispecies Habitat Management Plan (approximately 6,560 acres). DFG-OSPR provided comments on the Draft Track 3 Impact Area MRA Munitions Response RI/FS in an October 24, 2006 memorandum to the Department of Toxic Substances Control (DTSC). The subject document provides responses to these comments in Appendix E. DFG-OSPR reviewed Appendix E to evaluate whether our previous concerns were addressed in the revised Draft Final document.

Comment 1. Response to Comment 1, page 62 of Appendix E. White the Response to the comment states that a process will be developed for adjusting remedial decisions as more data become available, DFG-OSPR continues to have concerns with relying on the existing limited site characterization data to develop remedial options for the entire MRA.

Response 1: Please see responses to DTSC General Comments 1 and 2.

Comment 2: Response to Comment 2, page 62 of Appendix E. DFG-OSPR reviewed the text that was added to Section 4.1 to provide a rationale as to why physical risks to wildlife were believed to be low. While anecdotal observations of no observed effect may be the only information that is available, they do not constitute the type of quantitative evaluation that would be required to establish that the physical risks to wildlife are low. As such, significant uncertainty remains regarding the actual physical hazards to wildlife posed

APPENDIX F

by the MEC at the site. The text in Section 4.1 should be revised to indicate that the level of physical risk to ecological receptors is unknown.

Response 2: Based on many years of site experience, the presence of MEC in the Impact Area MRA does not appear to be a concern in terms of physical risks to ecological receptors. Several iterations of biological resource evaluations and many years of monitoring show that the ecological environment in the Impact Area MRA is healthy and thriving. In fact, the USFWS has designated the entire Impact Area MRA as critical habitat necessary for the continued existence of Monterey spineflower, a federally threatened annual plant.

Comment 3: Response to Comment 3, page 62 and 63 of Appendix E. DFG-OSPR is aware that addressing physical risks associated with MEC will allow for characterization of chemical risks in the same area. As stated in Comment 1, DFG-OSPR continues to have concerns with relying on existing site characterization data to make remedial decisions for the entire MRA.

Response 3: Please see response to DTSC General Comment 1.

Comment 4: Response to Comment 4, page 63 of Appendix E. The response is acceptable.

Response 4: Comment noted.

Comment 5: Response to Comment 5, page 63 of Appendix E. The response is acknowledged.

Response 5: Comment noted.

CONCLUSIONS

DFG-OSPR requests that the document be revised based on the comments provided herein. The adequacy of site characterization remains a concern. DFG-OSPR supports the request by DTSC to provide additional information on the proposed approach for modifying remedial decisions as more data becomes available. If you have any questions or require further details, please contact Patty Velez by phone (831-649-2876) or by e-mail (pvelez@ospr.dfg.ca.gov).

Comments from Mike Pool, California State Director, U.S. Department of the Interior, Bureau of Land Management [February 22, 2007]

COMMENTS

Comment 1: This letter is in response to the Draft Final Track 3 Impact Area Munitions Response Remedial Investigation/Feasibility Study Former Fort Ord, California (Track 3 RI/FS) that was released for review on January 26, 2007. The Bureau of Land Management (BLM) appreciates the efforts of the Army in cleaning up munitions and explosives of concern (MEC) at the former Fort Ord, and the partnership that our agencies have forged over the last 12 years in this regard. We look forward to the day when these lands can be cleaned up and transferred to support a successful reuse of the former military installation.

BLM's Policy Regarding Transfers of MEC Contaminated Lands

The BLM's policy for acquiring lands containing MEC is through Department of the Interior Manual, Part 602, Chapter 2 that states:

"It is the Departmental policy to minimize the potential liability of the Department and its bureaus by acquiring real property that is not contaminated unless directed by the Congress, court mandate, or as determined by the Secretary."

The Department allows bureaus to acquire property with liability only when Congress or the Court mandates the acquisition, or when the bureau determines that the acquisition benefits the bureau's programs and when the appropriate authority in the bureau or the Secretary of the Interior approves the acquisition. This latter situation generally is limited to properties for which substantial natural or cultural resource values override the associated environmental liability.

In the case of the former Fort Ord, the lands that are identified for transfer to the BLM contain numerous federally protected, state protected or rare plant and animal species. Therefore, our consideration of the remedial options must take into account what affects the program will have on the natural resource values of the former Fort Ord. This includes short-term direct affects from the cleanup program, and long-term affects due to limitations placed on management of these resources.

In the case of the Track 3 RI/FS, the document will need to further disclose the likely short-term and long-term consequences of implementing the various remedial alternatives to determine whether the cleanup options will lead to a MEC remediation that the BLM can support. This is consistent with the National Contingency Plan that explains that the RI/FS remedies must be evaluated in relation to how they are protective of human health and the environment. The BLM recognizes that additional clarification has been

APPENDIX F

added to the Track 3 RI/FS as a result of our October 13, 2006, comment letter. Specifically, disclosures under Sections 5.1.1 have been added that describe how human health and the environment is protected.

We are concerned, however, that reviewers comparing alternatives will be compelled to conclude that Alternative 3 is less protective of the environment than Alternative 4 because more sifting and temporary habitat destruction is assumed (i.e., 320 acres versus 85 acres). This should be clarified within the document because the habitat disturbance caused from sifting operations is not likely to be permanent. As stated in our previous comment letter, it is our experience based upon 10 years of habitat restoration activities at the former Fort Ord, that the maritime chaparral habitats are fairly resilient. Small to medium-sized areas that require full excavations for MEC clean up can usually be restored with some effort as long as the seedbed is protected. The seedbed can be protected by ensuring that the vegetation is removed through prescribed burning (as opposed to large scale cutting) and by using the sifted topsoil to reclaim the site. Some of these areas may require planting maritime chaparral seedlings to speed the recovery. Weed abatement of invasive species is very important following the disturbance to ensure that vegetation recovery is from target species.

Response 1: The Army appreciates BLM's perspective regarding the ability to successfully restore CMC; however, the Army must meet the HMP success criteria for habitat recovery. The HMP and biological opinions recommend that the Army limit the size of remediation areas to the smallest area possible to limit unnecessary disturbance of habitat. The Army is not aware of a mechanical method that can preserve the seedbed while still sifting out the contamination. Even if the Army attempts to set aside the topsoil for special handling, it is unknown whether the habitat restoration effort would be successful. Despite the attempts, the sifted topsoil would likely be mixed with the subsurface soil as a result of the large scale excavation and sifting operations. The Army does not believe there is a successful method to implement sifting and separation during MEC removal activities to preserve only the portions of the topsoil that contains the seedbed.

The text has been revised to provide additional discussion of the impacts on the natural resource values of the Impact Area MRA, including short-term direct effects from the cleanup program, and long-term effects due to limitations placed on management of these resources. The Army believes that restrictions proposed under Alternative 4 do not prevent the safe implementation of habitat management requirements identified in the HCP and therefore do not result in negative effects to the natural resource values. Please also see the Army's response to comment, below.

The Army acknowledges the DOI's cited current policy regarding land acquisition. We understand that eventual transfer of the impact Area MRA to BLM would be within the policy however; substantial natural resource values

APPENDIX F

exist in the Impact Area MRA, and the land reassignment does not increase the liability to the United States.

The Army has taken these substantial natural resource values into consideration during the development of remedial options at the former Fort Ord. This includes short-term direct affects from the cleanup program, and long-term affects due to limitations placed on management of these resources. The Army believes that the preferred alternative will result in remediation of the contamination sufficiently to protect human health and allow the continued management of the significant natural resources within the Habitat Reserve as described in the HMP and other documents, and is committed to working with BLM to allow for reuse of the property in acknowledgement of the BLM policy.

Comment 2: It appears that both Alternative 3 and Alternative 4 may require additional Consultations with the U.S. Fish and Wildlife Service (USFWS) because both alternatives exceed the temporary disturbance threshold of 75 acres under the USFWS Biological Opinions on the Habitat Management Plan. We do appreciate, however, your acreage estimations of sifting sites because it does help disclose some important short-term effects. The Track 3 RI/FS should, however, disclose cost estimates for habitat restoration (i.e., 320 acres versus 85 acres) of these sifting areas where habitat destruction is assumed. This is important to gauge the potential costs associated with the cleanup options.

Response 2: The cost estimates for habitat restoration after excavation/sifting are included in the FS cost estimates in Appendix A, Tables A-5 and A-6, for Alternatives 3 and 4, respectively. The costs of restoring habitat following excavation and sifting were annualized assuming \$45,000 per acre based on recent Fort Ord specific data, and are included in the task of Excavation / Sifting of \$115,000/acre as noted in Footnotes [c] and [d], for Alternatives 3 and 4, respectively.

It should be noted that the acreages attributed for sifting are estimates; the actual number of acres of habitat that would be temporarily disturbed by excavation and sifting could be more or less depending on site conditions. The Army expects that the estimated 85 acres of sifting under Alternative 4 would be conducted in several small areas over the entire period of the cleanup so that temporary habitat disturbance can be managed within the HMP allowance at any given time. On the other hand, the scale of possible sifting under Alternative 3 (estimated 320 acres) is expected to almost certainly exceed the HMP allowance for habitat disturbance thus requiring consultation with USFWS.

Comment 3: While we are confident that these sifting areas could be restored through active management and with some cost, the option of fencing off these individual areas is not an option that was considered. In our October 13, 2006, comment letter, we recommended that another alternative could be evaluated that would be a modification of Alternative 3 – we called this

APPENDIX F

Alternative 3b. This additional alternative would prescribe a removal to depth MEC remediation for the entire area, however, only a surface removal in areas designated as “special case areas.” “Special case areas” would need to be clearly defined, but would presumably mean areas that would: 1) expose cleanup workers to unacceptable risk from exposure when performing a subsurface remediation; or 2) require large-scale subsurface sifting operations over rare plant and animal habitats (i.e., a vernal pool) that could not be reasonably restored within a given timeframe - we recommend something longer than 5 years; or 3) be excessively expensive to cleanup subsurface areas on a per unit basis. Army munitions experts have apparently made an informed estimate of how many acres of sifting would be needed to clean the subsurface of the Track 3 Area; however, there is little information to know what type of habitats these may occur within. It would be important to know whether the sifting sites are within vernal pool areas, open grassland areas, or maritime chaparral.

Response 3: The Army does not believe that the suggested “Alternative 3b” would result in a significant difference in terms of protection of human health and the environment and compliance with ARARs—the primary evaluation criteria for the evaluation and comparison of remedial alternatives under EPA’s RI/FS Guidance. The implementation of the suggested alternative would result in the presence of multiple scattered areas where surface MEC removal would require the same land use controls as were described under Alternative 4. In addition, the suggested alternative leaves the areas of highest risk behind and the cleanup would take much longer to implement than Alternative 4. Based on the FS cost estimates in Appendix A, if the 320 acres were not sifted, the cost difference would be approximately \$37 million dollars less than excavation and sifting. This still leaves a cost difference of approximately \$250 million dollars between Alternative 4 and Alternative 3. For these reasons, the BLM’s suggested alternative was not further evaluated in the FS. The FS will be revised to provide additional information for clarification regarding the acreages of high-density areas that occur in each of these habitat types; Plate 5 of the report has been revised to show the high density areas overlain on the different habitat areas that are described in the Final RI/FS.

