DEPARTMENT OF THE NAVY
ENGINEERING FIELD ACTIVITY, WEST
NAVAL FACILITIES ENGINEERING COMMAND
900 COMMODORE DRIVE
SAN BRUNO, CALIFORNIA 94066-5006

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From: Commanding Officer, Engineering Field Activity West, Naval Facilities Engineering Command

To: Distribution

Subj: NAVY'S RESPONSE TO AGENCY COMMENTS ON THE DRAFT FINAL FIELD SAMPLING & QUALITY ASSURANCE PROJECT PLANS FOR THE REMEDIAL INVESTIGATION OF GROUNDWATER AT SWMU's 1, 2, 5, 7, & 18 AT THE NAVAL WEAPONS STATION, SEAL BEACH DETACHMENT, CONCORD

Encl: (1) Navy Responses to Agency Comments, Draft Final Field Sampling Plan and Quality Assurance Project Plan, Prepared for the Remedial Investigation of Groundwater, at Solid Waste Management Unit Sites 1, 2, 5, 7, & 18, Naval Weapons Station, Seal Beach Detachment, Concord

1. The Draft Final Field Sampling Plan and the Draft Final Quality Assurance Project Plan are currently the subject of informal disputes. Enclosure (1) was prepared in coordination with the agencies and is forwarded for agency review and comment.

2. If there are any questions or comments regarding this correspondence, please contact the undersigned at (650) 244-2565.

GILBERT A. RIVERA
By Direction

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NAVY RESPONSES TO AGENCY COMMENTS
DRAFT FINAL FIELD SAMPLING PLAN AND QUALITY ASSURANCE PROJECT PLAN
PREPARED FOR THE REMEDIAL INVESTIGATION OF GROUNDWATER
AT SOLID WASTE MANAGEMENT UNIT SITES 1, 2, 5, 7, & 18
NAVAL WEAPONS STATION SEAL BEACH DETACHMENT CONCORD

This document provides the Navy's responses to comments (RTC) received from the U.S. Environmental Protection Agency (EPA) and the San Francisco Bay Region, Regional Water Quality Control Board (RWQCB) on the Draft Final Field Sampling Plan (FSP) and Quality Assurance Project Plan (QAPP) for the Remedial Investigation for Groundwater at SWMU Sites 1, 2, 5, 7, and 18, Naval Weapons Station Seal Beach Detachment (SBD) Concord. Both documents were dated January 23, 2001. Comments were not received from the State of California's, Environmental Protection Agency, Department of Toxic Substances Control (DTSC).

The Navy received five groupings of EPA comments on March 13, 2001. One RWQCB comment was received on March 14, 2001. The Navy has separated the comments and responses into six sections (A through F) and has renumbered each group using a letter section identifier for clarity.

The EPA invoked informal dispute on March 13, 2001 to resolve ongoing issues regarding the draft final FSP and QAPP documents. All remaining issues are included in the following agency comments. Based upon the April 17, 2001, meeting with the agencies, the Navy expects that the issues will be resolved with agency concurrence following the agencies review of these responses to their comments. As a result, the Navy has begun to revise the FSP and QAPP in accordance with the following responses to comments. Should the Navy's responses on any of the following issues fail to satisfactorily resolve agency concerns, the Navy requests immediate notification so that the final modifications to the FSP and final QAPP will be made to address agency concerns.

Most of the Navy responses to agency comments that follow were issued to the agencies in draft form during the remedial project managers (RPM) meeting of April 17, 2001; however, responses to comments for those issues directly related to program-wide quality assurance were not provided in draft form (see Section E below). Several of the Navy responses that follow have also been modified slightly from the April 17, 2001 draft responses to comments, per discussions at the RPM meeting.

SECTION A
NAVY RESPONSES TO EPA COMMENTS
FROM THE EPA'S REVIEW OF APPENDIX E OF THE DRAFT FINAL FSP

A1. **General Comment 1:** The RTC states that the FSP was revised to include additional sampling at SWMUs 1, 2, 7, and 18 to further define the extent and potential sources of VOC contaminants detected in groundwater both above and below screening criteria. However, as presented in Figure 2-5, (1) no sample locations are proposed at SWMUs 1 and 7, (2) no additional investigation is proposed near wells MW-11, MW-14 and MW178-5, (3) only one sample location is proposed for Buildings IA-8 (hazardous waste storage area) and the hazardous waste storage building at SWMU 2, and (4) no sample location is proposed directly downgradient of the sump at SWMU 18 and the Auto Hobby Shop (Building 193). The RTC to EPA's General Comment 5 states, "after [this] investigation is completed, where contamination is not detected in excess of the proposed screening

levels, the investigation of the area will be considered complete and without data gaps." In order to fill any potential data gaps, the FSP should be revised to add sample locations at the above-mentioned areas.

Navy Response: (1) The Navy has not identified any technical justification as to why Solid Waste Management Unit (SWMU) 1 requires further investigation. Only very low-level contamination (near maximum contaminant levels [MCL]) has been detected, and the contamination appears to be uniformly distributed in concentration and lateral extent. The source area is clearly upgradient and is not in the locale of SWMU 1. At SWMU 7, a mere 2 micrograms per liter (µg/L) of 1, 2 dichloroethane was detected during the investigation conducted under the Resource Conservation and Recovery Act (RCRA) Facility Assessment Confirmation Study (FFACS) at location 07-08. No volatile organic compounds (VOCs) were detected in samples nearby or at upgradient well number MW-7 after four quarters of monitoring.

(2) Additional investigation is proposed at grab groundwater sample locations 1, 4, and 5 near well MW-11 even though concentrations of 1,1-tetrachloroethene (PCE) in samples from this well occur at very low levels (7 µg/L). The Navy has not identified a technical justification as to why additional wells are necessary near existing well MW-14, within the golf course at the downgradient edge of the detectable plume (where concentrations of PCE are only 2 µg/L), or at well MW-178-5 at the lateral edge of the detectable plume (where total concentration of PCE plus trichloroethene [TCE] are only 3 µg/L).

(3) The consistently low concentrations of VOCs detected in samples collected near SWMU 1, SWMU 2, and Building 178 suggest a source that is well upgradient of these areas. Borings 1, 2, 3, 4, and 5, are situated to evaluate this hypothesis. If there is any significant release from the hazardous waste storage areas, it will be detected by the proposed downgradient borings. (Boring 5 can be relocated farther south, if desired).

(4) As discussed in the April 17, 2001, meeting, the Navy will relocate Boring 31 so that it is nearer the auto hobby shop (Building 193). Boring 25 is located downgradient of the sump at SWMU 18. Either area may be a significant source of VOC contamination, if samples from boring 31 and boring 25 contain VOCs, then these areas will then be further evaluated using step-out borings, as described in the FSP.

