



## Tetra Tech EM Inc.

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February 25, 2000

Ms. Mary Rose Cassa, RG  
Remedial Project Manager  
Department of Toxic Substances Control  
Region 2  
700 Heinz Avenue Suite 200  
Berkeley, California 94710-2721

**Subject: Transmittal of the Response to Comments on the Draft Final Feasibility Study for the Marsh Crust and Groundwater at the Fleet and Industrial Supply Center, Oakland Alameda Facility/Alameda Annex Site and Feasibility Study for the Marsh Crust and Former Subtidal Area at Alameda Point, Alameda, California**

Dear Ms Cassa:

On behalf of the U.S. Navy, Tetra Tech EM Inc. is forwarding one copy of the above referenced response to comments. If you have any questions regarding the responses, please call Lou Ocampo, remedial project manager, Naval Facilities Engineering Command Southwest Division (EFDSW) at (619) 532-0969 or me at (916) 853-4512.

Sincerely,

A handwritten signature in black ink that reads "Mark R. Reisig".

Mark R. Reisig  
Project Manager

Copy to w/ enclosure:

Mr. Lou Ocampo, EFDSW (3 copies)  
Mr. Dick Hegarty, EFDSW  
Ms. Diane Silva, EFDSW, Information Repository (3 copies)  
Mr. Brad Job, California Regional Water Quality Control Board  
Mr. Philip Ramsey, U.S. Environmental Protection Agency  
Mr. Larry Setto, Alameda County Department of Environmental Health  
Mr. Mike Quillin, ERM West, Inc.  
Mr. Peter Russell, Russell Resources, Inc.  
Mr. James Adams, Catellus Development Corporation  
Mr. Ken Hansen, Restoration Advisory Board Community Co-chair  
Mr. Jeff Bond, City of Alameda  
Mr. Steve Schwarzbach, U.S. Fish and Wildlife Service  
Ms. Laurie Sullivan, National Oceanic Atmospheric Administration  
Mr. Julian Elliot, Bay Area Air Quality Management District  
Ms. Susan Ellis, California Department of Fish and Game  
Mr. Dan Shafer, Tetra Tech EM Inc.  
File, Tetra Tech EM Inc.

## RESPONSE TO COMMENTS

### DRAFT FINAL FEASIBILITY STUDY FOR THE MARSH CRUST AND GROUNDWATER AT THE FLEET AND INDUSTRIAL SUPPLY CENTER OAKLAND ALAMEDA FACILITY/ALAMEDA ANNEX AND FEASIBILITY STUDY FOR THE MARSH CRUST AND FORMER SUBTIDAL AREA AT ALAMEDA POINT, ALAMEDA, CALIFORNIA

On January 6, 2000, the Navy submitted the "Draft Final Feasibility Study For The Marsh Crust And Groundwater At The Fleet and Industrial Supply Center Oakland Alameda Facility/Alameda Annex And Feasibility Study For The Marsh Crust And Former Subtidal Area At Alameda Point, Alameda, California" (FS). Written comments on the FS were submitted to the Navy on February 7 by the US Environmental Protection Agency (EPA), and by the California Environmental Protection Agency, Department of Toxic Substances Control (DTSC). These comments are reproduced in bold type below, with the Navy's proposed response immediately following each comment.

#### U.S. EPA COMMENTS:

##### General Comments:

1. **U.S. EPA disagrees with language in the executive summary that there is no unacceptable risk from Marsh Crust (e.g. p. ES-3). In addition, this language is inconsistent with statements in the document that the no action alternative is not protective. The Navy needs to consistently explain that the reason this FS is being prepared is that there is a potential future risk if, as a result of construction activities, soil is excavated to the depth of the Marsh Crust/Subtidal Area and disposed of at the surface. For example, "Although there is currently no complete exposure pathway to the Marsh Crust contamination, there is the possibility of unacceptable risk if the soil were brought to the surface, where it could remain as a source of exposure and could pose an unacceptable risk to human health and the environment." Similarly with the groundwater, " Although there is currently no complete exposure pathway to the groundwater contamination, there is the possibility of unacceptable risk if there were accidental ingestion by humans, or ingestion resulting from well construction inconsistent with current well construction regulations."**

#### Response

The text will be changed to consistently use the proposed language.