Comment 4: The time required to remediate Track 3 areas is disclosed as 8 years for alternatives 2 and 4, and 22 years for Alternative 3. This assumes that 800 acres can be cleaned up each year for alternatives 2 and 4, while 300 acres can be cleaned up each year for Alternative 3. While the longer cleanup timeframe for Alternative 3 is less desirable for expediency, it should be noted that it provides a better age-class distribution for the maritime chaparral. A healthy maritime chaparral ecosystem typically contains a variety of age-classes that support an abundance of species. Because the cleanup operations require removing almost all of the maritime chaparral that impedes MEC detection, each cleanup unit is relatively homogenous in regards to an age-class distribution following the response. As such, a longer

APPENDIX F

timeframe for MEC clean up is more desirable in widening the age-class distribution across the entire Track 3 area.

Response 4: A longer clean up timeframe would leave the danger of surface munitions in place longer, therefore is less desirable from human health perspective. Burning of up to 800 acres per year is consistent with the HMP and the Biological Opinions, therefore is protective of the chaparral plant community.

Comment 5: In our October 13, 2006, comment letter, we provided the Army a copy of our management program under the pending Habitat Conservation Plan (HCP). That management program has been folded into the revised HCP prepared by the Fort Ord Reuse Authority (FORA - January 2007). The 2007 HCP management program for the BLM lands in the Natural Resource Management Area is provided in Attachment A. Please refer to that management program as it is expected to supersede the management program within the 1997 HMP and 1995 Site Use Management Plan. It is important to refer to that management program because its lists 59 specific actions that the BLM is obligated to undertake as part of the base reuse program.

It is imperative for the MEC remediation to reasonably accommodate the commitments that BLM is being asked to undertake within the HCP. Should any of the 59 specific actions that the BLM is being asked to undertake within the HCP be unsafe (or cost prohibitive) to perform within the Track 3 Area due to MEC issues, then the BLM will not accept transfer of those lands for those HCP purposes. As the Army is well aware, lands contaminated with MEC limit some of the basic land management tools that ensure an efficient management program.

For this reason, we are concerned that areas that have undergone only a surface MEC remediation will be cost prohibitive to manage under the HCP. This is most evident in the program areas of prescribed burning, weed abatement, habitat restoration and public use management. For prescribed burning, hand crews and heavy equipment might not be able to scratch lines around spot fires – instead, more costly aerial equipment (i.e., helicopters) may need to be used. The Army's cost estimate of 2 million dollars to burn 800 acres is a clear example of how MEC issues can greatly increase prescribed burn costs. For weed abatement, spraying herbicide would be the only option as opposed to mechanical methods such as digging. Herbicide use is weather dependent and wind/rain can limit the control options by at least 50 percent. For habitat restoration, heavy equipment used for reshaping and ripping compacted sites would be greatly restricted. This would greatly increase restoration costs as would the restrictions that would be involved on planting seedlings in the ground. Finally, the cost of keeping trespassers and visitors out of MEC areas would be great. The BLM

APPENDIX F

disagrees that these costs would be a responsibility of our agency once the lands are transferred.

Response 5: The Army appreciates the clarifications that BLM has been providing regarding the types of habitat/land management activities that are planned to be conducted in the Impact Area MRA. The Army evaluated the 59 specific actions listed in the attachment to BLM comment letter. The Army believes that all of these actions can be implemented safely, and that implementations would not be cost prohibitive, with the following clarifications.

It should be noted that the HCP and the 59 specific management actions assume that there would be no land use controls. However, except for the no further action alternative, all of the remedial alternatives were developed to be comprehensive and to address long-term protectiveness, therefore land use controls were included as part of the alternatives. Elements of remedial land use controls include prohibition of unrestricted public access, maintenance of a perimeter fence, MEC recognition and safety training for reusers, and construction support for subsurface activities. In order to manage these requirements, the FS cost estimates included two full-time UXO-qualified personnel. In addition to specifically identified land use control elements such as construction support, these UXO-qualified personnel would advise BLM in reuse planning, activity planning, responding to reports of incidental suspect munitions, and other UXO safety-related matters. In the final RI/FS the Army has also included law enforcement support to supplement the access management-portion of the land use controls.

Regarding prescribed burning, the Army recognizes the need to address spot fires immediately. The possible presence of subsurface MEC could make the use of hand crews and heavy equipment unsafe in some areas, and the use of alternative methods to address spot fires could involve requirements for additional resources in those instances. Therefore, the FS cost estimates for Alternative 4 have been revised to include a helicopter onsite during prescribed burning of 100 acres per year by BLM within the Impact Area MRA. Please note that the Army's prescribed burn costs can not be directly compared to the costs of future BLM burns because to the Army's burns will be conducted in areas containing surface MEC and many more safety measures are implemented.

Although herbicide will likely be relied on for weed control to a greater degree than what is recommended in the draft HCP. As described in the Draft Final FS, (1) other methods of weed control will also be available with the support of onsite long term UXO-qualified personnel, and (2) a digital map of remaining anomalies will also be provided to BLM which will be useful in making land management decisions. In addition, partial subsurface removal and/or construction support that are included as part of Alternative 4 would sufficiently address or support habitat restoration activities, which BLM estimates to involve a total of approximately 100 acres per draft HCP.

APPENDIX F

Comment 6: One of the balancing criteria that the Army uses to evaluate the effectiveness of a remediation is the long-term effectiveness and permanence of the action. Soil movement is a common phenomenon in the maritime environment – with wind and rain causing erosion and deposition of sandy soil particles. This soil movement would likely cause some subsurface MEC to become exposed through time, and other MEC to become further buried through depositional processes. The document does not disclose how long Alternative 2 (Visual Surface MEC Remediation) and Alternative 4 (Combination of Visual Surface Removal and Removal to Depth MEC Remediation) would remain effective. It is reasonable to assume that after some period of time, additional surface MEC remediation would be required to maintain a surface MEC remediation.

Response 6: As described in the FS, which has been revised for further clarification, the UXO-Qualified Personnel onsite (identified as part of the remedy) would be available to periodically survey the surface removal areas to search for and remove any MEC that became exposed after the remedy was completed.

Comment 7: We look forward to reviewing the Final Track 3 RI/FS. Should you have any questions regarding our response, feel free to contact Rick Cooper, Hollister Field Manager, at or Eric Morgan, Fort Ord Manager.

Response 7: No response necessary.

APPENDIX F

ATTACHMENT A

Bureau of Land Management Habitat Management Responsibilities from the 2007 Draft Habitat Conservation Plan

3.5 BLM – Natural Resource Management Area

Approximately 14,638 acres of former Fort Ord lands are identified as the Natural Resource Management Area (NRMA), which comprises the largest habitat reserve on the former base, supporting a diversity of plant communities and wide range of habitat types important to the preservation of HCP species. This acreage includes existing roads, former ranges, former military training and administrative areas, and approximately 647 acres designated as an easement for the proposed Caltrans State Route 68 Corridor. The portion of this easement that could be developed includes a 300-foot-wide corridor through the NRMA. Any work proposed by Caltrans on this easement is not a covered activity and is not authorized as part of this HCP.

The BLM currently manages approximately 7,200 acres of this land (known as the Fort Ord Public Lands) which has already been transferred to BLM by the Army. Over the next decade or two, the Army plans to transfer the approximately 8,000 additional acres of the NRMA to the BLM. In the meantime, the Army must complete its pre-disposal actions associated with the cleanup of contaminated sites and munitions and explosives of concern (MEC) under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). Through the Army's cleanup process, vegetation must be cleared and MEC must be identified, located and removed from future habitat reserve lands. These pre-disposal munitions response (MR) actions cannot undermine the goals of species and habitat preservation described in the 1997 HMP. The remaining NRMA lands eventually transferred to BLM will likely have been subjected to prescribed burns and/or otherwise manipulated, but will remain undeveloped and suitable for long-term management as a habitat reserve.

In general, undeveloped areas in the NRMA will be maintained in their natural state. No more than two percent of the areas supporting native vegetation (about 300 acres) may be converted to areas with buildings or other development-oriented uses. The former Range Control compound (HMP Parcel F1.12) that currently serves as the BLM Project Office is already developed and is not included in this two percent development allowance in the NRMA. Any development that may occur in the Caltrans Transportation Easement that passes through the NRMA is also not included in this two percent development allowance. Only land management consistent with the conservation of biological resources will be conducted in the NRMA; a Natural Resources Management Plan will be developed and implemented for the area by BLM.

BLM's development on the former Fort Ord would be limited to buildings and/or facilities that would contribute the furtherance of goals and objectives outlined within this HCP, or would not substantially detract from the furtherance of those goals. These facilities may include visitor centers, visitor contact stations, roads, trails, public access locations, administrative support buildings or warehouses, and utility lines (i.e., water, electrical, telecommunications, etc). In addition to these facilities, the BLM is obligated under the Federal Land Policy and Management Act (43 U.S.C. 1761-1771) and Mineral Leasing Act (43 U.S.C. 185) to consider requests for

APPENDIX F

rights of way for a wide variety of public benefit facilities and infrastructures. These facilities may include proposals for new roads, development and expansion of communication sites, water storage tanks and well sites, etc. All development proposals would be evaluated in relationship to their direct, indirect and cumulative effects that they may have in relation to the furtherance of biological goals and objectives outlined within this HCP. All development projects will be sited to avoid or minimize impacts on HCP species. No development will occur within occupied Contra Costa goldfields habitat or known or potential breeding habitat for California tiger salamander.

Types of activities that will be allowed in the NRMA include: route, road and trail management and maintenance, habitat enhancement, fuelbreak construction and management, use of administrative areas, aquatic monitoring and educational programs, and species-specific monitoring and habitat enhancement. Recreational access will be allowed on established routes. No public motorized use on these routes will be allowed. During special events such as bike or equestrian races, motorized use of some trails may be allowed for equipment staging, safety purposes and/or emergency access. Vehicles may also be allowed on some trails for scientific research projects.

The BLM intends to develop, manage and maintain a system of roads and trails necessary for land management purposes and compatible public access within the NRMA. The exact location, number and configuration of the road and trails are difficult to delineate at this time. For purposes of this HCP, the BLM would manage and maintain about 100 to 110 miles of drivable road (administrative purposes), and an additional 50 to 75 miles of recreational trails. This would encumber about 330 to 355 acres of road/trail surface and sparsely vegetated road/trail shoulder. New route development (including administrative access roads, fuelbreak roads, recreation trails) would encumber less than 2 percent of the land base. The BLM would not count against the 2 percent development restriction any reroutes of trails or roads that involved closing and restoring certain route segments and opening alternative route segments to lessen overall impacts to sensitive resources in a given area. Development of routes within BLM's Fort Ord Project Office development parcel would also not be counted against the 2 percent development restriction on NRMA habitat parcels. The BLM intends to restore and stabilize up to 100 miles of former roads over the life of the HCP. This will result in the restoration of between 100 to 150 acres of degraded habitat. This road and trail retirement estimate includes restoration that has already been conducted by the BLM since land transfer of 7,200 acres in 1996.

