

## RESPONSE TO AGENCY COMMENTS ON

### NAS MOFFETT FIELD FINAL INSTALLATION RESTORATION PROGRAM PETROLEUM SITES (and Wastewater Tanks and Sumps) CHARACTERIZATION REPORT

January 28, 1994

This report presents point-by-point responses to comments by the San Francisco Bay Regional Water Quality Control Board (RWQCB) and the U.S. Environmental Protection Agency (EPA) on the Final Installation Restoration Program (IRP) Petroleum Sites (and Wastewater Tanks and Sumps) Characterization Report submitted October 1, 1993 by PRC Environmental Management, Inc. (PRC) for Naval Air Station (NAS) Moffett Field, California. Ms. Elizabeth Adams (RWQCB) and Mr. Michael Gill (EPA) provided comments. Responses to the comments were previously discussed during a conference call on December 15, 1993 involving RWQCB, EPA, Navy, and PRC.

The response to agency comments is divided into two sections: Section 1.0 presents responses to RWQCB comments and Section 2.0 presents responses to EPA comments. The agency comments are presented first, followed by PRC's responses.

#### 1.0 RESPONSE TO RWQCB COMMENTS

The following sections present the responses to RWQCB general and specific comments.

##### 1.1 GENERAL COMMENTS

Comment 1: RWQCB staff was pleased to see that several of the comments from the draft version of this document were incorporated into the text. However, there are some clarifications of State guidelines which still need to be incorporated into the text. Throughout the text, visual inspection of the sumps or tanks is outlined as the first procedure to determine whether or not a release has occurred and if further soil and groundwater investigation of the site is necessary. This methodology is not

consistent with the requirements for tank investigations outlined in the Tri-Regional Guidelines. Page six of the Tri-Regional Guidelines states:

When any underground storage tank is removed, whether for permanent site closure or tank replacement, the responsible party is to demonstrate that no authorized release from the tank has occurred. At a minimum a visual inspection of the tank system, and soil samples (and groundwater samples when appropriate) are required."

The addition of soil samples, as well as visual inspections should be included in the text to determine if a release has occurred.

*Response: The Navy agrees that soil samples should be collected from tanks and sumps that are scheduled for removal to evaluate whether a release has occurred. Visual inspections were recommended only for active sumps since the Tri-Regional recommendations do not specifically include soil sampling for active tanks or sumps unless evidence of a release is identified through leak indicators (such as nuisance conditions, inventory loss, or confirmed failed tank system test). However, the Navy has agreed to collect soil samples adjacent to active sumps in addition to the visual inspections; the remaining sumps will be sampled according to state guidance when removal activities occur.*

*For clarification, the Navy intends to collect soil samples from tanks and sumps that are inactive and scheduled for removal. The collection, location, frequency, and analyses will follow the Tri-Regional guidelines. Groundwater samples will be collected if groundwater is found in the removal excavations or if soil contamination is identified.*

**Comment 2:** The reason for including groundwater elevation data is to aid in evaluating the analytical data over seasons. Though the seasonal high water table level was included on the tables in the text, it would have been helpful to include the date of the water level measurement in order to compare it to the groundwater sampling events and the analytical results.

*Response: Tables 3, 10, and 16 have been revised to include the dates of the seasonally high water level measurement.*

Comment 3: The text states that Site 12 groundwater is being addressed through the CERCLA [Comprehensive Environmental Response, Compensation, and Liability Act] response action within the regional plume, however, the CERCLA source remediation projects are within the Site 9 area and will not affect Site 12. Any groundwater analytical data available for Site 12 should be included in this document. The contaminants of concern at the site are petroleum-related, and the recent excavation showed that the contamination at the site was far more extensive than originally estimated. The excavation was completed down to groundwater which indicates that there is the potential for groundwater to be contaminated at the site. If there is not sufficient groundwater data for Site 12 currently, then further investigations should be included in the future work plans for the petroleum sites. RWQCB staff does not concur with the Navy's conclusions that no further action is warranted at Site 12.