2. **In several sections of the Marsh Crust FS, the Navy uses the term "acceptable risk range" (e.g., pp. ES-3, 1-18, 1-19, 1-20.). U.S. EPA considers an excess cancer risk level of  $10^{-6}$  as the point of departure for considering when to implement remedial measures at a site. Cancer risks above a risk level of  $10^{-4}$  generally require remediation. The range between  $10^{-6}$  and  $10^{-4}$  is generally referred to as the "risk management range" and sites having cancer risks which fall into this range may, or may not require remediation, based upon the**

nature and extent of contamination, potential exposure, and other site-specific factors. For noncarcinogens, the point of departure corresponds to a hazard index (HI) of 1. U.S. EPA requests that the phrase "acceptable risk range" be replaced with "risk management range".

**Response**

The term "acceptable risk range" or similar terms used in the FS will be replaced with the term "risk management range".

**Specific Comments:**

1. **Executive Summary, ES-5:** Text indicating a HHRA was completed as part of the Annex RI states, "[t]he HHRA concluded that groundwater does not present an excess lifetime cancer risk greater than 1.0E-06..." Executive Summary text should accurately summarize risks that have been assessed as part of the Baseline HHRA and reference the Final HHRA dated January 26, 2000. The Final Baseline HHRA indicates an excess cancer risk of 6.0E-5 was calculated for carwash worker scenario (see Table 12 for Alameda Facility/Alameda Annex SMWU-1).

**Response**

The text will be updated to reflect that an excess cancer risk of 6.0E-5 was calculated for carwash worker scenario, and will reference the final Human Health Risk Assessment of January 26, 2000 by Newfields. The document will be referred to as an addendum to the final Alameda Facility/Alameda Annex RI.

**2. Chapter 1, Introduction and Site Characterization:**

- A. **Same comments as above regarding the term "acceptable risk range" (see e.g. p. 1-18, 1-19, 1-20.)**

**Response**

The term "acceptable risk range" or similar terms used in the FS will be replaced with the term "risk management range".

- B. **Page 1-2 first paragraph, "principals" should be "principles." (Same thing p. 1-3 par. 2.)**

**Response**

The correct word will be inserted.

- C. **On page 1-16, text references a July 1999 Groundwater Beneficial Use Determination Report. U.S. EPA possesses a Final Groundwater Beneficial Use Determination Report, dated October 29, 1999.**

**Response**

The text will be updated to reference the Final Groundwater Beneficial Use Determination Report of October 29, 1999.

- D. **Page 1-18, Sec. 1.5.1 first paragraph, after word "depth" add "unless soil is brought to the surface during construction activity."**

**Response**

The phrase will be added.

**3. Chapter 2 -- Remedial Alternatives:**

- A. **Page 2-1: The FS continues to assert that "no unacceptable risks were identified." This should be changed to a statement such as discussed above that the purpose of the FS is to deal with the possibility of a release if soils were brought to the surface.**

**Response**

The text will be changed to include the same statement as that suggested in general comment 1.

- B. **Considering the streamlined nature of this FS, the anticipation that the selected remedy will be institutional controls, and the fact that U.S. EPA does not consider the active remediation alternatives to be a viable alternative, U.S. EPA has not reviewed action-specific ARARs that would apply to the active remedies (nos. 3 and 4). In addition, because the FS indicates that there is no ecological risk, we have not analyzed whether other location-specific ARARs such as the Endangered Species Act would apply.**

**Response**

No response required.

- C. **Page 2-8, Sec. 2.5.1.2. Description of alternative 2 (institutional controls) for Marsh Crust: The FS (and certainly the ROD) should include a more complete description of the deed restriction. It should describe the specific activities which would be restricted or the specific conduct which the deed restriction would require.**

## Response

A summary of the proposed Covenant to be signed by the State of California will be provided in the text.

- D. Section 2.5.1.2: The IC remedy proposed in this FS does not include any retention by the Navy of the ability to enforce the land-use covenant. U.S. EPA generally recommends that when federal property is transferred and contamination remains in place, that the United States (in this case, the Navy) retain an interest in enforcing institutional controls. Therefore, with regard to the Marsh Crust land use covenant, U.S. EPA recommends that the Navy consider retaining an interest and retaining the ability to enforce the covenant. As an alternative, the Navy should consider more explicitly conditioning the transfer of any property underlain by Marsh Crust on having an executed agreement between DTSC and the City to effect the land use covenant. In the ROD, the Navy will need to spell out in much more detail how and when the covenant is being established, and what assurances the United States has that the covenant will in fact be established.**

## Response

Sections 2.5.1.2 and 2.5.2.2 will both be replaced with a brief statement that this alternative will require that a land use covenant must be entered into with the state. The following text will be inserted to replace the existing language in these two sections:

