

5090
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From: Commanding Officer, Engineering Field Activity, West, Naval Facilities
Engineering Command
To: Distribution

SUBJECT: TRANSMITTAL OF RESPONSE TO AGENCY COMMENTS ON THE
PHASE II REMEDIAL INVESTIGATION (RI) DRAFT FINAL FIELD WORK
PLAN, NAVAL FUEL DEPOT, POINT MOLATE, RICHMOND, CALIFORNIA

Enclosure: (1) Response to Agency Comments on the Phase II Remedial Investigation
(RI) Draft Final Field Work Plan, Naval Fuel Depot, Point Molate,
Richmond, California

1. Enclosure (1) is forwarded for your information. Due to time constraints, the Navy plans to proceed with areas of the Phase II RI Work Plan which have been agreed to by the agencies.
2. If there are any comments, please provide them in written format by December 5, 1998 to Commanding Officer, Engineering Field Activity West, 900 Commodore Drive, San Bruno, CA 94066, Attn: Dave Song. If there are any questions about the document, the point of contact is Mr. Dave Song at (650) 244-2591.

ORIGINAL SIGNED BY

LARRY DOUCHAND
BRAC Environmental Coordinator
By direction

Distribution:

Regional Water Quality Control Board (Attn: James Nusrala)
US Environmental Protection Agency (Attn: Phillip Ramsey)
City of Richmond (Attn: Kent Kitchingman)
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Activity file: Pt. Molate

**RESPONSE TO AGENCY
COMMENTS ON THE
PHASE II REMEDIAL INVESTIGATION
DRAFT FINAL FIELD WORK PLAN,
NAVAL FUEL DEPOT POINT MOLATE**

1.0 INTRODUCTION

Comments on the Naval Fuel Depot (NFD) Point Molate Phase II Remedial Investigation (RI) Draft Final Field Work Plan were received from Mr. James Nusrala with San Francisco Bay Regional Water Quality Control Board (RWQCB); Mr. Phillip Ramsey with U.S. Environmental Protection Agency (EPA); Mr. Jeffrey Paull with EPA; and Mr. Joe Eidelberg with EPA. RWQCB provided comments in a letter dated August 28, 1998 and EPA provided comments in a letter dated August 31, 1998. With the exception of Mr. Paull's comments, responses to the comments are provided below. Mr. Paull approved the work plan as is and there are no responses.

2.0 RESPONSE TO RWQCB COMMENTS

Responses to Mr. Nusrala's comments are provided below,

GENERAL COMMENTS

Comment 1: Placement of the Bedrock Monitoring Wells. Staff request more specific geologic or chemical rationale for the placement of each of the bedrock monitoring wells proposed at Point Molate. We understand that the site has much outcropping and subcropping bedrock, and limited groundwater reservoirs, due to the hilly nature of the site, and would like an overall conceptual model for how the specific bedrock locations assist us in filling our outlined data gaps. It appears that the bedrock wells were placed randomly at each of the four Installation Restoration (IR) sites. The reader has the plates with the soil and groundwater data summaries to assist in reviewing the placement of the proposed soil borings and monitoring wells, but nothing specific for the bedrock points.

Response: Table A-2 of the Field Sampling and Analysis Plan provides rationale for placement of the bedrock monitoring wells reiterated herein. With the exception of Site 3, very limited data exist for the bedrock in the vicinity of NFD Point Molate. There are data from the shallow soil investigation for the UST Program (EMM-West 1990). Numerous soil borings were drilled into the upper few feet of the bedrock at Point Molate. Many of these borings contained fractured bedrock. Borings at the adjacent Chevron refinery also exhibited fractures in bedrock (BEDM 1991, 1992). These investigations mapped the geology and structure of the San Pablo ridge. Bedding planes in the Franciscan Formation generally strike west-northwest. Dips vary from 40 to 80 degrees to the south (BEDM 1991).

Faults and brecciated zones were observed in the Chevron borings. These bedrock structures trend northeast and northwest. This structure appears to be mirrored in the topography with the backbone of the ridge trending northwest and numerous ravines trending northeast to southwest. It is hypothesized that the geomorphology is controlled by the structure with major ravines superimposed on larger fractured zones in the bedrock. These fractured zones would provide more easily erodable rock that promoted erosional growth of the ravines. The more highly fractured zones would be most prospective places to monitor groundwater. This is the rationale for placement of monitoring well BR1-1 proposed upgradient of the Waste Disposal Area, BR1-2 downgradient, and BR1-3 further downgradient and centered in the ravine.