3.5.1 Habitat Features and HCP Species

Five habitat types occur within the NRMA. The most abundant habitat type is maritime chaparral/coastal scrub. Other dominant types include annual grasslands, inland coast live oak woodland, coastal coast live oak. Habitats of special interest within the NRMA include riparian forests, perennial grasslands and vernal pools. Sand gilia, Monterey spineflower, California linderiella, seaside bird's beak, Toro Manzanita, sandmat manzanita, Monterey ceanothus, Eastwood's ericameria, coast wallflower, Hooker's manzanita, Contra Costa goldfields and California tiger salamander are known to occur in the NRMA. Potential habitat is available for California red-legged frog, black legless lizard, and Monterey ornate shrew.

3.5.2 Resource Conservation and Management Activities

APPENDIX F

BLM's management activities emphasize preserving, enhancing, maintaining and restoring (as appropriate) habitat quality of maritime chaparral and other habitat types within the NRMA and promoting the preservation of all HCP species therein. Some management activities are unique to certain habitat types or plant communities and others are procedures that apply throughout the NRMA. Some of the activities are focused on the protection, preservation or enhancement of HCP species and natural communities to meet the objectives of the conservation strategy of this HCP and others are simply required for basic property management. BLM's resource conservation and management activities will include, but not be limited to the following. Where specific actions are targeted to meet the objectives of the conservation strategy, those objectives are referenced. These actions are also cross-referenced in the discussion of biological goals and objectives in the conservation strategy (Section 5.5).

Establish Adjusted Baseline

The following specific actions are required to meet the landscape-level objectives of the conservation strategy of the HCP.

- *Specific Action BLM-1: Identify, characterize and map the aerial extent of natural communities within the NRMA no later than three years from transfer of the property from the Army or from issuance of the permits under this HCP, whichever is later.*
- *Specific Action BLM-2: Identify and map the extent and abundance of HCP plant species within the NRMA no later than five years from transfer of the property from the Army or from issuance of the permits under this HCP, whichever is later.*
- *Specific Action BLM-3: Identify, characterize and map the aerial extent of suitable habitat, and determine presence, absence and/or other characteristics of the HCP animal species within the NRMA following species-specific protocols for each (see animal monitoring section 6.3.2) no later than five years from transfer of the property from the Army or from issuance of the permits under this HCP, whichever is later.*

Prepare a Resource Management Plan

The following specific actions are required to meet the landscape-level objectives of the conservation strategy of the HCP.

- *Specific Action BLM-4: Describe and implement specific protocols for managing biological resources to meet the goals and objectives of the HCP. The plan will address management including restoration, enhancement and maintenance including an integrated program for control of non-native species; and include tools, programs and processes such as prescribed fire management.*
- *Specific Action BLM-5: Describe short-term and long-term development and land use plans, public access and recreational uses and other non-habitat-specific plans for the NRMA. Identify measures that can be implemented to avoid and minimize impacts to HCP species and natural communities with the potential to occur with siting, construction, occupation and/or maintenance of allowable facilities and uses.*

APPENDIX F

· *Specific Action BLM-6: Identify project level monitoring which is specific to the NRMA, and describe how base-wide monitoring program is implemented on the NRMA.*

· *Specific Action BLM-7: Submit draft resource management plan to FORA and CRMP no later than three years from transfer of the property from the Army or from the issuance of the permits under this HCP, whichever is later.*

Preserve, Enhance and Maintain Maritime Chaparral

BLM will maintain (at minimum) the viability and populations of species and their habitats covered within the HCP using (as one standard) those habitat areas documented during adjusted baseline surveys as described above. Over the 50-year life of this HCP, populations of individual HCP plant species are expected to fluctuate through normal succession such that early seral-stage species will become less evident as maritime chaparral stands age. Similarly, early seral-stage species will become more evident after older maritime chaparral stands burn. The HCP recognizes that protecting the seed banks within the soil of early seral-stage species is an important component of managing older stands of maritime chaparral.

BLM will use prescribed burning to provide a range of successional stages, prevent senescence, maintain native species diversity and, in particular, to maintain habitat for herbaceous HCP plant species. Alternative vegetation treatments will be tested to gain a better understanding of the effects of these various strategies. BLM will eradicate about 50 acres of noxious weed infestations in maritime chaparral each year in the NRMA and protect against noxious weed infestations on about 1,000 to 1,500 acres of new habitat opening each decade. Accelerated erosion caused by human use and intrusion will be reduced and disturbed areas, especially old roads and other areas associated with former military use, will be restored into healthy maritime chaparral where possible.

Maritime chaparral will be maintained as a patchwork of stands that support vegetation of various ages and structures. This habitat “mosaic” allows for high species and habitat diversity and provides sources of propagules for dispersal between patches. For purposes of this HCP, the long-term desired future condition of maritime chaparral habitat will contain a mixture of age classes and species that tend to carry lower fuel loadings at the habitat area/development parcel margins, and higher fuel loadings away from those margins. After 50 years, the desired future age-class distribution of maritime chaparral would have about 30% less than 20 years of age, 30% between 20 to 45 years of age, 30% between 45 to 70 years of age, and 10% greater than 70 years of age. These percentages may be adjusted based on the results of studies of maritime chaparral and recovery. Specific actions listed below meet resource level biological objectives 1.1, 1.2, 11.1, and 11.2 and 12.2 of the conservation strategy (see Section 5.0).

· *Specific Action BLM-8: Estimate and map maritime chaparral age class distribution in the NRMA within three years of HCP approval.* BLM will produce an acreage estimate and mapped distribution of current age classes of all maritime chaparral on NRMA lands that have been or will be transferred to BLM under the Habitat Conservation Plan.

· *Specific Action BLM-9: Continue to coordinate with the Army on vegetation removal strategies as part of the MEC cleanup program within the NRMA.* BLM will not perform prescribed burns for habitat enhancement purposes on sites that have surface MEC. BLM will, however, support

APPENDIX F

the consideration of prescribed fire on these sites by the Army as part of the MEC cleanup process under CERCLA (see also discussion under Changed Circumstances).

· *Specific Action BLM-10: Use prescribed burning on a rotational basis and wildfire suppression strategies, covering about 1,000 to 1,500 acres in the NRMA each decade, to replicate desired future conditions and fulfill vegetation and fuels management objectives.* The specific seasonal timing, patch size, decadal total, and rotational time of prescribed burns will be determined based on the results of studies of maritime chaparral and recovery. Assuming that there are about 9,000 acres of maritime chaparral within the NRMA, BLM will evaluate burn events (i.e., prescribed fires and wildfire) to determine whether the desired future age class distributions and species compositions are being attained. Should decadal burn targets/estimates be exceeded, BLM will adjust suppression and enforcement strategies to reduce the size and/or number of wildfires. Should decadal burn targets/estimates not be met, BLM will increase the number and/or size of prescribed fires.

· *Specific Action BLM-11: Use research-oriented vegetation treatments in lieu of in-season prescribed burning on up to 500 acres of maritime chaparral to regenerate decadent stands on a case-by-case basis.* BLM will use research oriented treatments such as cutting, mowing, goat grazing, out-of-season (i.e. before or after the optimum October/September window for) prescribed burning, and other measures to gain a better understanding of the effects of alternative vegetation management strategies, or for use in areas considered too hazardous to prescribe burn at certain times. Should certain methods produce favorable biological results, their application may be used more frequently when economical. However, if results indicate that certain treatments are not favorable to HCP Species, BLM will discontinue their use unless they are required to regenerate stands considered too hazardous to burn in season.

Restore Maritime Chaparral Habitat in Targeted Areas

Restoration activities are intended to recreate, upon a disturbed landscape, the abiotic and biotic characteristics and processes that produce equilibrium landforms bearing the highest quality habitat given the constraints of the region. The models for specific restoration sites are suitable reference sites selected from natural, functioning, undisturbed parts of the nearby landscape. The resulting restoration project should be indistinguishable from the surrounding terrain, given enough time to evolve toward the biotic and abiotic reference site. BLM will restore up to 15 acres of maritime chaparral annually for a total of 100 to 150 acres in the NRMA over the term of this HCP

Specific actions listed below meet resource level biological objectives 2.1, 2.2, 11.1, and 11.2 and 12.2 of the conservation strategy (see Section 5.0).

· *Specific Action BLM-12: Control erosion, remove hardstand, reshape, stabilize and restore existing degraded or destroyed sites associated with roads, gullies, or rills into naturally recurring maritime chaparral/coastal scrub habitat.* Site specific restoration and erosion control sites are difficult to delineate at this time. However, within the multiple range area where most of the maritime chaparral occurs, it is reasonable to expect that BLM will restore and stabilize up to 100 miles of former roads and/or associated gullies and unneeded hardstand areas over the life of the HCP. This estimate is based upon aerial surveys of the route network conducted within the *Road and Trail Resources Inventory (RATRI): Bureau of Land Management Lands, Former Fort*

APPENDIX F

Ord, Monterey County, California (2002) and consideration of the Watershed Riparian Assessment Report (2002). This estimate excludes the Army's restoration requirements associated with the munitions and explosives of concern (MEC) cleanup program, and includes restoration that has already been conducted by BLM since land transfer of 7,200 acres in 1996. If habitat disturbance results from public use, additional restoration beyond the estimated maximum of 15 acres per year would be required.

· *Specific Action BLM-13: Plant native plant seedlings, and/or broadcast native seed on restoration sites where appropriate to expedite the recovery of native vegetation.* Species selected for planting or broadcasting would mimic the closest adjoining habitat considered a reference site of healthy maritime chaparral. Native species plantings at the restoration sites would be limited to native seed or seedlings from Fort Ord genetic stock whenever possible. Non-local plant materials would be used only when important restoration projects needed to be completed and Fort Ord stock was not available. In the event that Fort Ord stock was not available, BLM would strive to use material from as close to Fort Ord as possible.

· *Specific Action BLM-14: Stockpile topsoil from areas potentially disturbed through restoration activities that are occupied with HCP plant species.* Soils will be stockpiled prior to the fall rains of any given growing season and redistributed in its former location prior to January 15 to provide sufficient time for germination, growth, and seed production.

· *Specific Action BLM-15: Flag areas adjacent to restoration sites that are occupied by HCP species and that will not be disturbed by heavy equipment.* Vehicle and foot traffic will be prohibited within the flagged area.

Preserve, Enhance and Maintain Oak Woodlands

BLM will maintain or improve the approximate extent, crown cover and quality of oak woodlands in the NRMA as documented in adjusted baseline surveys. Remnant oak woodlands will be managed to permit natural regeneration and to maximize the cover and dominance of native plant species, while controlling the spread and reducing current noxious weed infestations. Decadent stands will be regenerated through the use of vegetation treatments including mechanical thinning and understory clearing to fulfill vegetation and fuels management objectives as appropriate. Oak woodlands within the NRMA will be managed to promote the reestablishment of natural biotic systems, including interacting microbial, invertebrate, and vertebrate communities within oak woodlands. Appropriate oak species, canopy cover and associated understory species will be established in areas that had been degraded by historical uses. BLM estimates it will restore or improve up to ten acres of oak woodland habitat in the NRMA over the life of the HCP.

Specific actions listed below meet resource level biological objectives 5.1, 5.2, 5.3, 5.4, 11.1, 11.2, 15.1 and 16.1 of the conservation strategy described in Section 5.0.

