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IN REPLY REFER TO:

5090.3
Ser 052GAR/026
20 June 2002

From: Commanding Officer, Engineering Field Activity West, Naval Facilities Engineering Command
To: Distribution
Subj: RESPONSE TO AGENCY COMMENTS ON THE REVISED DRAFT FINAL ROD, SITES 13 & 17, NAVAL WEAPONS STATION, SEAL BEACH DETACHMENT, CONCORD
Encl: (1) Response to Agency Comments, Revised Draft Final Record of Decision, Inland Area Site 13 and Site 17, Naval Weapons Station, Seal Beach Detachment, Concord California
Ref: (a) EFA West letter: 5090.3, Serial 052GAR/027, dated 20 June 2002, w/enclosure

1. Enclosure (1) is forwarded for your information and records.
2. In accordance with Section 10.2 (a) of the Federal Facility Agreement (FFA), enclosure (1), the Navy's response to the agency comments on the Revised Draft Final Record of Decision for Sites 13 and 17 is provided.
3. Reference (a) forwarded the Record of Decision for Inland Area Sites 13 and 17.
4. If there are any questions or comments regarding enclosure (1), I may be contacted at (650) 746-7451.


GILBERT A. RIVERA
By Direction

Distribution:

U.S. Environmental Protection Agency, Region 9 (Attn: Phillip Ramsey)
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RESPONSE TO AGENCY COMMENTS
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This document presents the U.S. Department of the Navy's (Navy) responses to comments from the U.S. Environmental Protection Agency (EPA) and the California Regional Water Quality Control Board, San Francisco Bay Region (RWQCB) on the Revised Draft Final Record of Decision (ROD), Inland Area Site 13 and Site 17, Naval Weapons Station, Seal Beach Detachment, Concord, California, dated October 30, 2001. The California Department of Toxic Substances Control (DTSC) did not submit comments on this version of the ROD.

The Navy, EPA, DTSC, and RWQCB met on February 13, 2002, to discuss the following comments to determine how the ROD should be revised prior to signature. Many of the following issues were resolved in the meeting, and these responses to comments document the Navy's understanding of the resolution, or for comments that were not discussed, the following presents the Navy's proposed solutions.

The comments addressed below were received from EPA on January 10, 2002.

GENERAL COMMENTS:

EPA General Comment 1: **The ROD does not contain sufficient information regarding groundwater (sampling locations, sampling frequency, and well-specific sampling results) and the elevated Manganese detections in particular, to support to the Navy No Further Action decision. For example, on Table 5, Organic and Inorganic Constituents in Groundwater at Site 13, it is not clear which well(s) detected the June and September 1995 maximum concentrations which are compared to a May 2000 value presented for monitoring well MW-10.**

Response: The EPA and the Navy agreed that the following items will be added to the ROD or revised to provide more detail about the remedial investigation (RI)(Tetra Tech EM Inc. [TtEMI] 1997):

- Figure 5-11 from the Draft Final RI has been added as Figure 5 of the ROD to illustrate sampling and well locations.
- Table 5 of the ROD has been revised to include (a) the sampling methodology (that is, filtered, unfiltered, or slow purge), (b) wells sampled, and (c) the maximum result for manganese from upgradient Well MW-11.
- Sections 2.2.2 and 2.7.1.1 of the ROD have been revised to clarify the rationale for resampling Well MW-10 using slow purge pumping techniques.

EPA General Comment 2: **The ROD does not include sufficient information regarding the soil sampling locations selected and analytical results obtained during the site investigation activities. The ROD only contains summary tables listing maximum detected concentrations. To facilitate evaluation of the sample coverage, the extent of soil removal at Site 13, and the location of confirmation samples with respect to previous hot spot areas, please include figures in the ROD that show previous sample locations (including confirmation sample locations) and the soil removal areas at Site 13. In addition, this will be our pre-meeting to the scheduled Jan. 22 Navy-agencies meeting at TetraTech. Please include analytical summary tables**

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for all samples collected at Sites 13/17 and provide the detection limits for compounds that were not detected in all analytical summary tables to better evaluate the presence of elevated detection limits.

Response: EPA and the Navy agreed at a meeting held on February 13, 2002, that the following items will be added to the ROD to provide more detail about the RI (TtEMI 2002, 1997):

- Figures that illustrate distribution of organic and inorganic chemicals in soil, including lead, at Site 13 (see Figures 6 through 8 of the ROD).
- The excavation area at Site 13 where napalm residue was removed (see Figure 9 of the ROD)
- A new data summary table that includes the range of detection limits.

After printing the data summary table with detection limits for Site 13 and Site 17, the Navy believes that the requested information is too detailed and lengthy for inclusion in the ROD. The requested information is included in two tables that are attached to the end of these responses to comments. If the EPA prefers that the tables be included in the ROD, the Navy is willing to add them to the document.

EPA General Comment 3: **The ROD does not include the results of the ecological risk assessment. For clarity and completeness, please include summary tables listing the results of the ecological risk assessment (e.g., receptors evaluated, exposure pathways, hazard quotients and ecological risk estimates for each chemical of concern).**

Response: EPA and the Navy agreed that the following items will be added to the ROD to provide more detail about the results of the ecological risk assessment (ERA) (TtEMI 1997):

- Table 11-13 from the Draft Final RI (summarizes hazard quotients for comparing estimated chemical doses to toxicity reference values (TRVs) for ecological receptors) (see Table 13 of the ROD).
- An introduction to Table 11-13 that includes explanations of hazard quotients and bioavailability (see Section 2.7.2.1, page 54 of the ROD).
- A conceptual site model similar to Figure 11-1 from the Draft RI.

A conceptual site model for human health risk assessment was added to the ROD as Figure 13. Figure 11-1 was not added to the ROD because it is a conceptual food web illustration and not a conceptual site model.

EPA General Comment 4: **The ROD must be revised to include specific references to agency correspondence and a description of regulatory agency (State and Federal) involvement with the Sites. Please include the Navy's response to Agency Comments on the previous draft, and also attach a copy of the Administrative Record for U.S. EPA review. Also, please explain why the ROD has been in a state of inactivity for more than one-year.**

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Response: A copy of the administrative record, with all Inland Area Sites 13 and Site 17 ROD-related documents highlighted, was provided to EPA at the February 13, 2002, Remedial Project Manager meeting. At the meeting, EPA and the Navy agreed that Navy responses to agency comments and a detailed accounting of the items responsible for delaying completion of the ROD are not necessary for inclusion in the ROD.

Section 2.9, Page 58 of the ROD has been revised to include text describing that the decision has not been altered since the public comment period. The Navy has solicited comments on the ROD from the Restoration Advisory Board, but has not received comments to date.