(5) The proposed screening levels are very low (MCLs). Where the investigation has been performed and concentrations do not exceed screening levels, it is appropriate that the investigation be considered complete and without data gaps. The Navy will consider any EPA proposal for additional sampling locations or relocated borings so that EPA can support the Navy's contention that lack of positive results constitutes a firm basis to discontinue investigation of a particular area.

A2. General Comment 3: The RTCs state that additional sample locations are proposed upgradient of SWMU 7. However, according to Figure 2-5, no additional sample locations are proposed

upgradient of SWMU 7. Please add additional sample locations at SWMU 7 downgradient of the Paint Shop (Building IA-16) and upgradient of this area as stated in the RTC.

Navy Response: The Navy's response concerning additional sampling upgradient of SWMU 7 for analysis of VOCs was intended to indicate proposed locations for samples 29, 30, and 31. The Navy acknowledges that these sampling locations are both cross gradient and upgradient. However, the Navy's previous sampling of SWMU 7 and historical research did not provide any reason to investigate areas directly upgradient of this SWMU. (Note that the area on the map labeled 161 is an open grass field [not a building] and that all other upgradient buildings were for domestic use and were formerly used as barracks, dining facilities, administrative offices, and recreational facilities.)

As a result of the April 17, 2001, RPM meeting, the Navy agreed to add the results of VOC analysis to Figure 2-7 of the FSP.

A3. **General Comment 5:** The EPA comment requested that the area near Buildings IA-51 and IA-38, and the area upgradient of MW-11, be further investigated. The RTC states that these areas were addressed. However, based on Figure 2-5, the two borings proposed near Building IA-38 are not placed downgradient of the building. Further, only one boring is proposed downgradient of Building IA-51, and the only boring proposed upgradient of MW-11 is approximately 300 feet away. Please provide the rationale for the placement of the two borings near Building IA-38, explain why one boring will be sufficient to characterize groundwater downgradient of Building IA-51, and add borings closer to MW-11 to determine the source of elevated PCE concentrations (above MCL) detected in groundwater detected at this well.

Navy Response: The Navy and EPA discussed the rationale for boring locations during the April 17, 2001, RPM meeting. In general, the locations for the investigation are dispersed to obtain general coverage of a large area, with the investigation concentrated more at locations downgradient of potential source areas. No additional locations for the investigation have been added to the FSP in response to this comment.

A4. **Specific Comment 7:** The RTC states that Figure 2-2 will be revised as suggested. However, Figure 2-2 does not show the location of the existing oil tank. Please include the location of the existing oil tank on Figure 2-2.

Navy Response: The existing oil tank at the southwest end of the building will be added to the figure.

A5. **Specific Comment 10:** The RTC states that VOC analytical results for soil borings 07-11 through 07-13 will be added to Figure 2-2. However, analytical results for soil borings 07-11 through 07-13 were not added to Figure 2-2. Please revise Figure 2-2 as originally requested.

Navy Response: The Navy's original response to this comment was incorrect. The analytical results for VOCs in samples from these borings could not be added to the figure because samples of soil or groundwater from these borings were not analyzed for VOCs.

A6. **Specific Comment 12:** The RTC states that analytical data from all twelve soil borings will be discussed in the FSP, and that all analytical results will be presented in figures. However, Figures 2-2 and 2-5 only show nine soil borings. Borings 18-03 through 18-05 installed along the storm drain outfall, south and east of Building IA-8 (hazardous storage area) are not shown. The samples from these borings were only analyzed for metals, not for VOCs. Since the storm drain outfall might be a potential source of VOCs, please show the storm drain outfall on Figure 2-2 and propose additional sample location along the outfall. Alternatively, please explain why an investigation along the storm drain is not warranted.

Navy Response: Although repeated and persistent disposal of VOCs at this location is possible, the Navy considers it unlikely because contamination downgradient is consistent with the source areas previously identified.

At the April 17, 2001, RPM meeting, the Navy agreed to an additional soil boring with a grab groundwater sample west of the ditch. The additional location was proposed to provide lateral delineation of the VOC plume in groundwater as well as to investigate the possibility of a previously unidentified upgradient source.

A7. **Specific Comment 13:** The RTC states that well MW-02 will be resampled and one monitoring well will be installed upgradient of SMWU 1. However, the FSP does not state that MW-02 will be resampled and that one monitoring well will be installed upgradient of SMWU 1, and the proposed location of the new well is not shown on a figure. In addition, it is unclear why only well MW-2 is proposed for re-sampling. It is recommended that all monitoring wells be resampled, since it appears that the last sampling event for some of the on-site monitoring wells at the SWMUs site was performed in 1995 (for the remaining monitoring wells, the last sampling event was in 1999).

Navy Response: The Navy agrees that resampling all wells is appropriate for long-term monitoring of the site. [redacted]

The EPA is correct that no location for a new well has been identified upgradient of SWMU 1. The Navy has reconsidered the RTC and does not now recommend an additional well upgradient of SWMU 1. Three locations are identified for grab groundwater samples.

In the April 17, 2001, RPM meeting, the Navy agreed that one additional round of groundwater samples from all Inland Area wells is appropriate, and will be included in the proposed sampling for the site. The FSP will be revised to include groundwater sampling for analysis of total petroleum hydrocarbons (TPH) at locations near the former underground storage tanks (UST) and at locations that have not been sampled previously for analysis of TPH.

A8. **Specific Comment 15:** The RTC states that the FSP will include a discussion of all analytes of potential concern from wells MW-09 and MW-10. However, the FSP does not include this discussion for MW-09 groundwater analytes.

Navy Response: Low concentrations of VOC were detected in samples from well MW-09. Please refer to Table 2-2 and Figure 2-2 for a listing of the analytes detected in samples from well MW-09. The Navy believes that additional discussion of the results in the FSP would not clarify or otherwise enhance the document. The Navy's original response to this comment should have stated that only analytes detected in samples from well MW-10 would be discussed.

A9. **Specific Comment 15:** The RTC states that the FSP will include a discussion of all analytes from well MW-11. However, the FSP does not include this discussion for groundwater analytes.

Navy Response: Please see the Navy's response to comment A8 above.

A10. **Specific Comment 20:** The RTC states that "the metals groundwater results discussion ...will be revised to remove the portion of sentence that states that "... detections are within range of ambient levels ..." However, the Draft Final FSP now states that the detected groundwater metals concentrations are "likely within background." Since the FSP refers to metals background concentrations, please include the metals background concentrations that were used to derive this statement in the FSP.