Site 3 bedrock well, BR3-1, is placed in an area of a known paleochannel at the bottom of Diesel Road. The well is placed to assess potential for contaminants in the paleochannel to enter the bedrock.

Site 4 bedrock wells, BR4-1 and BR4-2, are placed to assess potential for contaminant movement into bedrock in areas historically indicating high recharge rates to the groundwater.

Comment 2: Plate 5, IR Site 1 Waste Disposal Area and IR Site 4 South Shoreline Proposed Investigation Locations.

- The focus of the proposed sampling to determine nature and extent of contamination at the Waste Disposal Area appears to be biased toward characterizing the perimeter of the landfill. This may very well not provide the most accurate representation of the contamination, depth of fill, and nature of material underneath the landfill. We suggest that the Navy propose three or four of the trenches, soil borings, or monitoring wells down the middle of the landfill to provide a more representative sampling strategy for use in presumptive removal scoping. The interior may well be where we detect the most highly contaminated material. Staff feel sampling in the interior or center of the Waste Disposal Area will provide the depth of any potential contamination in this area, as well as any necessary geotechnical information.
- RWQCB staff propose a few changes to the placement of the monitoring wells and piezometers at this area. We request better groundwater coverage around well, MW02-06. This is one well that still contains fuel products as of the April 1998 monitoring data. During this event the Navy detected up to 2,770 micrograms per liter ($\mu\text{g/l}$) diesel, and 13 $\mu\text{g/l}$ Acenaphthene in MW02-06. The Navy needs to better define the extent of any potential petroleum plume in this area.

Response: Bullet No. 1: The study is biased to assess the landfill perimeter. Data collected in the Phase 1 RI under CTO 248 were collected from borings in the landfill (PRC 1994). Four additional borings are being drilled during this investigation per RWQCB request (see Plate 5 of the Draft Final Work Plan). Definitive characterization data are not needed for applying a presumptive remedy and EPA guidance discourages characterization of landfill contents when applying presumptive remedies (EPA 1997). Therefore, in applying a presumptive remedy, no further trenching or characterization is required by EPA guidance (EPA 1993a; 1993b; 1996; 1997).

Bullet No. 2: New proposed monitoring wells MW1-1, MW1-2, MW1-3, and BR1-2 are all placed downgradient to assess any leachate or hydrocarbons exiting the Waste Disposal Area. No other wells will be placed within the landfill as the application of the final remedy would eventually destroy them. The goal is to place wells in places useful for contained long-term monitoring of the remediated Waste Disposal Area without threat of destroying them during remediation.

Comment 3: Proposed Investigation Locations, IR Site 3 and 4 Treatment Ponds, and Drum Lot No. 1 Areas.

- Staff request the Navy better define the lateral and vertical extent of the Methyl-t-butyl Ether (MTBE) detections in groundwater at points MW11-19, MW11-21, and PZ11-78, through sampling in the Remedial Investigation. The July 31, 1998 Semiannual Groundwater Sampling Event No. 2, Data Summary for Point Molate shows 18 micrograms per liter ($\mu\text{g/l}$) detected at MW11-19, and 84 $\mu\text{g/l}$ detected at MW11-21. Staff request the Navy to determine the source of these positive detections of MTBE in the Drum Lot No. 1 Shoreline in this upcoming RI effort.
- We feel the Navy would be better off placing one or two of the wells proposed in the interior of Drum Lot No. 1, MW4-1 through MW4-5, north up closer to MW11-19, rather than inland from MW11-56. The Navy has detected more TPH and Semi-Volatile Organic Compounds over historic groundwater monitoring periods at MW11-19. Staff look at Plate 13 of the Draft Final RI Work Plan as proof of this. Drum Lot No. 1 Previous Groundwater Sampling Results and Contoured Total BTEX form Oct./Nov 1997.