SPECIFIC COMMENTS

- EPA Specific Comment 1:** Section 2.1, Site Name, Location, and Description, Page 3: **The ROD does not provide sufficient detail regarding Sites 13 and 17 in this section. For clarity, please indicate in the last paragraph of this section that Site 13 was used as a burn area for live ordnance and napalm, and that Site 17 includes Building IA-24 and surrounding area which were formerly used for forklift maintenance and battery recharge.**
- Response: The requested information has been added to the ROD in Section 2.1, page 3.
- EPA Specific Comment 2:** **Figure 4, Site 17 Building IA-24 Site Features: The area included in Site 17 is unclear. The ROD states that Site 17 is Building IA-24; however, the ROD presents a discussion of analytical results from samples collected near features that are located in the vicinity of Building IA-24 (i.e., the former UST at Building IA-55, a steam pad and drainage channels). It is unclear whether the interior of Building IA-24 was sampled. For clarity, please indicate the boundaries of Site 17 in Figure 4. In addition, please show the steam cleaning pad, the drainage channel and the septic system in the figure.**
- Response: The boundaries of the sites were not delineated in the RI or previous versions of the ROD. Various areas of Site 17 were sampled to determine whether contamination is present. The interior of Building IA-24 was not sampled. To be consistent with the RI, no Site 17 boundary will be drawn. The former steam cleaning area, the drainage channel and the septic system are depicted on Figure 10, which has been added to the ROD.

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- EPA Specific Comment 3:**
- a) **Section 2.2.2, Environmental Investigations at Naval Weapon Station SBD Concord, Page 11: This section is confusing. For example, the ROD states that based on the Initial Assessment Study, 13 sites were recommended for further investigation, including Sites 13, 14, and 16, but not 17. Then, without further explanation, the ROD states that Site 17 was recommended for a Remedial Investigation (RI) when the Site Investigation (SI) was completed. It is unclear why Site 17 was included in the SI if it was not recommended for further investigation.**
 - b) **In addition, the second paragraph on Page 11 includes superfluous information regarding Site 16, 27, 14 and eight additional Inland Area sites. Please delete this superfluous information to avoid confusion. Additionally, please explain why and when the confirmation study was performed.**
 - c) **The third paragraph also contains superfluous information regarding Sites 22, 24A and 27, which should be deleted.**
 - d) **In the fourth paragraph, please indicate that manganese in groundwater at Site 13 exceeded EPA Region 9 Preliminary Remediation Goal (PRG) for tap water.**
 - e) **Since groundwater sampling was not mentioned before in this section, it is unclear in the fifth paragraph why “two additional” groundwater sampling rounds were performed at Site 17. In addition, the fact that arsenic concentrations consistently exceeded the PRG is not mentioned in this section. Please clarify the groundwater sampling activities at Sites 13 and 17 and state that arsenic concentrations consistently exceeded the PRG at Site 17.**
 - f) **To avoid confusion, this section should be revised to discuss only Sites 13 and 17 in more detail, and to state early on that Sites 22 and 27 are no longer part of this ROD.**

- Response:**
- a) Sections 2.2.2 and 2.4 have been rewritten for clarity.
 - b) See response 3a above.
 - c) Because Sites 22, 24A, and 27 were included in the Sites 13 and Site 17 ROD, brief mention of each of these sites in this section of the ROD is appropriate and has been included.
 - d) A detailed discussion of manganese and reference to the manganese PRG detected in groundwater for Site 13 is included in the ROD in Section 2.5.1.
 - e) The discussion of additional groundwater sampling has been clarified in this section of the ROD. Arsenic in groundwater is not discussed in Section 2.2.2, but a detailed discussion of the arsenic detected at Site 17 is presented in the ROD in Section 2.5.2.

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f) Section 2.2.2 of the ROD has been revised to include a discussion of the previous ROD versions that included Sites 22 and 27.

EPA Specific Comment 4: **Section 2.2.3, Estimation of Ambient Concentrations of Metals in Inland Area Soils, Page 12: The ROD states that the concentrations of some metals displayed two distinct populations, but does not offer an explanation for this phenomenon. This trend could be interpreted to indicate that the data set is split into an “ambient” population and a “contaminated” population. Please revise the ROD to clarify why two populations of data were observed (e.g., caused by two different soil types).**

Response: The distinct populations of ambient metals concentrations are the result of distinct geological differences between the two sites. This is explained in detail in the Inland Area RI. The text of the ROD (Section 2.2.3, Page 14) has been revised to explain that the two distinct populations of ambient data resulted from the fact that Sites 13 and 17 are on geologically distinct formations.

EPA Specific Comment 5: **Section 2.4, Scope and Role of the No Action Alternative, Page 13: The title of Section 2.4 is unclear, since the text describes the remedial status of all sites at Concord Naval Weapons Station. Please correct this section.**

Response: This section title and the content comes from EPA guidance. The Navy agrees that the information appears out of context and its value for this ROD is debatable. To clarify the intent of the section, an introductory paragraph has been added to Section 2.4.

EPA Specific Comment 6: **Section 2.5, Site Characteristics, Page 16: A description of the Conceptual Site Model on which the risk assessments are based should be provided. In addition, the rationale for collecting samples at depths of 19 feet and more should be indicated.**

Response: A figure depicting the conceptual site model for risk assessment has been included in the report (see Figure 13).

Deeper samples generally were collected while drilling borings for installation of groundwater monitoring wells, and sample analysis generally is consistent with the rationale presented in the project work plan (PRC and Montgomery Watson 1995). The purpose of analyzing deeper samples is to investigate potential vertical migration of constituents or to investigate the concentration of constituents located at or near the groundwater table.

EPA Specific Comment 7: **Table 2, Current Phase of Site Activities, Page 15: It is unclear 1) what Sites 25, 26 and 27 are since they are only listed as “Litigation Area, RASS”, 2) why Remedial Action Sub Site (RASS) 3 is not listed, and 3) why Site 1 “Tidal Area Landfill” is listed as already having a completed Record of Decision although the ROD for the Tidal Area Landfill is still pending. Please revise the table to clarify these issues.**

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Response: Sites 25, 26, and 27 are RASS 3 sites. The listing has been revised to indicate them as such. This table also will be modified to indicate that the Tidal Area Landfill ROD is pending signature.

EPA Specific Comment 8: **Table 3, Organic Constituents Detected in Soils at Site 13, Page 18: The table lists 62 mg/kg as the residential soil PRG for chrysene although a California-modified PRG has been established for chrysene. In Table 4, the California-modified PRG is listed when this value is available. Please revise Table 3 to list the California-modified PRG of 6.1 mg/kg for chrysene instead of the Region 9 PRG.**

Response: The table has been revised, as requested.

EPA Specific Comment 9: **Table 5, Organic and Inorganic Constituents Detected in Groundwater at Site 13, Page 21 and Section 2.7.1.4, Page 34: The table and text indicate that groundwater samples were not analyzed for nitrite and nitrate in 1995. However, based on footnote "i", nitrite was not detected above the detection limit of 30 ug/l in 1995 and the maximum detected concentration of nitrate in 1995 was 3,500 ug/l. Please correct this discrepancy.**

Response: Groundwater analyses were conducted for (1) nitrates, (2) nitrites, and (3) nitrate/nitrite. When analyzed as nitrate/nitrite, the result is reported for total nitrogen and therefore, it is not possible to distinguish between nitrate and nitrite. The table correctly shows that analyses were not conducted for nitrate/nitrite in 1995 and Footnote i correctly reports analytical results for the separate analyses for nitrate and nitrite in 1995 in Well BUAMW002. Nitrite is not listed as a separate entry in Table 5, because nitrite was not detected in any sample analyzed for "nitrite." (Only analytes detected in one or more samples from at least one sampling event are listed in the table.) The maximum detected concentration of 9,600 micrograms per liter shown in the table is for well BUAMW004. The text on Page 34 of the ROD correctly states that samples collected in June and September 1995 were analyzed separately for nitrate and nitrite.