*Response: The Navy did not intend to indicate that no further action is appropriate for Site 12; the Navy agrees that both soil and groundwater data from Site 12 should be included in the petroleum sites documents. The Navy intended that Site 12 would be remediated under a separate source control activity that would address all contamination. However, recently available results from the source control activity indicate that petroleum-contaminated soils still exist at Site 12. A technical memorandum summarizing the results of the source control is being prepared. This document will summarize the data collected during the source control and present recommendations for additional activities. A schedule will be proposed if additional investigation is warranted. The Navy recommends including Site 12 in future petroleum sites documents after completion of the Site 12 technical memorandum.*

Comment 4: Active oil/water separators and sumps cannot be recommended for closure. For proper closure these units would need to be taken out of service, inspected for leaks or cracks and soil samples would need to be collected to verify that the site is clean. If soil contamination is present, the site would need to be remediated before closure could occur. RWQCB staff recommends that a visual inspection and soils sampling, at a minimum, be conducted at the active sites to verify that the unit is functioning properly and is not releasing contaminants to the environment. If contamination is present, then the site should be recommended for corrective action and the unit be replaced.

*Response: The Navy did not intend to recommend closure for active sumps; only inactive sumps are recommended for removal and closure. Additionally, the Navy agrees that soils should be sampled in addition to visual inspections. Please see the response to RWQCB general comment 1.*

## 2.2 SPECIFIC COMMENTS

Comment 1: Page ES-2, Paragraph 3. Inspections and soil sampling is required before the sumps and oil/water separators can be approved for closure.

*Response: This paragraph has been revised to include collecting soil samples from active sumps in addition to visual inspections. Sumps scheduled for removal will be sampled during removal activities and follow the Tri-Regional guidance for closure.*

Comment 2: Page 2, Section 1.1. It is unclear how the Navy intends to handle some of the sumps that historically may have handled wastewater. Are these sites going to continue to be evaluated in these documents? Are there residual contaminants from the sumps which are not petroleum-related? If only petroleum-related constituents remain in the soil or groundwater it seems more appropriate to address these sites within the current format. In general, please clarify this section.

*Response: The Navy recommends that tanks and sumps that handled nonpetroleum substances (such as wastewater) be included with the petroleum sites documents. The rationale is that the closure process for all tanks and sumps is similar, regardless of content (only sample analyses vary with content). Evaluation of the nature and extent of contamination and remedial technologies will target contaminants consistent with tank or sump contents. This approach will provide consistent closures at all tank and sump sites. To address CERCLA requirements for tanks and sumps that handled nonpetroleum substances, data from these sites will be included in the NAS Moffett Field site wide risk assessment. The paragraph has been clarified.*

Comment 3: Page 3, Paragraph 1. Groundwater at Site 12, though it is within the western portion of Moffett Field, will not be affected by the current remedial designs under the CERCLA process. Site 12 should be addressed by the petroleum documents.

*Response: The Navy agrees that Site 12 should be included with the petroleum sites documents and the text has been clarified. Please see the response to RWQCB general comment 3.*

**Comment 4: Page 3, Paragraph 3.** Groundwater contamination from Site 15 sumps and tanks was not adequately addressed in the OU5 [operable unit 5] RI/FS [remedial investigation/feasibility study] process, and it was understood that these tanks and sumps would be further evaluated within the petroleum documents. It was with this understanding that the agencies reserved comment on the data presentation for most of the Site 15 tanks and sumps within the OU5 RI. It is inappropriate to now reverse course and state that potential groundwater contamination from these sites will not be addressed by the petroleum documents. This document recommends further inspections and investigation of Site 15 tanks and sumps and should address the potential groundwater contamination associated with the site.

*Response: Tri-Regional guidance requires evaluation of groundwater impacts only if soil or groundwater contamination is identified. Only limited data are available for the vicinity of the sumps, and additional investigation of the surrounding soils has been recommended. If soils contamination is identified, groundwater impacts will be evaluated by constructing monitoring wells, as required by the Tri-Regional guidance. However, until the results of the additional investigation are available, no conclusions regarding the need for evaluations of groundwater impacts can be made.*

**Comment 5: Page 10, Tanks.** Soil samples collected from well W05-09 are not adequate representations of the soils surrounding tank 18 since the well is approximately 48 feet away from the tank. Any conclusions regarding closure of tank 18 should be delayed until its removal and collection of soil samples have been completed.