Navy Response: No study of background levels of metals in groundwater at Naval Weapons Station SBD Concord has been conducted. The qualitative statements in the FSP regarding background levels of metals in groundwater was based on review of analytical results and experience with other sites. The statement in the Draft Final FSP was based on historical site knowledge, professional judgment, and observed concentrations.

In the April 17, 2001, RPM meeting, the Navy agreed that the FSP should be revised to indicate the results for groundwater samples that are not filtered.

A11. **Specific Comment 22:** The RTC states that the FSP "will be revised to include a discussion of the topographical change (hillside) that occurs immediately east of MW-13 as the cause of the steep groundwater gradients and flow direction in this area." However, the FSP (Page 33) only states, "in the vicinity of monitoring well MW-13, which is located at the base of a hill east of SWMUs 5 and 18, the hydraulic gradient increases significantly." This statement does not indicate that the topography of the adjacent hill is the cause of the steep groundwater gradient and flow direction in this area. Please revise the FSP to include the information provided in the RTC.

Navy Response: The Navy proposes that the requested level of detail is uncalled for within the context of the field sampling plan. The Navy would be pleased to defer addressing the discussion of this topographical feature to the remedial investigation report.

A12. Specific Comment 26: The RTC does not address EPA's recommendation for using a bailer for the collection of grab groundwater samples to minimize sample disturbance and VOC volatilization. The RTC states that Section 2.5 of the SOP indicates that a peristaltic pump is an acceptable sampling device. However, the SOP also states that bailers are acceptable sampling devices and lists them first in the list of acceptable sampling devices (Page 9). Since the SOP for *Using the GeoProbe System* (Appendix B, Pages 30 and 31) states that "the preferred method for collecting samples for volatile organic analysis is to use a well mini-bailer," please revise the FSP to state that double-check valve stainless steel or Teflon bailers will be used to collect grab groundwater samples, in order to address EPA's concern regarding sample disturbance and VOC volatilization. Please revise Section 4.2 accordingly.

Navy Response: In accordance with EPA's request, a bailer will be used and Section 4.2 will be revised accordingly.

A13. Specific Comment 27: The RTC states that water entering the screened interval of the GeoProbe rod is formation water and that GeoProbe borings do not need to be purged before *grab* groundwater sample collection. However, the RTC also states that two gallons of groundwater will be removed from the GeoProbe sampling screen before a groundwater sample will be collected. Since the SOP for *Using the GeoProbe System* (Appendix B) does not describe the process of purging the boring before sample collection, it is recommended that the GeoProbe boring not be purged before grab groundwater sample collection. Please revise Section 4.2 accordingly.

Navy Response: At EPA's request, the Navy will not purge the Geoprobe borings.

A14. The RTC also states that groundwater samples from monitoring wells will be collected after three well casing volumes. However, groundwater samples collected from monitoring wells should be purged until the water quality parameters have stabilized. Since parameter stabilization is more important than the number of casing volumes removed, the FSP should be revised to state that groundwater samples from wells will be collected after the water quality parameters have stabilized, or until a maximum of five casing volumes have been removed.

Navy Response: At EPA's request, purging will continue until parameters stabilize or until five casing volumes have been removed.

A15. Specific Comment 28: The RTC states that observations concerning the quality and clarity of the water withdrawn will be recorded during the well development process. EPA originally requested that turbidity measurements be made to evaluate the success of well development. Since visual observation may not be as accurate as turbidity measurements, please revise the FSP to include a criterion for when to stop well development, based on reaching a specified turbidity level.

Navy Response: The Navy will use a standard turbidity meter and will not stop the well development process until turbidity measurements stabilize or until five casing volumes have been removed.

A16. Specific Comment 29: The RTC states that Table 2-1 will be revised to include analytical methods. However, the table was not revised. Please revise the table as originally requested.

Navy Response: The analytical test methods applicable to samples from Table 2-1 include the following:

1. Contract Lab Program (CLP) Volatile Organic Analysis (VOA) (modified for low-level detection limits)
2. CLP VOA (standard analysis, not modified)
3. Filtered CLP Metals
4. CLP Semivolatile Organic Analysis (SVOA) (modified for low-level detection limits)
5. CLP SVOA (standard analysis, not modified)
6. Total Petroleum Hydrocarbons as Gasoline (TPH-g) by EPA 8015modified
7. Total Petroleum Hydrocarbons as Diesel (TPH-d) by EPA 8015modified
8. CLP Pesticides and Polychlorinated Biphenyls (PCB)

These methods will be listed in the text of the FSP, but will not be included in Table 2-1.

A17. Specific Comment 30: The RTC states that Table 4-3 will be revised to include analytical methods. However, the table was not revised to indicate the EPA method rather than the CLP SOW number. Please revise the table appropriately.

Navy Response: The CLP Statement of Work (SOW) VOA method is listed in Table 4-3 and the method designation fully describes the analytical method proposed for soil and groundwater samples. The proposed CLP SOW VOA method of analysis is similar to EPA method 8260, but the two are not interchangeable.

A18. Specific Comment 31: The RTC states that Figure 2-2 will be revised to include the constituent(s) detected at well MWIA-17 at a concentration of 12 ug/l. However, the figure was not revised. Please revise the figure as originally requested.

Navy Response: The constituent is listed in the FSP in Appendix C. Methyl-tert-butyl-ether (MTBE) was detected at a concentration of 12 µg/L. The Navy will revise the figure.

A19. Specific Comment 33: The RTC states that the FSP will be revised to indicate the rationale for each proposed soil boring location. This rationale was not presented for each boring location. 7 To facilitate the review of the FSP, please include the rationale for the placement of each proposed sample location.

Navy Response: EPA is correct that the RTC states that the FSP will be revised to indicate the rationale for each proposed soil boring location. The Navy revised the FSP in response to this comment; however, it was revised in less detail than originally proposed.

The Navy's RTC should have stated that a general rationale would be provided. It is the Navy's determination that a detailed description of the rationale for each boring is unnecessary. The FSP includes a discussion of all known potential source areas. In addition to covering known potential source areas, the sampling plan is also intended to cover unknown areas. For this reason, the Navy proposes a high density distribution of borings in the vicinity of existing well MW-10, where potentially significant contamination has been detected.

SECTION B
NAVY'S RESPONSE TO GENERAL COMMENTS FROM EPA'S REVIEW OF THE DRAFT FINAL FSP

B1. The Draft FSP stated (Section 2.2, Page 4) that the facilities in the greater Tidal Area of the site were dedicated to ordnance operations. This statement was removed from the Draft Final FSP. Please clarify why the reference to ordnance operations was removed from the FSP.