Response: **Bullet No. 1:** There has been no known historical source of gasoline in the area of these wells since 1978 when MTBE began being used as an additive. MTBE detections may be false positives due to gas chromatograph errors. However, the Navy will move one of the Drum Lot No. 1 wells to investigate these detections of MTBE.

Bullet No. 2: The wells in Drum Lot No. 1 were placed after a field discussion with RWQCB and EPA representatives in October 1997. The wells have been located as per their request. The boring and well locations are targeted to find potential sources of hydrocarbons in Drum Lot No. 1.

Comment 4: Section 3.3.5, IR Site 3 Data Quality Objectives Process. The text in this section needs to describe in better accuracy the nature of the environmental problem at site 3. The Navy has not told the reader of the residual fuel product thicknesses and extent of impact throughout the ponds site, nor described in any detail the flows and contaminant levels that pass out the Oily Recovery System (ORS) out to San Francisco Bay. This site contaminant information is necessary to understand the full conceptual model at site 3, all constituents that may pose a threat to human health or the environment, and need to be addressed in either removal actions or through the RI/FS process.

Response: Some text will be added to this section, a more detailed discussion of IR Site 3 can be found in the Naval Fuel Depot Point Molate, Treatment Ponds Area, Final Site Characterization Report (PRC Environmental Management, Inc., July 29, 1994). The nature of Site 3 environmental problems is continually being evaluated as new data become available. Additionally, Site 3 pilot testing is being conducted to collect

further data to incorporate into the RI report. The Phase II RI report will contain a full description of all data and interpretations of environmental problems. The ORS System is part of the compliance program and is being closed as part of the underground storage tank closure program.

Comment 5: Section 5.0, Background Soil Geochemical Study. Staff request that the Navy not pursue the background soil geochemical study to argue that Polycyclic Aromatic Hydrocarbons (PAHs) are naturally occurring in the San Francisco Bay Area and at NFD Point Molate. There are several reasons why we request that the Navy not pursue this approach and potentially screen out a constituent of concern, PAHs. First, we know that PAHs are not naturally occurring in shallow soils in the environment. Unlike metals, they are only produced by man, through automobile exhaust, petroleum refining, chemical production, etc. Secondly, there has been very little data presented supporting Navy's argument that activities at Chevron or automobile traffic from the Richmond-San Rafael Bridge are depositing PAHs via airborne transport onto Point Molate shallow soils. Thirdly, we have detected many PAHs sitewide and identified PAHs as a constituent of concern due to petroleum leaks from Point Molate. We are not comfortable with the Navy screening out any of these potential constituents of concern (COC). Instead, RWQCB staff request that Navy determine the full nature and extent of PAHs at Point Molate, and evaluate the potential risk to human and ecological receptors due to their presence at the site. This work will be done during the Remedial Investigation. It is after this full risk evaluation, that the BRAC Cleanup Team can use risk management tools to make decisions regarding potential COCs like PAHs.

Response: The Navy is determining the full nature and extent of PAHs at NFD Point Molate during the Phase II RI, the tank and pipeline investigations, and various removal actions. However, it is possible that not all PAHs in shallow soils come from NFD Point Molate. Industrial and traffic sources exist, and historical sources of pyrogenic PAHs have been documented from the extensive fires after the 1906 earthquake. The statement PAHs are only man made is incorrect. PAHs have been documented as naturally occurring at low levels in uncontaminated soils (Dragun 1988 and Moore 1984).

Furthermore, the Navy is not attempting to screen out potential constituents of concern, only accurately assess the PAHs directly attributable to operations at NFD Point Molate. The Navy reserves the right to conduct this evaluation and is specifically directed to conduct this study by U.S. Navy policy (Navy 1997). The background study will be conducted as presented and used to assist with risk management decisions.

SPECIFIC COMMENTS

Comment 1: Section 3.1.2, Chemistry Summary - Soil, Site 1. The Waste Disposal Area, Installation Restoration Site 1, conceptual model needs to mention here the depth of impacted soil. The reader needs to know this information to understand the extent of the problem at this site, and the basis for proposing a presumptive remedy. It is obvious that the estimated nature and extent of the waste plays a major roll in the Navy's pushing for presumptive remedy over the more conventional CERCLA path, (Remedial Investigation, Feasibility Study, then Record of Decision, and Remedial Design/Remedial Action) here at site 1.