· *Specific Action BLM-16: Monitor oak woodlands for indications of sudden oak death or other disease outbreaks and take appropriate actions if sudden oak death or other diseases are confirmed and if such actions are available and recommended through CRMP.* If sudden oak death or other potentially virulent diseases of oaks are identified during the plant monitoring program or in the course of normal management activities, BLM will evaluate the significance of

APPENDIX F

the occurrence and report its findings through CRMP. If control or remedial measures are available, BLM will take action as recommended through CRMP.

· *Specific Action BLM-17: Use prescribed burning in oak woodlands on a rotational basis as determined necessary and appropriate to fulfill vegetation and fuels management objectives.* The specific methods, seasonal timing, patch size, yearly total, and rotational time of prescribed burns would be determined based on experience with chaparral burns and the results of studies of oak woodlands and recovery undertaken by BLM.

· *Specific Action BLM-18: Use mechanical thinning and understory clearing in lieu of prescribed burning as determined necessary and appropriate to regenerate decadent oak woodland stands in areas considered too hazardous to burn.* The specific areas, methods, equipment used, timing and other aspects of woodland thinning and clearing programs would be based on case-by-case assessments, with emphasis on preserving and protecting habitat for Monterey ornate shrew and other woodland-dependant species. Thinning and clearing proposals would be reviewed through CRMP prior to implementation.

· *Specific Action BLM-19: Maintain the extent of potential habitat for Monterey ornate shrew and other woodland wildlife species.* BLM will preserve fallen trees, snags and duff and prohibit collection of wood in scruboak, oak woodlands, or riparian woodlands that are moist and contain thick duff and / or downed logs. This management activity will cease if, through monitoring, BLM determines that other HCP species are being adversely affected.

· *Specific Action BLM-20: Identify potential restoration sites, evaluate oak woodland regeneration within existing stands and plant native oak seedlings where appropriate to improve habitat quality.* While site-specific restoration/improvement sites are difficult to delineate at this time, it is reasonable to expect that the BLM will restore or improve up to ten acres of oak woodland habitat over the life of the HCP. This oak woodland habitat restoration/improvement estimate includes restoration that has already been conducted by the BLM since land transfer of 7,200 acres in 1996.

Preserve, Enhance and Maintain Grassland Plant Communities

Grassland plant communities in the NRMA will be managed to reduce fuel hazard, protect habitat for HCP species, and enhance native plant and animal habitat. Where possible, BLM will reestablish or introduce appropriate native species in areas that were degraded by historical uses or otherwise determined suitable for restoration. Specific actions listed below meet resource level biological objectives 6.1, 6.2, 6.3, 6.4, 11.1, 11.2, 13.2, 15.1 and 16.1 of the conservation strategy described in Section 5.0.

· *Specific Action BLM-21: Use livestock grazing (sheep) in NRMA grassland areas between January and August each year to reduce fuels, control non-native invasive grasses and reduce thatch buildup that can inhibit native forbs.* BLM will continue to lease about 2,500 acres in the grassland region of southeast Fort Ord for up to 2,700 sheep (ewes) plus their lambs to graze from January to May with extensions often granted into July or August, depending on remaining forage. BLM will initially limit the actual number of sheep permitted to graze on the southeast grasslands to no more than 1,000 ewes and their lambs unless and until BLM demonstrates that higher levels are needed for fuel reduction and control of non-native plant species and a strategy

APPENDIX F

is in place to minimize the impacts of livestock use on California tiger salamanders. BLM will consider extending the grazing program to other grassland areas within the NRMA if it could benefit vegetation management objectives in those areas.

· *Specific Action BLM-22: Monitor sheep grazing to determine its effectiveness in controlling the spread of various invasive, non-native species and its effects on grassland habitat for HCP species.* If monitoring indicates that grazing is ineffective in non-native species control, contributes to the spread of various invasive non-native species, or is detrimental to grassland habitat for HCP species, BLM will consider other methods of grassland management.

Alternatives to livestock grazing could include prescribed burning, mowing or other research-oriented alternatives following an integrated vegetation management approach as described above for maritime chaparral and below under non-native species control.

· *Specific Action BLM-23: Incorporate native grasses and forbs in the plant palette when restoring degraded areas in grassland habitat.*

· *Specific Action BLM- 24: Site allowable development in the NRMA to minimize impacts to remnant stands of native grassland.* Preserve, Enhance and Maintain Aquatic and Riparian/Wetland Habitats BLM will maintain or enhance the number and quality of aquatic habitat locations that support or could support HCP species such as Contra Costa goldfields, California tiger salamander, California red-legged frog and California linderiella. The aquatic wetland vegetation, wetland hydrology, and associated upland habitats will also be preserved and maintained. Non-native species that could threaten HCP species and/or degrade habitat quality, including nonnative pigs, bullfrogs, and fish will be reduced or eliminated. Specific actions listed below meet resource level biological objectives 7.1, 7.2, 7.3, 13.1, 13.3, 14.1 and 15 of the conservation strategy described in Section 5.0.

· *Specific Action BLM-25: Identify, map and/or characterize actual and potential threats to aquatic and riparian/wetland habitats within the NRMA through ongoing monitoring.* As part of the baseline studies and ongoing monitoring, conduct regular inventories within the watersheds of these habitat types to identify actual and potential physical, biological, water quality, recreation-related and other impacts and prioritize management and restoration activities accordingly. Physical impairments within watersheds including gullies, slides and other erosion, bank failures along streams, roads and hardstand areas in close proximity to aquatic or riparian/wetland habitats and culvert failures would be mapped. Biological threats including the presence of bullfrogs, non-native fish, non-native, invasive plants and feral animals would be identified and assessed (see also section on non-native species control). Authorized access near pools along designated trail systems by hikers, mountain bike riders, equestrians and pets; educational and research activities (i.e. school staff and students on field trips, researchers seining or netting ponds, etc.); illegal vehicle/motor cycle trespass, and other types of visitation and use in close proximity to (or in) aquatic habitats would be evaluated. Finally, other habitat management actions (e.g. prescribed burning, weed eradication, livestock grazing) in watersheds would be monitored to identify any deleterious effects they might have on aquatic or riparian/wetland habitat for HCP species (see also discussion below).

· *Specific Action BLM-26: Periodically monitor water quality in seasonal pools and perennial ponds.* Collect water (standard grab) samples in seasonal pools and ponds in concert with the

APPENDIX F

baseline studies and ongoing monitoring and analyze for basic water quality parameters (e.g. turbidity, pH, nitrates, disease organisms, etc.). If results indicate levels above accepted standards or significant increases over baseline conditions, make every reasonable effort to identify the source problem and initiate remedial action in accordance with watershed protection measure described herein or other adaptive management strategies (see Adaptive Management section).

· *Specific Action BLM-27: Limit water use by livestock to no more than three ponds annually in the NRMA.* BLM will develop and implement a monitoring and adaptive management strategy to address the potential impacts on California tiger salamanders of water use by livestock in the southeast grasslands and adjust sheep grazing numbers and water use limits accordingly (see Adaptive Management Section 5.5).

· *Specific Action BLM-28: Prohibit livestock access to vernal pools and other aquatic areas outside of the southwestern grasslands in the NRMA.*

· *Specific Action BLM-29: Modify or adapt the prescribed burn program and other (e.g. research-oriented) vegetation management treatments within certain areas if monitoring indicates harmful effects on the watershed or aquatic habitat for HCP species.* Habitat and vegetation management treatments described elsewhere in this chapter will be modified in areas where monitoring clearly demonstrates deleterious effects on the watershed, aquatic environments or riparian/wetland habitats (see also Adaptive Management Section 5.5).

· *Specific Action BLM-30: Modify or adapt livestock grazing practices if monitoring indicates harmful effects on the watershed or aquatic habitat for HCP species.* If monitoring indicates that grazing is detrimental to the watershed or aquatic habitat for HCP species, BLM will consider changing grazing practices or other methods of grassland management. Alternatives to livestock grazing could include prescribed burning, mowing or other research-oriented alternatives following an integrated vegetation management approach.

· *Specific Action BLM-31: Restrict pets from aquatic and riparian wetland areas.* Dogs and other domestic pets will not be allowed in ponds, pools, streams, wetlands or riparian areas. All pets must be on leashes whenever they are in close proximity to such areas.

· *Specific Action BLM-32: Relocate roads and trails away from aquatic and riparian/wetland habitats when feasible, and remove unneeded hardstand areas consistent with priorities established through watershed inventories.* Road and trail removal and relocation, hardstand removal and site restoration would be completed as described elsewhere in this chapter. While specific restoration sites are difficult to delineate at this time, it is reasonable to expect that the BLM will restore up to five acres of aquatic and riparian/wetland habitat over the life of the HCP. This aquatic and riparian/wetland habitat restoration/improvement estimate includes restoration that has already been conducted by the BLM since land transfer of 7,200 acres in 1996.

· *Specific Action BLM-33: Remove introduced wildlife species as warranted, especially predators, feral animals, and pests from aquatic and riparian/wetland habitats and their watersheds.* Identify and implement specific programs to remove and/or control non-native

APPENDIX F

wildlife, especially predators that threaten known populations of aquatic HCP species. BLM has already identified a program to remove bullfrogs from ponds where they are known to occur by gigning, seining or dip-netting and a program to electroshock ponds to remove non-native fish in certain ponds where they have been documented (see also 3-31 discussion below). However, BLM may also consider stocking some ponds and managing them for recreational fishing. Other specific programs will be developed as a result of the watershed inventories conducted in the NRMA.

Control Activities in Watersheds of Aquatic and Riparian/Wetland Habitats

The following actions are intended to reduce potential threats to aquatic habitats from anthropogenic factors. Specific actions listed below meet resource level biological objectives 8.1, 8.2, 8.3, 11.3, and 13.2, of the conservation strategy described in Section 5.0 ·

Specific Action BLM-34: Identify priority sites and implement appropriate erosion control and site restoration methods. Prioritize candidate erosion control and restoration sites based on the watershed inventories described above and use methods to control erosion and restore sites as described below.

· *Specific Action BLM-35: Restrict public and educational visitation to locations that could degrade the quality or quantity of aquatic and riparian/wetland habitat.* Public use will be redirected away from aquatic and riparian/wetland areas if monitoring indicates harmful effects on the watershed or aquatic habitat for HCP species.

· *Specific Action BLM-36: Conduct periodic patrols by law enforcement officers and other visitor support staff to reduce or eliminate illegal vehicle use into aquatic and riparian/wetland habitats.* Ongoing patrols and enforcement within the NRMA and at key access locations into the NRMA will make all reasonable efforts to stop illegal trespass into these habitats (see also discussion below).

· *Specific Action BLM-37: Monitor vehicle routes within 175 meters of any known breeding pond for CTS on mornings after nights with rainfall to attempt to detect mortality caused by motor vehicles.* If more than two CTS are observed crushed in any one year, then BLM will consider protective measures such as posting caution signs where routes cross within 175 meters of known breeding ponds and restricting driving privileges along these routes during periods when CTS are active.

· *Specific Action BLM-38: Establish safe movement routes for CTS where roads or other structures must traverse a known or possible movement route.* Site and design needed roads or structures so that they do not create a barrier between known or potential breeding ponds for California tiger salamander and suitable upland habitat.