Although the table and text correctly report analytical results for nitrate, nitrite, and nitrate/nitrite, they have been revised for clarity to avoid possible confusion associated with the three analyses.

EPA Specific Comment 10: **Section 2.5.1, Site 13 - Burn Area, Page 23: The ROD states that the RI concluded that there is no clear spatial pattern of metals at Site 13 and no evidence to suggest that metals are being transported off site. In support of this statement, please include a figure showing the sample locations and analytical results in the ROD.**

Response: A figure has been added to the ROD to indicate the sampling pattern at the site (see Figure 5). Results for all metals are not practical to add to the figure. A figure has been added to clarify the pattern of lead detected in soil across the site.

EPA Specific **Section 2.5.2, Site 17 - Building IA-24, Page 25: The ROD states that samples**

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Comment 11: were collected near a fuel UST at Building IA-55. Since a second UST is shown in Figure 4 near Building IA-24, but the ROD does not indicate whether samples were collected from this UST, it is unclear whether the soil in the vicinity of this UST was investigated. If samples were collected from the UST near Building IA-24, please include this UST in the list of sampling areas. If samples were not collected from this UST, please explain why sampling in that area was not warranted.

Response: A brief summary of UST removals and sampling at the UST sites has been added to Section 2.2.1 of the ROD. Although evaluation and remediation of petroleum hydrocarbon constituents are not evaluated under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA), additional investigation IA-24 is planned for the former UST at Building IA-24A under the UST program, as explained in Section 2.2.1 of the ROD.

EPA Specific Comment 12: Section 2.5.2, Site 17 - Building IA-24, page 26: There is insufficient evidence presented in the text to support the conclusion that detections of nickel above the residential PRG displayed no apparent spatial pattern. Concentrations above the residential PRG were most frequently reported in subsurface soil samples, with the greatest frequency in samples collected from depths of 19 feet or greater. Please revise the discussion to clarify whether or not these samples were collected from borings located within the same general area.

Response: The distribution of nickel at Site 17 at concentrations exceeding the PRG value has been illustrated in Figure 12 of the ROD. A comprehensive discussion of the soil investigation and nature and extent of the nickel detected is presented in the RI report (TtEMI 1997).

EPA Specific Comment 13: Section 2.5.2, Site 17 - Building IA-24, Page 26 and Table 7, Organic Constituents Detected in Soils At Site 17, Page 27: The ROD states that benzo(a)pyrene was detected in two soil samples at concentrations of 0.073 and 0.44 mg/kg. However, based on Table 7, the maximum detected soil concentration at Site 17 was 0.11 mg/kg benzo(a)pyrene. Please resolve this discrepancy.

Furthermore, the ROD discusses the metal concentrations detected in soil and sediment and indicates that some samples were collected from a depth of 19 feet and greater. It is unclear why samples were collected from these depths unless there was a reason to suspect that either a release could have occurred at these depths or that migration to such depths could have occurred. For clarity, please provide the rationale for collecting samples at this depth.

Response: The maximum detected concentration of benzo(a)pyrene in soils is correctly reported as 0.11 milligrams per kilogram (mg/kg) in Table 7. The benzo(a)pyrene concentration reported on Page 26 of the text has been corrected.

Please see response to EPA Specific Comment 6.

EPA Specific Table 7, Organic Constituents Detected in Soils At Site 17, Page 27: In the

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Comment 14: previous version of this table (i.e., Table 6 in the Record of Decision Inland Area Sites 13, 17, 22, and 27, dated January 2000) two additional compounds were listed: 1,2-Dichloropropane at 0.058 mg/kg and 4-methyl-2-pentanone at 0.005 mg/kg. In addition, in the previous version, the TPH-Motor Oil result was listed as 4,100 mg/kg; however, the current Table 7 lists the TPH-Motor Oil result as 1,300 mg/kg. For clarity, please explain 1) why the two VOCs listed above are not included in Table 7, and 2) why the concentration of TPH-Motor Oil in the previous version of Table 7 was higher.

Response: 1,2-Dichloropropane and 4-methyl-2-pentanone were inadvertently deleted from Table 7. The table has been revised to include these two analytes and their maximum detected concentrations.

The concentration of total petroleum hydrocarbon-motor oil listed in Table 7 of the January 2000 draft ROD was for sediment and not soil. A separate table listing analytical results for sediments has been included in the ROD.

EPA Specific Comment 15: Table 8, Inorganic Constituents Detected in Soils at Site 17, Page 28: Footnote “i” next to the maximum detected lead concentration explains that only two of 48 samples analyzed exceeded the residential PRG. However, the maximum concentration listed is 225 mg/kg and the residential PRG is 400 mg/kg, so it appears that all lead concentrations detected in the 48 samples were below the residential PRG for lead. If footnote “i” is supposed to reference the Department of Toxic Substances Control (DTSC) Lead Risk Assessment Model output for lead instead of the residential PRG, please revise the table to refer to the DTSC model output rather than the PRG for lead.

In addition, footnotes “j” and “m”, state that the actual maximum concentrations for manganese and thallium were higher than what is listed in the table, but these actual maximum concentrations are not provided. It is unclear why the table does not list the actual maximum concentrations. Please provide the rationale for not listing the maximum detected concentrations for all compounds in Table 8, or, for completeness, list the maximum detected concentrations of manganese and thallium in the table or the footnotes.

Response: Footnote i has been revised to indicate that the comparison is being made with a lead screening value of 150 mg/kg, derived using DTSC’s LeadSpread model.

Table 8 (and Tables 3, 4, and 7, which list similar information) has been revised to include one column listing with the maximum detected concentration. A second column will provide commentary and will indicate the maximum detected concentration in the 0 to 10-foot range when that differs from the maximum concentration.

EPA Specific Comment 16: Sections 2.7.1, Human Health Risk Assessment and 2.7.2, Ecological Risk Assessment: These sections should (1) identify the COCs in each medium,

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(2) provide the range of detected concentrations and the frequency of detection, and (3) discuss the (a) data quality, (b) the exposure point concentration, (c) the exposure assessment, (d) the toxicity assessment and (e) the uncertainty evaluation. The chemicals of concern and risk values (including hazard indices and hazard quotients, respectively) should be presented in a table format. For the ecological risk assessment, the toxicity data used to screen chemicals of concern needs to be provided.

Response: Additional information describing the human health and ecological risk assessments has been provided in Sections 2.7.1 and 2.7.2. However, because no action is proposed for Sites 13 and 17, the level of detail provided is limited. Complete details of each of the elements requested by the reviewer are provided in the RI report.

