

NAS MOFFETT FIELD SITE 9
RESPONSE TO COMMENTS ON DRAFT ACTION MEMORANDUM
VOLUMES I AND II, MARCH 1, 1991

INTRODUCTION

This report presents point-by-point responses to comments received from regulatory agencies for the Site 9 draft action memorandum dated March 1, 1991 for Naval Air Station (NAS) Moffett Field in Mountain View, California. Comments were received from Mr. Lewis Mitani for the U.S. Environmental Protection Agency (EPA) in a letter dated March 29, 1991; from Mr. Cyrus Shabahari of the California Department of Health Services (DHS) in a letter dated March 27, 1991; and from Mr. Steven Morse of the California Regional Water Quality Control Board (RWQCB) in a letter dated April 3, 1990.

In general, responses to comments refer to sections within the revised action memorandum dated May 2, 1991.

Comments from Mr. Lewis Mitani, U.S Environmental Protection Agency

GENERAL COMMENTS:

Comment Number 1. All tables, figures, and plates should show the reference(s) to make the report more useful and complete.

Response: *Figures have been referenced to the sources they were reproduced from. References for tables are provided in the narrative of the revised action memorandum.*

Comment Number 2. Migration patterns of the contaminants should be better described, especially in terms of the vertical migration from the A aquifer to the B aquifer. Ground water flow directions for Site 9 should be provided on a figure.

Response: *Previous investigations have shown that the A1 and A2 permeable zones are hydraulically interconnected (NEESA, 1984 and SAI, 1983). Currently, the migration of contaminants and the extent of hydraulic interconnection between the A1 and A2 zones is not clearly defined. Additional site characterization*

data are essential to more clearly define the hydraulic characteristics of the A aquifer.

Ground water flow direction and gradient were determined using International Technology Corporation (IT) quarterly reports. Potentiometric maps for the A1 and A2 zones were reproduced from the November 1990 and February 1991 quarterly reports and are presented in Appendix E (Volume II) of the revised action memorandum.

Comment Number 3. Because the design costs are based on disposal of the effluent to the publicly owned treatment works (POTW), Sunnyvale POTW should be contacted in the early stages of planning to verify discharge capability.

Response: The feasibility of discharging treated ground water to the Sunnyvale POTW cannot be determined until the POTW receives and reviews a discharge permit application for this action. The Navy will submit the application to the POTW after receiving field investigation data (flow rate data) necessary for preparing the application. Based on preliminary discussions with POTW personnel, no problems are anticipated with receiving approval to discharge treated ground water to the Sunnyvale POTW.

Comment Number 4. The "regional Middlefield, Ellis, Whisman (MEW) plume" and its relationship to Site 9 should be described and identified on a figure.

Response: The objectives of the source control for Site 9 are limited to the A1 zone. The regional MEW plume is not known to be present above the A2 zone, and is therefore beyond the scope of these objectives; therefore, the plume has not been delineated on a figure. The relationship of regional contamination to the specific sources within Site 9 has been described in Sections 3.0 and 4.0 of the revised action memorandum.

Comment Number 5. All analytical data in the report should be included in appendices or specifically referenced throughout the report.

Response: Analytical data incorporated in the revised action memorandum have been referenced in the narrative.

Comment Number 6. To accurately characterize the site, all available information about the site's contamination should be investigated and discussed in this report. All wells in the vicinity of Site 9 should be shown on a figure and all pertinent past analytical results presented.

Response: All pertinent analytical data including results from the remedial investigation (RI), the tank and sump investigations, and the Building 29 investigation were considered in preparing the revised action memorandum. In some cases, results were determined not to be applicable to a particular source and have not been incorporated in the report.

SPECIFIC COMMENTS:

Comment Number 1. Page 10, Third Paragraph. Explain how the ponds act as a buffer zone between the base and the bay.

Response: The salt evaporation ponds north of NAS Moffett Field provide a physical separation between the facility and San Francisco Bay. The reducing estuarine environment of the evaporation ponds, also, supports the growth and reproduction of bacteria, which may consume contaminants. Surface and ground water flowing north from NAS Moffett Field pass through this area before reaching San Francisco Bay.