Under Subtidal Area and Marsh Crust Alternative 2, and Groundwater Alternative 2, institutional controls will be implemented to restrict site occupants from excavating into the marsh crust, or from extracting groundwater, without obtaining the required permits and taking proper measures to dispose of extracted soil or groundwater and ensure that no groundwater is consumed. A summary of the covenant is as follows:

The following activities are prohibited on the property:

- a. Construction of any water well screened for the extraction of water from the shallowest groundwater zone except as provided in this covenant;
- b. Extraction (except for necessary construction site dewatering), utilization or consumption of water from the shallowest groundwater zone for use other than irrigation or emergency use, e.g. firefighting;

- c. Disposal of extracted groundwater from construction site dewatering into the waters of the state except in compliance with the requirements of the Regional Water Quality Control Board, San Francisco Bay Region; and
- d. Engaging in any excavation below the threshold depth without a City excavation permit. If the excavation ordinance has been repealed, or if DTSC has made a written determination with thirty (30) days prior written notice to the City that the excavation ordinance does not comport with the intent of this covenant, then a permitted excavation may be conducted only in accordance with a written approval issued by DTSC. Covenantor's application for such an approval shall be submitted to DTSC and shall otherwise comply with the permit application requirements of the last version of the excavation ordinance or such other requirements as DTSC may specify.
- E. **Sec. 2.5.2.2. Alternative 2 (Shallow Groundwater). U.S. EPA has similar concerns as expressed above regarding the Marsh Crust institutional control.**

**Response**

Alternative 2 (Shallow Groundwater) will be replaced with the same language as in the response to 3. E. above, and will also include the following statement "Groundwater monitoring will be conducted by the Navy to demonstrate that contaminated groundwater is not migrating off the site."

**DEPARTMENT OF TOXIC SUBSTANCES CONTROL COMMENTS**

**A. Site description and characterization of contamination**

- 1. **Page ES-2: "... assumed to be a continuous layer ..."** The marsh crust is not assumed to be a continuous layer, but rather is assumed to be discontinuous over a large area. Because we cannot predict the presence or absence, the assumption is made that it is likely to occur anywhere throughout the historic tidal and shallow subtidal zone.

**Response**

The text will be changed to state that the marsh crust is assumed to be a discontinuous layer that occurs throughout the designated area.

- 2. **Page ES-2: Floating product contamination at FISC Annex is being addressed under a separate non-CERCLA cleanup action in cooperation with the California Regional Water Quality Control Board. This is not consistent with the preliminary draft Corrective Action Plan that has been submitted. See also page 1-1.**

**Response**

The text will agree with the wording in the corrective action plan (CAP) for IR04/06.

3. **Page ES-3: Depth to marsh crust - the average depth cited (15.3 feet below ground surface) is not consistent with the depth contours shown on Figure 1-11. According to the map, the average depth to marsh crust at the Annex should be between five and ten feet.**

**Response**

Figure 1-11 will be updated to show that the marsh crust is deeper in the vicinity of Alameda Annex.

4. **Chapter 1 should refer the reader to Figure 1-11 for locations of IR sites and other geographic features mentioned in the text.**

**Response**

Section 1.2.1 will be updated to include references to all the figures that show features discussed in the text, including Figures 1-6 through 1-11.

5. **Human Health Risk Assessments: Please cite references (e.g., bottom of page 1-18), state risk numbers (e.g., pages 1-19 and 1-20), and explain anomalous results (e.g., 17,000 ug/m<sup>3</sup>, bottom of page 1-18).**

**Response**

All the data in the paragraph at the bottom of page 1-18 is from TtEMI 1999e, as stated in the first sentence of the paragraph. The reading of 17,000 ug/m<sup>3</sup> is a localized anomaly. As can be seen on Figure 1-12, none of the 8 samples that surround this sample at distances of approximately 50 to 70 feet detected benzene. Also, there is no known source associated with the location of this sample. The text will be revised to state this.

The first paragraph on page 19 will be changed to clarify that the data discussed there is also from TtEMI 1999e. The one location on page 1-19, and two locations on page 1-20 that state that risk was within the acceptable risk range will be changed to give the actual calculated risk, and state that the risk is within the risk management range.

6. **Figure 1-1: The geographic designation SWMU 1 is not consistent with usage in the text or with other figures.**

**Response**

The figure will be changed to refer to the site as IR02.

7. **Page 2-8, Alternative 1: The text mentions existing government controls. Please clarify what these controls are for soil (marsh crust and related soils).**

#### **Response**

The text will be revised so as to remove mention of existing government controls.