Navy Response: The discussion of operations in the Tidal Area is not relevant to this Inland Area Report.

B2. The FSP (Page 10) states that building IA-16 was used as a Paint Shop. As presented on Figure 2-5, several soil borings surrounding this building were analyzed for metals, petroleum hydrocarbons and BTEX compounds. Since the soil has not been analyzed for VOCs and Building IA-16 was a Paint Shop, please include additional sampling location near this building for VOC analysis to fill this data gap.

Navy Response: Soil and groundwater samples collected in the vicinity of Building IA-16 have already been analyzed as a part of the RCRA Facility Assessment Confirmation Study (RFACS). Complete analytical results from that study are provided in the RFACS. The only area proposed for future investigation based on results from the borings at former SWMU 7 was in the vicinity of Boring 07-08.

At the April 17, 2001, RPM meeting, the Navy agreed that data for VOCs from the RFACS should be added to Figure 2-7 of the FSP. No additional modification of the FSP is proposed in response to this comment.

B3. The FSP (Page 12) states that analytical results from wells MW-1 through MW-6 at SWMU 1 confirmed the presence of VOCs. However, the analytical results for wells MW-2, MW-3, MW-4, and MW-6 are not included in the FSP and no grab groundwater sampling is proposed at SWMU 1. For completeness, please include the analytical results for all SWMU 1 wells in the FSP to better evaluate the proposed grab groundwater sampling locations. Based on these analytical results, it may be necessary to collect grab groundwater samples at SWMU 1.

Navy Response: Analytical results for samples from wells MW-1 through MW-6 are presented on Figure 2-2 and in the RFACS. Additional groundwater sampling at SWMU 1 is unnecessary, as described in response to EPA comment A1.

B4. The Draft FSP (Page 6) originally stated that a satellite hazardous waste storage area south of Building IA -7 housed 55-gallon drums until they were moved to the hazardous storage facility at Building 433. This statement was deleted, and the satellite hazardous waste storage area is not discussed in the Draft Final FSP. In addition, no grab groundwater sample locations are proposed south of Building IA-7. To better evaluate the proposed sampling locations, please include a discussion of soil sampling in the vicinity of Building IA-7, including analytical results and depth information, in the FSP. Based on these analytical results it may be necessary to collect grab groundwater samples south of Building IA-7.

Navy Response: Discussion of the satellite hazardous waste storage area will be reinserted in the text of the FSP. The storage area appears on Figure 2-5 of the FSP and is labeled "Hazardous Waste Storage Building." Proposed boring 1 is located downgradient of the area in question. Soil and groundwater samples will be collected from boring 1. Details on VOC sampling and analysis in the vicinity of SWMU 2 are presented in the RFACS.

B5. The rationale for placement of the proposed grab groundwater sample locations is unclear. For clarity, please indicate what potential source area or extent characterization each proposed sample location is supposed to address.

Navy Response: The locations of samples were discussed in the remedial project manager meetings prior to issue of the Draft FSP and the Draft Final FSP. Locations of samples are illustrated graphically on Figure 2-5. An in-depth discussion of the rationale for sampling each location is beyond the intended scope of the FSP and is therefore not recommended. Please see response to comment A19.

B6. The FSP (Page 20) states that the EPA Contract Laboratory Program required detection limit for the VOC analysis is 10 ug/l. However, the Maximum Contaminant Levels for Drinking Water (MCLs) for PCE, TCE, and DCE are less than 10 ug/l. In addition, groundwater analytical results listed in Table 2-1 show that for most of the groundwater sampling events, the detection limits were above the MCLs. Since the presence or absence of VOCs above MCLs at the site cannot be determined from the current data set, please ensure that the detection limits for the proposed and future groundwater sampling efforts will be below MCLs for the compounds of concern.

Navy Response: The discussion in the FSP (Page 20) noted by the EPA reviewer pertains to past work completed at this site. Table 4-4 of the QAPP indicates the contract-required quantitation limits (CRQL) for the proposed work. As indicated on Table 4-4, limits of detection at or below MCLs will be achieved for all VOCs except for the four VOCs with an MCL of 0.5 µg/L. The EPA contract-required detection limit for these constituents is 1µg/L. Any detected concentrations less than reporting limits will be reported but will be "J" flagged to indicate that the result is estimated.

The VOCs in question are vinyl chloride, 1,2-dichloroethane, carbon tetrachloride, and trans-1,3-dichloropropene. Of these, only 1,2-dichloroethane has ever been historically detected at the site. 1,2-Dichlorocthane was detected in 1995 at SWMU 7 from a single grab groundwater sample at a concentration of 2 µg/L. Specialized methods and additional cost would be required to reduce the detection limit from 1µg/L to 0.5 µg/L.

SECTION C
NAVY'S RESPONSES TO SPECIFIC COMMENTS FROM EPA'S REVIEW OF THE DRAFT FINAL FSP

C1. **Section 1.1, Page 2:** The FSP states that the sources of PCE and TCE, respectively, detected in groundwater from SWMUs 1 and 2 may be associated with an upgradient off-site source. It is unclear where the upgradient off-site source would be, since the property upgradient of SWMUs 1 and 2 (i.e., SWMUs 5, 7, and 18) are all Navy property. For clarity, please indicate where the upgradient off-site sources would be located or delete the statement regarding a potential off-site source from the FSP.

Navy Response: The term "off-site sources" in this context is not intended to refer to any properties outside the confines of NWSSBDC or that is owned by parties other than Navy.

C2. **Section 1.1, Page 4:** The FSP states that no further investigation is proposed because the elevated manganese and thallium groundwater concentrations are all likely background concentrations. Please include the groundwater background concentrations for manganese and thallium in the FSP for comparison.

Navy Response: Manganese and thallium were not consistently detected in groundwater samples at concentrations that exceed screening levels. Based on the lack of sources for manganese and thallium at the site and on professional judgment, the Navy finds no basis for continuing the investigation of these constituents. No background concentrations are available or established for direct comparison. Please see response to comment A10.

C3. **Section 1.2.1, Page 5:** The FSP states that the sources of: 1) PCE at SWMU 1, 2) TCE at SWMU 2, 3) VOC-affected groundwater at SWMU 7, and 4) TCE in groundwater at SWMU 18 require further investigation. However, according to Figure 2-5, no further investigation is proposed in SWMUs 1 and 7. In addition: 1) PCE detected in MW-11 and well 178-5 will not be further investigated, and 2) TCE detected at MW-8, MW-09, and MW178-5 will not be further delineated. Since groundwater VOC concentrations detected at SWMU 1 are not provided, the necessity for additional sampling locations at SWMU 1 cannot be evaluated. Please propose further sample locations in the above-mentioned areas or explain why no further sampling is warranted.

