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MARE ISLAND
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Department of Toxic Substances Control

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Agency Secretary
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Arnold Schwarzenegger
Governor

May 24, 2005

Mr. Jerry Dunaway
BRAC Program Management Office West
1230 Columbia Street, Suite 1100
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Dear Mr. Dunaway:

FORMER DEFENSE REUTILIZATION AND MARKETING OFFICE SITE,
ENGINEERING EVALUATION/COST ANALYSIS /INTERIM REMOVAL ACTION PLAN
AND REMOVAL ACTION PLAN, FORMER MARE ISLAND SHIPYARD,
SOLANO COUNTY

Thank you for providing the Department of Toxic Substances Control (DTSC) with the *Draft Final Non-Time-Critical Removal Action for the Fenced Scrapyard Area of the Defense Reutilization and Marketing (DRMO) Site, Engineering Evaluation/Cost Analysis (EE/CA)/Interim Removal Action Plan (IRAP) and the Removal Action Plan (Work Plan)* dated April 22, 2005 for our review and comment. The EE/CA/IRAP and the Work Plan are well written and address all of our comments except for the comments below. DTSC will concur and support the Navy with the public notice/public comment period of the above documents once the Navy revises the above document to include the requested changes.

Comments to the Draft final EE/CA/IRAP:

1. **DTSC original comment No. 19:** Page 3-11, section 3.4.4: A clean bottom should be defined by a 100% geophysical survey and investigation of all anomalies. This clean bottom survey should be conducted when the excavation has reached a depth, or below the depth that is considered to be the top of the original soil or soil that was placed prior to the time period with a history that may have included the handling of ordnance. According to the CSM, the soil at this depth, when exposed by this removal action, should be visually free from debris. Excavation should continue at least to this depth which, according to the CSM, should be relatively shallow and have a visually distinctive soil surface. This RAWP should also include or be followed by a QA/QC Plan for the MEC

2005 MAY 27 P 1:43
BRAC OFFICE

component of this removal action. This QA/QC Plan should be approved prior to the start of the removal action.

Navy response to comment: Comment noted. Section 3.4.4 will be modified to include additional details on the technical approach to bottom surveying and anomaly investigation of grids. The process will include procedures for intrusive digs of individual anomalies if the density is low. Alternatively, if the anomaly density is high, additional excavation and mechanical screening will be conducted to expose a new bottom surface of the particular grid. Additional excavations will also be noted on the grid worksheets. Any additional metallic anomalies excavation and screening will not extend beyond three feet below ground surface, because MEC items are not expected to be present at depths greater than 2 feet based on history of site operation (never used for ordnance operation), as well as history of in-filling of the site (most of it was completed prior to the Second World War).

Section 6.18, currently titled "Quality Control", will be expanded to become the QC Plan for the geophysical survey. The section will detail the applicable definable features of work; inspection requirements, grid QC including pass/fail criteria, procedures for handling an anomaly similar to a seeded item in the Instrument Verification Prove-out, and procedures for re-investigation of grids if there is a QC grid failure. The section will also detail the QC aspects of the digital geophysical mapping (DGM) including QC of DGM data and deliverables, comparison of reacquisition results with initial survey results, and comparison of intrusive investigation results with initial survey and reacquisition results.

The QC plan in Section 6.18 will be all inclusive with regard to the geophysical survey and DGM systems. The programmatic portions of the QC process (such as the three phases of control, reporting, corrective action procedures, etc.) will be referenced to the Construction Quality Plan (CQP) in Volume II of the RAWP. These sections of the CQP will be modified as necessary for consistency.

Chapter 7 of the Construction Quality Plan is for construction processes and tasks only, and does not address the QC issues involved in the MEC-related components of the removal action.

DTSC comment to Navy response: DTSC requested that the bottom of the excavation should be free of all anomalies after the geophysical survey is completed. However; the response above states "any additional metallic anomalies excavation and screening will not extend beyond three feet below

ground surface, because MEC items are not expected to be present at depths greater than 2 feet based on history of site operation (never used for ordnance operation), as well as history of in-filling of the site (most of it was completed prior to the Second World War)." The work plan (Section 6.18.1.2, page 6-9, Removal Action Plan) states that removal of anomalies will not exceed 3 feet below ground surface (bgs). However, the text on page 6-18 (8th bullet) states that "soil removal for magnetic anomalies will stop at 3 ft bgs unless an anomaly has the signature of a MEC item. Please clarify if anomalies will be investigated below 3 feet bgs. DTSC recommends that all anomalies (as stated in our original comment) should be investigated and resolved if detected below the 3 foot line. Additionally, all anomalies detected by magnetometers or by geophysical instruments should be resolved intrusively (digs) without relying on the signature (discrimination capability) of an item as this technology is shown to be minimal at best at discriminating MEC or MPPEH items.

The response to comments provides an adequate response to the Quality Control (QC) measures to be taken during the removal action. However, no discussion or a response is provided whether a Quality Assurance (QA) program will be in place. DTSC recommends that a government or third party QA program be established, described in the Removal Action Plan and implemented during the removal action. DTSC can not support the removal action with out an approved QA plan.

Comments to the Draft Final Work Plan:

1. Section 2.3.2.2, Excavation, Screening, and Soil Sampling Analysis, 4th bullet. How is "a few anomalies" defined? If additional MEC or anomalies are found at the bottom of the excavation, intrusive investigation will be required until no additional MEC or MPPEH is found.
2. Section 2.3.2.2, Excavation, Screening, and Soil Sampling Analysis, 5th bullet. Please clarify the basis for not using a Controlled Detonation Chamber (CDC) for quantity of less than 1000 pounds in gross weight of ordnance explosives.

Mr. Jerry Dunaway
May 24, 2005
Page 4

If you have any questions regarding this letter, please feel free to call me at (916) 255-3610 or via email at rghazi@dtsc.ca.gov.

Sincerely,



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