



Department of Toxic Substances Control



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MCAS EL TORO
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May 2, 2001

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DRAFT WORK PLAN FOR ORDNANCE AND EXPLOSIVES (OE) RANGE
EVALUATION AND UNEXPLODED ORDNANCE SURFACE SWEEP WORK
PACKAGE, INSTALLATION RESTORATION PROGRAM (IRP) SITE 1, EXPLOSIVE
ORDNANCE DISPOSAL (EOD) RANGE, MARINE CORPS AIR STATION (MCAS)
EL TORO

Dear Mr. Gould:

The Department of Toxic Substances Control (DTSC) reviewed the following documents:

- *Draft Work Plan, Ordnance and Explosive Range Evaluation, IRP Site 1, Explosive Ordnance Disposal Range, Marine Corps Air Station, El Toro, California (Earth Tech, Inc., March 2001) (draft Work Plan).*
- *Unexploded Ordnance (UXO) Surface Sweep Work Package, EOD Range (Site #1), Marine Corps Air Station (MCAS) El Toro, California (Roy F. Weston, Inc., April 4, 2001) (Work Package).*

The draft Work Plan details the objectives and procedures to conduct an OE Range Evaluation at Site 1. The Work Package describes the objective and procedures to accomplish an UXO surface sweep of Site 1 prior to initiation of the radiological survey.

After review of the draft Work Plan, DTSC has the following comments:

General Comment

In the Work Plan, the Department of the Navy (DON) proposes that if an unexploded ordnance (UXO) item is determined to be unsafe to move, an emergency removal

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action is required. The proposed emergency removal action for UXO consists of blow(ing) it in place (BIP).

In determining that unstable UXO requires an emergency removal, the DON has not evaluated other alternatives to BIP. Additionally, the DON proposes to provide a public comment period after initiation of emergency removal actions. DTSC believes that other alternatives to BIP should be evaluated and selection of an alternative should be properly documented. Further, an opportunity for public participation, including a public comment period of at least 30 days and responses to comments, should be provided prior to initiation of OE clearance activities in which unstable UXO may be encountered at Site 1.

The United States Environmental Protection Agency (U.S. EPA) categorizes removal actions in three ways, emergency, time-critical, and non-time-critical based on the type of situation, the urgency and threat of the release or potential release, and the subsequent time frame in which the action must be initiated. Emergency removals are appropriate when there is a release that requires a response within hours. DTSC understands that Site 1 is secure and potential public access is restricted. Additionally, any UXO subject to the proposed emergency removal action has remained on site without incident at least since closure of the base on July 2, 1999. As a result, DTSC does not agree with the determination that an emergency removal action is required.

Additionally, DTSC classifies OE/UXO at closed, transferred or transferring ranges as a hazardous waste. Pursuant to California Health and Safety Code (HSC) Section 25123.5, the definition of treatment includes any method, technique, or process which removes or reduces the harmful properties or characteristics of a waste. As a result, detonation, which is the method used to remove the reactive characteristic of OE/UXO, is considered to be treatment. As such, treatment of a hazardous waste is an activity regulated by DTSC pursuant to HSC, Chapter 6.5, Section 25201.

However, pursuant to HSC, Chapter 6.8, Section 25358.9(a), DTSC "may exclude any portion of a response action conducted entirely onsite from the hazardous waste facility permit requirements of Section 25201 if both of the following apply: (1) The removal or remedial action is carried out pursuant to a removal action work plan or a remedial action plan prepared pursuant to Section 25356.1. (2) The removal action work plan or the remedial action plan requires that the response action complies with all laws, rules, regulations, standards, and requirements, criteria, or limitations applicable to the construction, operation, and closure of the type of facility at the hazardous substance release site and with any other condition imposed by [DTSC] as necessary to protect public health and the environment."

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Since MCAS El Toro is included on the National Priorities List (NPL) and the United States Environmental Protection Agency (EPA) is identified as the lead regulatory agency, a Federal document that is substantively equivalent to a removal action work plan or remedial action plan will be acceptable.

The Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) 121(e) and HSC, Division 20, Chapter 6.8, Section 25358.9 provides for exemption from permits. However, substantive requirements applicable to treatment must be adequately addressed as applicable, or relevant and appropriate requirements (ARARs). As a result, in preparation of a remedial action plan, removal action work plan or equivalent document, Title 22, California Code of Regulations, Section 66264.600 et seq. under Article 16, Miscellaneous Units are ARARs for the treatment of OE/UXO.