Navy Response: The Navy and EPA discussed the proposed investigation at the April 17, 2001, RPM meeting. It is the Navy's opinion that none of the additional investigation of VOCs

suggested in EPA's comment is justified by the low concentrations of VOCs present in the Inland Area. The Navy believes that the borings proposed are adequate to evaluate whether multiple sources are present, and the final FSP will be amended as described in these responses to comments.

C4. **Section 1.2.1, Page 6:** The FSP states that humans and aquatic organisms have been identified as potential receptors at the site; however, the aquatic receptors are not identified. Please provide more information regarding the receptors known or expected to be present at the site.

Navy Response: Specific aquatic receptors have not been identified. Although Seal Creek may receive groundwater from the Inland Area, exposure of receptors at Seal Creek is unlikely because of the very low concentrations of VOCs in the plume. Therefore, as discussed in the April 17, 2001, RPM meeting, aquatic receptors will not be discussed in the final FSP.

C5. **Section 1.2.5, Page 7:** The FSP lists the decision rules that will be applied to assess whether additional field investigation activities are required. For completeness, please also indicate what steps will be taken if VOC-affected soil is not encountered (i.e., the source of VOCs to groundwater is not found). In addition, please clarify that the "RWQCB screening criteria" mentioned in the first bullet are the 1995 Regional Water Quality Control Board Basin Plan Water Quality Criteria.

Navy Response: If VOC contaminated soil is not found, additional investigation would not likely be triggered.

C6. **Section 1.2.6, Page 8:** Step 6 of the DQO process should specify limits on decision errors. However, the FSP states that because data collection locations are based on professional judgment, a statistical model is not appropriate.

Step 6 of the DQO process should establish performance goals for the data collection design and should address the likelihood of obtaining false positive results (e.g., based on a false positive detection of VOCs above screening criteria, the Navy decides that the extent of VOCs has not been adequately defined and installs step-out borings) and false negative results (e.g., based on a false ND result, the Navy decides that the extent of VOCs has been defined). Please revise the FSP to indicate how decision errors will be minimized.

Navy Response: Decision errors will be minimized in two ways. First, these errors will be minimized through the use of the best available (most precise and accurate) sampling and analytical methods. In particular, required quantitation limits will be below screening levels for the principal contaminants of concern (see Table 4-4 of the FSP and the response to comment B6 above). Second, these decision errors will be minimized by the plan to use step-out borings. Part of this plan is to incorporate additional sampling in the area of results that are near screening levels. These areas have the greatest potential for false positive or false negative results. The DQO discussion in the FSP will be revised to incorporate this information.

C7. **Section 2.2, Page 10:** The FSP states hazardous chemicals were not used or stored in Building IA-51. However, the FSP goes on to state that a locomotive steam cleaning station was located southeast of and within Building IA-51. Since steam-cleaning operations could have involved the use of solvents, groundwater in the vicinity of Building IA-51 and downgradient of Building IA-51 should be investigated further. Please indicate whether the proposed sample location (number 25) is located downgradient of the former steam cleaning area.

Navy Response: Sample location 25 is downgradient of the former steam cleaning area and Building IA-51.

C8. **Section 2.2.1, Page 11:** The FSP states that the Navy suspected that the measured product found in well MW-01 was not representative of product floating on groundwater. This statement is unclear. Please clarify why it was suspected that the product measured in MW-01 was not product floating on groundwater.

Navy Response: The measured product thickness of 0.4 feet was assumed to be unrepresentative of actual conditions at the site. It is possible that the interface probe was clogged and provided an incorrect reading. However, after the well was bailed, a thickness 0.01 feet was measured.

C9. **Section 2.2.3, Page 14:** The FSP provides the history of activities that were performed in and around Building IA-12. However, it is unclear how the proposed sample locations address each of these areas (e.g., the locomotive and rail car steam cleaning area, oil/water separator, sump, manhole). Please clarify the rationale for placing the proposed sample locations shown in Figure 2-5 with respect to the areas listed above.

Navy Response: It is the Navy's opinion that the number of samples currently proposed is sufficiently ample to cover the subject areas. A description of the rationale for each sampling location would be beyond the intended scope of the FSP. The Navy requests that EPA propose the additional sampling locations necessary to sufficiently cover the site, or that additional recommended text for the FSP be provided. Please see the Navy's response to comment A19.

C10. **Section 2.2.3, Page 14:** This section is entitled "SWMU 5 - Building IA-12 and Building IA-43." However, Building IA-43 is not discussed in the text. Please include a discussion of activities associated with Building IA-43 in the FSP (as was done in the Draft FSP) and provide the rationale for placing the proposed sample locations shown in Figure 2-5 with respect to the hazardous waste storage and railcar steam-cleaning areas at Building IA-43.

Navy Response: The area of Building IA-43 is first introduced in the text on page 10 as the existing steam cleaning pad and wash rack. This area was identified in several RPM meetings before the FSP was submitted for review. On page 14, the locomotive and rail car steam cleaning area is identified in the FSP but is not called out as Building IA-43. The Navy will identify Building IA-43 more clearly in the future. A dense pattern of sampling locations is

proposed to thoroughly investigate the area because the exact location of former spills is unknown and there is evidence of potentially significant contamination at well MW-10.

C11. **Section 2.2.4, Page 15:** This section is entitled "SWMU 7 - Building IA-15 and Building IA-16." However, Building IA-15 is not discussed in the text. Please include a discussion of activities associated with Building IA-15 in the FSP (as it was done in the Draft FSP) and provide the rationale for placing the proposed sample locations shown in Figure 2-5 with respect to the metals, machine, weld, forge, and automotive repair shops at Building IA-15.

Navy Response: As noted by EPA, Building IA-15 included metals, machine, weld, forge, and automotive repair shops, and that these activities are not discussed in detail in the FSP. However, additional discussion of these activities in the FSP is unnecessary because the concentrations of VOCs in samples from downgradient wells MW-7 and MW-8 ranged from low to non-detect, and because Building IA-15 is not proposed for further study as part of the remedial investigation (RI).

C12. **Section 2.2.5, Page 17:** The FSP states that chromates were detected in Seal Creek in 1978 and that no additional information regarding the location of samples and concentrations detected has been found. Since the extent of chromates in SMUW 18 soils and groundwater is a data gap, please indicate how the Navy will address the characterization and potential remediation of chromates in the vicinity of Building IA-51. It is recommended that soil and grab groundwater sampling be conducted to characterize the presence and extent of chromates as part of the upcoming field effort.