Comment Number 2. Page 13, Figure 4. IT Corporation labeled the uppermost aquifer the "A1" aquifer, not the "A" aquifer. Please clarify.

Response: The "A" aquifer designation for the uppermost permeable zone has been changed to the A1 zone within the A aquifers, to agree with the definition used previously by IT. All references to the "A" zone have been corrected in the text, in tables, and on figures of the revised action memorandum.

Comment Number 3. Page 17, Figure 5. What information supports the location of the hypothetical divide between areas of hydrocarbon contamination and chlorinated solvent contamination? As given in Table 2 (page 22), areas 9E, 9F, and Building 88 contain benzene at or above 1,000 parts per billion (ppb) and 9E and Building 88 contain toluene at or above 1,000 ppb. Additionally,

areas 9A, 9B, and 9C contain chlorinated organics above 1,000 ppb. Contamination values do not support the hypothetical divide.

Response: The reference to a divide between areas of hydrocarbon and chlorinated solvent contamination has been eliminated in the revised action memorandum.

Comment Number 4. Page 28, Section 3.2.5 Water Level Measurements. Plate 2 references W09-07 as a B1 aquifer well and this section references it as an A aquifer well. Please clarify.

Response: Well W09-07 is an "A2" aquifer well as defined by IT. References to all wells have been corrected on the revised base map and in the text and in tables of the revised action memorandum.

Comment Number 5. Page 28, Section 3.3.1 Soil Contamination. This section states that analytical results for monitoring wells W09-20 and W09-24 were not available. Explanation is needed on the reason(s) for the unavailability of the results for these wells.

Response: Copies of IT quarterly reports reviewed to prepare the Site 9 action memorandum did not contain results for these samples. This situation should improve with the establishment of the centralized data base being undertaken by James M. Montgomery Consulting Engineers, Inc. (JMM).

Comment Number 6. Page 30 and 31, Table 5. See general comment 1.

Response: See response to general comment 1.

Comment Number 7. Page 33, Second and Third Paragraphs. Wells are referred to as "FP9-1" and "FP9-2" here and throughout the report but they are not shown as such on Plate 2. Please clarify. Wells W09-01 and W09-02 should be included in the report (i.e., Table 8, trichloroethene (TCE) concentrations).

Response: Wells FP9-1 and FP9-2 have been added to Plate 2. Wells W09-01 and W09-02 have not been included in the revised action memorandum, because data for these wells were not available.

Comment Number 8. Page 33, Fourth Paragraph. Background values have not been finalized to date and may be less than referenced background values. The development of the baseline metal content of soils in the draft phase I characterization report is being re-evaluated due to inherent erroneous assumptions. In the draft phase I report, values below the detection were not used in estimating background levels. Because values below the detection are an integral part of the normal range, they cannot be dismissed. Background values have yet to be established and will likely be less than reported in the phase I report. Soil contamination should be re-examined in light of this fact.

Response: Ranges of metals concentrations in soils reported in the Draft Phase I Characterization Report were used for comparison, due to the lack of finalized information. These comparisons will be updated when ranges have been finalized. To avoid confusion caused by the use of the term "background ranges," changes were incorporated into the text of the revised action memorandum to refer to them as "NAS Moffett Field range."

Comment Number 9. Page 34, Table 6. See general comment 1. Why have results for W09-03, W09-14, and W09-27 been omitted from the table? The draft phase I characterization report (August 1990) contains analyses reporting that chlorinated organic contaminants were found in soils at these locations.

Response: Table 6 of the draft action memorandum lists the maximum concentrations of chlorinated volatile organic compounds (VOCs) in soils. Soil samples collected from well W09-03 contained these compounds in only low concentrations. Results for the soil sample from W09-14 were inadvertently left out and have been included in Section 3.4.2 of the revised action memorandum. The soil sample from W09-27 was not included in summary tables because concentrations were below detection limits.

Comment Number 10. Page 38-40, Table 8. See general comment 1. According to the phase I characterization report (August 1990, page 9.1.14), W09-06 contained 1,1-dichloroethene (1,1-DCE) at a concentration of 6 micrograms per liter ($\mu\text{g/L}$). Please note on table.