Response: The text has been revised to state that the thickness of fill in the Waste Disposal Area varies from a few feet to a maximum depth of approximately 50 feet towards the downslope end. Data collected during the Phase II RI will assist in the verification of the extent of Site 1.

Comment 2: Section 3.1.5, IR Site 1 Data Quality Objectives Process, Step 1: State the Problem. The Navy needs to define the problem at the Waste Disposal Area in this section. This is fundamental segment of the Data Quality Objectives Process, outlined on page 3-5. We need to understand the nature and extent of contamination, the access issues, the geology specific to site 1, etc. The reader needs to see in writing what the problem is for the Navy at this specific site.

Response: Extensive text on the Waste Disposal Area is found in Section 2.3.2 Geology, 2.3.3. Hydrogeology, and Sections 3.1 through 3.1.4 Waste Disposal Area Conceptual Site Model, nonetheless some text will be added to section 3.1.5 for further clarification.

Comment 3: Table 3-2, Data Gaps for IR Site 1. We request groundwater sampling upgradient from the Waste Disposal Area to help evaluate the fifth data gap: the differentiation of impact from Waste Disposal Area from regional sources. The upgradient groundwater will provide a benchmark or reference value for the contamination present at the beginning of the landfill ravine, where the flow starts. These values could be compared to downgradient groundwater values to determine whether the landfill constituents are having any adverse effect on the regional flow regime for the ravine.

Response: Please see Plate 5. Monitoring well BR1-1 is proposed to evaluate groundwater quality upgradient of Site 1. It should be noted that a previous boring in this area, DA-1 encountered dry bedrock at a shallow depth near the proposed location. This investigation will attempt to locate the water table, if possible.

Comment 4: Section 3.4.5, IR Site 4 Data Quality Objectives Process, page 3-23. The decision statement 3 is comprised of two decisions. The first decision, whether the extent of hydrocarbons in groundwater at Drum Lot No. 1 are adequately characterized? Is separate from the second decision, do the fuel constituents present that may be migrating to the Bay pose a risk to aquatic receptors? The report needs to make it clear that the first question of decision statement 3, whether the extent of hydrocarbons in groundwater at Drum Lot No. 1 are adequately characterized?, can be addressed by the placement of some wells in the interior of Drum Lot 1, as proposed later in the report.

Response: The section has been modified to clarify the decision statements.

Comment 5: Section 6.1, Waste Disposal Area Perimeter Trenching. How will the Navy adequately determine the boundaries of the landfill through trenching without soil and/or groundwater chemical analyses at all the perimeter trench locations? The entire flat area of the ravine where the landfill sits may be composed of the same geologic material, and it may not be possible to determine where the landfill stops and native soil begins through solely logging the soils. Please elaborate here for the reader.

Response: Please see the response to EPA comment number 7, Section 4.0. Boring logs presented in the Waste Disposal Area Draft Phase I RI Report, (PRC 1994) indicate soil and debris at Site 1 are easily distinguishable from surrounding materials soils.

3.0 RESPONSE TO EPA COMMENTS

Responses to Mr. Ramsey's comments are provided below

GENERAL COMMENTS

Comment 1: U.S. EPA notes significant improvements to the January 19, 1998, draft RI work plan. Notable improvements were in the organization and presentation of past site data and development of site maps.

Response: Comment acknowledged.

Comment 2: U.S. EPA requests that the RI work plan text better detail its decision to conduct removal actions at Waste Disposal Area (IR01), the Treatment Pond Site (IR03), and Shoreline Areas (IR04). In several sections, text does not sufficient and clearly describe this new strategy. Similarly, U.S. EPA notes that text for the Waste Disposal Area indicates that a "presumptive remedy is proposed". U.S. EPA request that the Navy clarify the use of U.S. EPA presumptive remedy guidance and state/local requirements for landfill closure.

Response: Please see Section 1.1 of the FWP for a description of the removal actions. Additional citations of guidance for the landfills have been added.

Comment 3: Data Quality Objectives (DQOs): U.S. EPA has concerns with some of the specific DQO text, as identified below. However, in general, U.S. EPA is satisfied with the design and quality of the data collection effort.