Navy Response: The investigation of SWMU 18 included sampling at three locations within a drainage ditch downgradient of SWMU 18. Analysis of the shallow soil samples included metals to evaluate whether concentrations of zinc or chromium were elevated and were associated with potential zinc chromate or chromium spills. Neither zinc nor chromium was detected at concentrations above ambient levels in soil. The agency-approved RFACS work plan and subsequent agency-approved RFACS report did not include sampling within Seal Creek. As indicated in the RFACS, the source of information on the detection of chromates in samples from Seal Creek was the 1992 DTSC RCRA Facility Assessment (RFA). The source of the DTSC's information and sample locations and concentrations of detected analytes were not apparent from the RFA. The Navy believes that no data gap exists and that investigation of this portion of SWMU 18 is complete.

As indicated in response to comment A6, the Navy has agreed to add one soil boring with a grab groundwater sample in the area west of the ditch. The additional location is proposed to provide lateral delineation of the VOC contaminated groundwater plume, as well as to investigate the possibility of a previously unidentified upgradient source. Analysis for metals is not proposed.

C13. **Section 2.2.5, Page 17:** It is unclear how the proposed sample locations address potential source areas in SWMU 18 (e.g., the sump, steam cleaning area, splash wall, incinerator, and drop pit). For

clarity, please indicate how the above-mentioned areas will be addressed as part of the proposed sampling effort.

Navy Response: Investigation of soil at SWMU 18 was completed in the agency-approved RFACS. As described in the FSP, the groundwater investigation is to be conducted by means of the proposed boring location 25. If contamination in soil and groundwater is not detected in samples collected at boring location 25, the Navy believes that significant soil or groundwater contamination associated with former releases from the SWMU 18 area is unlikely.

C14. Section 2.2.6, Page 17: The FSP lists upgradient buildings that were investigated to evaluate potential VOC sources. However, this list does not include Building 161 to the northeast and Building IA-46 to the southeast. For completeness, please include these buildings in this evaluation.

Navy Response: There is no Building 161 at the site, and an irrigated grass landscape field is found at that location. Building IA-46 was investigated as SWMU 13 in the RFACS and the investigation was restricted to soil sampling. Because groundwater samples were not collected as a part of the investigation of SWMU 13, borings 27 and 28 are proposed downgradient of SWMU 13.

C15. Section 2.3.2, Page 20: The FSP compares arsenic and lead concentrations detected in SWMU 2 soils to ambient levels. However, the FSP does not include a reference where the ambient concentrations can be found, or an explanation for their derivation. In addition, on Page 30, the FSP states that soil samples were screened against Inland Area Sites 17 and 24 ambient levels. However, it is unclear why the Inland Area Sites 17 and 24 ambient levels are appropriate for this site.

Navy Response: Inland Area Sites 17 and 24 lie on the south slopes of Los Medanos Hills north of Seal Creek in a geologic setting similar to the Inland Area SWMUs under consideration. As a result of the similar geologic setting, the ambient concentrations developed in the FSP for Sites 17 and 24 are considered applicable to the Inland Area SWMU's. Please note that the estimated ambient concentrations are included as Appendix D of the FSP.

C16. Section 2.5, Page 29: The FSP discusses VOC results from monitoring wells at the site. However, the FSP only discusses results for MW-10, MW-11, and MWIA-17. Since VOCs were also detected at other wells, please revise the FSP to discuss all VOC detections (including J-qualified data) in monitoring wells at the site.

Navy Response: Please see Table 2-1 for a complete listing of the analytical results. Summary information in graphic form is presented on Figure 2-2. The Navy considers detailed discussion of all low-level analytical results unnecessary when the results are clearly presented in Tables 2-2 and on Figure 2-2.

C17. Section 2.5, Page 31: The units in the discussion regarding phenol detections in soil are ug/l. It appears that the correct units should be mg/kg.

Navy Response: As indicated in Appendix C of the FSP, the correct units are micrograms per kilogram (µg/kg).

C18. Figures 2-2, 2-5 and 2-7: The figures do not include a legend for one of the soil boring symbols. The symbol is a box with two dark triangles and two white triangles. Please include this symbol in the legend and indicate that this symbol represents the location of the UST excavation sidewall samples at SWMU 1.

Navy Response: The Navy will revise the figure accordingly.

C19. Figure 2-4: The groundwater elevation contour map does not show actual groundwater elevations. To better evaluate the depicted groundwater contours and the placement of the proposed sample locations with respect to potential source areas (i.e., downgradient), please include the measured groundwater elevations on Figure 2-4.

In addition, it appears that proposed grab groundwater sample location 5 is not placed directly downgradient of Building IA-8. Since the groundwater contour map was generated in July 1999, it is recommended that groundwater elevations be measured at the existing monitoring wells and an updated groundwater contour map be prepared prior to finalizing the location of grab groundwater samples, to ensure that the sample locations are downgradient of the potential source areas. Furthermore, it is recommended that sample location 5 be moved closer to Building IA-8, directly downgradient of the hazardous waste storage area.

Navy Response: Because of the number of wells and borings at the site, the Navy believes that the information requested would detract from the clarity of the figure. The Navy does not recommend modification of the figure in the FSP. Groundwater depth and elevation information will be presented in the RI report.

The general direction of groundwater flow at the site is not expected to vary significantly with time. The Navy therefore believes that measuring groundwater elevations again and preparing a new map would not identify an altered direction in groundwater flow and would unnecessarily delay the sampling proposed in the FSP.

At the April 17, 2001, RPM meeting, the Navy agreed to relocate sample location 5 to the south.

C20. Section 4.8, Page 27: The FSP states that monitoring well locations will be surveyed and that locations of soil borings and water samples will be measured relative to existing buildings but will not be surveyed. The same section in the Draft FSP stated that monitoring well locations, water sampling locations and soil sampling locations will be surveyed. It is recommended that instead of measuring borings and water sample locations relative to buildings, Global Positioning System

(GPS) instrumentation be used to more accurately characterize the location of potential source areas and to assess the extent of contamination.

Navy Response: As previously stated, wells will be surveyed and the distance of borings from existing buildings will be established with a tape measure. Neither surveying nor GPS instrumentation is necessary to establish the horizontal location of borings in the field for the proposed RI.

C21. Table 2-1: The table lists groundwater sampling results for SWMUs 1, 2, 5, 7, and 18. However, no analytical results for SWMU 1 wells (MW-1 through MW-6) are provided. In addition, no analytical results for wells MW178-2 through MW178-4 are provided. For completeness, please include a summary of all site-related monitoring wells in the table.

Navy Response: A summary of analytical results for all the locations requested in the comment is presented on Figure 2-2. For complete analytical results, please see the RFACS or the summary report for the former underground storage tank (UST) located at Building 178.

