DEPARTMENT OF THE NAVY
ENGINEERING FIELD ACTIVITY, WEST
NAVAL FACILITIES ENGINEERING COMMAND
2001 JUNIPERO SERRA BOULEVARD, SUITE 600
DALY CITY, CALIFORNIA 94014-1976

IN REPLY REFER TO:

14 March 2003

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

To: Distribution

Subj: **NAVY'S RESPONSE TO AGENCY COMMENTS ON THE DRAFT REMEDIAL INVESTIGATION (RI) FOR SWMUs 2, 5, 7 AND 18, NAVAL WEAPONS STATION SEAL BEACH DETACHMENT CONCORD, CALIFORNIA**

Encl: (1) Navy Responses to Regulatory Agency Comments, Draft Remedial Investigation for Solid Waste Management Units 2, 5, 7, and 18; Naval Weapons Station Seal Beach Detachment Concord, Concord, California, dated 18 October 2002

1. In accordance with Section 10.7 (e) of the Federal Facility Agreement (FFA), enclosure (1) is forwarded for your review and consideration for acceptance. As requested in the Navy's 7 February 2003 letter, this response to comments is being submitted by the requested new submittal date of 15 March 2003, while the Draft Final RI report will be submitted at a later date in order to allow inclusion of the results of additional site characterization that has been requested by the agencies. While no time period for review and acceptance of responses to comments received in advance of a draft final document is defined in the FFA, agency review and acceptance is requested by 14 April 2003.

2. If there are any questions or comments regarding the enclosure (1), please contact the undersigned at Telephone No. 650-746-7451.

Sincerely

STEPHEN F. TYAHLA, P.E., CHMM
By Direction

Distribution:
U.S. Environmental Protection Agency, Region 9 (Attn: Mr. Phillip A. Ramsey)
U.S. Environmental Protection Agency, Region 9 (Attn: Sonce de Vries)
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14 March 2003

Subj: NAVY'S RESPONSE TO AGENCY COMMENTS ON THE DRAFT REMEDIAL INVESTIGATION (RI) FOR SWMUs 2, 5, 7 AND 18, NAVAL WEAPONS STATION SEAL BEACH DETACHMENT CONCORD, CALIFORNIA

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RESPONSES TO REGULATORY AGENCY COMMENTS ON THE DRAFT REMEDIAL INVESTIGATION FOR SOLID WASTE MANAGEMENT UNITS 2, 5, 7, AND 18 NAVAL WEAPONS STATION SEAL BEACH DETACHMENT CONCORD

This document presents draft U.S. Department of the Navy's (Navy) responses to comments received from the U.S. Environmental Protection Agency (EPA); California Regional Water Quality Control Board (RWQCB), San Francisco Bay Region; and the California Environmental Protection Agency, Department of Toxic Substances Control (DTSC) on the "Draft Remedial Investigation [RI] for Solid Waste Management Units [SWMU] 2, 5, 7, and 18, Naval Weapons Station Seal Beach Detachment [SBD] Concord, Concord, California," dated October 18, 2002. The Navy received the comments addressed below from EPA on December 17, 2002; from RWQCB on November 12, 2002; and from DTSC on December 18, 2002.

RESPONSES TO COMMENTS FROM EPA

EPA General Comment 1	**The draft SWMUs RI Report requires an expanded discussion and description of past site operations involving waste generation, waste disposal, past site investigations, and removal actions completed. In general, U.S. EPA believes that the Navy site history discussion fails to provide a complete presentation of past activities at the site. Examples include the fire burn pit at Solid Waste Management Unit (SWMU) 2, where wastes were burned and later likely excavated and disposed in a drainage canal west of the site that leads to Seal Creek; the waste oil tank closed under Resource Conservation and Recovery Act (RCRA) at SWMU 5; a pesticide area where releases occurred and a clean up action was conducted near SWMU 18; and a former hazardous waste storage area (SWMU 16) near Building IA-46. As a stand alone document, the RI Report should document or at least summarize all past activities and not rely of the numerous past studies completed for individual source areas.**
Response	The Navy will include an expanded discussion of past site operations in the draft final RI report.
EPA General Comment 2	**The site description is also incomplete because there are no maps of subsurface utilities, even though utilities are discussed as potential conduits for contaminant migration. Also, the draft SWMUs RI Report should provide information on climate, soils, demographics and land use.**
Response	The Navy will expand the site description in the draft final RI report, including climate, soils, and land use. The Navy will also revise the draft final RI report to include a map illustrating the locations of sanitary and storm sewer utilities in portions of the site where the highest concentrations of volatile organic compounds (VOC) were detected in groundwater. Additionally, the Navy will revise the draft final RI report to clarify the potential role of buried subsurface utilities.

EPA General Comment 3	**The Navy should revise the draft SWMUs RI Report to document regulatory involvement in the planning process. The discussion in Section 1.2, Scope of Work, and Section 3.0, Field Investigation Approach, does not characterize U.S. EPA's role in resolving disagreements over a January 23, 2001, draft final Sampling and Analysis Plan (SAP) or set forth the Agency's recommendations to reach consensus and finalize the plan through a November 8, 2001, SAP Addendum. At a minimum, create a revised Section 3.0, entitled " Investigation Approach/Regulatory Involvement" and document and cite the Draft Final SAP, SAP Addendum, an October 1, 2001, SAP Informal Dispute Resolution meeting and U.S. EPA's January 15, 2002, work plan approval letter.**
Response	The Navy will revise the draft final RI report, as requested.
EPA General Comment 4	**The Navy must classify groundwater beneficial use following Federal Groundwater Classification Guidelines. U.S. EPA Program staff has determined that the groundwater meets the federal definition of a current drinking water supply, based upon the existence of the Contra Costa Water District production wells at Mallard Reservoir (even though not recently used) and possible residential wells in the community of Clyde. Also, the aquifer meets the definition of a drinking water supply based upon an estimated yield and total dissolved solids (TDS) concentrations (less than 10,000 mg/l), per Federal Guidelines. As a result, U.S. EPA's drinking water Maximum Contaminant Levels (MCLs) are Applicable and Relevant and Appropriate Requirements (ARARs).**
Response	The Navy will revise the draft final RI report to include discussion of the Federal Groundwater Classification Guidelines. The Navy will include an evaluation of applicable and relevant or appropriate requirements (ARARs) in the feasibility study (FS) report.
EPA General Comment 5	**Similarly, U.S. EPA does not believe the draft SWMUs RI has adequately documented the use of groundwater in the general vicinity of Concord Naval Weapons Station, which includes current use of groundwater for irrigation at the Diablo Creek Golf Course, potential use of groundwater for irrigation and possibly drinking water by residents in Clyde, nor past use by Contra Costa Water District. For completeness these current and past uses should be better described, assessed and mapped.**
Response	The Navy will revise the draft final RI report to include a description of the Mallard Reservoir wells and the Golf Course well. The locations of these wells will be shown on a figure and the revised text will include a discussion of the potential use of groundwater at the wells.

An additional well may exist near Naval Weapons Station SBD Concord property (identified as the Conco well) and the Navy will add the location of this well to a figure in the draft final RI report.