Response: Comment acknowledged.

Comment 4: Background assessment of PAHs: U.S. EPA has concerns with the proposal to evaluate background concentrations of Polyaromatic Hydrocarbons (PAHs) at Point Molate. U.S. EPA would prefer to see the Navy expend resources on conducting the necessary investigations, which according to the Navy may be now limited due to document preparation cost over-runs.

Response: Please see response to RWQCB general comment number 5. The Navy feels the background study is a necessary investigation for future risk management decisions. Additionally, no required investigations have been limited based on cost over runs or funding.

Comment 5: New methods for collecting/preserving soil samples for volatile organic compound (VOC) analysis: U.S. EPA Region IX now recommends that for VOC analysis of soil matrix, methanol preservation be used.

Response: Please see the response to EPA comment 17, Section 5.0. All previous sampling at NFD Pt. Molate has used the CLP method for volatile organic compounds. The methanol preservation method is an SW846 method. Therefore, to promote continued comparability of data the Navy will not use the newer SW 846 methanol preservation method but continue with the CLP method.

SPECIFIC COMMENTS

Comment 1: Executive Summary, page ES-1: In the first bullet at the bottom of the page, text should be changed to more clearly describe IR01 strategy. Also, data will be collected for evaluating one of two primary presumptive remedies for the landfill, not for "choosing" a remedy.

Response: This section has been revised as suggested.

Comment 2: Executive Summary, page ES-2: Reference to presumptive remedies for the Waste Disposal Area needs to more clearly described. Text should indicate something to the effect that the Navy is proceeding with closure actions at the Waste Disposal Area in part using U.S. EPA landfill presumptive remedy guidance (U.S. EPA 1993, "Presumptive Remedy for CERCLA Municipal Landfill Sites," Office of Solid Waste and Emergency Response, Directive No. 9355.0-49FS, EPA 540-F-93-035, September). Also please note, a new guidance exists on this subject (U.S. EPA 1997, "Implementing Presumptive Remedies," Office of Emergency and Remedial Response, EPA 540-R-97-029, October).

Response: Reference to the EPA guidance has been added.

Comment 3: Section 1.0, Introduction: On page 1-1, second paragraph, please expand the discussion of BCT involvement in developing the Remedial Investigation work plan to include specific RI scoping meeting, site visits, and other meeting dates that were associated with the RI work plan development. A brief statement is also requested to detail Navy's re-assessment of the Point Molate RI (including the Navy's June meetings). Please note that the June meetings were requested by the Navy and are not considered BRAC Cleanup Team (BCT) meetings.

Response: These changes have been made as suggested.

Comment 4: Section 1.1, Scope and Objective: The following specific comments apply to the site summaries included on pages 1-2 through 13:

- A. For Site 1 summary, please clarify how and when human health and ecological risks will be assessed and when Applicable or Relevant and Appropriate Requirements (ARARs) would be evaluated.
- B. For Site 1 summary, please change first sentence to read, "In order to expedite closure and as a result of the Navy June meetings, the Navy is proposing to collect data sufficient to evaluate the site for a U.S. EPA landfill presumptive remedy. The presumptive remedies fall into two categories, removal or capping/control (a no action alternative is always considered)".
- C. Site 3 summary: Next to last sentence is awkward, please restate.

Response:

- A. The Navy is proposing to conduct a removal action to address environmental concerns at Site 1, the Former Waste Disposal Area. An engineering evaluation/cost analysis (EE/CA) will be prepared to support the removal action and evaluate closure alternatives (for example, excavation or capping).

Typically, a risk assessment is not prepared for a removal action, although risks are discussed in the context of identifying the need for the removal action and establishing removal action objectives. Preparation of the human health risk assessment (HHRA) and ecological risk assessment (ERA) will then depend on the outcome of the EE/CA. If excavation of the contents of the disposal area is the selected remedy, the HHRA and ERA will be conducted following completion of the removal action. The assessments will be based on confirmation samples collected following the removal to ensure that cleanup goals established in the EE/CA have been met. If capping is the selected remedy, streamlined risk assessments will be prepared consistent with EPA guidance on presumptive remedies for landfill sites (EPA 1993a and 1996). ARARs will be addressed during preparation of the remedial documents. Text has been added to the FWP for clarification.