*Response: This paragraph has been revised to include the distance from well W05-09 to Tank 18. Furthermore, the Navy agrees that conclusions regarding closure should be made following the results of removal and sampling activities.*

Comment 6: Page 18, Table 3. Please include wells W05-21, W05-23, and W05-27 on this table. These wells are used within the text to characterize contaminant levels at specific tank sites, however, their distances from the tanks and screened intervals are not known.

*Response: Well W05-27 was already included in Table 3. This table has been revised to include wells W05-21 and W05-23.*

Comment 7: Page 40, Section 2.3. As stated previously, RWQCB staff does not concur with the conclusions that the petroleum documents should not further evaluate the soil and groundwater contamination at Site 12.

*Response: The Navy agrees that Site 12 should be included with the petroleum sites documents; this section has been clarified. Please see the response to RWQCB general comment 3.*

Comment 8: Page 43, Sump 64. This sump may be a potential vertical conduit to the shallow groundwater for contaminants in surface run-off. RWQCB staff have visually inspected the former stormwater diversion box and we recommend that it be removed.

*Response: The Navy agrees that Sump 64 should be removed. The National Aeronautics and Space Administration (NASA) has agreed to remove Sump 64. The text has been revised accordingly.*

Comment 9: Page 44, Section 2.4.1. Soil samples and visual inspections are the minimum requirements (if groundwater is not present in the excavation) for our agency to evaluate whether a release has occurred. If groundwater is present at the bottom of the excavation, then groundwater samples must be collected and analyzed for potential contaminants.

*Response: The Navy agrees that soil samples are required to determine if a release has occurred. Soil samples will be collected adjacent to active sumps during the*

*additional investigation; soil samples will be collected from beneath inactive sumps during removal activities. If groundwater is present in the removal excavations, groundwater samples will be collected. This section has been revised for clarification. Please see the response to RWQCB general comment 1.*

**Comment 10:** Page 50, Table 10. Sump 58 and Sump 59 are oil/water separators. The contents of the sump should have been sampled for TPH [total petroleum hydrocarbons] and oil and grease as well as BTEX [benzene, toluene, ethylbenzene, and xylene] constituents.

*Response: Sump 58 is inactive and scheduled for removal. Soil samples will be collected during removal activities. If groundwater is present in the removal excavation, groundwater samples will be collected. Sump 59 is active and soil samples will be collected adjacent to the sump during the additional investigation. Sample analyses at both sumps will include BTEX constituents and oil and grease.*

**Comment 11:** Page 52, Section 2.5.1. Was groundwater present at the bottom of the Tank 2 excavation? Please include this information if available.

*Response: Groundwater was found in the bottom of the Tank 2 excavation and sampled accordingly. This information was already provided in the final report in Section 2.5.2, page 65, second paragraph.*

**Comment 12:** Page 57, Tank 14. The motor oil contamination present in the soils needs to be addressed in the text.

*Response: The text has been revised to indicate the detected range of TPH as motor oil in the Tank 14 excavation (summarized from Table 13).*

**Comment 13:** Tank 43. The statement "no samples . . . contained significant concentrations of VOCs [volatile organic compounds] or SVOCs [semivolatile organic compounds] and metals values were within reported ranges for NAS Moffett Field" is not acceptable. Please state the concentrations of these compounds, instead of simply

qualifiers to describe the concentration. What is meant by within the "reported ranges" for metals analyses? Please state the levels of metals detected at the site.

*Response: The requested information was provided in detail in a previous report (Tank and Sump Removal Summary Report) which should be consulted for specific data. The statements included in the final report regarding VOCs, SVOCs, and metals were taken directly from the previous report. To expedite review time, however, a summary of the results has been included in the text and page numbers where the data can be found have been included with the references. "Reported ranges" for metals analyses refer to background concentration ranges.*

Comment 14: Page 65, Section 3.0 and Page 72, Paragraph 1. Soil samples must be taken in addition to visual inspections to determine whether a release has occurred.

*Response: The Navy agrees that soil sampling should be conducted in addition to visual inspections. These sections have been clarified. Please see the response to RWQCB general comment 1.*

Comment 15: Page 70, Groundwater. Wells W05-25 and W05-23 had TPH detected during the December 1992 sampling event (Table 4), however, the text states here that no TPH constituents were detected.