See general comment 6. HydroPunch sampling results are not included for H9-16, H9-18, H9-23, H9-26, H9-32, H9-34, H9-38, H9-40, H9-42, H9-44,

and H9-45B. These HydroPunch results should be included in the report and reviewed to obtain an accurate characterization of the site.

H9-1 should be H9-11 in the table and on Plate 1.

The 4th quarter 1990 report contains higher levels than reported for W9-18, W09-30, W09-16, W09-31, and W09-23. Also, show MEW-81 on Plate 2. See general comment 6.

Response:

See response to general comment 1. The concentration of 1,1-DCE in ground water sample W09-06 was entered incorrectly in Table 8 of the draft action memorandum. However, results for this ground water sample were also not incorporated in the revised action memorandum, because the well appears to be screened in a less permeable zone.

See response to general comment 6. Hydropunch Sampling results for H9-23, H9-40, and H9-44 have been included in summary Table 15, page 64 of the revised action memorandum. Results for samples H9-29 and H9-42 are included in summary Table 26, page 87 of the revised action memorandum. No analytes were detected in the remaining six samples.

References to H9-1 have been changed to H9-11 in the narrative and on the accompanying base map in the revised action memorandum.

Discussions of chemical data in the revised action memorandum have been updated to include the 1990 fourth quarter results for all locations. In addition, MEW-81 has now been shown on Plate 2. See response to general comment 6.

Comment Number 11. Page 41, First Paragraph. What criteria were used to determine that in the vicinity of Building 45 the A aquifer is "moderately contaminated?" What determines a "moderate" amount of contamination? Why are H9-19 and W09-31 results inconsistent? Report H9-19 sample depth and W09-31 screen interval.

Response: *The relative degree of contamination in the A1 zone near Building 45 was based on a comparison with other contaminated areas (Buildings 29, 31, and 88). The distinction is arbitrary and has been removed.*

Currently, there is no explanation for the apparent discrepancy in results for samples H9-19 and W09-31. Possible explanations for the inconsistency are sampling bias, heterogeneity of the contamination, or intersection of more permeable material by the well screened interval.

Comment Number 12. Page 42, Table 9. See general comment 1.

Response: *See response to general comment 1.*

Comment Number 13. Page 44, Table 10. See general comments 1 and 6. According to the February 1990 quarterly report, W09-06, W09-07, W09-13, and W09-27 detected metal species in ground water (i.e., 9.1-20). Also, W09-24 is not shown on the table. Please complete the table.

Response: *See responses to general comments 1 and 6. Metals data for ground water samples at Site 9 have been summarized in Tables 11, 16, 23, and 27. Other summary tables have been added incorporating additional data. Wells for which constituent analyses were not completed or no analytes detected were not included on summary tables. Data for well W09-24 were not available.*

Comment Number 14. Page 46, First Paragraph. The reference should be included for the statement "Petroleum hydrocarbons in the soils were found only at the saturated/unsaturated zone interface." Sample depths, water levels, and other information should be provided to support this conclusion.

Response: *References to the locations of the petroleum hydrocarbon contamination have been modified to indicate a depth below land surface. Total petroleum hydrocarbon (TPH) contamination was found in a band between 9 and 13 feet BLS. Section 3.4.1.1 on page 45 of the revised action memorandum contains additional information concerning petroleum hydrocarbon contamination in soils near Building 29.*

Comment Number 15. Page 48, Section 3.4.3 Building 88. This section should discuss Building 88 in view of the high levels of benzene and toluene found in the area (see Table 2, page 22). A brief history of Building 88 with regards to it being a possible source of benzene and toluene would be helpful.

Response: *Table 2 should not have indicated that benzene and toluene are major contaminants in the area of Building 88. The table has been corrected in the revised action memorandum and no longer indicates that benzene and toluene are major constituents in the Building 88 area.*

Comment Number 16. Page 49, Section 3.5 Potential or Actual Impacts on Surrounding Populations. See general comment 2. This report presents contamination in the A aquifer at Site 9 and does not evaluate the contamination in the B aquifer. How is it known that ground water contamination is primarily confined to the A aquifer? In order to state this, sufficient evaluation of the B aquifer needs to be presented. As evident in the 4th quarter 1990 report and the phase I characterization report, TCE and other chlorinated organics are present in the B aquifer. Additionally, there is close proximity between the A and B1 aquifers and they are likely to be hydraulically connected. Site 9 has been in operation for many years and it is likely that contamination from Site 9 has migrated from the A aquifer to the B1 aquifer and further.