The Navy has discovered that prior to 1960, the Town of Clyde received its drinking water from a well located adjacent to Naval Weapons Station SBD Concord property near the northwest corner of the town. Although this well has apparently been capped (specific details on it's closure status are unknown to the Navy), its former location will also be added to the draft final RI report.

The Navy initiated a request for well records from Contra Costa County for the Town of Clyde. The request to Contra Costa County was denied because of security issues. As a result, details about other wells in the Town of Clyde were unavailable and could not be included in the draft final RI report. Although the information is not available, it is not considered a data gap for the following reasons:

1. Drinking water is currently supplied to the Town of Clyde by Contra Costa County Water District.

2. Based on review of site topography, the Town of Clyde is located on the western flank of the western end of the Los Mendanos Hills. The lowest elevation contours in the Town of Clyde lie at the western end of the town between about 20 and 25 feet. The alluvial plain to the west has elevations that vary from 5 to 15 feet. The most likely direction of groundwater flow through the Town of Clyde is to the west, as implied by surface topography.

   The contaminated groundwater plume in the Inland Area at Naval Weapons Station SBD Concord flows in a westerly direction from its point of origin. The groundwater flow direction takes the plume toward the lowest lying ground in the area, which is centered on Seal Creek. From that point, ground surface topography suggests that groundwater flow would be directed to the northwest.

   The Town of Clyde is located at least 25 to 30 degrees north of the direction of groundwater flow from the site. This direction, in combination with the fact that the town is located on the flanks of the Los Mendanos Hills, suggests that it is very unlikely that groundwater would flow diagonally across the ground surface topography toward an area with higher ground surface elevations. Thus, it is highly unlikely that the Town of Clyde is located downgradient from the site

3. Concentrations of tetrachloroethene (PCE) in groundwater within the Inland Area of Naval Weapons Station SBD Concord attenuate from the maximum detected value of 102 micrograms per liter (µg/L) to 5 or 6 µg/L within about 600 feet. The Town of Clyde is located about 5,000 feet from the 100-µg/L concentration of PCE. Even if the Town of Clyde was located directly downgradient and 5,000 feet from the site, it is highly unlikely that detectible VOCs would be present in groundwater at that location.

EPA General Comment 6

U.S. EPA notes that a large number (156 out of 158) of volatile organic compound (VOC) soils samples had non-detected levels of contamination. Analysis of so many samples may not have represented the most efficient use of DoDs financial resources for this investigation (these 'non-detects' may represent as much as $50,000 in analysis costs). U.S. EPA Program staff would have considered modifications to the approved sampling plan, including a short term archiving of VOC samples pending groundwater grab and TPH soil results, with an resulting elimination of some of the required VOC soil samples, had the Navy considered such discussions with the regulators. However, U.S. EPA noted reluctance from the Navy in sharing preliminary data even after the analysis was completed. This delay in coordination and communication may have resulted in a less efficient investigation.

Response

The Navy completed the investigation of the site as outlined in the EPA-approved sampling plan (EPA 2001, TtEMI 2001a, 2001b, and 2001c). The Navy worked collaboratively and extensively with the agencies to develop the approved plan. The Navy also carefully considered the cost for this investigation. As just one example, the Navy procured a laboratory that provided the sample analyses at a cost of about half of EPA's estimate.

Data were not reviewed with EPA during the field program due to logistical constraints to complete the field program and analyses. The holding time for VOC analysis is 14 days. Preliminary data for presentation to the agencies was only available after the field work and analyses were complete.

Preliminary sampling results were presented to the agencies during the June 2002 RPM meeting.

However, the Navy is open to consideration of modifications in investigation techniques for future projects to enable the EPA more access to preliminary data, especially given the willingness expressed by the comment for EPA to perhaps agree to less extensive analyses should preliminary results support such a change. Data can be made available for rapid review to enable the fine-tuning of an investigation. While such methods do provide more flexibility in the design of an investigation, there are additional costs, which can be significant, when expediting lab analyses to accommodate decision-making needs during field events. To be successful, the process, deadlines, and rapid turnaround analytical testing would need to carefully evaluated and then detailed in the project sampling and analysis plan.

EPA General Comment 7

Despite considerable resources spent assessing subsurface soil contamination via the collection of soil samples, U.S. EPA does not agree with the Navy that all significant potential source areas have been assessed. U.S. EPA recommends that the Navy consider conducting an active soil gas survey at the locomotive wash rack/steam cleaning area and the waste oil tank areas (SWMU 5) where elevated VOCs were detected in groundwater. The soil gas information may prove beneficial in evaluating an active remedial action alternative (air sparging/soil vapor extraction) as part of the FS analysis of alternatives.

Response

The Navy will perform additional characterization of the site to address EPA's concerns. The Navy will revise the draft final RI report to include the results of additional analyses. The Navy will meet with EPA to discuss the extent of the additional sampling requested.

EPA General Comment 8

Quality Assurance/data validation documentation appears incomplete. The data validation reports do not explain what the data were qualified for and if there are any limitations to the data. At the minimum a detailed narrative of how the data was validated, by whom, and information to interpret the data validation reports should be provided.

Response

The Navy will revise the draft final RI report to include a complete data quality summary report.

EPA General Comment 9

As part of the FS scoping and identification and analysis of remedial action alternatives, U.S. EPA recommends that the FS include and analyze the following additional action alternatives: air sparging/soil vapor extraction, accelerated bioremediation using slow release compounds, and pump and treat. Institutional Controls (ICs) that protect against the use of groundwater must also be included, and are typically analyzed both on their own and in combination with the other remedial action alternatives.

Response	The Navy plans to review the most appropriate technologies and alternatives to be included in the FS with the regulatory agencies. However, discussion of appropriate technologies is not a required element of the RI; therefore, it will be removed from the draft final RI report.
EPA General Comment 10	**While geochemical data was collected in order to evaluate monitored natural attenuation (MNA), the report does not provide any clear conclusions regarding the reaction rate or effectiveness of this process. U.S. EPA notes limited concentrations of VOC break-down products down-gradient of monitoring well MW-10 and the locomotive wash rack/waste oil tank source areas, even though total VOC concentrations appear to decrease with distance. As indicated in the Conclusions, "VOC concentrations have remained relatively consistent at the Site over time". Also, please clarify if sufficient chemical data have been collected to estimate for the FS the time required for contaminant concentrations to attenuate to below MCLs.**
Response	The Navy believes that sufficient information has been collected to indicate that natural attenuation is occurring at the site. The Navy will estimate the rate of natural attenuation for the FS report to estimate the time required for chemical concentrations to attenuate below maximum contaminant levels (MCL).
EPA General Comment 11	**U.S. EPA notes numerous grammatical and typographical errors. A technical proof-reading of future deliverables prior to transmittal to the regulators and the public is recommended. A few examples include: 1) the text on Page ES-3 appears to be missing a word, it currently reads "Chemical concentrations in soil and pose minimal risk to ecological receptors."; 2) at the bottom of page 18, the word " exiting" should be replaced with the word "existing"; 3) the fourth sentence of Section 4.2.2.2 appears to be missing a word, it currently reads, " PCE and TCE were generally detected at relatively concentrations the cis and trans 1,2-DCE " ; and 4) in the heading for Section 5.1, the word volatile is misspelled.**
Response	The Navy will complete a full editorial review of the draft final RI.
EPA General Comment 12	**For readability and given the primary focus on CERCLA contaminants (more specifically volatile organic compounds or VOCs), U.S. EPA requests a rearrangement in the order of contaminant discussions. Please present the various discussions of data in the order of VOCs followed by total petroleum hydrocarbons (TPH).**
Response	The Navy will incorporate this suggestion into the draft final RI report, as requested.