· *Specific Action BLM-39: Maintain characteristics of confirmed occupied upland habitat for CTS in the NRMA as documented during baseline studies and ongoing monitoring.* Upland habitat within 1 km of known CTS breeding ponds will be evaluated during baseline studies and ongoing monitoring to determine suitability for CTS. Habitat management activities will focus on maintaining and/or improving upland habitat for CTS in these areas.

APPENDIX F

Control of Non-Native Species, Pests and Diseases

BLM will control the spread and reduce the abundance and distribution of noxious weed infestations using integrated vegetation management methods, with a goal of limiting the overall area of individual infestations to no more than five percent of the total area of habitat. A combination of standard methods and research-oriented treatments will be employed, including manual removal, mowing, use of gas powered weed cutters, propane torches, hand spraying of herbicide or vinegar, livestock grazing and prescribed burning (both in and out of season) to contain, reduce or remove infestations of non-native plant species. Protocols for implementing an integrated vegetation management program that minimize effects on HCP Species are presented in Appendix F. Specific actions listed below meet resource level biological objectives 9.1, 9.2, 9.3, 9.4, 15.2, 11.3, 16.2 of the conservation strategy described in Section 5.0.

· *Specific Action BLM-40: Identify and map the species or categories of weed infestation targeted for removal.* BLM has identified 50 non-native plant species for abatement as of 2005 and has aerial photography showing known locations of each. However, weed inventory and mapping (aerial surveys) will be an ongoing process occurring in concert with the baseline surveys and plant monitoring program to determine whether abatement actions were contributing to the fulfillment of noxious weed control goals. (see Monitoring section). While the majority of target species will be included in the inventories, some target weed species occur sporadically over much of the NRMA and it is not feasible to map all their occurrences. Aggressive exotic (and usually perennial) plants such as Pampas grass, French broom or iceplant, and large, dense infestations of European and other non-native annual plants will continue to be mapped. However, smaller or individual occurrences of weeds such as various thistles, poison hemlock and cut-leaved fireweed do not warrant mapping unless large infestations are observed.

· *Specific Action BLM-41: Develop strategies for eradication of noxious weed species, categories of weed infestation and/or infestations within certain habitat types.* Identify appropriate abatement techniques, following the integrated vegetation management approach, for target weed species or categories of infestation with consideration for the habitat type, location relative to sensitive resources, proximity to development and other factors. Methods could include a combination of prescribed burning, manual removal, mowing, use of gas powered weed cutters, propane torches, and hand spraying of herbicide or vinegar. Noxious weed abatement would focus on containing, reducing or eradicating existing infestations from spreading, and preventing the establishment of new infestations. Within the NMRA where most of the maritime chaparral is located, infestations are typically found in openings created by past disturbances. New habitat openings are expected to occur from fuel break development and maintenance, prescribed burning and wildfire, and research-oriented vegetation treatments.

· *Specific Action BLM-42: Refine the integrated vegetation management program through monitoring and adaptive management in an effort to reduce dependence on herbicides.* BLM will continually refine the integrated vegetation management program through monitoring and adaptive management in an effort to reduce dependence on herbicides. The goal of the program is to eliminate or substantially reduce the size of existing populations of invasive non-native plants and reduce activities that introduce and/or contribute to the spread of those species so that future eradication efforts can also be reduced. Herbicides will only be applied when there is no risk of take of listed species. The timing, location and method of herbicide application will be adjusted in conformance with BLM protocols (see Appendix F). Water quality testing, drift cards

APPENDIX F

or other controls may be used to further assure that there are no deleterious effects on listed species. A pesticide use plan that includes the typical methods for pesticide applications within the NRMA will be included in the resource management plan.

· *Specific Action BLM-43: Address actual and potential adverse effects from introduced wildlife species, feral animals and pests on HCP species and their habitats.* Identify and evaluate issues with feral animals and pests through the baseline studies and outline steps for addressing those issues in the Resource Management Plan. Actions identified should not result in take of or adverse effects on HCP species and should be reviewed by the USFWS and CDFG through CRMP prior to implementation. Monitor the effectiveness and habitat effects of the actions and use adaptive management strategies as appropriate to refine the control program.

· *Specific Action BLM-44: Remain informed about plant and animal diseases that have or may spread into the Monterey area and that could affect HCP species and their habitats.* Review and discuss through CRMP and identify actions to address diseases that are considered potential problems. Provide that information to the USFWS and CDFG for review prior to implementation. Actions should be designed to avoid take of and/or adverse affects on HCP species. Monitor actions employed to minimize the spread of diseases and apply adaptive management strategies as appropriate.

Control and Reduce Erosion and Restore Disturbed Sites

While wind, sheet, rill and gully erosion are natural processes in the maritime chaparral landscape; accelerated erosion is normally associated with road construction and maintenance (or lack of maintenance) and former military training. Control will focus on reducing the source of erosion such as concentrated runoff, point discharges, gullies and other drainage problems, especially associated with impervious surfaces, disturbed landforms, roads and trails.

Restoration of eroded or otherwise disturbed areas should recreate characteristics similar to natural, functioning, undisturbed parts of the nearby landscape. Specific actions below meet resource level biological objectives 10.1, 10.2, 11.3, 15.2, and 16.2 of the conservation strategy described in Section 5.0

· *Specific Action BLM-45: Identify high priority sites where erosion control and site restoration measures are warranted.* As part of the baseline studies and ongoing monitoring, conduct regular inventories of the NRMA to identify and prioritize erosion control, hardstand removal and restoration sites. Sites could include heavily used unsurfaced roads and trails, former military roads (paved and unpaved), gullies and hardstand or other disturbed areas, especially those adjacent to populations of HCP species or to riparian or wetland habitats (see also discussion on aquatic and riparian habitats above). BLM initially estimates that over 100 miles of former roads and/or associated gullies and unneeded hardstand areas will be restored and stabilized in maritime chaparral habitat over the life of the HCP (see also Specific Action 12 above).

· *Specific Action BLM-46: Identify and implement appropriate erosion control and site restoration methods for priority areas.* Methods could involve soil and vegetation removal adjacent to degraded areas; the use of fill soils; removal of “chip seal,” asphalt, concrete or other hardstand surfaces; ripping of compacted roadbeds and other surfaces; re-contouring of eroded areas; installation of drainage features such as outlet ditches, rolling dips (similar to waterbars),

APPENDIX F

and berms (as needed to facilitate the proper drainage of storm runoff); application of certified weed-free rice or barley straw or other similar functioning product (e.g. chipped vegetation) to cover and protect the soil surface; application of noninvasive, non-persistent annual grasses (such as barley) or other species; and the addition of soil amendments such as fertilizers and gypsum. Earthwork would primarily be accomplished using heavy equipment and occasionally hand crews. Site plans would be drawn up for each project site including methods, necessary equipment, supplies, materials, and labor. Surface protection would be maintained to the extent feasible given the need and funds available, until native species were effectively protecting the surface of a given site from significant erosion.

· *Specific Action BLM-47: Seed or plant re-contoured and restored areas with native plant species from Fort Ord genetic stock whenever possible given the need and funds available.* Non-local plant materials would be used only when important restoration projects needed to be completed and Fort Ord stock was not available. In the event that Fort Ord stock was not available, BLM would strive to use material from as close to Fort Ord as possible. Species selected for planting or broadcasting would mimic the closest adjoining native habitat.

Maintain Fuelbreaks

The purpose of this management activity is to maintain fire and emergency access and fuel reduction standards around and through the NRMA to provide for adequate management during prescribed burns and to reduce fire threats to communities at risk. The primary responsibility for providing adequate fuelbreaks or other appropriate separation between the reserve and developed private lands or lands designated for future development rests with the development lands (see Borderlands section). However, fuel reduction measures within the NRMA could be used to complement the required fuelbreak measures on borderland parcels adjacent to the NRMA.

· *Specific Action BLM-48: Maintain and manage about 100 to 110 miles of fuelbreaks of variable width depending upon fuel type, fuel loading (tons per acre), topographic position and features of the area.* Fuelbreaks, in many cases along drivable roads, with widths typically ranging between eight to 23 feet beyond one or both of the road shoulders and up to 45 feet beyond the shoulder in areas where sharp turns occur in oak woodlands, would be maintained using hand crews and mechanized equipment. Maintenance could occur annually or as infrequently as every two to four years, depending on vegetation type, rainfall amounts and specific locations. Vegetation would be removed using hand tools, chain saws, an All Seasons Vehicle (ASV), a tractor-operated mower, or a combination of the above. Manually-operated hand tools would be used to limb up oak trees so that no oak tree branches in the fuel break would be lower than nine feet off the ground. Understory vegetation would be cleared using the ASV or mower except in areas where hand crews and chippers must be used instead. In general, shrubs would be cleared to a height of two to six inches, leaving a mostly herbaceous cover on the ground. In oak woodlands and savannahs, branches below nine feet would be trimmed and the canopy thinned. Other surface fuels would be removed, leaving an open park-like landscape. Mechanized equipment would be used to chip or grind up the cut vegetation or it would be piled and burned at a later date. Cut vegetation may be loaded into a truck to be chipped off-site and used for erosion control in other locations, or chipped and dispersed back into the project area. Pile burning would be completed outside of the declared fire season. In locations where burning may encourage the propagation of listed plant species, fuels could be windrowed for later burning.

APPENDIX F

This technique would be continued or discontinued depending on post-burn monitoring results to protect listed species.

· *Specific Action BLM-49: Implement special fuels management strategies if determined necessary to reduce the risk of wildfire adjacent to Borderlands.* Every two years, BLM will assess fuel loads in areas within the NRMA that are adjacent to currently developed private lands or lands designated for future development to determine fire threats to communities at risk. These areas will be designated Wildland Urban Interface Areas and special fuels management strategies, including mechanical clearing, goat grazing, prescribed burning and other strategies will be considered if the biennial assessment determines that the chance of a wildfire moving towards or from these communities must be reduced. BLM has developed protocols for fuels management strategies that minimize effects on HCP species (see Appendix F). BLM will also periodically patrol these areas to educate landowners and visitors about wildfire risks.

Maintain and Improve Roads and Trails

The purpose of this activity is to maintain and improve roads and trails within the NRMA that are necessary for land management purposes and to provide opportunities for compatible public access on a system of well-defined and maintained trails. Existing road and trail systems that are redundant or unneeded will be eliminated or restored and needed transportation systems will be rerouted away from occupied habitat of HCP species where possible – especially State and Federally listed species. Restoration of unneeded roads meets objectives 10.2 and 11.3 of the conservation strategy described in Section 5.0.

· *Specific Action BLM-50: Maintain paved roads to include asphalt (or equivalent) surfaces 20 to 25 feet wide with shoulders typically three to four feet wide.* Road shoulders would be mowed annually and graded as needed to control erosion, maintain slopes and contours and ensure proper drainage. Repaving would occur as needed, but the asphalt surfaces of existing roads would not be widened. Glyphosate-based (e.g. Roundup Pro®) or other appropriate herbicides as approved by BLM in coordination with CRMP would be used to control vegetation within asphalt cracks inside roadbeds, along a 6-12 inch strip along asphalt road edges, within 6-12 inches around and inside concrete culverts inlets and within 6-12 inches along roadside concrete or otherwise hardened drainage ditches.