B. This sentence has been changed.

C. This sentence has been rewritten.

Comment 5: Section 2.1, Facility Background. U.S. EPA requests additional detail be provided. For example, the text does not indicate when the facility operated, of what activities occurred prior to the Navy's ownership of the property. We also request that the Final Environmental Basewide Survey (EBS) be referenced.

Response: Additional text has been added and the EBS has been referenced.

Comment 6: Section 2.2, IRP Site Designation. Text incorrectly states that the IR: Sites are shown on Plate 1: boundaries for IR site 01, 03 and 04 are not shown. Please correct Plate 1. Also U.S. EPA requests that an explanation be provided as to why the Navy reduced the boundary of IR01 from that presented in EBS, BRAC Cleanup Plan, and other existing site documents.

Response: The approximate boundaries of IR Sites 3 and 4 will be added to Plate 1.

The boundary of Site 1 was modified to show only the footprint of the debris. Extending any boundary lines downhill and downgradient have been arbitrary because the extent of impacted groundwater from Site 1 is not currently defined. This Phase II RI and the pipeline investigations will clarify the extent of impacted groundwater. Please also note that by delineating the footprint of the Waste Disposal Area the Navy has not excluded IR investigations outside the marked area.

Comment 7: Section 2.2. U.S. EPA's response to the statement on the bottom of page 2-2 that "(t)he extent of the [Waste Sump Pond] area affected is currently well defined," is that U.S. EPA believes the information (particularly residual soil contamination) could be better documented and discussed with the BCT.

Response: Please see the response to RWQCB general comment number 4, Section 2.0.

Comment 8: Section 2.3.2, Geology. U.S. EPA determined that the geology section is very brief and general, and should be expanded. In the Hydrogeology section, text mentions a preferential flow pathway. A discussion of preferential flow pathways should be contained within Section 2.3.2.

Response: A discussion of preferential pathways has been added to Section 2.3.2. However, the Phase II RI report will contain an expanded geology discussion. The RI Report will be able to integrate more pre-existing data with the newly collected data for a more site-specific interpretation.

Comment 9: Section 2.4.9, Facility-Wide EBS Sampling. Text indicates that, "(EBS data) will be used for the CTO 112 human health and ecological risk assessments if relevant and applicable." U.S. EPA notes that preliminary data collected from the EBS sampling has detected elevated pesticides at BRAC Parcel 30 that necessitate additional analysis for the offshore sediments.

Response: Pesticides have been added to Site 4 sediment analyses offshore of BRAC Parcel 30.

Comment 10: Section 2.4.11, Rational National Standards Initiative (RNSI). U.S. EPA is unclear on how the January 1997 RNSI document, previously comment on by U.S. EPA (please see U.S. EPA's March 28, 1997 letter) will be utilized for the RI investigations. As indicated is U.S. EPA's March 1997 letter, the RNSI ecological screening protocol is not suitable for use. Furthermore, a protocol for screening sites in the early stages of ecological risk assessment already exists in the guidance available from the State of California. This protocol has been accepted by the Region IX BTAG.

Response: The Rational National Standards Initiative (RNSI) document was utilized to the extent possible. However, only minor ecological background material was used and incorporated into the FWP. Moreover, it is not the Navy's intent to use the ecological or human health risk screening protocols presented in RNSI. The protocols used for NFD Point Molate will be the ones agreed upon with the BCT and presented in the respective work plans.

Comment 11: Figure 3-6, 3-7, and 3-8, Human Health Conceptual Site Model for IR01, 03, and 04, respectively. U.S. EPA recommends that the referenced figures be modified to indicate potential pathways between contaminated groundwater and future construction worker (receptor) via dermal contact.

Response: The figures will be modified as requested. However, the Navy believes this is a very unlikely exposure scenario because most pipelines, tanks, and foundations at NFD Point Molate are several feet above the water table.

Comment 12: Figure 3-9, Conceptual Site Model for IR01, Waste Disposal Area. While some concrete debris has been noted, U.S. EPA does not believe true rip rap retaining wall exists in the south Shoreline Area, as indicated on the figure. Please correct.