EPA Specific Comment 1	**Section 1.2, Scope of Work: The discussion of Agency involvement in work plan development and approval needs significant revision and should be described in a separate section. At a minimum, create a revised Section 3.0, entitled "Investigation Approach/Regulatory Involvement". As part of the narrative please document and cite the Draft Final Work Plan, Work Plan Addendum, the RI Work Plan Informal Dispute Resolution meeting held on October 1, 2001, and U.S. EPA's RI Work Plan approval letter dated January 15, 2002.**
Response	The Navy will incorporate this change in the draft final RI report, as requested.
EPA Specific Comment 2	**Section 2.2, Site History: Please add that Naval Weapons Station Seal Beach Detachment Concord was added to the National Priority List (i.e., became a Superfund Site) on December 16, 1994, and that a Federal Facilities Agreement was signed by the Navy and U.S. EPA in June 2001.**
Response	The Navy will incorporate this suggestion into the draft final RI report, as requested.
EPA Specific Comment 3	**Section 2.3.1, Solid Waste Management Units 2,5,7, and 18: On page 5, briefly describe what Buildings IA-7, 114, IA-17, IA-18, IA-48, IA-37, IA-38, IA-51, and IA-52 were used for to support the Navy's determination that hazardous chemicals were not used or stored there.**
Response	The Navy will incorporate this suggestion into the draft final RI report, as requested.
EPA Specific Comment 4	**Section 2.3.2, Operations Area: In the second paragraph on page 6, U.S. EPA suggests that a term such as "dismantle and backfill of the turntable pit" replace "removal" to avoid any confusing regarding the non-CERCLA action taken at this area.**
Response	The Navy will incorporate this change in the draft final RI report to avoid the word "removal" in this context.
EPA Specific Comment 5	**Section 2.3.2.1, SWMUs 2, Building IA-7: U.S. EPA notes this site discussion is extremely limited and excludes any discussion of a non-CERCLA removal action taken at the fire burn pit, where soils were possibly excavated and deposited in a drainage channel west of the site that leads to Seal Creek. It was in this general area that an additional boring was located at the insistence of U.S. EPA. Please provide additional text regarding this possible historical release.**

Response	Unfortunately, only limited additional information is available regarding prior activities at the alleged fire burn pit. The Navy will revise the draft RI report to include the available additional information. Based on review of Naval Weapons Station Seal Beach Detachment (SBD) Concord documents, DTSC is the original source of information about alleged burning and disposal practices in the area. The document identifying DTSC as the source was the Resource Conservation and Recovery Act (RCRA) facility assessment (RFA) dated 1992. The DTSC's source of information is not referenced in the RFA. The Navy is not aware of any removal action ever performed at the site, nor is the Navy aware of any actions beyond those described in the draft RI report.
EPA Specific Comment 6	**Section 2.3.2.2, SWMUs 5, Buildings IA-12 and IA-43: Regarding the waste-oil tank removed at Bldg. IA-12, please present a summary of analytical data collected during the tank investigation(s) and document any soils removal action(s) completed. Also, indicate residual contaminant concentrations, as this area does appear to have a groundwater impact (the second highest groundwater detections were identified at SB024, slightly down-gradient from the tank site).**
Response	The Navy will incorporate this change in the draft final RI report, as requested.
EPA Specific Comment 7	**Section 2.3.2.2: Last paragraph indicates that Building IA-43 is a covered locomotive steam cleaning area; however Figure 2 and Figure 3 indicate that an adjacent Quonset hut is Bldg. IA-43. Please correct this discrepancy. Also detail how waste water generated at the wash rack is pre-treated (wastewater clarifier/ separator) and discharged. As the locomotive wash rack/steam cleaning and the waste oil tank areas appear to be associated with the most significant groundwater contamination at the SWMU sites, U.S. EPA requests that these areas be given a more thorough analysis and presentation of data, which would include appurtenant piping and utility systems (past and present).**
Response	The text will be revised to accurately state building names. The steam cleaning facility is Building 269. When the facility was operational, wastewater was directed to pass through an oil/water separator before discharging to the sanitary sewer. The Navy will revise the draft RI report to include this information. Additionally, the Navy will revise the report figures to include buried utilities in the area.
EPA Specific Comment 8	**Section 2.3.2.3, SWMUs 7, Buildings IA-15 and IA-16. Please illustrate on Figure 2 the approximate location of the sump referenced on page 8.**
Response	The Navy will add the location of the sump to the figure if drawings can be found at the public works office at Naval Weapons Station SBD Concord.

EPA Specific Comment 9	**Section 2.3.2.4, SWMUs 18, Bldg. IA-51, Steam Cleaning Facility, and Locomotive Turntable: Please make sure the statement on page 9 ("[b]efore the early 1960s, a zinc chromate rust inhibitor was added to motor antifreeze and waste antifreeze was disposed of by a contractor") is consistent with earlier RCRA reports for this SWMU. Also, please clarify if the Navy has design information regarding the "drop pit" located adjacent to the former locomotive turntable. Lastly, U.S. EPA understands a pesticide storage area near SWMU 18 had a RCRA clean up action conducted (plus a documented release of chemicals to an adjacent grazing area) and there was a hazardous waste storage area near Building IA-46. Please document in the SWMUs RI Report these areas and closure actions (described in a June 1992 RCRA Report and U.S. EPA in our work plan approval letter dated January 15, 2002).**
Response	The text is consistent with the 1997 RCRA Facility Assessment Confirmation Study Report prepared by TtEMI. If details regarding the drop pit design are available from the public works office of Naval Weapons Station SBD Concord, they will be described in the draft final RI report. The Navy will revise the draft RI report to describe the interim RCRA corrective action at SWMU 16 and the existing hazardous waste accumulation area at Building 433.
EPA Specific Comment 10	**Section 2.3.2.4: The text states, "after the early 1960s, antifreeze, which was believed to be free of chromates was typically discharged to the ground and into storm drains," and later states, "chromates were detected in Seal Creek in 1978", but does not discuss whether the storm drains discharge into Seal Creek. Please discuss whether storm drains discharged into Seal Creek and provide a map that includes storm drain lines and discharge points.**
Response	The Navy will illustrate the location of storm drain discharges on a figure in the draft final RI report.
EPA Specific Comment 11	**Section 2.4.1.1, SWMU 1, Previous Investigation: The text states that tetrachloroethene (PCE) detected at concentrations of 5 to 6 micrograms per liter (µg/L), was "below the EPA Contract Laboratory Program (CLP) required detection limit of 10 µg/L". It appears that there is confusion about the terms "reporting limit" and "detection limit." The text should state that this detection is below the CLP required reporting limit. Concentrations between the detection limit and the reporting limit are typically J-qualified (i.e., are estimated values). Also, it is unclear why it is relevant to discuss the CLP reporting limit when the detection of PCE is above the MCL. Please revise the text to state that the detection is below the CLP required reporting limit, or remove this statement from the text and simply report the PCE concentration.**
Response	The Navy will remove discussion of the Contract Laboratory Program (CLP) reporting limits from this section in the draft final RI report.