Further, OE cleanup at the former Fort Ord military reservation was characterized as a remedial action. See Monterey Bay Unified Air Pollution Control District versus the United States (US) Department of the Army and US Department of Defense, No. C-99-20485-RMW (US District Court for the Northern District of California, March 13, 2001). Please explain why the OE cleanup at Site 1 should not be characterized as a remedial action. Additionally, please provide justification for selecting the type of response action (e.g. time-critical removal action, non-time-critical removal action or remedial action) that the DON would prefer to use to address potential unstable UXO items at Site 1.

Specific Comments

1. Section 1, Introduction: The fifth paragraph states, "A range identification and a preliminary range assessment was conducted by the U.S. Army Corps of Engineers (USACOE) for MCAS El Toro, including Site 1 (USACOE 1998)."

Please include a brief summary of the objectives and findings of the range identification and preliminary range assessment conducted by USACOE in Section 1.3, MCAS El Toro - Description and Background. Additionally, please provide a copy of this document to DTSC for reference.

2. Section 1.3, MCAS El Toro - Description and Background: On July 26, 2000, DTSC was provided with a copy of a letter regarding "Close-Out Inspection of MCAS El Toro, CA (Phase I)," dated May 3, 1999. The letter was sent by the Commander, Naval Ordnance Center to the Commander, Marine Corps Air Bases West. The letter stated that Phase I of close-out inspection was

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conducted to inspect potential explosion sites on February 24, 1999. Phase II was to be conducted after the squadron has permanently detached from the MCAS.

Since MCAS El Toro was closed on July 2, 1999, please provide information regarding Phase II of the close-out inspection that was to be conducted. For clarification, please include the close-out inspection information in the context of the background for Site 1 and potential explosion sites. The background information for Site 1 should include a comprehensive summary of the history of Site 1 and particularly activities related to ordnance and explosives.

3. Section 2.1, Location: The second paragraph states, "A bermed retention pond is present in the northern portion of the site."

Please show the location of the retention pond on Figures 2-1 and 3-1 for reference.

4. Section 2.2., EOD Activities: This section briefly describes both military and law enforcement activities conducted at the EOD Range.

The description of the ordnance reportedly used at the range is not sufficient. Please provide a more specific list of the military ordnance with the smallest ordnance described. Additionally, please provide a more detailed description of EOD operations involving ordnance.

Further, the description of the civilian and commercial explosives detonated by law enforcement agencies is not sufficient. Please provide a more specific list of the explosives and the associated operations. In response to a request for information from DTSC, the Federal Bureau of Investigation (FBI) forwarded information regarding historical law enforcement activities conducted at the EOD Range. DTSC can provide copies of this information to the DON upon request.

5. Section 3, Work Plan Approach: Please include an estimated schedule of activities.
6. Section 3.2.2, Project Decisions: The principal study decision is identified as, "Deciding whether the 'explosives safety risk' due to the presence of OE requires response actions that would be consistent with anticipated reuse."

Please provide information regarding the proposed future land use of Site 1. Additionally, please verify that the degree of OE cleanup consistent with the future land use and describe how will future access to the site be controlled.

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7. Section 3.2.5, Decision Rules: Decision Rule Number 1 describes the strategies for conducting surface and geophysical surveys relative to several boundaries such as inside perimeter, perimeter fence, brush line, metal fence and site boundary.

It is difficult to determine which boundaries and associated areas are referenced. For clarification, please clearly identify all of the boundaries on Figure 3-1, Investigation Approach, so that the reader will understand which areas are referenced.

8. Section 3.2.5, Decision Rules: Decision Rule Number 1.b. states, "If no OE or OE scrap are discovered during the initial survey, then a subsurface geophysical survey will be conducted along a 30-foot wide transect inside the perimeter fence, to verify that kick-out items do not lay buried at or near the surface."

Please clarify if the initial survey refers to the surface survey of the inside perimeter of Site 1 described in Decision Rule Number 1. Additionally, please clarify that the criteria, "If **NO** OE or OE scrap are discovered. . ." is correct. It appears that the criteria should state, "If OE or OE scrap are discovered . . ."

9. Section 3.2.5, Decision Rules: Decision Rule Number 2 describes the steps to evaluate if an OE item is a UXO.

Please provide detail regarding the steps to determine if an OE item is a UXO and if the UXO is unsafe to move.

10. Section 3.2.5, Decision Rules: Decision Rule Number 3 states, ". . . explosive safety risk tool (Appendix G) . . ."

Information regarding the explosive safety risk tool is included in Appendix H. Please revise the reference accordingly.

11. Section 3.7.1, Sampling Within a Sector: The third paragraph states, "The assumed target density (sensitivity or resolution desired for the sampling results) is assigned based on anticipated reuse. A target density of 0.5 per acre (1 UXO per 2 acres) was used to calculate the size of the area to be sampled to achieve a 90 percent confidence level in the conclusion."