*Response: The text has been revised to include TPH detections in wells W05-23 and W05-25.*

Comment 16: Page 71, Soil. Active sources at Site 9 include all the contaminated soils that were backfilled into the excavations.

*Response: The text has been revised to include contaminated soils as a potential source.*

Comment 17: Section 3.3. As stated earlier, RWQCB staff does not concur with the recommendation for no further evaluation or action at Site 12.

*Response: The Navy agrees that Site 12 should be included with the petroleum sites documents; this section has been clarified. Please see the response to RWQCB general comment 3.*

**Comment 18:** Section 3.4. If soil analyses from the tank and sump sites at Site 15 show that there is a potential for groundwater contamination, or analyses from groundwater present at the bottom of excavations demonstrates that contamination is present, then these petroleum reports should address the contamination since the RI for OU5 is already completed.

*Response: The Navy agrees that groundwater impacts should be evaluated if there is a potential for groundwater contamination. Groundwater contamination will be included in future petroleum sites documents, if identified. This section has been clarified.*

**Comment 19:** Page 73, Paragraph 1. Table 10 shows that at Sump 59 no TPH analyses were performed yet the text states here that analysis indicated that petroleum-related compounds were not present. This statement is misleading and should be revised since TPH and oil and grease were not even analyzed for, and no soil samples surrounding the oil/water separator were collected.

*Response: The reference to petroleum-related compounds referred to BTEX. The text has been revised to indicate that BTEX compounds were not present.*

**Comment 20:** Sump 63 needs to be re-routed to the sanitary sewer if continued use of the sump is planned for the future. It is currently being routed to the wastewater flux pond which will be closed in January 1994.

*Response: NASA plans to maintain Sump 63 as an active sump and will be responsible for re-routing it. The text has been clarified.*

**Comment 21:** Sump 42. The monitoring well used to determine if there has been impact to the groundwater from Sump 42 is too far away to adequately represent potential impact from the sump. Either "hydropunch" samples or another means of investigation will need to be conducted to gain closure for this sump.

*Response: Sump 42 is part of the Naval Exchange (NEX) service station, which will be undergoing an additional investigation during spring 1994. Soil borings and monitoring wells will be completed as part of this investigation. When the investigation is complete, recommendations will be made and included in future petroleum sites documents.*

## **2.0 RESPONSE TO EPA COMMENTS**

**Comment 1:** Throughout Section 3.0 (Conclusions and Recommendations), it is mentioned that cleanup levels for soils are to be developed in the Corrective Action Plan. As EPA wrote in the comments on the West Side Aquifers RD/RA [remedial design/remedial action] Workplan (letter dated September 15, 1993 and October 22, 1993) and as RWQCB has stated in the past, cleanup levels for petroleum in soils are already defined and are non-negotiable, unless the Navy can prove that the petroleum products won't impact groundwater. Is there disagreement or misunderstanding over this statement?

*Response: As discussed previously with the regulatory agencies, the Navy does not disagree with this statement. The Navy is, however, currently evaluating petroleum cleanup levels and potential groundwater impacts. Evaluations include fate and transport, risk assessment, beneficial use, and cost/benefit analysis. An interim document will be prepared summarizing these evaluations.*

**Comment 2:** Also in this section, the Navy describes a field work plan that will be prepared to document additional investigation activities. Please provide an approximate date for this document's release.

*Response: The field work plan has already been prepared and submitted to the regulatory agencies on December 17, 1993. The Navy received comments from the agencies and is proceeding with the field work.*

**Comment 3:** Finally, in the last paragraph on page 73 of the final document, the Navy makes the statement "Consistent with state guidance, groundwater evaluations are not required

unless evidence of soil contamination is identified." Hopefully, this is a simplified statement referring to the *Tri-Regional Board Staff Recommendations for Preliminary Evaluation and Investigation of Underground Tank Sites* (August 1990) and is not a misunderstood interpretation of this document. EPA agrees with the RWQCB that these guidelines for tank excavations and investigations are required for Moffett Field.

*Response: The statement on page 73 is in direct reference to the Tri-Regional guidance. The Navy agrees that this guidance is required for tank removals and investigations.*