EPA Specific Comment 12	**Section 2.6.3, Groundwater Basin Plan: The Navy characterizes groundwater as a potential groundwater supply only using State of California criteria. Based upon Federal Groundwater Classification Guidelines, Program staff believes the groundwater also meets the Federal definition of a current drinking water supply aquifer. The SWMUs RI Report should either confirm this determination or explain why it does not believe it meets Federal criteria. For an existing or potential drinking water supply, MCLs are Applicable or Relevant and Appropriate Requirements (ARARs).**
Response	Please see the response to EPA general comment 4.
EPA Specific Comment 13	**Section 4.1.2, Groundwater Flow and Hydraulic Gradients: Please indicate to what extent the Navy has considered the impact of Diablo Creek Golf Course irrigation well(s) on groundwater flow direction. For example, please indicate if the operational frequency and pumping rates of irrigation well(s) at the adjacent area has been considered.**
Response	Only one irrigation well is present at the Diablo Creek Golf Course. This well is the sole source of irrigation water for the golf course. The well pumps about ¾ of a million gallons per day during the hottest summer months and pumps only a small quantity of water for most of the wet winter months. Based on the four quarters of groundwater measurements previously taken in the Inland Area of Naval Weapons Station SBD Concord, no significant change has occurred in the direction of groundwater flow from summer to winter.
EPA Specific Comment 14	**Section 4.1.2: The text states that the water level in MW-13 indicates the well is artesian, but does not provide a basis for this conclusion. An examination of the hydrogeologic cross-section (figure 6) does not reveal why this well is artesian, but there may be other wells up-gradient that provide information regarding this condition. Please discuss whether any up-gradient wells provide useful information to explain why MW-13 is artesian.**
Response	Well MW-13 is known to be an artesian well because water flows from the well at the ground surface without pumping when its sealed well cap is removed. The Navy will revise the draft RI report to describe the observed flow condition at MW-13. Water levels have been measured in the past at this well by connecting a watertight extension pipe to the well and allowing the groundwater level to stabilize above the ground surface. When left undisturbed with a riser pipe, groundwater eventually stabilizes about 2 feet above the ground surface. The artesian conditions at MW-13 are due to a hydraulic confining layer of relatively impermeable clayey soil. No wells are located upgradient of MW-13.

EPA Specific Comment 15	**Section 4.2.2, Groundwater Sample Results: The text states that "Tables 9 and 10 present detected concentrations of TPH and VOCs (specifically PCE, [trichloroethylene] TCE, and cis- and trans-1,2-DCE), respectively," but Table 10 has analytical results for compounds other than the ones listed in the parenthetical comment. Please delete the parenthetical comment or revise it to accurately describe the content of Table 10.**
Response	The Navy will incorporate this change in the draft final RI report, as requested.
EPA Specific Comment 16	**Section 4.2.2.2, Volatile Organic Compounds in Groundwater: The concentrations of specific analytes cited in the text do not match the values in Table 10. The text states that "concentrations of PCE ranged from...to a quantifiable concentration of 102 µg/L in the sample collected from MW-10," but the maximum concentration listed in Table 10 is 100 µg/L. Similarly, the maximum concentration cited in the text for cis-1,2-dichloroethene is 5.6 µg/L, but the concentration in Table 10 is 6.5 µg/L. Also, the maximum concentration cited for trans-1,2-dichloroethene was 3.8 µg/L, but the concentration in Table 10 is 4 µg/L. Please resolve these discrepancies.**
Response	The Navy will review the data and resolve such discrepancies in the draft final RI report.
EPA Specific Comment 17	**Section 4.2.2.2: It is unclear why PCE was not detected in the groundwater sample collected from SB-10. It appears possible that the depth at which the groundwater sample was collected at this boring location was different than the depths from which grab groundwater samples were collected in nearby borings, but there is no information provided in the draft SWMUs RI Report regarding sampling depths. Please discuss whether there are any contaminant concentration trends relative to the depth at which groundwater samples were collected, and provide sampling depth information in Tables 3 and 10.**
Response	Identical sampling techniques were used for all borings in accordance with the procedures detailed in the approved sampling and analysis plan (TtEMI 2001a, 2001b, and 2001c). The Navy consistently collected groundwater samples from borings and wells at a depth of at least 1 foot from the groundwater surface. Each well or boring was sampled only once, so there is insufficient data to evaluate the effect of groundwater sampling depth. In the draft final RI report the Navy will provide a table including the depth of each groundwater sample.
EPA Specific Comment 18	**Section 4.2.2, Groundwater Sample Results. This discussion seems very brief and should be expanded to provide additional discussion of the data and the areal extent of groundwater contamination (ie., approximate volume and/or number of gallons of contaminated groundwater).**

Response	The Navy will revise the draft RI report to further explain the distribution of VOCs detected in groundwater. The Navy prefers to delay calculating volume estimates until preparation of the FS report begins, when calculated results would be useful in evaluating specific areas and determining the cost or duration of potential remediation.
EPA Specific Comment 19	**Section 4.2.3, Natural Attenuation Parameters in Groundwater: The text states that nitrite was sampled as part of the natural attenuation parameter suite, but it does not appear that there are nitrite results in Table 12 or in Appendix A. Please resolve this discrepancy.**
Response	The results of the nitrite analysis did not appear in Appendix A, Table A-2, of the draft RI report because nitrite was not detected. The Navy will include nondetected nitrite results in the draft final RI report.
EPA Specific Comment 20	**Section 5.1, Potential Sources of Volatile Organic Compounds and TPH: The text discusses the potential that "underground sewer lines and utility corridors" were preferential migration pathways, but with the exception of the conceptual site model, there is no figure depicting the location of underground utilities. Please provide a figure that shows underground utilities.**
Response	Please see the response to EPA general comment 2.
EPA Specific Comment 21	**Section 6.0, Qualitative Human Health Risk Screen (3rd paragraph): The reason for using residential preliminary remedial goals (PRGs) is not to add a level of conservatism, but rather to evaluate unrestricted land use. This same comment also applies to Section 6.4 (2nd paragraph).**
Response	The Navy will revise the draft RI report, as requested.
EPA Specific Comment 22	**Section 6.4, Perform a Screening Evaluation and Table 16, Comparison of Maximum Detected Concentrations in Groundwater with Screening Levels for Protection of Human Health: As part of our review, U.S. EPA used "Draft Guidance for Evaluating Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils" (November 2002) (this guidance can be found at http://www.epa.gov/correctiveaction/eis/vapor.htm). Include in Table 16 a column comparing the screening value from the referenced guidance to the maximum detected groundwater values. In doing so, the Navy will find that PCE and TCE fail the screen, based upon a residential land use; therefore, the groundwater concentrations represent a future indoor air risk for residential reuse. Conclusions need to reflect this evaluation. This information supports the inclusion in the FS of an IC alternative analysis.**

Response

The Navy will add a column to the table in the draft final RI report, as requested.