For clarification, please clearly state the anticipated reuse. Please clarify how the anticipated reuse corresponds to the target density.

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12. Section 3.2.7.2, Sampling Anomalies Within a Grid/Transect: The second paragraph in this section states, "The buffer zone transects and the perimeter geophysical survey along the site boundary will be sampled 100 percent for geophysical anomalies reported greater than 50 mV [millivolts]."

Please clarify that both the inside and outside perimeter geophysical surveys along the site boundary will be sampled. Additionally, please clarify what 50 mV corresponds to and provide an explanation for using 50 mV as a minimum limit.

13. Section 4.3.4, Chemical Warfare Material: This section states, "The archives search report (ASR), Range Identification and Preliminary Range Assessment and discussion with the Navy have indicated that the identified fieldwork areas should not contain chemical warfare material (CWM)."

Please clarify the basis for the statement "should not contain CWM." For example, if CWM was not used at Site 1, please state as such. Also, please include procedures for identifying CWM and how these materials will be handled and disposed.

14. Figure 4-2, Process Flowchart: This figure depicts the process for addressing a surface anomaly. Please include the process for handling and disposing of chemical warfare material, if found.

15. Section 4.4.2.3, Equipment: The first paragraph states, "Only one geophysical system will be used, a Geonics EM61 High Sensitivity Metal Detector."

Please provide more information in the text to support the use of only the Geonics EM61 for the geophysical surveys. For example, why will the Geonics EM61 be used rather than the Geometrics G858? Also, please provide information on methods for reducing background noise associated with geophysical surveys.

16. Section 4.4.3.7, UXO Handling, Demolition, and Notifications:

Refer to the General Comment.

Additionally, please provide a justification for not using a detonation chamber for demolition/detonation of UXO items. The justification should include an environmental analysis of potential groundwater, soil, air and human health impacts.

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17. Section 4.4.3.10, Onsite OE Transportation and Storage: Item number 10 states, "OE/UXO storage on site is not planned or anticipated."

According to Section 4.4.3.8, Removal and Handling of OE/UXO (Safe to Move), "OE/UXO that is not considered on immediate threat to the safety of site workers (or public) will be moved to an onsite consolidation location in accordance with Section 4.4.3.10 and Figure 4-2." The work plan does not address the ultimate disposition of the explosively contaminated OE/UXO material to be consolidated on site. Please include this information in the text. Additionally, OE/UXO generated from evaluation activities is a hazardous waste. Please provide the information regarding the anticipated storage time, storage location (bunker or magazine), and associated procedures for consolidation and storage of OE/UXO in a manner that is protective of human health and the environment.

Additionally, the description of the procedures for demolition/detonation for UXO items that can be safely moved to a consolidation location on site needs to include the size of shot (pounds net explosive weight) and number of shots per day.

18. Section 5, Quality Control Plan: "Blind seeding" techniques should be included as part of the geophysical quality assurance.
19. Section 6.2, Work Clothing and Field Sanitation: Item number 4 states, "Hard hats will not be worn during the excavation and demolition of UXO items."

Please clarify, in the text, why hard hats will not be worn during excavation and demolition of UXO items in the text.

20. Appendix A, Table A-1, Geophysical Equipment Test Plot Lay-Out: Due to the limited description of ordnance reportedly used at the range provided in Section 2.2, the test plot layout described in Table A-1 may not include the smallest ordnance that could be encountered at the range. As a result, this test plot may not be sufficient to determine the detection efficiency of the instrumentation used for ordnance sweeps.

Please verify inclusion of the smallest ordnance that could be encountered at the range and modify the test plot accordingly.

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21. Appendix C, Hazards of Electromagnetic Radiation to Ordnance: This appendix provides formulas for calculating safe separation distance for electromagnetic radiation devices.

Please cite the reference for these formulas.

22. Appendix D, Section 6.1, General Requirements: Item number 2 states, "OE or bulk explosives to be destroyed by detonation should be detonated in a pit not less than three feet deep and covered with earth, which protrudes not less than two feet above existing ground level. The components should be placed on their sides or in a position to expose the largest area to the influence of the demolition material."

Please clarify if this standard operating procedure is intended to address "blow in place" of UXO that is unsafe to move. If this is the intended procedure, please clarify how the UXO that is unsafe to move will be placed in a pit for demolition.

After review of the Work Package, DTSC has the following comment:

1. Since the Work Package is supplements the draft Work Plan, please ensure that applicable comments on the draft Work Plan are addressed in the Work Package.

Please contact me at (714) 484-5395 if you have any questions.

Sincerely,



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