Response: A layer of rip rap exists along most of the south shoreline. It is relatively fine size and dark in color so it doesn't stand out. It is also heavily overgrown with weeds, particularly wild fennel, so it is not obvious. The figure will remain as presented.

Comment 13: Section 3.1.5, IR Site 1 Data Quality Objective Process. The following comments apply to IR Site 1 DQOs:

- A. U.S. EPA would have preferred to see Problem Statements for each IR site, as opposed to the general statement made for all IR sites.
- B. For Step 2: Identify the Decision, Decision Statement 1: U.S. EPA believes the first statement should not be "(d)etermine which presumptive remedy should be selected for the Waste Disposal Area," but rather explain what are the decisions required to evaluate the landfill presumptive remedy alternatives.

- Response:**
- A. Statements have been presented for each site.
 - B. The text has been changed as requested.

Comment 14: Section 3.2. Please correct text to indicate U.S. EPA has provided comments on the IR Site 02, Removal Action Completion Report in correspondence dated July 14, 1998.

Response: The text has been changed as requested.

Comment 15: Section 5.2. Rationale for Approach to Background Geochemical Study: U.S. EPA is concerned that text in this section does not acknowledge the site as a source of PAH contamination. Text in the second paragraph does not indicate that fuels may also be a primary source of PAHs at Point Molate, and should be corrected. Also, U.S. EPA does not agree with the statement on page 5-2, that most PAHs in soils at Point Molate are from off-site, atmospheric deposition."

Response: Section 5.1, second paragraph clearly states that the data set is needed to "...evaluate the environmental impact of site operations on surficial soil." The rationale section is discussing why PAHs may exist from causes other than facility operations and why background is an issue for investigation by the Navy.

The sentence on page 5-2 clearly does not state "most PAHs in soil at Point Molate are from off-site, atmospheric deposition." It states..."Most PAHs in soil [any soil, anywhere] are believed to result from atmospheric deposition after local and long-range transport." This does not state this is true of NFD Point Molate.

Comment 16: Plates 1-19. In general, U.S. EPA found the plates are fairly well prepared and organized; however, some minor changes are requested for the following plates:

- A. Plate 1: U.S. EPA requests that all IR site boundaries or actual site areas (like that presented for IR02 be included on this figure.
- B. Plate 5: U.S. EPA requests that the exploratory trenches at IR01 (Landfill Site) be increased. U.S. EPA requests that three trenches perpendicular to the drainage (approximately north and south orientation) be completed across the site, and one parallel to the drainage (approximately east and west across the center) be completed. The rationale for focusing only on the perimeter is unclear; however, U.S. EPA believes the Navy's proposed trenches may not assess contaminants in the deeper portions of the site.
- C. Plate 6: This plate appears to illustrate the general location of the former waste disposal sump pond; however, it is not identified as such. U.S. EPA requests clarification on the actual boundary of the former waste disposal sump pond and documentation of information utilized to establish this boundary.
- D. Plate 7: U.S. EPA notes reference to "Reworked Intertidal Sediments" in the geological logs on this plate; however, no discussion of this is included in the geology section (Section 2.3.2). Please include a brief discussion of these sediments in the text.
- E. Plate 13: U.S. EPA notes piezometer PZ11-79 is shown on the plate; however, no data is presented. Please clarify or correct.

- F. Plate 14; U.S. EPA notes that this figure does not provide water quality data for ERM-3. Please correct to include data for well ERM-3.
- G. Various plates, including Plate 16; U.S. EPA notes that many plates contain data qualifiers. U.S. EPA did not notice a complete list of qualifiers until Plate 16. Please verify that all qualifiers presented on each plate are defined on the respective plate.
- H. Plate 19; U.S. EPA requests clarification on the Navy's rationale for bedrock well location BR4-2.