#### **B. Rationale for FS**

1. **Process:** A member of the Alameda Naval Air Station RAB raised the question about whether the RAB members were given an opportunity to review the RI that supports the FS. The Alameda Point BCT responded (April 23, 1999) as follows:, “Most of the data to support this focused FS comes from FISC Alameda Annex/Alameda Facility. Because the historic marsh extends on to Alameda Point, it was considered appropriate to include RI data from the Alameda Point OU1 report to support the concept that historic deposits bayward of the historic marsh (i.e., intertidal deposits) contain similar compounds in comparable concentrations. The concerns over soil management during future construction activity exist for both bases. Because the focused FS summarizes the nature and extent of the marsh crust/subtidal deposits, it may be more appropriately entitled RI/FS. The NCP process sometimes combines the RI/FS into a single document.” In keeping with this response, the BCT should consider including RI in the title of this document. At the very least, the FS should refer to the RI-type documents that support it.

#### **Response**

This FS is based on the RI for Alameda Facility/Alameda Annex, and three RIs done at Alameda Point. With any FS, it is often typical to present a review of the nature and extent of contamination to set the stage for setting RAOs, and proposing and evaluating technologies. The fact that more than one RI was involved it made it important to include a discussion of the relevant data from all the RIs and show how they fit together. The text in Section 1.1 will include a discussion of this point.

2. **Exposure pathway for marsh crust:** The FS in several places states that the marsh crust and related sediments currently pose no risk to site occupants because of the depth of contamination, and then states the rationale for developing a remedy. Each time this rationale is stated in the document, it evolves slightly. This rationale should be succinctly explained and remain consistent throughout the document. One of the best descriptions is on page 3-4: “It is, however, assumed that future construction at both facilities could result in the former subtidal area and marsh crust being brought to the surface, where it could remain as a source of exposure to future occupants.” Alternatively, the wording in the middle of page 1-19 is quite good. Please locate all descriptions of the rationale for developing a remedy and make sure they are appropriate and consistent. For example, on page ES-4, the sentence, “For the purposed of this FS, it is assumed that the marsh crust and former subtidal area would pose an unacceptable risk to human health and the environment if they were brought to the surface” would be more accurately

rewritten as follows: “. . . if they were placed at the surface, resulting in a complete exposure pathway.” This more closely parallels the language on page 3-4. See also the bottom of page ES-6.

#### Response

Instances in the FS where this subject is addressed will be rewritten based on the suggested quote from page 3-4.

- 3. Need for NCP action: The text (e.g., page ES-5, second full paragraph) incorrectly states that marsh crust contamination requires no action under the NCP. The text would be clearer and more accurate if the contaminated media are addressed separately, for example: “Because contaminants found in the groundwater underlying the Alameda Facility/Alameda Annex pose no current or likely future risk to human health or the environment, no further action under the NCP is necessary. A remedy is required to address contamination found in the marsh crust and former subtidal area underlying the Alameda Facility/Alameda Annex and Alameda Point, and prevent potential future exposure due to uncontrolled placement of marsh crust and related sediments at the surface. The Navy is conducting this FS . . .” See also the top of page 1-20, and remedial action objectives described on page 2-2.**

#### Response

The text in the three sections mentioned will be changed to include the suggested wording.

- 4. Groundwater: The description of the rationale for further evaluation of groundwater (e.g., page ES-3) does not acknowledge that additional work was necessary to adequately characterize the site (in particular, exposure scenarios that are quite plausible in current reuse proposals). This paragraph should be rewritten in as follows: “DTSC and EPA identified the need to evaluate (1) the potential exposure of humans to groundwater through uses other than consumption; and (2) the potential exposure of children and adult workers at a new school proposed for the western part of Site IR02 to indoor air that could be contaminated with VOCs that may volatilize from the contaminated groundwater at the site. To accomplish these objectives, a new HHRA was performed by Newfields Inc. (1999).”**

#### Response

The paragraph will be rewritten as suggested, except reference will be made to the final HHRA, Newfields 2000.

## C. Institutional Control

1. **Function of land-use covenant:** A major component of many institutional controls is the land-use covenant, an instrument which provides additional protection to human health and the environment in two ways:
  - (1) A land use covenant signed by the State runs with the land and thus, will always emerge in a title search, and cannot be changed without State approval.
  - (2) Violation of a land use covenant allows the State to seek remedy in court immediately.

In this case, no other instrument has been identified that will provide similar protection where waste representing a possible risk remains in place. For these reasons, the land use covenant should be listed as the first and primary component of the institutional control. An ordinance, such as the one proposed by the City of Alameda, is one of several ways to implement the remedy and is a secondary component of the institutional control.