EPA Specific Comment 17: Section 2.7.1.3, Characterization of Risk, Page 32 and Table 11, Results of the Human Health Risk Assessment For Site 17, Page 35: The ROD states, "in general, action is not warranted at a site when the cancer risks associated with residential exposure at a site are below 10^{-4} ." However, this statement is not accurate. EPA considers an excess cancer risk level of 10^{-6} as the point of departure for considering when to implement remedial measures at a site. Cancer risks above a risk level of 10^{-4} generally require remediation. The range between 10^{-6} and 10^{-4} is often referred to as the "risk management range," and EPA strives to make decisions regarding whether remedial action is warranted on a case by case basis after consideration of all factors, of which the risk assessment is only one of many components. Therefore, please revise the ROD to state that if cancer risks fall within the range of 10^{-6} to 10^{-4} , a risk management decision has to be made regarding whether remedial action is warranted on a case by case basis after consideration of all factors, of which the risk assessment is only one of many components. This revision will also affect the section entitled "Summary" on Page 37.

In addition, since cancer risks listed for Site 17 exceed 1×10^{-6} , for surface and subsurface soil and sediment for the residential scenario, please include a discussion regarding the risk management decision that was made to justify why no further action is warranted for Site 17.

Additionally, Page 36 of the ROD states that the only chemical-specific risk that exceeded 1×10^{-6} for soil was associated with exposure to benzo(a)pyrene that was detected at a maximum concentration of 0.1 mg/kg. However, based on Section 2.5.2, Page 26, the maximum detected benzo(a)pyrene concentration was 0.44 mg/kg. Please resolve this discrepancy. If the maximum detected concentration was 0.44 mg/kg and this concentration was not used in the risk calculations, please revise the risk assessment to include a maximum concentration of 0.44 mg/kg for benzo(a)pyrene.

Response: The ROD correctly summarizes EPA guidance (EPA 1999) on the role of the human health risk assessment (HHRA) in supporting risk management decisions. However,

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the Navy acknowledges EPA's position that if cancer risks fall within the range of 10^{-6} to 10^{-4} , a risk management decision is made regarding whether remedial action is warranted. This decision is made on a case-by-case basis after consideration of all factors, of which the risk assessment is only one component.

A description of the risk associated with benzo(a)pyrene, which drives the result, is presented in Section 2.7.1.5. Figure 6-11 from the draft final RI has been added to the ROD to show the locations where benzo(a)pyrene was detected. The text of the ROD has been revised to discuss the distribution of benzo(a)pyrene and the associated human health risk.

As stated in the response to EPA Specific Comment 13, the text of the ROD has been revised to indicate that the maximum detected concentration of benzo(a)pyrene is 0.11 mg/kg.

EPA Specific Comment 18: **Section 2.7.1.4, Results of Risk Characterization for Site 13, and Section 2.7.1.5, Results of Risk Characterization for Site 17, Pages 33-37: The text in these sections and the accompanying tables present segregated hazard indices (HIs). However, this concept is not described in the ROD. For clarity, please provide a brief discussion of the relevance of calculating a segregated HI.**

Response: The requested description has been added to the ROD.

EPA Specific Comment 19: **Section 2.7.1.4, Results of Risk Characterization for Site 13, Page 34: The ROD states, "Because concentrations of nitrate and nitrite could be distinguished in the 1992 sample, the results were not included in the risk assessment." Apparently the word "not" was omitted, from this sentence. Please revise the sentence to read: "Because concentrations of nitrate and nitrite could *not* be distinguished in the 1992 sample, the results were not included in the risk assessment."**

Response: The correction has been added to the ROD.

EPA Specific Comment 20:

- a. **Section 2.7.2.1, Site 13 - Burn Area, Page 37: The ROD states that, as part of the ecological risk assessment, "A chemical detected at Site 13 was identified as a chemical of ecological concern if it exceeded the ambient concentration established for the site in at least 10 percent of the samples, or if the concentration of the chemical in the waste extraction test exceeded the freshwater chronic ambient water quality criteria in at least 10 percent of the samples." It is unclear whether this approach was approved by regulatory agencies. Please indicate whether regulatory agencies concurred with the process for selection of Chemicals of Concern (COCs) in the ecological risk assessment, presumably as part of the Remedial Investigation.**
- b. **Additionally, based on the COC selection process described above, the ROD identified beryllium, cadmium, lead, and zinc (exceed ambient concentrations in more than 10 percent of the soil samples), and copper, lead, mercury, and zinc (waste extraction test extracts exceed the chronic Ambient Water Quality Criteria) as COCs. However, the ROD does not provide clear justification to**

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explain why detected concentrations of beryllium, cadmium, copper, lead, mercury, and zinc do not pose an unacceptable risk. For completeness, please revise the ROD to explain why these chemicals do not pose an unacceptable risk to ecological receptors.

- Response:
- a. The revised draft final ROD is the conclusion of a long Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) process used to investigate these sites. The approach, the results of the investigation, and the risk assessments have all been subject to agency review and approval.
 - b. The ROD includes the following statement:

Beryllium, cadmium, lead, and zinc were detected in soils at concentrations above ambient levels and in more than 10 percent of the soil samples. Copper, lead, mercury, and zinc in waste extraction test liquid extract from soil samples were detected at concentrations that exceeded the chronic freshwater ambient water quality criteria. However, these metals are not expected to be bioavailable, based on the following lines of evidence: (1) concentrations of metal in the weak acid liquid extract from the in waste extraction tests were generally two to three orders of magnitude less than concentrations of metals in bulk soils; (2) weak acid extractions of metals completed as part of the comprehensive soil analysis indicated limited availability of potentially toxic metals, especially in surface soils where wildlife is most likely to encounter the chemicals; and (3) the results of the Microtox bioassay indicated only limited bioavailability of inorganic chemicals in soils.

It is the Navy's opinion that the above statement provides adequate justification. If the EPA disagrees, the Navy would appreciate suggested wording to address EPA's comment.

EPA Specific Comment 21: **Appendix A, Responsiveness Summary For Inland Sites 13 and 17, Section 3.0, Public Comments and the Navy's Responses, Page A-4: The ROD states that Mr. O'Connell requested that groundwater samples be collected during both the rainy and dry seasons to account for varying groundwater flow rates. The Navy responded that groundwater samples were collected from May through September at Site 13. However, none of these sampling dates fall within the rainy season. It does not appear that the Navy provided an adequate response to Mr. O'Connell's comment. Please revise the ROD to provide the rationale for not collecting groundwater samples at Site 13 during the rainy season.**

Response: Samples were collected in May, immediately following the rainy season. Groundwater levels at the site are expected to have been at a relatively high level during that time.

RESPONSE TO AGENCY COMMENTS
REVISED DRAFT FINAL RECORD OF DECISION, INLAND AREA SITE 13 AND SITE 17
NAVAL WEAPONS STATION, SEAL BEACH DETACHMENT, CONCORD, CALIFORNIA
(Continued)

The comments addressed below were received from RWQCB on January December 21, 2001.