Please note that PCE and trichloroethene (TCE) fail the screen in the EPA's draft guidance report because the screening values set by the EPA are equal to the MCLs for these chemicals. These MCLs were established to protect human health from potential ingestion of groundwater containing these chemicals. The MCL concentration values are not related to the potential risk associated with the groundwater to indoor air pathway; therefore, are inappropriate screening values for this pathway.

Although the draft final RI report will include the requested MCL screening values for PCE and TCE, please note that Table 16 of the Draft RI report includes RWQCB's indoor air screening values for these chemicals. The Navy believes that the RWQCB's screening values for these chemicals are more appropriate for the assessment of risk from indoor air.

EPA Specific Comment 23

Section 7.0, Screening Level Ecological Risk Assessment for COPECs in Soil and Groundwater (page 45): The text states that the screening-level ecological risk assessment (SLERA) would assess potential risk associated with exposure to chemicals of potential concern in groundwater. However, the text on page 47 states that there is not a direct exposure pathway from groundwater to ecological receptors. The text in Section 7 should be revised to clearly reflect that the only potential exposure pathway for exposure of ecological receptors to groundwater contamination is via discharge from groundwater to Seal Creek, which is at least several hundred feet away from any significant groundwater contamination.

Response

Section 7.5 of the draft RI report explains the potential ecological risk at Seal Creek. For clarity, the Navy will revise the draft RI report to explain that the only potential exposure pathway for groundwater is through discharge from groundwater to Seal Creek, as indicated above.

EPA Specific Comment 24

Section 7.0 (page 46): The text states that no fish or invertebrate surveys have been conducted at Seal Creek, but "based on habitat characteristics," their presence is expected. To aid the reader in understanding the ecological setting, please provide a specific description of the characteristics of Seal Creek that lead the Navy to believe that fish and invertebrates are present.

Response

The Navy will revise the draft RI report to indicate that the habitat characteristics of Seal Creek. These include the unaltered, natural makeup of the stream combined with flowing water during the rainy season and areas of ponded water during drier months. There is no reason to suspect that fish and invertebrates are not present during the rainy season. The assumed presence of fish or invertebrates is the most conservative assumption available.

EPA Specific Comment 25	**Section 7.3, Risk to Terrestrial Invertebrates: In the absence of a soil screening benchmark to evaluate exposure of invertebrates to toluene, the SLERA uses trinitrotoluene as a surrogate. This approach is not appropriate; trinitrotoluene does not have chemical or toxicological properties similar to those of toluene. Please remove this comparison from the report, and remove the statement that "toluene is below effects levels reported in the literature". Instead. The report should discuss the potential effects of both toluene and xylene qualitatively. This brief discussion could refer to the comparison of the detected concentration at the site (0.003 mg/kg) to the available benchmark for terrestrial plants (200 mg/kg).**
Response	The use of trinitrotoluene as a surrogate for toluene will be removed from the draft final RI report. Instead, available toxicological information on toluene and xylene will be presented qualitatively and more appropriate benchmarks will be presented.
EPA Specific Comment 26	**Section 9.1, Summary: The text sates that the detection concentration of PCE was 120 µg/L, but this concentration does not match the number cited elsewhere in the text, tables or figures. Please resolve this discrepancy.**
Response	The correct value is 102 µg/L. The Navy will correct the typographical error in the draft final RI report.
EPA Specific Comment 27	**Section 9.2, Conclusion: As indicated above, U.S. EPA does not agree with the Navy and believes that the locomotive wash rack/steam cleaning and waste oil tank areas at SWMU 5 represent potential ongoing source areas that have not been sufficiently characterized. U.S. EPA recommends that the Navy consider conducting an active soil gas survey at these areas to provide additional data necessary to evaluate an air sparging/soil vapor extraction alternative in the FS.**
Response	The Navy intends to perform additional investigation to determine if residual sources exist at the site. The Navy will revise the draft final RI report to include the results of the additional field investigation. Please note that the wash rack/steam cleaning area was rebuilt in 1995 to better collect and properly handle potentially contaminated rinsate. Washing, steam cleaning, and maintenance of locomotives and railcars is no longer conducted in the Inland Area of the Naval Weapons Station SBD Concord. The draft RI report will be revised to describe that railcar and locomotive maintenance activities are no longer conducted at the site.

EPA Specific Comment 28	**Section 9.3, Recommendations: At this time, based upon the information presented, U.S. EPA cannot concur with the Navy recommendation to sample only monitoring wells MWIA-17, MW-3, MW-7, MW-9, MW-10, MW-12, and MW-14. Wells MW-02 and MW-12 need continued monitoring and the Navy should consider additional well(s) within the groundwater plume (near SB004 and SB024).**
Response	The Navy will remove the recommendation for future monitoring of specific wells from Section 9.3 of the draft final RI report. The Navy will discuss the appropriate wells to monitor with EPA before collecting additional groundwater samples.
EPA Specific Comment 29	**Figure 1, Regional Location Map: This map is fairly limited in regional features. For example, the map should include Contra Costa Water District - Mallard Reservoir, Diablo Creek Golf Course, any know irrigation and/or production wells (including those at Mallard Reservoir, the golf course, and residential community of Clyde), major highways and residential areas.**
Response	The Navy will revise the draft RI report to include a figure depicting Mallard Reservoir, Diablo Creek Golf Course, known irrigation and/or production wells, major highways and residential areas.
EPA Specific Comment 30	**Figure 2, General Site Location Map: This map should indicate the building function in addition to building number. In the text this information should also be described. Also in this figure please add the former locomotive turntable and "sump pit" at SWMU 18, the paint locker and sump at SWMU 7, and better illustrate the drainage channel leading from SWMU 2 to Seal Creek.**
Response	The Navy will include a figure with the requested information in the draft final RI report.
EPA Specific Comment 31	**Figure 3, Site Conceptual Model: This figure correctly shows a Quonset hut - building adjacent to the locomotive wash rack/steam cleaning area at SWMU 5, labeled Building IA-43; however, text on page 7 indicates Bldg. IA-43 is the steam cleaning area. Please correct this discrepancy. Also, similar to comments on Figure 2, please add the former locomotive turntable and sump pit at SWMU 18 and drainage channel at SWMU 2 to Figure 3. Also please clarify why buildings in the vicinity of Building IA-46 are outlined in red.**
Response	The Navy will revise the draft RI report, as requested. The red outline on the figure will be removed in the draft final RI.