Because of the two ways in which land use covenants provide additional protection, the first of the NCP 9 criteria, overall protection of human health and the environment, is better fulfilled. Additionally, signing a covenant fulfills and enhances at least three other criteria: compliance with ARARs; long term effectiveness; and State acceptance.

To provide greater flexibility in determining the final remedy, DTSC recommends that reference to the covenant remain generic, i.e., not specific to the City of Alameda. This would allow the remedy to include a covenant with, for example, the Navy.

Because the land-use covenant is enforceable by DTSC as the NCP remedy, please place the covenant before the ordinance, and DTSC before the City of Alameda (e.g., page 3-5). The section on page 3-7 describing the cost for Alternative 2 (soil) lists passing the excavation ordinance and negotiating the land use covenant as part of the cost. Please place negotiating the covenant before passing the ordinance, for the purposes previously mentioned.

On page 3-6 (Long-Term Effectiveness and Permanence), the text states that DTSC will ensure that the City of Alameda will not change or eliminate its excavation ordinance in the future without DTSC input. DTSC does not approve or disapprove adoption, rescission, or modification of local ordinances. That is why the land-use covenant, not the City ordinance, is the primary component of the NCP remedy. Should the City of Alameda change or eliminate the ordinance, the covenant would require DTSC to approve any projects involving excavation into the marsh crust and related sediments. Please delete or change this paragraph.

## Response

The text to Sections 2.5.1.2 and 2.5.2.2 will both be changed as described in the response to comment D by EPA above.

2. **Groundwater institutional control:** The text incorrectly states that the objective of the institutional control for groundwater is to restrict installation of any wells. Rather, the purpose of the IC is to restrict consumption of groundwater. The additional HHRA performed by Newfields Inc. was carried out specifically to determine if other uses required restriction. The assessment determined that only consumption must be restricted, “in the unlikely event of groundwater use by future residents in violation of current well construction standards that essentially restrict drawing water from the shallow water-bearing zone.” Similarly, the text on page 2-7 incorrectly states that the second objective of the groundwater IC is to limit human use or contact with groundwater; rather, the objective is to restrict human consumption of groundwater at the Alameda Facility/Alameda Annex. On pages 2-11 and 3-19 the text should be revised.

## Response

The text on page 2-7 and 3-19 will be revised to clarify that the objective is only to restrict consumption of groundwater. The text in on page 2-11, section 2.5.2.2 will be revised as described in the response to EPA comment 3. D. above.

3. **Specific actions required for the implementation of institutional controls for marsh crust and related sediments:** The text enumerates three items: City of Alameda Ordinance, DTSC/City of Alameda land-use covenant, 5-year review. Because of the priority of the land-use covenant in the NCP remedy, DTSC prefers that the land-use covenant be listed first. In addition, please add the following text, as conveyed via e-mail to Dick Hegarty on December 29, 1999: “Concurrent with property transfer, DTSC and the City will enter into a binding agreement to enter into the covenant.”

## Response

The text will be revised as described in the response to EPA comment 3. D. above.

4. **Specific actions required for implementation of institutional controls for groundwater:** The text enumerates four items: DTSC/City of Alameda land-use covenant; groundwater monitoring; existing government controls; 5-year review. Please add the following text to the land-use covenant bullet, as conveyed via telephone to Dick Hegarty: “Disposal of extracted groundwater from construction site dewatering into waters of the state is prohibited except in compliance with the requirements of the Regional Water Quality Control Board, San Francisco Bay Region.” Because compliance with RWQCB regulations is specifically related to the intent of this remedy, inclusion of this reference is warranted. Please clarify the

**wording of the last sentence in the land-use covenant bullet as follows: "The land-use covenant will provide assurances for the future enforcement of the covenant." Please modify the text in the ground water monitoring bullet, as conveyed via e-mail to Dick Hegarty on December 29, 1999 as follows: "The Navy will implement groundwater monitoring as long as necessary to verify that contaminants are not migrating off site . . ." The need for continued monitoring will be re-evaluated as appropriate. See also reference to the 5-year limit on page 3-21, under Cost.**

**Response**

The text will be revised as described in the response to EPA comment 3.E above. Although the cost estimate is based on monitoring continuing for a period of 5 years, the Navy intends to propose criteria that could result in the cessation of groundwater monitoring in less than 5 years, if the criteria are met for a specified period of time.

**D. Other**

- 1. Typographic error: Hazardous Water Control Law, page 3-10 [should be Waste]**

**Response**

The text will be revised requested.

- 2. Word choice: "low effective" (various places); prefer low / moderate / high effectiveness.**

**Response**

The text will be revised as requested.