A. General Comments

RWQCB General Comment 1: **It is Board staff position that sites 13 and 17 still pose adverse effects to the environment due to the following findings:**

- **Contaminants (metals, benzo(a)pyrene, TPH-d/ mo site 13; lead, nickel, TPH-mo site 17) are found above the residential Preliminary Remedial Goals (PRGs).**
- **Potential risk to the coyote (from cadmium) and California quail (from lead) at site 13.**

Response: A HHRA typically is based on average site concentrations (more specifically, the 95 percent upper confidence limit on the arithmetic mean) and not on maximum detected concentrations. For Site 13, cancer risks were less than 1E-06 and segregated HIs were less than 1 for all media. For Site 17, risks associated with exposure to soils were within the target risk range and segregated HIs were less than 1. Cancer risks associated with all other media (sediment and groundwater) were less than 1E-06, and HIs were 1 or less. Justification for no action at Site 17 (where cancer risks are within the risk management range) has been included in the text of the ROD. As a note, a residential PRG has not been established for TPH-motor oil.

RWQCB General Comment 2: **Please inform Board staff on the rationale why Site 13 had not been inspected for unexploded ordnance using geophysical techniques.**

Response: Section 2.5, page 19 of the ROD has been revised to mention the geophysical investigation that was performed for the March 1993 SI prepared by PRC Environmental Management, Inc. (PRC) and Montgomery Watson (MW).

B. Specific Comments

RWQCB Specific Comment 1: **Please provide a map and tables presenting monitoring wells location and hydrogeological characteristics. A sampling location map for both soils and groundwater is also needed for sites 13 and 17.**

Response: Locations of monitoring wells and soil samples have been added to the ROD (see Figures 5 and 10) . For more information on the hydrogeologic characteristics of the site, please refer to the Draft Final RI (TtEMI 1997).

RESPONSE TO AGENCY COMMENTS
REVISED DRAFT FINAL RECORD OF DECISION, INLAND AREA SITE 13 AND SITE 17
NAVAL WEAPONS STATION, SEAL BEACH DETACHMENT, CONCORD, CALIFORNIA
(Continued)

RWQCB Specific Comment 2: **Section 2.2.1, Background, p 10: Please advise the Board whether the Navy reviewed aerial and ground photographs of site 17 to deny the existence of an acid sump.**

Response: Aerial photographs were reviewed during the 1993 SI. Please refer to the SI or to the October 1997 RI for a description of SI activities (PRC and MW 1993; TtEMI 1997).

RWQCB Specific Comment 3: **Section 2.2.3, Estimation of Ambient Concentrations of Metals in Inland Area Soils, p 12: Please indicate the scientific basis for distinguishing sites 13 and 17 based on metal concentrations. Indicate on the map the locations where ambient sampling samples were taken for both sites.**

Response: A general description of the geologic distinction between the Sites 13 and 17 has been added to Section 2.2.3 of the ROD to explain why different background data sets are applicable. Because the ROD only presents a summary of the RI, the Navy does not propose to add a full description of sampling locations used to determine ambient concentrations. Please refer to Appendix A of the 1997 RI for a full description of the ambient sampling and data evaluation (TtEMI 1997).

RWQCB Specific Comment 4: **Section 2.5, Site Characteristics, p 16: The rationale for immediate action or removal and/or further investigation for sites 13 and 17 is missing from the ROD. More specifically what criteria/ observations generated removal and or further investigation at both sites?**

Response: The rationale for action and investigation at each Sites 13 and 17 has been added to Section 2.5 of the ROD.

RWQCB Specific Comment 5: **Section 2.5.1, Site 13 Burn Area, p 24: An indication of why "not collocated" benzo(a)pyrene samples at concentrations greater than the PRG were not included in the soil remediation is missing from the report.**

Response: As previously indicated in the response to the RWQCB's General Comment 1, risk assessment and decisions regarding remediation are typically based on average concentrations and not point comparisons with PRGs. The location with a concentration of benzo(a)pyrene greater than the PRG was not included in the removal action, because no unacceptable risk to human health or ecological receptors was associated with benzo(a)pyrene at this site.

RWQCB Specific Comment 6: **Section 2.7.1.4, Results of Risk Characterization for Site 13, p 33: Please advise the Board why the soils contaminated with lead concentrations above PRG found in two trenches at site 13 were not excavated concurrent to the remedial work performed there.**

RESPONSE TO AGENCY COMMENTS
REVISED DRAFT FINAL RECORD OF DECISION, INLAND AREA SITE 13 AND SITE 17
NAVAL WEAPONS STATION, SEAL BEACH DETACHMENT, CONCORD, CALIFORNIA
(Continued)

Response: Based on the human health and ecological risk assessments, lead does not pose an unacceptable risk at the site. Soil locations where high concentrations of lead were reported were resampled to assess the extent of lead detected previously. Analytical results from the resampling event did not confirm the presence of high concentrations of lead at these locations, and no definable area of lead contamination was identified. Discussion of the extent of lead at the site is presented on Pages 33 and 34 of the ROD and in the RI report.

**RWQCB
Specific
Comment 7:** **Maps outlining contaminant concentrations exceeding screening criteria for soils at sites 13 and 17 are missing from the report.**

Response: The ROD presents a summary of the RI and is not intended to recreate the data presentation of the RI. The Navy has agreed to include more detail about the RI in the ROD, as described in the response to EPA General Comment 2.

C. Petroleum Issues Related Comments

**RWQCB
Petroleum
Related
Comment:** **Section 2.2.1, Background, p 10: Underground storage tanks (USTs) data (age, GPS location, analytical results for soils and groundwater, closure status) is needed in the ROD.**

Response: A brief summary of each UST site has been added to Section 2.2.1 of the ROD.

D. Editorial Comments

**RWQCB
Editorial
Comment 1:** **The latest version of Navy's response to comments generated by regulatory agencies needs to be included in the draft final ROD.**

Response: EPA guidance does not suggest or require that a ROD contain a record of agency comments and Navy responses that lead to the final signed document. See the response to EPA General Comment 4.

**RWQCB
Editorial
Comment 2:** **Please modify the Table of Contents to correct for the first entry mentioning "Error! Bookmark not defined."**

Response: This error has been corrected in the final ROD.

RESPONSE TO AGENCY COMMENTS
REVISED DRAFT FINAL RECORD OF DECISION, INLAND AREA SITE 13 AND SITE 17
NAVAL WEAPONS STATION, SEAL BEACH DETACHMENT, CONCORD, CALIFORNIA
(Continued)

REFERENCES

- PRC Environmental Management, Inc. (PRC) and Montgomery Watson (MW). 1993. "Naval Weapons Station (NWS) Concord, California, Inland Area Sites, Draft Site Investigation Report." March 26.
- PRC and MW. 1995. "Remedial Investigation/Feasibility Study, Inland Area Sites, Work Plan, Draft Final." February 3.
- Tetra Tech EM Inc. (TtEMI). 1997. "Draft Final Remedial Investigation Report, Inland Area Sites 13, 17, 22, 24A, and 27. NWS Concord, California." October 15.
- TtEMI. 2002. "Remedial Project Managers Meeting Minutes, Sites 13 and 17 Record of Decision, NWS Seal Beach Detachment Concord." February 13.
- U.S. Environmental Protection Agency (EPA). 1991. "Role of the Baseline Risk Assessment in Superfund Remedy Selection Decisions." Office of Solid Waste and Emergency Response (OSWER) Directive 9355.0-30. April 22.
- EPA. 1999. "A Guide to Preparing Superfund Proposed Plans, Records of Decision, and Other Remedy Selection Documents." July.