Response: *Contamination has been identified in both the A1 and A2 zones. The objectives of the source control action, however, focus exclusively on containment of contamination found in the A1 zone. The statement in Section 3.5 on page 90 of the revised action memorandum referring to contamination being confined to the A aquifer has been removed.*

Comment Number 17. Page 53, Section 4.4.1, Building 29. According to this report (page 46), results suggest that a source of 1,2-dichloroethene (1,2-DCE) is near Building 29. The A aquifer in the vicinity is contaminated with chlorinated organics. Include in this paragraph that additional information for Building 29 may indicate that other target compounds will be included.

Response: *Section 4.4.1 on page 95 of the revised action memorandum has been modified to include chlorinated VOCs as potential contaminants of concern in the Building 29 area.*

Comment Number 18. Page 53, Section 4.4.3, Building 31. The Navy Exchange (NEX) service station had one 500-gallon waste oil tank. Chlorinated organics were found in the A aquifer in high concentrations. As stated in this report (page 47), data from sample HP-22 suggests the regional contaminant plume is not contributing to the chlorinated compounds found at the site. Shouldn't chlorinated organics be added to the list of target chemicals to meet the removal action objectives?

Response: The source of chlorinated VOCs in the A1 zone in the Building 31 area has not been identified. Further investigation has been recommended and chlorinated VOCs have been added to the list of target compounds to meet source control action objectives.

Comment Number 19. Page 56, Table 11. The following should be corrected on Table 11:

Barium:	Federal maximum containment level goal (MCLG) is 2,000 µg/L
1,1-DCA:	State maximum contaminant level (MCL) is 5 µg/L
1,1-DCE:	State MCL is 6 µg/L
cis 1,2-DCE:	State MCL is 6 µg/L
trans 1,2-DCE:	State MCL is 10 µg/L
cis 1,2-DCE:	Federal MCLG is 70 µg/L
trans 1,2-DCE:	Federal MCLG is 100 µg/L
Methylene chloride:	Federal MCLG is 0.0 µg/L
Selenium:	Federal MCLG is 50 µg/L
Toluene:	Federal MCLG is 1,000 µg/L
Xylenes:	Federal MCLG is 10 ppm

Also include California total threshold limit concentration (TTLC) (soil) for lead (1,000 milligrams per kilogram (mg/kg), chromium VI (500 mg/kg), arsenic (500 mg/kg), and chromium (2,500 mg/kg).

Clarification is needed on the RWQCB cleanup goal of 100 parts per million (ppm) for TPH. Please include a reference supporting this cleanup level.

Clarification is needed on the RWQCB cleanup goal of 100 parts per million (ppm) for TPH. Please include a reference supporting this cleanup level. According to the Regional Board Staff Recommendations for Initial Evaluation and Investigation of Underground Tanks (June 2, 1988), "The 100 ppm level is not a cleanup level. The origin of the 100 ppm level was to develop a method to prioritize the case load and indicate whether a significant volume of fuel had been released or discharged. The level of cleanup is to be determined by assessing the potential impact of residual soil contamination on the ground water. In many cases it may not be appropriate to leave soil in-place which is contaminated with total petroleum hydrocarbons or other compounds at any concentration."

How were the Proposition 65 applicable or relevant and appropriate requirements (ARARs) obtained? Title 22 levels are presented in micrograms per day ($\mu\text{g}/\text{day}$). Also, regulatory levels exist for methylene chloride (50 $\mu\text{g}/\text{day}$), chromium VI (0.001 $\mu\text{g}/\text{day}$), and arsenic (10 $\mu\text{g}/\text{day}$). Beryllium and cadmium should also be included on the table.