· *Specific Action BLM-51: Maintain unpaved roads to include a compacted soil surface travel lane eight to ten feet wide with a six to eight foot sparsely vegetated shoulder on each side.* Together the road shoulders and travel lane would be 20 to 26 feet wide. Road shoulders would be mowed annually with a rubber-wheeled tractor mower. The travel lane and portions or all of the road shoulder would be graded by heavy equipment every three to five years to maintain the road and ensure proper drainage.

· *Specific Action BLM-52: Maintain trails to include a compacted soil surface that is four feet wide.* Trail maintenance would include vegetation trimming on an as needed basis and repairs to the trail surface using either hand tools or mechanized trail equipment. Mechanized trail equipment would use a four to six foot wide blade to grade a given trail, but only four feet would be maintained for actual recreational use. Any scraped surfaces outside of the four foot trail would be seeded, strawed, and allowed to revegetate. BLM anticipates that any given trail

APPENDIX F

segment would be graded once a decade or less. Trails used one or more times annually for large mountain bike and other events would require more frequent repairs and grading.

· *Specific Action BLM-53: Close and rehabilitate (retire) redundant or unneeded road and trail systems within the NRMA.* While site-specific road and trail retirement sites are difficult to delineate at this time, it is reasonable to expect that the BLM will restore and stabilize up to 100 miles of former roads over the life of the HCP. This will result in the restoration of between 100 to 150 acres of degraded habitat. This estimate is based upon aerial surveys of the route network conducted within the *Road and Trail Resources Inventory (RATRI): Bureau of Land Management Lands, Former Fort Ord, Monterey County, California* (2002). This road and trail retirement estimate includes restoration that has already been conducted by the BLM since land transfer of 7,200 acres in 1996.

· *Specific Action BLM-54: Develop new routes when needed outside occupied habitat of federally listed species to the maximum extent possible.* New route development (including administrative access roads, fuelbreak roads, recreation trails) would encumber less than two percent of the land base. The BLM would not count against the two percent development restriction any reroutes of trails or roads that involved closing certain route segments and opening alternative route segments to lessen overall impacts to sensitive resources in a given area. Development of routes within BLM's Fort Ord Project Office development parcel would also not be counted against the two percent development restriction on NRMA habitat parcels.

Control and Manage Access

This management activity is directed at providing public access in habitat reserve areas to promote the enjoyment, appreciation and conservation of the species and habitats at Fort Ord while maintaining ecological functions and values. Access or certain types of access will be limited, restricted and/or prohibited in areas where habitat values or public safety could be compromised. BLM will assist adjacent Borderlands managers in their identification and siting of appropriate access control measures.

· *Specific Action BLM-55: Identify levels and locations of public and other access.* As part of the baseline studies, identify and map the principal access points into and destinations within the NRMA, the existing road and trail network, existing barriers such as fences, steep topography and other features that preclude or impede access, and locations or areas that are sensitive, dangerous or otherwise inadvisable for unauthorized public or other access. Describe and assess the current and anticipated levels and types of uses associated with these locations in the resource management plan. Update this access inventory and assessment at least every two years in concert with the assessment of *Wildland Urban Interface Areas* described above (see Specific Action NRMA-11 above).

· *Specific Action BLM-56: Limit motorized vehicles within the NRMA to roads that are managed for public access except for emergency use and required management and maintenance.* BLM will identify restricted access locations associated with the internal road network in the NRMA and secure against unauthorized entry by motorized vehicles with either a gate or a vehicle barrier. Measures such as fences, barriers, signage, and other means to prohibit unauthorized motor vehicle access from Borderlands parcels into the NRMA, and gates to provide emergency vehicle access if fences are used, are the responsibilities of the adjacent borderland manager and

APPENDIX F

not BLM (see Borderlands discussion). BLM, the Borderland parcel manager, and other appropriate agencies shall be provided keys to the gates.

· *Specific Action BLM-57: Use "Trail Closed" signs, brush piles, fencing or other measures to identify trails, fire roads or other access points that are officially closed to public.* Measures such as fences, barriers, signage, and other means to prohibit unauthorized pedestrian, bicycle, pet and other access from Borderlands parcels into the NRMA are the responsibility of the adjacent Borderland manager and not BLM (see Borderlands section in previous chapter).

· *Specific Action BLM-58: Maintain regular security patrols to help control pedestrian, pet, bicycle, and motorized vehicle trespass.* The adjacent borderland manager is the primary party responsible for controlling pedestrian, pet, bicycle and motorized vehicle trespass into the NRMA from adjacent Borderlands parcels.

· *Specific Action BLM-59: Install and maintain interpretive signs/displays that illustrate the importance of the NRMA and methods for maintaining its habitat values.* Interpretive signs installed by the Army will be maintained and updated/replaced as needed. New interpretive signs, displays, trailhead markers and other signs advising on activities such as trash removal, limiting ground disturbance, restraining pets, discouraging capture or harassment of wildlife, and prohibiting the collection of HCP plant species will be installed.

Comments from Diane K. Noda, Field Supervisor, United States Department of the Interior, Fish & Wildlife Service [March 9, 2007]

INTRODUCTION

We have reviewed the Draft Final Track 3 Impact Area Munitions Response Area Remedial Investigation / Feasibility Study for Former Fort Ord, California (Draft Final RI/FS); dated January 26, 2007. This document includes the Department of the Army's (Army's) revisions and responses to comments that we and other entities made on the Draft Track 3 RI/FS in Fall 2006. The Draft Final RI/FS is responsive to some of our comments; having reviewed it and discussed it with your staff we have a better understanding of the alternatives and your decision making process. We appreciate that the Army has a complex and difficult task in selecting an alternative that is protective of human health and the environment and also cost efficient.

The CERCLA RI/FS process is intended to provide a formal method to develop, evaluate, compare, and select a preferred remedial approach that will protect human health and the environment. A rigorous evaluation depends upon full and accurate identification and consideration of all of the effects on human health or the environment that each analyzed alternative presents. One of our primary concerns remains that the Track 3 feasibility study does not fully identify and discuss the environmental costs and benefits of each of the alternatives.

For example, it is still not clearly explained how the preferred alternative, versus the other alternatives, would influence the future condition and habitat management of the 6,560-acre impact area. The area addressed in the Draft Final RI/FS is a substantial and ecologically valuable part of the future habitat reserve system identified for Fort Ord. The preservation, restoration, and management of lands within the habitat reserve system is intended to mitigate the losses to federally and state listed species that will occur on former Fort Ord lands that are designated for development. The intended benefits to listed species depend not just on preserving the land, but on carrying out a set of restoration and land management actions.

As you know, we are currently reviewing the draft habitat conservation plan for former Fort Ord (HCP). This HCP would support the Service's issuance of a permit to allow incidental take of federally listed species on those lands designated for development. To meet our issuance criteria, the HCP must provide assurances that the conservation actions described in the HCP will be both funded and implemented. Therefore, we need to understand how the Army's preferred alternative in the Track 3 RI/FS may affect the implementation of the HCP-required habitat management activities and whether or not it will make them logistically or cost prohibitive from the viewpoint of a future land manager. We have the following comments on the Draft Final RI/FS, which are similar to comments 2, 3, and 4 in our November 1, 2006, comment letter on the Draft RI/FS, as those comments do not appear to have been fully addressed.

APPENDIX F

COMMENTS:

Comment 1: Given the influence your preferred alternative may have on the way in which the 6,560-acre Track 3 Impact Area is managed in the future, we believe the alternatives analysis or a supplementary analysis should fully disclose (a) how the costs of future land management under the alternatives would differ due to the level of remediation; (b) which of those costs the Army would be responsible for, as opposed to the future land recipient, (c) barriers to conducting habitat management activities, such as substantially increased costs or narrower implementation periods for prescribed burning, (d) concomitant environmental effects of conducting habitat management activities under Alternatives 3 or 4 (e.g., larger fuel breaks, increased use of fire retardants, increased reliance on herbicides rather than manual weed control). We value the Army's long experience at Fort Ord conducting habitat management activities on lands containing munitions and explosives of concern (MEC). By sharing your expertise in clearly reasoned analysis, you will assist us in moving forward with other agreements that rely on assurances of future habitat management (e.g., the HCP and issuance of incidental take permits).

Response 1: The Army acknowledges the USFWS's comment regarding the components of the Army's preferred alternative that would have an affect on the future management of the Impact Area MRA by BLM. Please see the army's Responses to BLM Comments above regarding how the costs of future land management under the alternatives would differ due to the level of remediation. The Final FS will be revised to clarify how each of the components noted in the comment will be addressed during implementation of the preferred alternative.

Regarding Comments 1 (a) through (e), the Army would be responsible for all costs identified in the FS as components of the remedial alternatives identified in Section 4 of the FS, and that are described in detail in the cost estimates presented in Appendix A of the FS. Costs for future land management under the alternatives would not differ significantly due to the level of remediation.

All of the alternatives were developed to be comprehensive, to address long-term protectiveness and to support the reuse of the area as a habitat reserve. The remedial alternatives include land use controls so that BLM's implementation of land management actions would not be burdened by the results of the clean-up. Remedial land use controls included in the alternatives include maintaining the perimeter fence and signs and law enforcement support; two full-time UXO-qualified personnel who would provide MEC recognition and safety training and construction monitoring, and would advise BLM in reuse planning, activity planning, responding to reports of incidental suspect munitions, and other UXO safety-related matters. In addition, Alternative 4 also includes helicopter support for select future BLM habitat management burns where warranted.

APPENDIX F

The Army believes that, by incorporating the remedial land use controls noted above, all future habitat management activities can be implemented safely, the implementations would not be cost prohibitive, and there are no barriers to conducting habitat management activities. Fuel breaks and use of fire retardants for BLM's future habitat management burns are not anticipated to be significantly different due to different "level" of remediation. The level of remediation would not change the burn window for the future BLM burns. Under Alternative 4, helicopter support would be available for select future BLM habitat management burns where warranted.

Although herbicide will likely be relied on for weed control to a greater degree than what is recommended in the draft HCP, as described in the FS other methods of weed control will also be available with the support of onsite UXO-qualified personnel. A digital map of remaining anomalies would be provided to BLM, which will be useful in making land management decisions. In addition, construction support that is included as part of all three alternatives would sufficiently address or support habitat restoration activities. By incorporating UXO safety support that would be provided as part of the remedy, BLM's implementation of land management actions would not be burdened by the results of the clean-up.

Comment 2: The response in the Draft Final RI/FS to our previous questions about costs for future habitat management under alternative 4 indicates (Appendix E of the subject document, page 57, Response 4) that a provision for long-term safety support personnel would be part of the remedy. Based on a telephone conversation between members of our staffs last month, we understand this includes 2 full-time safety support personnel and that the Army would be responsible for providing/funding these support personnel (since they are part of the remedy) for the future land manager for as long as they were needed (presumably, for as long as the subsurface MEC remained and earth disturbing activities, such as wildfire suppression or erosion control, could occur). If our understanding is correct, please clarify this in the document. We also request you provide the basis for determining that 2 full-time staff would adequately cover the increased planning, training, and construction/safety support associated with habitat management under Alternative 4.