NAVAL WEAPONS STATION SBD CONCORD
LIST OF MINIMUM AND MAXIMUM DETECTION LIMITS FOR ALL SOIL ANALYTES
INSTALLATION RESTORATION SITE 13

ANALYTE	DETECTION LIMITS		UNITS
	MAXIMUM	MINIMUM	
1,1'-BIPHENYL	260	36	UG/KG
1,1,1-TRICHLOROETHANE	18	10	UG/KG
1,1,2,2-TETRACHLOROETHANE	18	10	UG/KG
1,1,2-TRICHLOROETHANE	18	10	UG/KG
1,1-DICHLOROETHANE	18	10	UG/KG
1,1-DICHLOROETHENE	18	10	UG/KG
1,2,3,4,6,7,8,9-OCDD	0.69	0.14	UG/KG
1,2,3,4,6,7,8,9-OCDF	0.27	0.057	UG/KG
1,2,3,4,6,7,8-HPCDD	0.14	0.05	UG/KG
1,2,3,4,6,7,8-HPCDF	0.099	0.034	UG/KG
1,2,3,4,7,8,9-HPCDF	0.099	0.034	UG/KG
1,2,3,4,7,8-HXCDD	0.19	0.067	UG/KG
1,2,3,4,7,8-HXCDF	0.092	0.04	UG/KG
1,2,3,6,7,8-HXCDD	0.19	0.067	UG/KG
1,2,3,6,7,8-HXCDF	0.092	0.04	UG/KG
1,2,3,7,8,9-HXCDD	0.19	0.067	UG/KG
1,2,3,7,8,9-HXCDF	0.092	0.04	UG/KG
1,2,3,7,8-PECDD	0.25	0.081	UG/KG
1,2,3,7,8-PECDF	0.14	0.036	UG/KG
1,2,3-PROPANETRIOL, TRINITRATE			UG/KG
1,2,4-TRICHLOROBENZENE	430	36	UG/KG
1,2-DICHLOROBENZENE	430	36	UG/KG
1,2-DICHLOROETHANE	18	10	UG/KG
1,2-DICHLOROETHENE (TOTAL)	18	10	UG/KG
1,2-DICHLOROPROPANE	18	10	UG/KG
1,3,5-TRINITROBENZENE			UG/KG
1,3-DICHLOROBENZENE	430	36	UG/KG
1,3-DINITROBENZENE			UG/KG
1,4-DICHLOROBENZENE	430	36	UG/KG
1-METHYLNAPHTHALENE	260	36	UG/KG
1-METHYLPHENANTHRENE	260	36	UG/KG
2,2'-OXYBIS(1-CHLOROPROPANE)	430	36	UG/KG
2,3,4,6,7,8-HXCDF	0.092	0.04	UG/KG
2,3,4,7,8-PECDF	0.14	0.036	UG/KG
2,3,5-TRIMETHYLNAPHTHALENE	260	36	UG/KG
2,3,7,8-TCDD	0.064	0.024	UG/KG
2,3,7,8-TCDF	0.14	0.051	UG/KG
2,4,5-TRICHLOROPHENOL	1100	89	UG/KG
2,4,6-TRICHLOROPHENOL	430	36	UG/KG
2,4,6-TRINITROTOLUENE			UG/KG
2,4-DICHLOROPHENOL	430	36	UG/KG
2,4-DIMETHYLPHENOL	430	36	UG/KG
2,4-DINITROPHENOL	1100	89	UG/KG
2,4-DINITROTOLUENE	430	36	UG/KG
2,6-DIMETHYLNAPHTHALENE	260	36	UG/KG
2,6-DINITROTOLUENE	430	36	UG/KG
2-BUTANONE	18	10	UG/KG
2-CHLORONAPHTHALENE	430	36	UG/KG

NAVAL WEAPONS STATION SBD CONCORD
LIST OF MINIMUM AND MAXIMUM DETECTION LIMITS FOR ALL SOIL ANALYTES
INSTALLATION RESTORATION SITE 13

ANALYTE	DETECTION LIMITS		UNITS
	MAXIMUM	MINIMUM	
2-CHLOROPHENOL	430	36	UG/KG
2-HEXANONE	18	10	UG/KG
2-METHYLNAPHTHALENE	430	36	UG/KG
2-METHYLPHENOL	430	36	UG/KG
2-NITROANILINE	1100	89	UG/KG
2-NITROPHENOL	430	36	UG/KG
3,3'-DICHLOROBENZIDINE	430	36	UG/KG
3-NITROANILINE	1100	89	UG/KG
4,6-DINITRO-2-METHYLPHENOL	1100	89	UG/KG
4-BROMOPHENYL-PHENYLEETHER	430	36	UG/KG
4-CHLORO-3-METHYLPHENOL	430	36	UG/KG
4-CHLOROANILINE	430	36	UG/KG
4-CHLOROPHENYL-PHENYLEETHER	430	36	UG/KG
4-METHYL-2-PENTANONE	18	10	UG/KG
4-METHYLPHENOL	430	36	UG/KG
4-NITROANILINE	1100	89	UG/KG
4-NITROPHENOL	1100	89	UG/KG
ACENAPHTHENE	430	36	UG/KG
ACENAPHTHYLENE	430	36	UG/KG
ACETONE	18	10	UG/KG
ALUMINUM	200	1.3	MG/KG
ANTHRACENE	430	36	UG/KG
ANTIMONY	60	0.34	MG/KG
ARSENIC	10	0.29	MG/KG
BARIUM	200	0.08	MG/KG
BENZENE	18	1.1	UG/KG
BENZO(A)ANTHRACENE	430	36	UG/KG
BENZO(A)PYRENE	430	36	UG/KG
BENZO(B)FLUORANTHENE	430	36	UG/KG
BENZO(E)PYRENE	260	36	UG/KG
BENZO(G,H,I)PERYLENE	430	36	UG/KG
BENZO(K)FLUORANTHENE	430	36	UG/KG
BENZOIC ACID	660	40	UG/KG
BENZYL ALCOHOL	260	36	UG/KG
BERYLLIUM	5	0.006	MG/KG
BIS(2-CHLOROETHOXY)METHANE	430	36	UG/KG
BIS(2-CHLOROETHYL)ETHER	430	36	UG/KG
BIS(2-ETHYLHEXYL)PHTHALATE	430	36	UG/KG
BROMODICHLOROMETHANE	18	10	UG/KG
BROMOFORM	18	10	UG/KG
BROMOMETHANE	18	10	UG/KG
BUTYLBENZYLPHTHALATE	430	36	UG/KG
CADMIUM	5	0.02	MG/KG
CALCIUM	5000	2.5	MG/KG
CARBAZOLE	430	36	UG/KG
CARBON DISULFIDE	18	10	UG/KG
CARBON TETRACHLORIDE	18	10	UG/KG
CHLOROBENZENE	18	10	UG/KG