EPA Specific Comment 32	**Figure 4, Site Plan Showing Borehole and Monitoring Well Locations: Please add the location of the Diablo Creek Golf Course irrigation well(s). Also, it would improve the illustration if the monitoring wells that were sampled and slug tested were better identified.**
Response	The Navy will revise the draft RI report to show the location of the golf course irrigation well. Section 3.3 of the draft RI report discusses hydraulic testing of the wells, and Section 3.2.1.2 of the draft RI report lists the wells sampled. Most borings and wells on Figure 4 were sampled. A figure in the draft final RI report will indicate which wells and borings were sampled and slug tested.
EPA Specific Comment 33	**Figure 5, Site Plan Showing Hydrogeologic Sections: U.S. EPA recommends that one additional cross section be included C - C') that would present the hydrogeology through monitoring well MW-10 (the well with the highest groundwater contamination) in a northwest - southeast direction.**
Response	The Navy will include a new cross section in the draft final RI report, as requested.
EPA Specific Comment 34	**Figures 6 and 7, Hydrogeologic Cross Sections: These figures intersect at well MW-9, but the cross-sections do not show the same lithologic units in the vicinity of MW-9. Please revise the cross-sections to show the same units at MW-9. Also, on Figure 6, it appears monitoring well MW-2 was not included; please correct.**
Response	The Navy will revise the draft RI report, as requested.
EPA Specific Comment 35	**Figures 6 and 7: The descriptions of lithology in the legend are misaligned on these figures. As a result, the boxes with the main lithologic units are mislabeled and it looks like the light color represents sand and the darker color represents silt and clay. Please correct.**
Response	The Navy will correct the draft RI report, as requested.
EPA Specific Comment 36	**Figure 8, Site Potentiometric Surface Map. The single groundwater potentiometric map for the draft SWMUs RI Report provides an extremely limited presentation of groundwater flow direction data. At a minimum include all existing groundwater flow direction data/maps prepared to date for the site.**
Response	The Navy will add an appendix in the draft final RI report that will include previous groundwater flow direction maps prepared for the site.

EPA Specific Comment 37	**Figure 9, TPH Analytical Data for Soil: Several values are qualified with a D or an H, but these qualifiers are not defined in the legend. Please provide definitions for the D and H qualifiers.**
Response	The Navy will add definitions for D and H qualifiers to the draft final RI report.
EPA Specific Comment 38	**Figures 9 and 11 (TPH data). As indicated in general comments, for better readability and report priority please present the TPH figures after the VOC data.**
Response	Navy will revise the draft RI report, as requested.
EPA Specific Comment 39	**Figure 12, VOC Analytical Results for Groundwater and Table 10: Please reconcile figure and table data for MW-10, that show different PCE concentrations.**
Response	The results in Table 10 were rounded, while the results on Figure 12 were not rounded. The Navy will revise the draft RI report to be consistent throughout.
EPA Specific Comment 40	**Figures 13 and 14, PCE and TCE Concentrations in Groundwater. In addition to the dot-plot data presentations, these figures should be expanded to show groundwater iso-concentration contours.**
Response	The Navy will revise the draft RI report to include an iso-concentration contour of 10 µg/L on these figures.
EPA Specific Comment 41	**Tables 3 and 10: The depth at which the groundwater samples were collected should be specified in these tables. This will allow any discrepancies in the data to be evaluated.**
Response	The draft RI report will be revised to include a table of groundwater sample depths.
EPA Specific Comment 42	**Appendix A, Table A-2, Summary of groundwater Analytical Results. Please note that a new MCL for arsenic will be 10 µg/L, when it officially goes into effect on January 23, 2006. U.S. EPA recommends in the interim that the 10 µg/L concentration be used for a screening value.**
Response	The Navy will add the 10 µg/L screening concentration to the draft final RI report, as requested.

RESPONSES TO COMMENTS FROM RWQCB:

RWQCB General Comment 1	**Board Staff is concerned that the high detections of Total Petroleum Hydrocarbon (TPH) diesel and gasoline in soils were detected near a sewer line on the south side of Building IA-12. This area needs to be integrated in the Basewide Stormwater Pollution Prevention Plan. The source and potential linkage of this soil contamination need to be determined. The Navy needs to succinctly discuss in this report how the TPH data will be integrated into the planned Site Characterization and Analysis Penetrometer (SCAP).**
Response	Because petroleum hydrocarbon remediation is not conducted under the Installation Restoration Program, the Navy will address this comment under the Navy's underground storage tank (UST) program.
RWQCB General Comment 2	**The Navy makes the argument that the groundwater sample results "may not actually be of like quality" (p 28) due to turbidity interference to sample analysis. It is unknown to Board Staff if a statistically supported causation was found between sample turbidity and VOC concentration to support this statement. Furthermore, it is unknown to Board Staff if the air sealed samples were filtered prior to analysis.**
Response	The conclusions and recommendations of the draft RI report were not based upon any supposition that grab groundwater samples might be biased higher. The use of the word "may" was intended to suggest uncertainty. The Navy, and most state and federal regulatory agencies, do not consider grab groundwater samples to be as representative of hydrologic conditions as groundwater samples collected from wells. Therefore, the sentence was written to reflect a potential difference even though actual differences are uncertain. It is the Navy's opinion that sample bias, if any, tends toward higher analytical results for grab groundwater samples than for groundwater samples from properly developed and purged wells. Air-sealed samples were not filtered in the field or the laboratory prior to analysis.
RWQCB General Comment 3	**Due to the fugacity of Volatile Organic Carbons (VOC) compounds the Navy needs to illustrate how atmospheric gas exchange was minimized during soil and groundwater samplings in order to preserve sample integrity.**
Response	The samples were collected using a peristaltic pump as described in the draft RI report and outlined in the RI work plan (TtEMI 2001a, 2001b, and 2001c). Discharge from the pump tube was fed directly to volatile organic analysis (VOA) vials that were filled full, without air bubbles, and sealed.

RWQCB General Comment 4	**It is essential to Board Staff, the Navy reports why (1,1,1,2 and 1,1,2,2) Tetrachloroethane (TCA) concentrations were not reported during this soil and groundwater characterization effort. Furthermore, the Navy needs to indicate which isomers were sampled/ reported for groundwater quality screening purposes.**
Response	The Navy did not report VOCs (such as tetrachloroethane) and semivolatile organic compounds because they were not detected during the investigation. The Navy will revise the draft final RI to include the full list of detected and non-detected analytes for each sample.
RWQCB Specific Comment 1	**RWQCB Specific Comment No. 1: Executive Summary, p ES-3: Please identify the upgradient source of VOCs at SWMU 2.**
Response	The Navy will revise the Executive Summary of the draft RI report to include a description of the upgradient source of VOCs at SWMU 2.
RWQCB Specific Comment 2	**Section 2.4.1.2, Solid Waste Management Unit 2, p 11: The Total Petroleum Hydrocarbon ranges (TPH) detected in the soils and groundwater at the site need to be reported.**
Response	The Navy will revise the draft RI report to include the requested analytical results.
RWQCB Specific Comment 3	**Section 2.4.1.3, Solid Waste Management Unit 5, p12: The term "gas" needs clarification. Is the Navy referring to TPH-g (gasoline) or gaseous compounds?**
Response	"Gas" in this paragraph refers to TPH-g. The Navy will revise the draft RI report to clarify the definition.
RWQCB Specific Comment 4	**Section 2.4.1.4, Solid Waste Management Unit 7, p 12: Please clarify the sentence: "TPH-d was detected in of the several soil samples."**
Response	The Navy will correct the typographical error in the draft final RI report.
RWQCB Specific Comment 5	**Section 3.2, Field Sampling Program, p 19: In a Board Staff letter dated December 7th 2001, a recommendation was made to sample soil and groundwater for MTBE. The Navy needs to elucidate why this analyte was not reported in the report.**