Response 2: As noted in the comment the Draft Final FS included as a component of the preferred alternative (and as noted in the comment regarding the telephone conversation) that two full-time onsite UXO-qualified personnel would be available to provide long-term support during reuse of the property, and that the Army would be responsible for providing/funding these support personnel (since they are part of the remedy) for the future land manager for as long as they are needed (presumably, for as long as the subsurface MEC remained and earth disturbing activities, such as wildfire suppression or erosion control, could occur). Under CERCLA, the Army is the lead agency responsible for the implementation and maintenance of any selected remedy at the former Fort Ord. Although the

APPENDIX F

Army may transfer some of the remedy implementation responsibilities to another party, the Army will retain ultimate responsibility for remedy integrity. The Final FS will be revised to further clarify this component of the alternatives, and to provide additional detail on the basis for determining the level of effort of the personnel as adequate for proposed reuses.

Comment 3: Please indicate which Land Use Controls under Alternatives 3 and 4 would be the responsibility of the future land managing agency (Bureau of Land Management), following land transfer, and which would continue to be the responsibility of the Army. For instance, the response to the Department of Toxic Substance Control's Comment 12 (Appendix E, page 35) indicates that, following land transfer, the future land manager will be preparing a site security plan on which the agencies will have the opportunity to comment. The response further indicates that site security will be modified, as necessary, based on changes in the nearby human populations. Our interpretation of this is that the future land manager will be responsible for the costs and implementation of site security following land transfer and that site security requirements are likely to increase as the surrounding human population grows. Clarifying future responsibilities associated with acceptance of these lands will help us evaluate the potential for a land manager to be able to implement the activities identified in the HCP.

Response 3 The Final FS will be revised to further clarify which component of the alternatives would be the responsibility of the Army and BLM, and to provide additional detail on the basis for determining the level of efforts and costs. Under CERCLA, the Army is the lead agency responsible for the implementation and maintenance of any selected remedy at the former Fort Ord. Although the Army may transfer some of the remedy implementation responsibilities to another party, the Army will retain ultimate responsibility for remedy integrity.

Comment 4: We appreciate the clarification the Draft Final RI/FS provides in terms of the estimated acreage under Alternatives 3 and 4 that may contain significant amounts of metallic debris and, therefore, may require large scale excavation. Please provide further detail on the locations of these potential excavation areas, if possible (e.g., whether they occur under one or more wetlands or in upland maritime chaparral). With this information, we will be better able to assess the Army's conclusion that Alternative 3 would not be protective of the environment due to the level of excavation anticipated.

Response 4: Plate 5 of the Final RI/FS has been revised to show the requested information, and the text will be revised as appropriate to reference this information.

APPENDIX F

Additional Comments:

Another area which we believe needs further evaluation is the environmental contaminant effects of leaving munitions in the subsurface. The Track 3 RI/FS remedial alternatives are discussed and weighed from the perspective of a physical explosion risk to humans, but not from a chemical contamination standpoint. The Army states that chemical contamination is being addressed separately, under the Basewide Range Assessment and Ecological Risk Assessment process. However, each of the alternatives in the Track 3 feasibility study will affect the mass of contaminants or volume of hazardous waste the Army is proposing to leave in the subsurface, and thus eventually each alternate will have a different degree of effect on the environment and the ecological community as those munitions decay and become disturbed. The Basewide Range Assessment Process depends on soil sampling to detect the presence of hazardous chemicals, but it does not account for detection of chemicals contained in unexploded and undegraded ordinance. Therefore, by relying on the range assessment process, the environmental effects and associated future costs of leaving these munitions in the ground will not be adequately identified and discussed in the weighing of alternatives. We believe these effects and costs should be considered along with the other factors, such as the environmental benefits of limiting the area of habitat disturbance by removing less MEC, which is one of the reasons cited in support of selecting the preferred alternative.

Additionally, each of the more than 40 munition types identified in the Draft Final RI/FS, Section 3.5.3.1, has its own unique combination of physical structure and chemical content. Some attempt should be made to estimate the number and type of munitions the Army is proposing to leave in the subsurface under each of the alternatives. The eventual fate of these munitions should be discussed, including the mass of contaminants each contains, and the anticipated long-term environmental effects of those contaminants.

Response: The Draft Final RI/FS includes a summary of the status of the assessment of chemical risks to human health and the environment. The risks associated with chemical hazards to human health and the environment are being addressed as part of the Basewide Range Assessment and the Site 39 Feasibility Study Addendum, which are components of the Hazardous Toxic Waste (HTW) RI/FS program, separate from the Munitions Response RI/FS program. In the event that any evidence that ordnance found in the subsurface has degraded and leaked explosives compounds into the subsurface soils, these specific locations would be noted and evaluated to determine if additional soil sampling is warranted under the HTW program.

APPENDIX F

Comments from LeVonne Stone, Fort Ord Environmental Justice Network, Inc. P.O. Box 361, Marina, CA 939333 [February 19, 2007].

Please see attached hard copy, enclosed report submitted by Fort Ord Environmental Justice Network, Inc. for inclusion in the Administrative Records.

In addition, this report reflects additional comments from the community.

COMMENTS

Comment 1: Burning in highly populated areas, where munitions are involved should not be tolerated. The Monterey County Air District's report states that "burning the brush alone creates Dioxin, which we know to be a Cancer causing air toxin. Along with the fire starter, red Oak and Munitions, there are additional health risk to impacted residents.

Response 1: The results from air monitoring stations, located in populated areas surrounding a prescribed burn and subsequent wildfire that burned the brush from approximately 1,500 acres on the Fort Ord Impact Area in 2003, were analyzed by the Monterey Bay Unified Air Pollution Control District (MBUAPCD). Their review of the data determined that, "...dioxins, furans and several other pollutants initially of concern occurred at such insignificant levels in the resultant smoke that those compounds no longer warranted monitoring."

Subsequent prescribed burns have been and are planned to be smaller than the 2003 prescribed burn and managed in a manner that reduces the impact of smoke well below the levels experienced during the 2003 event.

The Army considers the impact of the continued presence of unexploded ordnance (UXO) on the surface of property adjacent to residential and municipal areas, and the possible transport of the UXO into those communities by trophy hunters or others, more problematic than the properly managed smoke from prescribed burning used to remove vegetation in order to locate and remove the UXO. This opinion is shared by a large number of community members who participate in the Army's environmental cleanup process and comment on related plans.

Comment 2: Any training for workers should include local impacted community members, who are being impacted by exposure to the smoke from the burns.

Response 2: The training provided by the Army to workers involved in the Fort Ord Base Realignment and Closure (BRAC) Prescribed Burn Program is for Munitions and Explosives of Concern (MEC) safety and recognition. That free training is offered to local community members and groups by the Fort Ord BRAC office as part of the community relations program. Interested community groups or

APPENDIX F

individuals may contact the community relations office at (831) 393-1284 or email Ms. Melissa Broadston at Melissa.broadston@monterey.army.mil to request this training.

Comment 3: Other alternatives should be used instead of burning. The public feels that this method is very unacceptable, especially since the temporary relocation plan was handled so unprofessionally. Poor residents have to give notice to their jobs and schools in advance, and not the day of the burn.

Response 3: The Army remains open to suggested alternatives to prescribed burning that accomplish the vegetation removal requirements within the habitat and safety restraints established by the Installation-Wide Multispecies Habitat Management Plan (HMP) and Department of Defense munitions safety standards.

Public acceptance of prescribed burning is a matter of record described in public meetings held on the subject and in regard to related plans for previous and proposed work on the former Fort Ord.

The temporary voluntary relocation program for the most recent BRAC cleanup prescribed burn in 2006 was managed by professionals for the US Army Corps of Engineers and Fort Ord BRAC. From 17 October through 19 October, Army and contracted staff took 1,489 telephone calls related to the event with instructions to make note of complaints by subject. Not a single call was recorded as a complaint about the relocation program. More than 28 local newspaper articles and TV stories were published about the preparation, conduct, and results of the event without a single mention of discontent with the related relocation program.

All local residents are subject to possible impacts from nearby prescribed burning. Those impacts are generally mild and can be addressed by taking simple, in place, precautions. The Army concurs with MBUAPCD that local residents take their recommended precautions to reduce the possible impacts of prescribed burning rather than accept the risk of accidents as well as the personal costs and difficulties involved in temporary relocation.

APPENDIX F

Comments on Draft Track 3 Impact Area Munitions Response Remedial Investigation/Feasibility Study Prepared by Environmental Stewardship Concepts, Richmond VA for Fort Ord Environmental Justice Network, Marina CA, February 19, 2007

Since comments dated October 31, 2006 to the draft version of the subject document were received by the Army from ESC and were addressed in the Response to Comments portion of the draft final version of the subject document published January 2007, it is assumed for the purpose of this response that the comments received from ESC dated February 19, 2007 although titled as comments to the draft version are applicable to the draft final version of the subject document.

These comments were prepared at the request of the Fort Ord Environmental Justice Network (FOEJN) to provide technical comment to the Army regarding the clean up of unexploded ordnance at the former base. FOEJN represents the affected community in the greater Fort Ord area in the clean up of contamination and ordnance related waste.

RECOMMENDATIONS

Comment 1: The Army should discontinue its use of prescribed burns as a method of vegetation clearance. Contrary to the claims in the report, any action that involved prescribed burns like those proposed will not gain public acceptance.

Response 1: Public acceptance of prescribed burning is a matter of record described in public meetings held on the subject and in regard to related plans for previous and proposed munitions response work on the former Fort Ord. The Army encourages the suggestion of alternatives to prescribed burning that provide an opportunity for workers to protect the public by safely removing unexploded ordnance from areas covered by protected habitat while meeting the requirements of responsible habitat management as described in the Fort Ord Installation-Wide Multispecies Habitat Management Plan (HMP).

Comment 2: All workers performing intrusive activities in the entire Fort Ord should be required to receive MEC (munitions and explosives of concern) recognition and safety training just as the workers in the Impact Area now receive.

Response 2: Munitions and Explosives of Concern (MEC) recognition and safety training is available to all property recipients of, and workers on, former Fort Ord property. The Army recommends such training for all workers performing intrusive activities on former Fort Ord property. The Army requires such training or an equivalent for all workers and visitors in restricted Munitions Response Sites (MRS). It is not within the Army's authority to require workers to accept training while operating on private or municipal property not under Army control, unless such a requirement is specifically identified as part of a selected cleanup remedy.

APPENDIX F

Comment 3: Munitions and Explosives of Concern still represent a significant risk in these areas.

Comment 3: The Army disagrees that the alternatives 2, 3, and 4 in the Draft Final Track 3 Impact Area Munitions Response Area Munitions Response Remedial Investigation/Feasibility Study (MR RI/FS) will result in a significant residual risk for a responsible property reuser. The removal MEC from the described domain of the future reuser will provide for safe, appropriate reuse of the property plus the precautions as described will be protective of the responsible reuser

DOCUMENT SUMMARY

Track 3 sites are those “areas where MEC (munitions and explosives of concern) is suspected or known to exist, but investigations are not yet complete or need to be initiated, or an area identified in the future.” These sites present a significant hazard to public health through possible exposure to unexploded ordnance. Untrained community members may be seriously injured or even killed if ordnance explodes. The Remedial Investigation and Feasibility Study (RI/FS) accomplishes two purposes. First, the Feasibility Study reviews of previous investigations and actions from which various alternatives for cleanup are identified and selected based on risk analysis and other criteria.