NAVAL WEAPONS STATION SBD CONCORD
LIST OF MINIMUM AND MAXIMUM DETECTION LIMITS FOR ALL SOIL ANALYTES
INSTALLATION RESTORATION SITE 13

ANALYTE	DETECTION LIMITS		UNITS
	MAXIMUM	MINIMUM	
CHLOROETHANE	18	10	UG/KG
CHLOROFORM	18	10	UG/KG
CHLOROMETHANE	18	10	UG/KG
CHROMIUM	10	0.13	MG/KG
CHRYSENE	430	36	UG/KG
CIS-1,3-DICHLOROPROPENE	18	10	UG/KG
COBALT	50	0.08	MG/KG
COPPER	25	0.1	MG/KG
DI-N-BUTYLPHthalate	430	36	UG/KG
DI-N-OCTYLPHthalate	430	36	UG/KG
DIBENZ(A,H)ANTHRACENE	430	36	UG/KG
DIBENZOFURAN	430	36	UG/KG
DIBENZOTHIOPHENE	260	36	UG/KG
DIBROMOCHLOROMETHANE	18	10	UG/KG
DIESEL RANGE ORGANICS	560	2.69	MG/KG
DIETHYLPHthalate	430	36	UG/KG
DIMETHYLPHthalate	430	36	UG/KG
ETHYLBENZENE	18	1.1	UG/KG
FLUORANTHENE	430	36	UG/KG
FLUORENE	430	36	UG/KG
GASOLINE RANGE ORGANICS	0.0621	0.0538	MG/KG
HEXACHLOROBENZENE	430	36	UG/KG
HEXACHLOROBUTADIENE	430	36	UG/KG
HEXACHLOROCYCLOPENTADIENE	430	36	UG/KG
HEXACHLOROETHANE	430	36	UG/KG
HEXAVALENT CHROMIUM	50	50	UG/KG
HMX			UG/KG
INDENO(1,2,3-CD)PYRENE	430	36	UG/KG
IRON	100	0.5	MG/KG
ISOPHORONE	430	36	UG/KG
LEAD	5	0.18	MG/KG
M,P-XYLENE	1.2	1.1	UG/KG
MAGNESIUM	5000	1.1	MG/KG
MANGANESE	15	0.032	MG/KG
MERCURY	0.2	0.009	MG/KG
METHYLENE CHLORIDE	18	10	UG/KG
MOLYBDENUM	14	0.14	MG/KG
MOTOR OIL RANGE ORGANICS	560	10	MG/KG
N-NITROSO-DI-N-PROPYLAMINE	430	36	UG/KG
N-NITROSODIPHENYLAMINE (1)	430	36	UG/KG
NAPHTHALENE	430	36	UG/KG
NICKEL	40	0.26	MG/KG
NITRATE	0.2	0.2	MG/KG
NITRATE NITROGEN	0.9	0.9	MG/KG
NITRATE/NITRITE	0.64	0.53	MG/KG
NITRITE	0.3	0.3	MG/KG
NITROBENZENE	430	36	UG/KG
O-XYLENE	1.2	1.1	UG/KG

**NAVAL WEAPONS STATION SBD CONCORD
LIST OF MINIMUM AND MAXIMUM DETECTION LIMITS FOR ALL SOIL ANALYTES
INSTALLATION RESTORATION SITE 13**

ANALYTE	DETECTION LIMITS		UNITS
	MAXIMUM	MINIMUM	
PENTACHLOROPHENOL	1100	89	UG/KG
PERYLENE	260	36	UG/KG
PETN			UG/KG
PHENANTHRENE	430	36	UG/KG
PHENOL	430	36	UG/KG
PHOSPHOROUS	3	3	MG/KG
POTASSIUM	5000	7.7	MG/KG
POTASSIUM EXCH.+SOL.	0.1	0.1	MG/KG
PYRENE	430	36	UG/KG
RDX			UG/KG
SELENIUM	5	0.48	MG/KG
SILVER	10	0.1	MG/KG
SODIUM	5000	26.6	MG/KG
STYRENE	18	10	UG/KG
TETRACHLOROETHENE	18	10	UG/KG
TETRYL			UG/KG
THALLIUM	10	0.039	MG/KG
TOLUENE	18	1.1	UG/KG
TOTAL HPCDD	0.14	0.05	UG/KG
TOTAL HPCDF	0.099	0.034	UG/KG
TOTAL HXCDD	0.19	0.067	UG/KG
TOTAL HXCDF	0.092	0.04	UG/KG
TOTAL ORGANIC CARBON	131	100	MG/KG
TOTAL PECDD	0.25	0.081	UG/KG
TOTAL PECDF	0.14	0.036	UG/KG
TOTAL TCDD	0.064	0.024	UG/KG
TOTAL TCDF	0.14	0.051	UG/KG
TRANS-1,3-DICHLOROPROPENE	18	10	UG/KG
TRICHLOROETHENE	18	10	UG/KG
VANADIUM	50	0.14	MG/KG
VINYL CHLORIDE	18	10	UG/KG
XYLENE (TOTAL)	18	10	UG/KG
ZINC	20	0.06	MG/KG

NAVAL WEAPONS STATION SBD CONCORD
LIST OF MINIMUM AND MAXIMUM DETECTION LIMITS FOR ALL SOIL ANALYTES
INSTALLATION RESTORATION SITE 17