Response:

Table 11 in the draft action memorandum identified chemical-specific ARARs and to be considered requirements (TBCs). However, upon further evaluation, it has been determined that chemical-specific ARARs are not applicable to this source control action. The following discussion of this determination is summarized from Section 4.5.1 of the revised action memorandum.

This source control action is only part of a total remedial action. The site-wide RI/FS will establish site cleanup goals and action levels. This report only addresses ARARs that the source control must achieve to be in compliance with applicable laws, rules, and regulations. These ARARs are based on the action undertaken. Therefore, treated ground water discharged to a publicly owned treatment works (POTW) must meet the POTW acceptance criteria, not MCLs. Consequently, no chemical-specific ARARs were identified for this action and Table 11 has been deleted from the revised action memorandum.

Comment Number 20. Page 63, Section 5.2.2 Soils. Because soil treatment technologies requiring excavation of soils were not evaluated in this draft action memorandum, the final action memorandum should contain an evaluation of such.

Response: Excavation is considered logistically infeasible under this source control action (see Section 5.1.2 of the revised action memorandum). As a result, soil treatment technologies requiring excavation of soils were not evaluated in the revised action memorandum.

Comment Number 21. Page 72, Fifth Paragraph. Explain why discharge to the POTW is quicker. Design time may take longer with the addition of reinjection, but this may be outweighed by the shorter operation time.

Response: Reinjection of treated water would require design, permitting, and installation of injection wells which would, in turn, delay implementation of source control activities. Discharge of treated water to a POTW is more expeditious because the only task involved is obtaining a discharge permit.

Comment Number 22. Page 85, Section 7.2.3 Implementability. How will fill (sic) product be removed and be disposed?

Response: Recovery of free product phases is not anticipated at Site 9. If encountered the presence of free product phases would require significant modifications to the planned removal and treatment system design. However, screen placement and material composition are designed to consider the potential for free product phases, and to maximize the utility of the extraction wells under several possible aquifer conditions.

Comment Number 23. Page 85, Top and Page 87, Figure 7. Are these wells part of Moffett's wells? If so, have they been sampled? What were the results? Include locations on Plate 2. See general comment 6.

Response: Wells W29-02(A1), W56-02(A1), and W61-01(A1) were installed in December 1990. These wells were sampled in January 1991. Locations of these wells are shown on Plate 2. Results from these samples are included in Sections 3.4.1 and 3.4.3 of the revised action memorandum. Complete analytical data for these wells are contained in Appendix F of the Building 29 area field

investigation technical memorandum and in Appendix D of the tank and sump removal summary report.

Comment Number 24. Page 106, Figure 8. Indicate the approximate treatment unit location (as referenced in the legend).

Response: Drawings have been improved in the revised action memorandum to clearly indicate the approximate locations of ground water treatment units.

Comments from Mr. Cyrus Shabahari, California Department of Health Services

GENERAL COMMENTS:

Comment Number 1. It should be noted that this report does not provide sufficient data on Buildings 29, 45, and 88. The results of the fuel farm investigation are not included in this report as well. The interpretation of tank and sump investigations is also lacking thus, postponing the DHS concurrence. These data gaps will not allow to arrive at a comprehensive understanding of this study area. Such data are needed to be included to ascertain the source(s). DHS will review the Revised Final Action Memoranda including the above data to arrive at a decision. However, the proposed alternative remedy might remain the same.

Response: The chemical characterization of the areas around Buildings 29, 45, 31, and 88 in Section 3.0 of the revised Site 9 action memorandum includes data from the Building 29 area field investigation and the tank and sump removal summary report.

Comment Number 2. PRC Environmental Management's (PRC) definition of aquifers and renaming them differently will confuse further the complexity of this study area. IT has defined the aquifers into different zones, for example, A1, A2, etc. An explanation is required if PRC wishes to differ on its understanding of zoning the aquifers with IT. And if it is found to be justified then, IT has to follow the same zoning. It is imperative that Naval Facilities Engineering Command Western Division (WESTDIV) adopts one set of definition to attenuate furthering the confusion. In addition, Site 9 has been divided into different

subsites. It is not clear if the Navy wishes to adopt this division. A clarification is required.

Response: The revised action memorandum incorporates the IT definition of the uppermost A aquifer zones, A1 and A2.