Response	Methyl tertiary butyl ether was included in the list of chemicals analyzed, but none was detected in any sample. The summary tables included results for samples with detected chemicals only. The Navy will add the full analytical results to the draft final RI report, as indicated in the response to RWQCB general comment 4.
RWQCB Specific Comment 6	**Section 3.2.1.2, Monitoring Well Groundwater Sample Collection, p 22: Board Staff was not able to locate analytical results generated by the sampling of GCW-1 in the subsequent analytical tables. Please provide this data for review.**
Response	VOCs were not detected in GCW-1. The Navy will revise the draft RI report to include all nondetected results, as discussed in the response to RWQCB general comment 4.
RWQCB Specific Comment 7	**Section 4.2.3, Natural Attenuation Parameters in Groundwater, p 31: It is incorrect to generalize that an aerobic environment is preponderant at the site. Anaerobic conditions indicated by low Oxygen Reduction Potential (ORP) and Dissolved Oxygen (DO) were found directly downgradient of IA-43 where field data indicate some of the highest VOC concentrations.**
Response	The statement was meant to indicate that aerobic conditions are more prevalent at the site when considered as a whole. Lower concentrations of dissolved oxygen in an aerobic environment at locations near the spill tend to indicate that biodegradation is taking place.
RWQCB Specific Comment 8	**Section 4.3, Aquifer Testing Results, p 33: The Navy needs to map the results (hydraulic conductivity, groundwater velocities) of the aquifer slug testing.**
Response	The hydraulic conductivity and groundwater velocities for each slug test will be provided on a new figure in the draft final RI report.
RWQCB Specific Comment 9	**Section 5.2.1, Volatilization of Contaminants to the Atmosphere, p 35: It is incorrect to assume that VOC "venting to either outdoor or indoor air is generally inhibited by pavement and by concrete floors within buildings." This volatilization pathway needs to be appropriately characterized to protect human health.**

Response

The Navy considers volatilization to be an active transport pathway as stated in the text of the draft RI report in Section 5.2.1 and in Section 6.4. Although the Navy considers pavement and concrete floors to inhibit (but not prevent) volatilization to indoor air, the effect of pavements and concrete floors was not taken into consideration in evaluating the pathway. This pathway was screened using the RWQCB's risk-based screening levels for indoor air (presented on Table 16 of the Draft RI report). To avoid future confusion in the draft final RI report, the Navy will alter the text of the Site Conceptual Model to avoid discussion of pavement and concrete slabs.

RWQCB Specific Comment 10

Section 7.5, Risk to Fish and Aquatic Invertebrates, p 51: Board Staff recommends including Seal Creek in the proposed monitoring program for the chemical of potential concern investigated in this report.

Response

The Navy does not believe that monitoring of VOCs at Seal Creek is warranted by potential risk from observed concentrations in groundwater. The concentrations of VOCs in groundwater at the site near SWMU Site 1 are between about 5 and 6 μg/L. The MCL for drinking water that contains PCE is currently 5 μg/L. The analytical method detection limit for PCE and TCE is 1 μg/L.

(1) Please consider the following hypothetical example, which demonstrates that collection and analysis of VOCs in Seal Creek will not show detectable concentrations of PCE or TCE. Because the following example is hypothetical only, it is not based on actual or presumed flow conditions in Seal Creek. For the purpose of the example only, assume the following:

(2) That the groundwater plume containing PCE intersects the Seal Creek drainage channel and a portion of that groundwater flows directly into the Seal Creek channel and commingles with the creek flow.

(3) That Seal Creek above the groundwater plume flows at a volume of 5 liters per second and that creek water flowing into the plume area contains no PCE concentrations.

(4) That the Seal Creek flow volume increases to 6 liters per second as a result of the contribution of groundwater from the plume area. An increase of 1 liter per second within the plume area represents a 20 percent gain in the Seal Creek flow rate from the contribution of the plume.

(5) That the plume contains PCE at a concentration of 6 μg/L, where it meets Seal Creek.

Given the above assumptions, for each second of mixing, 5 liters of clean creek water will mix with 1 liter of groundwater from the plume that contains 6 μg of PCE. After mixing, the 6 μg of PCE will be contained in 6 liters of creek water. The resulting concentration of PCE in Seal Creek is 1 μg/L.

Under this hypothetical scenario, PCE in Seal Creek is:

- Not detectable.
- Legal for human consumption (only with respect to PCE) because it does not exceed the MCL of 5 μg/L.
- Considered to pose little or no risk to ecological receptors (please refer to Table 17 in the draft RI report).

The above example presents an extremely conservative scenario for the potential contamination of Seal Creek and the actual conditions at Seal Creek are very unlikely to resemble the above hypothetical example. Even in this extremely conservative hypothetical scenario, the existing PCE groundwater plume is not a significant concern for Seal Creek.

The actual groundwater recharge to Seal Creek from the area of the groundwater plume likely contributes a very small fraction of a percent, if anything, to the overall flow volume of Seal Creek and not a 20 percent increase as assumed in the above hypothetical example. Because the above example represents a gross overestimation of the potential for the plume to contribute flow to Seal Creek, and because the hypothetical example results in little risk to Seal Creek, the actual discharge of PCE to Seal Creek must present even less risk than the hypothetical example.

Because the contaminated groundwater plume is unlikely to pose a significant risk to Seal Creek, the Navy does not recommend inclusion of Seal Creek in a future VOC sampling program.

RWQCB Specific Comment 11 — **Figure 4, Site Plan Showing Borehole and Monitoring Well Locations: Well GCW-1 needs to be mapped on this figure.**

Response — The Navy will revise the draft RI report to include the location of the irrigation supply well referred to as GCW-1.