Using data primarily from MRS Ranges 43-48 where the prescribed burn/uncontrolled burn took place in 2003, the Army evaluated potential risks to individuals performing activities both on the ground surface and digging beneath the surface, involving significant penetration into the soil. Visual surface removals were determined to only reduce risks to individuals working on the surface to be “medium” while removals to depth reduced risks to these receptors’ risks to the lowest” designation. Individuals performing intrusive activities greater than one foot below the surface remained the “highest” designation, no matter the remedial action taken. Based on this information, the RI/FS recommends that a combination of surface removals and removals to depth (removing all identified items no matter their depth) to clean up UXO (unexploded ordnance) from within the impact area. The Army’s preferred method of vegetation clearance for these removal actions remains prescribed burning, which is not acceptable. This is a second draft of the document, where some changes have been made in response to comments from ESC and regulatory agencies such as the EPA.

GENERAL COMMENTS

General Comment 1: ESC notes and appreciates the changes made in response to our comments and those suggested by other agencies. Overall these adjustments have led to a more complete and easier to read document. However, a number of issues, particularly regarding prescribed burns have not been addressed adequately.

APPENDIX F

Response to General Comment 1: The Army appreciated the opportunity to respond to comments and concerns of the public concerning the Draft and Draft Final Track 3 Impact Area Munitions Response Area MR RI/FS.

General Comment 2: ESC's comments regarding worker MEC training were intended for basewide consideration and not just this document. Responses such as "Areas outside the Impact Area MRA are addressed under separate documents" miss the point and only make it more difficult for the community to offer significant input during the cleanup. This is a widespread problem at Fort Ord, pertaining to all areas of the base and all aspects of the cleanup. For example, to stay up to date on groundwater issues at the base, an individual must consult no less than three sets of documents. ESC is concerned that if comments can only be limited to the specific information contained in a report community involvement will suffer as a result. Comments based on information from a document pertaining to the entire cleanup should not be disregarded simply because of the document's limited scope.

Response to General Comment 2: The Army addresses comments received from community members in the most appropriate manner. No public comment received is disregarded. Public comments of a general nature to a document under review, or comments that address a subject not within the scope of the document, may be addressed within previously published material. In such cases referral of a commenter to previously published material that addresses a comment is intended to assist the commenter in obtaining the most appropriate response and additional information in the area that he/she has demonstrated an interest. Some public comments on subjects outside the area of the document being reviewed, or received after the closure of a published public comment period, may be responded to in separate correspondence. However, such comments are included in the Administrative Record and locatable by key word search so as to make that comment available to others with interests in that subject area. Responses to public comments and concerns directed to the Army that are not related to the environmental cleanup of the former Fort Ord may not be addressed directly. Such questions and concerns receive the best possible response available from the Army cleanup staff and/or may be referred to other agencies or authorities as appropriate.

The Army agrees that there is a considerable amount of published material available to the public addressing the many subject areas within the Fort Ord environmental cleanup. The Army maintains an administrative record staff and a searchable online database to assist public members interested in a specific or general subject area. The Army also produces fact sheets that provide condensed information on subjects of public interest to include references and points of contact for more information and comment. The Army holds frequent public workshops on general Fort Ord environmental cleanup topics to assist interested members of the public in understanding the technical complexities involved in

APPENDIX F

topics recommended by members of the public or areas of general public interest. Also, the US Environmental Protection Agency funds a Technical Assistance Grant (TAG) to assist public members in digesting technical environmental cleanup information.

General Comment 3: The response does not actually engage in any meaningful discussion on the topic of prescribed burns. ESC is aware of (and cited) the documents regarding the basis for the Army's continuing prescribed burns, and is more interested in how the Army intends on responding to the very specific points regarding smoke risks raised in ESC's previous comments. The Army continues to claim that these fires pose no risk to the public even though the ATSDR report this opinion was based on has been thoroughly discredited. No responses to the peer reviewed literature provided by ESC were included in the Army's reply, indicating that they refuse to engage in any sort of sustentative debate on the health risks from smoke. With this sort of non-response it raises the following question: what sort of information would sway the Army from its current position and make them see the reality of prescribed burns?

Response to General Comment 3: The Army does not contest the results of authoritative research in the area of risks associated with smoke. However, air monitoring conducted in coordination with and by the Monterey Bay Unified Air Pollution Control District confirms that smoke from prescribed burns conducted by the Army as part of the environmental cleanup of the former Fort Ord has been managed in a manner that is protective of public health.

The Army has invited authorities on the subject of smoke exposure to contribute to public meetings sponsored by the Army and to comment on proposed public information related to their area of expertise. The Army continues to assist members of the public and others in accessing authoritative research information on subjects related to the environmental cleanup of the former Fort Ord as part of the public involvement program and through links on the cleanup website.

It is the position of the Army that the conclusions and recommendations of the Health Consultation by the Agency for Toxic Substances and Disease Registry (ATSDR), February 3, 2005, addressing the impacts on local populations of a prescribed burn and subsequent wildfire involving more than 1,500 acres of native vegetation on the former Fort Ord, have not been discredited by authoritative literature.

It remains the position of the Army that the process developed for the conduct of prescribed burning on Fort Ord property in support of the removal of MEC, as described in the Draft Final Track 3 Impact Area Munitions Response Area MR RI/FS, is protective of public health due in part to the planned management of the resulting smoke in a manner so as to avoid significant impacts to residents of

APPENDIX F

surrounding communities and therefore the risks associated with prolonged exposure to significant concentrations of resulting smoke.

A review of the Administrative Record indicates that the Army is not in receipt of the “peer review literature” described as provided by ESC.

General Comment 4: The Army has refused to examine any plan such as the “crush and burn” option that may satisfy both the public’s wish to not be needlessly exposed to serious health risks and the desire to restore the chaparral to its natural state. To the public, the Army’s position appears to be that following through with predetermined plans is more important than the public’s safety. Understandably, local residents find this unacceptable. In order to start gaining the public’s trust on this issue, the Army needs to at a bare minimum acknowledge the serious risks that prescribed burns subject the public to.

Response to General Comment 4: The Army continues to consider the “crush and burn” technique of prescribed burning where the vegetation is crushed to dry out resulting in a lower flame height when later burned. However, this technique is not currently considered appropriate for vegetation removal requirements as described in the Draft Final Track 3 Impact Area Munitions Response Area MR RI/FS due to munitions safety issues involved in the crushing of vegetation in an impact area where unexploded ordnance is suspected to exist on the surface. Additionally, prescribed burn management consultants have advised the Army that this technique may result in a fuel disposition that inhibits the vertical lift of smoke otherwise created by burning the vertical stands of vegetation and thus may degrade fire management designed to reduce smoke impacts.

The Army does not consider providing for the safety of workers during the removal of unexploded ordnance “needless.” The Draft Final Track 3 Impact Area Munitions Response Area MR RI/FS is not a predetermined plan but a description of the methods and results of an investigation of an area known to contain hazardous munitions, as well as description and analysis of several alternatives to address that hazard.

The Army acknowledges the risks associated with prescribed burning on the former Fort Ord. The Army also acknowledges that appropriate fire management and contingency planning for a prescribed burn can reduce the risks to surrounding communities. In the case of prescribed burning within the impact area as described in the Draft Final Track 3 Impact Area Munitions Response Area MR RI/FS, contingency plans include the staging of contingency fire fighting resources and the installation of subsequent containment lines and fuel breaks prior to the burn, as well as fire management techniques to minimize adverse impacts and safeguard the health and property of local residents. The Army reviews all viable vegetation removal alternatives to include prescribed burning during MEC removal action planning to ensure that possible risks to local

APPENDIX F

community safety or property are addressed. The Army will take no cleanup action that is determined to present a significant risk to public health or property.

General Comment 5: ESC and FOEJN have not been the only stakeholders concerned about prescribed burns. The EPA has expressed interest in monitoring PM_{2.5}, which has a significantly lower threshold to cause adverse effects. To date, the Army has refused to monitor this major constituent of smoke. Regulatory agencies have also expressed concern that costs of prescribed burns may not be accurately reflected in the RI/FS, based on the use of MRS Ranges 43-48 as a baseline. ESC agrees with EPA that costs should be detailed as accurately as possible in the document, and that should mean including the costs of manual clearance of vegetation after burns in those estimates. Particularly since in its response to ESC's comments the Army acknowledged that such clearance would be required regardless of the success of the burn.

Response to General Comment 5: The Army has not received a request from a federal, state, or regional agency to monitor PM 2.5 during prescribed burning of vegetation associated with Track 3. The Army works with the Monterey Bay Unified Air Pollution Control District to identify air monitor requirements that are consistent with requirements identified for those conducting prescribed burning within the District.

The costs for implementation of the proposed alternatives are reflected in as much detail as possible in the Draft Final Track 3 Impact Area Munitions Response Area MR RI/FS. The cost estimates for vegetation cutting after a prescribed burn are included in the cost of MEC removal. The need for vegetation cutting after a prescribed burn is the result of technological limitations in meeting a proposed digital map of subsurface anomalies in the cleanup area. The post-burn vegetation cutting is part of the MEC removal action identified in alternatives 2, 3, and 4 and not part of or a direct result of a prescribed burn.

General Comment 6: The above comments should not be construed insisting that all vegetation in these areas be manually cleared. As noted above, we are very interested in exploring other options such as the "crush and burn" method that could both aid in the reestablishment of the chaparral and remove obstructions from the surface that would interfere with the removal of MEC. For several years ESC and FOEJN have attempted to open up a meaningful discussion on this issue of only burning the vegetation in the chaparral. The Army has yet to respond in a meaningful way to FOEJN and ESC requests to discuss the matter. As stated in numerous other comments, the Community Involvement Workshop (CIW) format significantly limits public input, and cannot compare with meeting members of the community regularly on a one on one basis. This and the issue of prescribed burns have been some of the FOEJN's primary motives in pressing the Army for greater community involvement.

APPENDIX F

Response to General Comment 6: The Army continues to consider the “crush and burn” technique of prescribed burning as a possible alternative. The Army does not consider this technique appropriate for vegetation removal requirements as described in the Draft Final Track 3 Impact Area Munitions Response Area MR RI/FS due to munitions safety issues involved in the crushing of vegetation in an impact area where unexploded ordnance is suspected to exist on the surface. The application of the “crush and burn” technique of prescribed burning will not allow the targeting of specific types of vegetation and preclude the burning of others in a burn area. The technique is a modification of the disposition of the fuel from vertical to horizontal for the purpose of limiting the flame height and reducing fuel moisture so as to expand a burn prescription window. The limiting of flame height during a prescribed burn increase the opportunities for conducting a prescribed burn, but may also increase the impact of smoke from such a burn on local residents by limiting the heat generated in the burn area and therefore the height of smoke column prior to atmospheric dissipation.

The Army continuously surveys community members and stakeholders as well as community representatives and members of special interest groups to assess the performance of the Fort Ord Environmental Cleanup community relations program. The results, published in the Fort Ord community relations plan, continues to indicate that a majority of participants consider the current type, amount, and format of cleanup information exchange “about right” and many positive comments are made by members of the public regarding the Army’s efforts to engage the community in the cleanup process. Nevertheless, the Army continues to seek avenues to improve community relations. The format for community involvement in the Fort Ord environmental cleanup process was developed, and is maintained, in accordance with US EPA guidance for Superfund cleanups.