The presence of different contaminant sources within Site 9 required division of Site 9 into subsites. The use of subsites allowed discussion of individual contaminant sources.

SPECIFIC COMMENTS:

Comment Number 1. Page 17, Figure 5. The site boundary in this report and in the IT's last quarterly report are not the same. A clear and consistent site boundary is needed to focus the cleanup process.

Response: None of the sites at NAS Moffett Field have rigidly defined site boundaries. Site boundaries have been, and should continue to be, addressed in terms of sources and extent of contamination.

Comment Number 2. Page 37, Last Paragraph. If it is determined that the large range observed for the well 9 is due to poor sampling, then it must be explained and documented as to why you believe such range occurred. Furthermore, what do you propose to stop repeating such occurrences in the future?

Response: Laboratory analysis problems may also explain the lack of reproducibility of sample results from W09-07. Results from the latest IT ground water sampling event suggest the contamination in many areas of Site 9 is heterogeneous. This may be the case for samples from W09-07. Samples should continue to be collected from this well to further investigate changes in concentration over time.

Comment Number 3. Page 46, Paragraph 3. The MCLs are ARARs and must be identified as such. For example, pursuant to California Code of Regulation Title 22 Article 5.5 the maximum contaminant level of benzene for the primary drinking water should not exceed 1 milligram per liter (mg/L).

discussion of this determination is summarized from Section 4.5.1 of the revised action memorandum.

This source control action is only part of a total remedial action. The site-wide RI/FS will establish site cleanup goals and action levels. This report only addresses ARARs that the source control must achieve to be in compliance with applicable laws, rules, and regulations. These ARARs are based on the action undertaken. Therefore, treated ground water discharged to a publicly owned treatment works (POTW) must meet the POTW acceptance criteria, not MCLs. Consequently, no chemical-specific ARARs were identified for this action.

Comment Number 4. Page 47, Paragraph 1. It is to be noted that the 100 mg/kg cleanup level of xylene in the soil is not a cleanup level. It is merely a cleanup target. The cleanup level will be determined upon the results of the base-wide risk assessment.

Response: References to cleanup levels and/or cleanup targets were removed from the revised action memorandum.

Comment Number 5. Page 114, Paragraph 1. The number of underground tanks is nebulous. It has been reported that there are 11 tanks on page 18, however, on page 45 it is said "10 or 11." And on page 114 it is said to be 10. This uncertainty should be clarified.

Response: Ten underground storage tanks are believed to exist near Building 29. Further site characterization activities are planned to determine the exact number and location of these tanks. References to these tanks in the revised action memorandum have been modified to indicate ten underground tanks (see pages 14 and 165).

Comments from Mr. Steve Morse, California Regional Water Quality Control Board

SPECIFIC COMMENTS:

Comment Number 1. Page 33, Last Paragraph. This references the metal background data contained in the draft phase I characterization report. This part of the characterization report was extensively commented on by the agencies and is currently being revised. Any comparison of data in this Site 9 report with conclusions of the characterization report should await finalization of the characterization report. At this time the characterization report should not be used to define background concentrations.

Response: Ranges of metals concentrations in soils which were reported in the Draft Phase I Characterization Report were used for comparison, due to the lack of finalized information. These comparisons will be updated when ranges have been finalized. To avoid confusion caused by the use of the term "background ranges," changes were incorporated into the text of the revised action memorandum to refer to the "NAS Moffett Field range."

Comment Number 2. Page 41, Fifth Paragraph. It states here that certain organic compounds found in soil, i.e., acetone, methylene chloride, and methyl ethyl ketone (MEK), may be associated with sampling and/or analytical method contamination. Before dismissing data a quantitative comparison of concentrations in samples and in various QA/QC blanks needs to be made and only samples with a similar range of concentrations as shown in the blanks should be eliminated.

Response: Comparison of field sample analytical results to QA/QC sample results was made to evaluate the potential for introduction of laboratory contamination into samples. Field samples that contained a compound which was detected in the corresponding QA/QC samples were examined further. Field samples that contained a compound at a concentration less than 10 times the concentration in the QA/QC sample were considered to contain laboratory-introduced contamination.