RWQCB Specific Comment 12 — **Figure 5, Site Plan Showing Hydrogeological Sections: Board Staff recommends adding a third hydrogeologic cross section C-C' spanning soil borings locations 09 and 24. This map would provide crucial information linking site contaminants distribution and hydrogeology.**

Response	The Navy will revise the draft RI report to include a third cross section as requested by the EPA and the RWQCB. The new cross section passes through monitoring wells MW-9 and MW-10, close to the location of soil borings SB09 and SB24.
RWQCB Specific Comment 13	**Table 15, Comparison if Maximum Detected Concentrations in Soil: The locations, depths and sampling dates at which these maximum concentrations were detected need to be indicated in the table.**
Response	The Navy will revise the draft RI report to include the requested information.
RWQCB Specific Comment 14	**Table 16, Comparison if Maximum Detected Concentrations in Groundwater: The locations, depths at which these maximum concentrations were detected need to be indicated in the table.**
Response	The Navy will revise the draft RI report to include the location of the maximum detected concentrations, as requested. The depth of groundwater samples will be added to a table in the draft final RI report.
RWQCB Specific Comment 15	**Appendix C, Aquifer Slug Testing Procedures and Results: Please include Aqtesolve observation data generated by the pressure transducer lowered in MW-7.**
Response	The Navy will revise the draft RI report to include the missing information.
RWQCB Editorial Comment 1	**Executive Summary, p ES-1: The executive summary would gain clarity if sampling locations were referenced to the maps found in the report.**
Response	The Navy will revise the draft RI report to reference the figures, as requested.
RWQCB Editorial Comment 2	**Acronyms/ Abbreviations Glossary: Following IUPAC nomenclature, please modify the spelling of PCE to Tetrachloroethene.**
Response	The Navy will correct the spelling in the draft final RI report.
RWQCB Editorial Comment 3	**Section 2.3.2.1, Solid Waste Management Unit 2 – Building IA-7: Please indicate where Building 433 is located on a map.**
Response	The Navy will revise the draft RI report to include the location of Building 433.

RWQCB Editorial Comment 4	**Section 2.3.2.3, Solid Waste Management Unit 7 – Building IA-16: The Underground Storage tanks locations in the proximity of all the SWMUs should be indicated by a different color code on all the figures where analytical results are reported.**
Response	The Navy will highlight or shade UST locations on one or more figures in the draft final RI.
RWQCB Editorial Comment 5	**Section 2.3.2.5, Solid Waste Management Unit 1 – Building IA-6: Please label SWMU-1 and map Building IA-6 UST sites.**
Response	The Navy will revise the draft RI report, as requested.
RWQCB Editorial Comment 6	**Table 13, Aquifer Slug Test Results SWMU 2, 5, 7 and 18 Investigation: Please map MW-112 outlined in the well name column or correct the spelling of this location.**
Response	The Navy will correct the typographical error in the draft final RI report.

RESPONSES TO COMMENTS FROM DTSC:

DTSC General Comment 1	**Soil borings were used exclusively to determine the extent of volatile organic compounds (VOCs) in soil. This strategy may have produced a false negative. Results of soil boring data reported nearly 100% non-detect for VOCs in soil. However ground water data could not rule out the possibility of VOC sources areas. The experience of DTSC at other similar sites has been that soil gas surveys have been more reliable in locating or ruling out the presence of VOCs in the soil.** **DTSC recommends that potential source areas be identified and soil gas surveys be performed. The benefits of soil gas surveys are as follows:** **a. Confirmation or repudiation of soil boring data.** **b. Development of a more complete data set for a more reliable feasibility study (FS) and risk assessment.**
Response	The Navy will perform additional site characterization using a soil gas survey for the draft final RI report.

DTSC General Comment 2	**The FS alternatives recommended include no further action, active ground water remediation, and monitoring. DTSC recommends that the scope of the FS be broadened to include other possible remedial actions. Suggested additions to the FS include institutional controls and source reduction.**
Response	The FS will be developed in consultation with the agencies. The Navy will remove the recommendation to evaluate specific alternatives from the draft final RI report. Please note that the monitored natural attenuation alternative must include institutional controls and that the mentioned active groundwater remediation is a means to achieve source reduction. The Navy looks forward to the discussion of other technologies and alternatives during the FS process.
DTSC Specific Comment 1	**Section 2.3.1 identifies buildings IA-7, 114, IA-17, IA-18, IA-48, IA-37, IA-38, IA-51, and IA-52 as support facilities that had no storage or use of hazardous chemicals. Please provide documentation to support this declaration.**
Response	The Navy will revise the draft RI report to include additional information about the operational histories of these buildings.
DTSC Specific Comment 2	**Section 2.4.1.1 states that at SWMU 1 tetrachloroethene (PCE) was detected at 5 to 6 µg/L. The Report further states that this is below the EPA contract laboratory program detection limit of 10 µg/L and infers that these concentrations are trivial. The text fails to acknowledge that the PCE concentrations at SWMU 1 are at or above the maximum concentration level (MCL). Please provide discussion regarding the significance of the CLP detection limit when the concentrations exceed the MCL.**
Response	The Navy will remove the reference to CLP detection limits from the draft RI report. The Navy will also revise the section to indicate an MCL of 5.0 µg/L for PCE. Although the detected concentrations are low, the Navy does not mean to infer that the concentrations are trivial.
DTSC Specific Comment 3	**Section 4.1.2 states that monitoring well (MW) 13 is an artesian well. Please provide a discussion regarding this phenomena and how it relates to the ground water gradient.**
Response	Please see response to EPA Specific Comment 14.
DTSC Specific Comment 4	**Section 4.2.2 discusses VOCs, including PCE, cis-1,2-dichloroethene, and trans-1,2-dichloroethene. The concentrations listed in the discussion are not consistent with those provided in table 10. The inconsistencies appear to be typographical, please revise for accuracy and consistency.**

Response	The Navy will revise the draft RI report to correct inconsistencies.
DTSC Specific Comment 5	**Section 4.2.3 discusses nitrate sampling. Please provide the results of nitrate sampling.**
Response	The results of nitrate sampling are presented in Table 12.
DTSC Specific Comment 6	**Section 5.1 discusses the possibility of underground utility conduits serving as potential pathways for contamination. No other references or details are submitted to support this hypothesis. The Report should include a more elaborate discussion of these conduits, possibly tying them to potential source areas. A map referencing these conduits should also be included.**
Response	Please see the response to EPA general comment 2.
DTSC Specific Comment 7	**Section 9.1 indicates PCE was reported a 120 µg/L. This reported level is supported in text or tables please revise.**
Response	The Navy will correct the typographical error in the draft final RI report.
DTSC Specific Comment 8	**Figures 6 and 7 (cross sections) meet at monitoring well (MW) 9. The lithology at MW 9 is inconsistent on each figure. Please insure that the lithology on each figure is consistent.**
Response	The Navy will revise the draft RI report for consistency between these two figures.
DTSC Specific Comment 9	**Figure 9 indicates sampling qualifiers as D and H. Please provide a notation in the legend as to what the D and H qualifiers are.**
Response	The Navy will revise the draft RI report to include the requested notation.

REFERENCES

U.S. Environmental Protection Agency. 2002. "Conditional Approval on Inland SWMUs RI Work Plan Addendum, Concord NWS." January 15.

Tetra Tech EM Inc. (TtEMI). 2001a. "Draft Final Quality Assurance Project Plan, Remedial Investigation for Groundwater, SWMU Sites 1, 2, 5, 7, and 18, Naval Weapons Station Seal Beach Detachment Concord, California." January 23.

TtEMI. 2001b. "Draft Final Field Sampling Plan, Remedial Investigation for Groundwater, SWMU Sites 1, 2, 5, 7, and 18, Naval Weapons Station Seal Beach Detachment Concord, California." January 23.

TtEMI. 2001c. "Addendum to Draft Final Field Sampling Plan and Quality Assurance Project Plan, Remedial Investigation for Groundwater at SWMU Sites 1, 2, 5, 7, and 18, Naval Weapons Station Concord, California." November 8.