SECTION D
NAVY'S RESPONSE TO GENERAL COMMENTS FROM EPA'S REVIEW OF THE DRAFT FINAL QAPP

Many of the following comments from the EPA relative to the QAPP include comments with implications for all Navy work conducted in EPA Region 9. Because these comments are significant for so many Navy projects, a meeting was held on March 27, 2001 to discuss these program-wide comments. The following Navy responses refer to the March 27, 2001 meeting where applicable.

D1. The QAPP does not name the analytical laboratory or provide any laboratory specific information. It is understood that the laboratory specific information may not be available during the draft QAPP development. Additionally, laboratory standard operating procedures (SOPs) are not normally required for commonly analyzed methodologies. However, the remaining laboratory specific information should be submitted with, or as an addendum to, the final QAPP. Without this information, the adequacy of the chosen laboratory cannot be verified. In order to comply with EPA Requirements for QAPPs (QA/R-5), please revise the QAPP to ensure that laboratory specific information will be submitted with, or as an addendum to, the final QAPP. This information should include a list of analytical detection limits, chain of custody (COC) procedures, sample handling procedures from sampling through analysis and the frequency, acceptance criteria and corrective actions of all calibration and QC parameters. Also, ensure that laboratory specific information is submitted to EPA prior to initiating field sampling activities.

Navy Response: As described in the original response to EPA's comments, at the time that planning documents are developed, the identification of a laboratory that can meet the capacity and demands of the project schedule are unknown. The Navy contractor (TtEMI) has a blanket

purchase agreement with several laboratories. TtEMI has entered into these purchasing agreements with the laboratories using a rigorous qualification and selection process. The qualification and selection process promotes consistency between laboratories and assures that high quality data will be consistently obtained. The qualification and selection process includes the verification of appropriate SOPs and QA/QC practices.

The laboratory qualification and selection process relies on a standard procedure to evaluate and qualify laboratories for conducting work under an analytical services contract. The laboratory qualification process includes an evaluation of the laboratory's ability to adhere to Navy QA policy, as well as applicable EPA and state QA guidelines, as appropriate. TtEMI has contractually established standard requirements for all analytical methods that are most commonly performed under the CLEAN contract. These standard requirements parallel requirements that are established under the EPA Contract Laboratory Program and other requirements established for laboratories to maintain California State certification under the Environmental Laboratory Accreditation Program (ELAP). Standard method-specific target analyte lists, calibration requirements, and method performance requirements are specified.

In response to this continuing comment, the text of this and future TtEMI/Navy QAPPs will be modified to include a description of the laboratory qualification and selection process. Specific method performance and quality control information that is vital to EPA's understanding of the laboratory requirements, including required detection limits and quality control acceptance criteria for QC samples, will be specifically described in all future QAPP. This QAPP already includes much of the information requested, including CRQLs (Table 4) and acceptance criteria for QC samples (Table 5).

D2. The QAPP does not include a distribution list of all individuals and their organizations who will receive copies of this QAPP. However, in the Navy's RTC to EPA General Comment 5 on the Draft QAPP, the Navy stated that this distribution list will be included in the QAPP. This distribution list is necessary to document the QAPP users and to ensure that they receive all amendments, etc. Please revise the QAPP to include a distribution list as stated in the previous response and as required by EPA Requirements for QAPPs (QA/R-5).

Navy Response: Navy policy requires that a distribution list be included with the transmittal letter. To fulfill EPA's request, the Navy proposes binding the transmittal letter into the final QAPP.

SECTION E
NAVY'S RESPONSE TO SPECIFIC COMMENTS FROM EPA'S REVIEW OF THE DRAFT FINAL QAPP

E1. **Section 3.1.5, Step 5:** This section does not discuss the potential presence of elevated volatile organic compounds (VOCs) in soil overlying areas of uncontaminated groundwater. In the RTC to EPA Specific Comment 5, the Navy states that it is unlikely that active leaks have not migrated to

groundwater considering the age of the facility and current activities. However, no information has been submitted to support this statement. Without adequate supporting documentation, it does not appear that the possibility of contaminated soils overlying areas of uncontaminated groundwater can be eliminated.

Navy Response: Groundwater across most of the site is already contaminated; therefore, the Navy is unlikely to discuss soil contamination in the absence of groundwater contamination.

The Navy cannot provide specific information to support the statement regarding the likelihood that leaks would migrate to groundwater. In general, leaks and spills at the facility that are or were prone to contaminate groundwater have likely already done so because of (1) the age of the facility (about 60 years), (2) activities at Naval Weapons Station SBD Concord have decreased substantially in recent times, and (3) RCRA environmental controls have substantially reduced the likelihood that waste will be mismanaged.

E2. **Section 5.1.2, Equipment Blanks:** The RTC to EPA Specific Comment 8 and EPA's Quality Assurance Management Section Comment 4 on the Draft QAPP, is not acceptable. The RTC states that the Navy does not intend to collect a daily equipment blank as requested by EPA; instead, equipment blanks will be collected on a weekly basis. The Navy's statement in the RTC that recent equipment blanks are rarely positive does not appear adequate. While equipment blanks may have been acceptable on previous projects, site conditions, subcontractor staff and field equipment are likely not a constant.

Navy Response: At the March 27, 2001 meeting, this issue was discussed in detail from both the programmatic perspective and with respect to this individual project. At the programmatic level, it was mutually agreed that the purpose of equipment blanks is to assess whether cross-contamination is occurring from field sampling equipment and that daily equipment blanks are not always required to achieve this goal. Taking equipment blanks daily can be a waste of resources for projects involving a limited number of samples each day and when previous results using the same procedures and equipment have repeatedly shown no contamination. Further, a project in which equipment blanks are taken frequently (daily) during initial sampling events can rationally be followed by less frequent equipment blanks if contamination is not found and the equipment, procedures, and field personnel are essentially unchanged. Therefore, it will be Navy's position that all FSP/QAPPs under the CLEAN program will either specify at least daily equipment blanks or will justify an alternative schedule based on the type of considerations discussed at the meeting on March 27 and summarized above.

For this specific project, the Navy proposes daily collection of equipment blanks.

E3. **Section 5.1.4, Field Duplicates:** The RTC to EPA Specific Comment 9 on the Draft QAPP, and the text in Section 5.1.4, indicate that field duplicates will not be collected for soil samples due to the heterogeneous nature of soil. However, sampling adjacent areas is useful to quantify and document the spatial variability of the soil samples. Therefore, simply stating that soils are

heterogeneous and field duplicates will not be collected is not appropriate. Please revise the QAPP to include the collection of field duplicate samples as required by EPA.