ANALYTE	DETECTION LIMITS		UNITS
	MAXIMUM	MINIMUM	
1,1,1-TRICHLOROETHANE	12	11	UG/KG
1,1,2,2-TETRACHLOROETHANE	12	11	UG/KG
1,1,2-TRICHLOROETHANE	12	11	UG/KG
1,1-DICHLOROETHANE	12	11	UG/KG
1,1-DICHLOROETHENE	12	11	UG/KG
1,2,4-TRICHLOROBENZENE	930	340	UG/KG
1,2-DICHLOROBENZENE	930	190	UG/KG
1,2-DICHLOROETHANE	12	11	UG/KG
1,2-DICHLOROETHENE (TOTAL)	12	11	UG/KG
1,2-DICHLOROPROPANE	12	11	UG/KG
1,3-DICHLOROBENZENE	930	190	UG/KG
1,4-DICHLOROBENZENE	930	190	UG/KG
2,2'-OXYBIS(1-CHLOROPROPANE)	930	340	UG/KG
2,4,5-TRICHLOROPHENOL	2200	830	UG/KG
2,4,6-TRICHLOROPHENOL	930	340	UG/KG
2,4-DICHLOROPHENOL	930	340	UG/KG
2,4-DIMETHYLPHENOL	930	340	UG/KG
2,4-DINITROPHENOL	2200	830	UG/KG
2,4-DINITROTOLUENE	930	340	UG/KG
2,6-DINITROTOLUENE	930	340	UG/KG
2-BUTANONE	12	11	UG/KG
2-CHLORONAPHTHALENE	930	340	UG/KG
2-CHLOROPHENOL	930	340	UG/KG
2-HEXANONE	12	11	UG/KG
2-METHYLNAPHTHALENE	930	340	UG/KG
2-METHYLPHENOL	930	340	UG/KG
2-NITROANILINE	2200	830	UG/KG
2-NITROPHENOL	930	340	UG/KG
3,3'-DICHLOROBENZIDINE	930	340	UG/KG
3-NITROANILINE	2200	830	UG/KG
4,6-DINITRO-2-METHYLPHENOL	2200	830	UG/KG
4-BROMOPHENYL-PHENYLETHER	930	340	UG/KG
4-CHLORO-3-METHYLPHENOL	930	340	UG/KG
4-CHLOROANILINE	930	340	UG/KG
4-CHLOROPHENYL-PHENYLETHER	930	340	UG/KG
4-METHYL-2-PENTANONE	12	11	UG/KG
4-METHYLPHENOL	930	340	UG/KG
4-NITROANILINE	2200	830	UG/KG
4-NITROPHENOL	2200	830	UG/KG
ACENAPHTHENE	930	340	UG/KG
ACENAPHTHYLENE	930	340	UG/KG
ACETONE	12	11	UG/KG
ALUMINUM	200	1.2	MG/KG
ANTHRACENE	930	340	UG/KG
ANTIMONY	60	0.29	MG/KG
ARSENIC	10	0.3	MG/KG
BARIUM	200	0.09	MG/KG

NAVAL WEAPONS STATION SBD CONCORD
LIST OF MINIMUM AND MAXIMUM DETECTION LIMITS FOR ALL SOIL ANALYTES
INSTALLATION RESTORATION SITE 17

ANALYTE	DETECTION LIMITS		UNITS
	MAXIMUM	MINIMUM	
BENZENE	12	11	UG/KG
BENZO(A)ANTHRACENE	930	340	UG/KG
BENZO(A)PYRENE	930	340	UG/KG
BENZO(B)FLUORANTHENE	930	340	UG/KG
BENZO(G,H,I)PERYLENE	930	340	UG/KG
BENZO(K)FLUORANTHENE	930	340	UG/KG
BERYLLIUM	5	0.006	MG/KG
BIS(2-CHLOROETHOXY)METHANE	930	340	UG/KG
BIS(2-CHLOROETHYL)ETHER	930	340	UG/KG
BIS(2-ETHYLHEXYL)PHTHALATE	930	160	UG/KG
BROMODICHLOROMETHANE	12	11	UG/KG
BROMOFORM	12	11	UG/KG
BROMOMETHANE	12	11	UG/KG
BUTYLBENZYLPHTHALATE	930	340	UG/KG
CADMIUM	5	0.02	MG/KG
CALCIUM	5000	1.5	MG/KG
CARBAZOLE	930	340	UG/KG
CARBON DISULFIDE	12	11	UG/KG
CARBON TETRACHLORIDE	12	11	UG/KG
CHLOROBENZENE	12	11	UG/KG
CHLOROETHANE	12	11	UG/KG
CHLOROFORM	12	11	UG/KG
CHLOROMETHANE	12	11	UG/KG
CHROMIUM	10	0.11	MG/KG
CHRYSENE	930	340	UG/KG
CIS-1,3-DICHLOROPROPENE	12	11	UG/KG
COBALT	50	0.09	MG/KG
COPPER	25	0.09	MG/KG
DI-N-BUTYLPHTHALATE	930	340	UG/KG
DI-N-OCTYLPHTHALATE	930	340	UG/KG
DIBENZ(A,H)ANTHRACENE	930	340	UG/KG
DIBENZOFURAN	930	340	UG/KG
DIBROMOCHLOROMETHANE	12	11	UG/KG
DIESEL RANGE ORGANICS	140	2.64	MG/KG
DIETHYLPHTHALATE	930	340	UG/KG
DIMETHYLPHTHALATE	930	340	UG/KG
ETHYLBENZENE	12	11	UG/KG
FLUORANTHENE	930	340	UG/KG
FLUORENE	930	340	UG/KG
GASOLINE RANGE ORGANICS	0.6	0.0534	MG/KG
HEXACHLOROBENZENE	930	340	UG/KG
HEXACHLOROBUTADIENE	930	340	UG/KG
HEXACHLOROCYCLOPENTADIENE	930	340	UG/KG
HEXACHLOROETHANE	930	340	UG/KG
HEXAVALENT CHROMIUM	59	50	UG/KG
INDENO(1,2,3-CD)PYRENE	930	340	UG/KG
IRON	100	2.2	MG/KG

NAVAL WEAPONS STATION SBD CONCORD
LIST OF MINIMUM AND MAXIMUM DETECTION LIMITS FOR ALL SOIL ANALYTES
INSTALLATION RESTORATION SITE 17

ANALYTE	DETECTION LIMITS		UNITS
	MAXIMUM	MINIMUM	
ISOPHORONE	930	340	UG/KG
LEAD	5	0.21	MG/KG
MAGNESIUM	5000	1.1	MG/KG
MANGANESE	15	0.028	MG/KG
MERCURY	0.2	0.008	MG/KG
METHYLENE CHLORIDE	12	11	UG/KG
MOLYBDENUM	14	0.12	MG/KG
MOTOR OIL RANGE ORGANICS	140	10	MG/KG
N-NITROSO-DI-N-PROPYLAMINE	930	340	UG/KG
N-NITROSODIPHENYLAMINE (1)	930	340	UG/KG
NAPHTHALENE	930	340	UG/KG
NICKEL	40	0.22	MG/KG
NITROBENZENE	930	340	UG/KG
OIL & GREASE	30	27	MG/KG
PENTACHLOROPHENOL	2200	830	UG/KG
PHENANTHRENE	930	340	UG/KG
PHENOL	930	340	UG/KG
POTASSIUM	5000	6.7	MG/KG
PYRENE	930	340	UG/KG
SELENIUM	5	0.42	MG/KG
SILVER	10	0.11	MG/KG
SODIUM	5000	25.3	MG/KG
STYRENE	12	11	UG/KG
SULFATE	5.72	0.53	MG/KG
TETRACHLOROETHENE	12	11	UG/KG
THALLIUM	10	0.039	MG/KG
TOLUENE	12	11	UG/KG
TOTAL ORGANIC CARBON	0.01	0.01	MG/KG
TRANS-1,3-DICHLOROPROPENE	12	11	UG/KG
TRICHLOROETHENE	12	11	UG/KG
VANADIUM	50	0.11	MG/KG
VINYL CHLORIDE	12	11	UG/KG
XYLENE (TOTAL)	12	11	UG/KG
ZINC	20	0.02	MG/KG