Comment Number 3. Page 47, Second Paragraph. The 1985 Regional Board document referred to has been superseded by 1990 recommendations for dealing with leaking underground tanks. Also, the 100 ppm concentration is for total petroleum hydrocarbons, not xylenes or any other single constituent.

Response: Reference to the RWQCB document (1985) has been eliminated from the revised action memorandum.

Comment Number 4. Page 49, Last Paragraph. Our position is that chemicals in ground water are a source for further migration. Therefore, we believe that interim control measures to prevent further migration are appropriate.

Response: Currently, drinking water for NAS Moffett Field is not supplied by ground water from the A1 or A2 zones. No A1 or A2 production wells are located in the surrounding area. The A1 and A2 zones are, however, potential sources for drinking water according to the RWQCB definition of potable water. Any future discussion of developing potential drinking water sources at Site 9 will take into consideration this definition.

Comment Number 5. Page 56, Table 11. We would like to make it clear that the TTLC and soluble threshold limit concentration (STLC) concentrations from Title 22, California Code of Regulations (CCR), are only intended for waste definition purposes. They are not environmental cleanup concentrations. These concentrations presume the waste will be disposed of in an appropriately lined landfill and therefore just because a waste is determined to be non-hazardous under these criteria does not mean it can remain uncontained and uncontrolled in the environment. Also on this table the 100 ppm TPH is listed as a cleanup goal. This concentration is not a cleanup goal. It is intended only to prioritize sites requiring cleanup. MCLs when available, and the one in a hundred thousand cancer risk when not available, when dealing with potential sources of drinking water. Therefore, the concentrations in the MCL and Proposition 65 columns should be the same for carcinogens.

Response: Table 11 in the draft action memorandum identified chemical-specific ARARs and TBCs. However, further evaluation of ARARs has determined that chemical-specific ARARs are not applicable to this source control action (see

Section 4.5.1 of the revised action memorandum). Therefore, Table 11 has been deleted from the revised action memorandum.

Comment Number 6. Page 79, Third Paragraph. This paragraph presents arguments for eliminating soil vapor extraction (SVE) as a source control technology at this site. We have found SVE a very successful method of remediation at cleanup sites in the Bay Area and would like to respond to each of the three arguments separately.

1. This uses soil data from Site 14 South to conclude that the soil at Site 9 is too impermeable for SVE. No information is given to show that the soils at the two sites are similar. Also, this argument is partially contradicted by the second argument.
2. This states that the soils are highly heterogeneous and preferential pathways would be formed through more permeable units if SVE were used. While this is true in general, it is possible to design a system to deal with this in some cases. Also, the more permeable soils can also be a preferential pathway for chemicals and if the chemicals are still present in these types of soils it would be appropriate and feasible to remove them.
3. The third argument is that the lighter components of fuels have likely already been removed from the soil by natural processes and SVE is not appropriate for the heavy components of fuel. No data is presented to show that the lighter components are actually gone. Also, at the beginning of the paragraph it states that SVE is appropriate for removal of VOCs at the site.

We believe the conclusion to eliminate SVE from further consideration should be reevaluated in response to these comments.

Response:

SVE has not been recommended for treatment of contaminated soils. This decision was primarily based on the fact that SVE is ineffective at removing contaminants from saturated soils (soil contamination is present predominantly in the saturated zone at suspected source areas). In addition, SVE is an inappropriate treatment method for the majority of the contaminants found at

Site 9 (for example, heavy fuel constituents). Lastly, it should be remembered that SVE has only been screened from these short-term temporary source control activities; it will be reconsidered during the remedial investigation/feasibility study (RI/FS) for the actual site remediation.

Comment Number 7. Appendix F. In the Table for action-specific ARARs the following should be added: For discharges to State waters, either surface or ground waters, the applicable statute is the Porter-Cologne Water Quality Act, California Water Code and Division 3 of Title 23 CCR; for land disposal Chapter 15 of Title 23 CCR (pursuant to the California Water Code) and Chapter 30 of Title 22 CCR (pursuant to the California Health and Safety Code) are applicable.

Response:

The above mentioned ARARs have been incorporated in Appendix F of the revised action memorandum.