Navy Response: At the March 27 meeting, this issue was discussed in detail both from the programmatic perspective and with respect to this individual project. At the programmatic level, it was mutually agreed that duplicate samples are fundamentally intended to be quality control samples and to provide estimates of sampling precision. It was further agreed that true duplicate soil samples are not practical to obtain and that the taking of adjacent soil samples as "duplicates" largely precludes the use of these samples for the originally intended quality control purpose. It was further mutually agreed that this type of soil "duplicate" sample provides information on spatial variability that may be useful for a specific project.

The Navy believes that any plan to take adjacent ("duplicate") soil samples in order to provide information on spatial variability should be developed as part of the setting of project objectives and the DQO process. Since no objectives relating to spatial variability were established for this project, the Navy does not intend to take soil "duplicate" samples.

E4. Section 6.0, Data Quality Management: This section does not present the records that will be kept with the analytical data, the secure location where the information will be stored, the length of storage for records other than analytical data, or the records custodian. The level of detail requested would add a minimal amount of text, approximately one or two paragraphs, to the QAPP. If the QAPP does not specify the records that will be retained, they may be lost and it may not be possible to "recreate" field or laboratory conditions observed during the project. Also, if the QAPP does not specify the secure location for the records storage or the records custodian, project records may be misplaced and/or future data users may not be able to locate necessary records. Therefore, please revise the QAPP to provide a list of all records that will be retained (e.g., audit reports, interim progress reports, final reports, corrective action forms, etc.), the length of time the records will be retained, the secure location and the records custodian as required by Section 3.2.9 of QA/R-5.

Navy Response: Document retention and storage practices are required of contractors for Navy contracts. TtEMI fulfills this obligation under the Navy's CLEAN II contract using a document storage and tracking system. The document storage and tracking system maintains the documents and a listing of documents for all projects under the CLEAN program. The documents and records pertaining to this project and all CLEAN projects are maintained both onsite at TtEMI offices and at offsite bulk storage facilities operated by a separate contractor specializing in document retention.

Under the CLEAN II contract, TtEMI is obligated to store all project documents and laboratory data until May 2011. At that time, all documentation will be made available to the Navy for continued storage, archiving, or destruction.

E5. Section 6.3, Data Validation: The QAPP does not provide for additional data validation should significant problems be encountered during the initial 20% validation. Without this information, it

is possible that data with significant QC exceedences may be reported and not qualified. Please revise the QAPP to ensure that additional data validation (i.e., an additional 10% if no further problems are found, another 10% if problems are also found in second set of samples, etc.) will be performed, for up to 100% of all samples, if significant deficiencies are encountered with the initial validated sample results.

Navy Response: If problems are encountered during the initial 20% full data validation, the Navy will take positive action. These actions will include either immediate corrective action or additional data validation. Section 6.3 of the QAPP will be revised to clarify this approach.

To clarify the Navy's position on this issue, it should be noted that the 20% full validation effort is intended to be a spot check for systematic errors or possible gross errors, and not just as a review of 20% of the data. If systematic or gross errors are found, then the gross errors are subjected to immediate corrective action by the laboratory for all potentially affected samples, not just the 20% reviewed. In the event of systematic or gross error, immediate corrective action for the entire project is more likely than additional data validation.

E6. **Section 7.1.3, Field Audits:** This section does not indicate the frequency with which field audits will be performed. However, in the RTC to EPA Specific Comment 17 on the Draft QAPP, the Navy stated that "technical systems audits of field sampling are performed on selected CLEAN projects at the discretion of the Navy QA Officer and contractor QA manager. An audit schedule is maintained and is available to EPA if desired." While this appears to be acceptable, for consistency with QA/R-5, it is suggested that the response text be added to QAPP Section 7.1.3 to document the field audit frequency. Please revise the QAPP to include the Navy's response to Section 7.1.3.

Navy Response: Section 7.1.3 of the QAPP will be revised to include the previous response, as suggested by this comment.

E7. **Table 5:** This table indicates that the listed accuracy and precision goals for VOCs may be superceded by laboratory specific limits. In addition, the Navy's RTC to EPA Specific Comment 22 stated that the goals listed in Table 5 for the project may differ from the laboratory precision and accuracy limits. Without laboratory specific precision and accuracy criteria, the validity of the method cannot be determined. While it is understood that laboratory specific precision and accuracy goals are not currently available, please revise Table 5 to ensure that the laboratory will meet or exceed the criteria stated in the QAPP. Alternatively, please submit laboratory specific precision and accuracy limits in the final QAPP or in a QAPP addendum.

Navy Response: The table will be modified and/or be corrected to delete this contingency. The original intent was to apply laboratory specific limits if they were more stringent than the listed limits.

SECTION F
NAVY'S RESPONSE TO COMMENTS

FROM RWQCB'S REVIEW OF THE DRAFT FINAL FSP

F1. Board staff would like to see that groundwater samples are collected in the area of petroleum-contaminated soil and analyses conducted for TPH, BTEX and MTBE. I understand that the Navy had conversations with Claudia Villacorta in August 2000 to the effect that petroleum-contaminated soil and groundwater associated with UST releases at the SWMU sites would be addressed under the Navy's UST Program. Notwithstanding this understanding, Board staff would like an analysis for petroleum-related contaminants to be conducted concurrently with the groundwater sampling proposed in this FSP.

According to the Navy's response to Ms. Villacorta's August 29, 2000 comments on the FSP, four USTs from the area of SWMU 7 were removed in January 1999. No information was provided in this response regarding the status of this investigation. What further investigations are underway to delineate petroleum releases at this and other SWMU sites?

Navy Response: Analysis of samples for benzene, toluene, ethylbenzene, and xylenes (BTEX) and MTBE is already proposed at all locations as a part of the CLP SOW VOA.

No TPH-g, TPH-d, TPH as motor oil (TPH-mo), BTEX, or MTBE was detected in any soil sample from drilling or in groundwater samples collected during all four consecutive quarters of 1999 from wells MW-7 through MW-14. The only TPH related detection in 1999 was from a water sample in well IA17 that contained 12 µg/L of MTBE.

The Navy proposes analysis of all soil samples for TPH from any boring location where there is field evidence to suggest TPH contamination of any portion of the boring. Field personnel will track all samples for evidence of TPH staining or odor. Field personnel will record the perceived absence or presence of TPH in samples on the lithologic logs of the borings.

At this time, 31 grab groundwater samples are proposed. TPH contamination is likely to be detected in only a fraction of these samples. The Navy proposes discussion of these locations with RWQCB in our proposed April 17, 2001, meeting to select all, or a portion of, these locations for TPH analysis.