Response:

- A. The boundaries have been added per this request.
- B. Please see the response to RWQCB general comment 2, Section 2.0. The trenches will remain as planned. Trenching the center of the Waste Disposal Area would not provide useful information. EPA guidance specifically states investigation of the center of a landfill is neither desirable or necessary for pursuing a presumptive remedy (EPA 1997). The trenches are proposed only to determine the extent of the fill and the nature of the contact between fill and natural soils or bedrock underlying the landfill. The trenches are not intended to assess the contaminants in the deeper portions of the site. Moreover, boring logs from CTO-248 the Phase I RI investigation of IR Site 1 show waste materials were generally absent above 10 to 15 feet below ground surface. Therefore, trenching would not likely reach much waste with the normal backhoe depth limit of 8 to 10 feet. Lastly, the clearing, grubbing, and excavation would damage the existing volunteer vegetation cap, thereby increasing the potential for erosion problems until the remedy is implemented.
- C. The approximate location of the sump pond will be labeled on the Plate. The line is dashed to show it is approximately the boundary. The location was approximated from old air photos and anecdotal evidence; therefore, the boundary as shown can not be considered to be exact.
- D. A discussion will be added to Section 2.3.2 on these sediments.
- E. Piezometer PZ11-79 was installed to use only as an observation point for the aquifer pumping test. It was never sampled for water quality.
- F. ERM-3 has not been sampled since 1989 so the data is not representative of current water quality. Data for ERM-3 is found in Appendix A. These data will not be placed on Plate 14 because they may not be representative.
- G. Qualifier definitions have been placed on all plates and a master list of qualifier definitions will be placed at the front of the plates.
- H. Proposed monitoring well location BR4-2 is in an area that exhibits much surface flow during rainy weather. It is hypothesized that fracture systems in the bedrock may be act as a conduit for groundwater.

4.0 RESPONSE TO EPA COMMENTS

Responses to Mr. Eidelberg's comments are provided below.

CONCERNS:

Comment 1: [General]. The document does not provide sufficient sampling information in narrative and table format for a sampling crew to clearly follow. Section 6.0 of the FWP provides the general technical approach for the sampling efforts for basewide and individual sites and the FSAP provides some general information in Table format. It is recommended that the FSAP provide sampling information for Sites 1, 3, 4, and the basewide site in narrative and table formats for easy reference by the sampling crew.

Response: The tables have been reviewed for clarity and accuracy. The text narrative, tables, and figures are sufficient to direct sampling efforts by experienced contractors at NFD Point Molate.

Comment 2: [FWP: Section 3.1.5, 3.3.5, 3.4.5, - Step 6. Specify Limits on Decision Errors]. Sections 3.1.5, 3.3.5, and 3.4.5 state that measurement errors will be minimized by adhering to the sampling, analytical, and record keeping procedures specified in the QAPP and FSAP prepared for this project. These general statements are not adequate for Step 6 of the DQO process. The document should specify tolerable limits on decision errors based on the proposed sampling for each project. The document should also discuss the consequences of making an incorrect decision. For example, Section 3.1.5 should discuss the rationale for how the proposed five soil borings, five monitoring wells, and three bedrock monitoring well samples are expected to be sufficient to make decisions, and what are the decision error rates acceptable for the project. Sections 3.3.5 and 3.4.5 should include a similar discussion for Sites 3 and 4.

Response: This investigation is not a probabilistic study, but rather a judgmental or biased study. The outcome of specific sampling results are used as an indication of the nature, extent, and basic physical characteristics of the problem. Furthermore, step 6 of the DQO process does not apply directly to judgmental or biased studies.

Comment 3A: [FWP: Section 5.4, Location and Number of Samples; FSAP: Table A-1, Summary of Phase II RI Investigation Methods]. The FWP and the FSAP do not specify the exact number of samples to be collected for the basewide soil geochemical study at the facility. Section 5.4 of the FWP indicates that 10 or 21 samples may be collected for this investigation. The FSAP must cite the exact number and location of samples to be collected. (Note that Table A-1 of the FSAP indicates that 14 to 21 samples will be collected for the study.)

Response: The number of samples to be collected will be determined based on the relative size of areas suitable for obtaining background samples. A pre-sampling reconnaissance will determine the areas suitable and accessible for sampling. It is envisioned that seven samples will be obtained from each of the larger areas, as applicable. If a suitable offsite location is found and access is obtainable, we will collect a set of samples there also. This is described in Section 5.0 of the work plan. Furthermore, the FWP will be clarified to state that 14 to 21 samples will be collected depending on field conditions.

Comment 3B: Section 5.4 of the FWP states that the exact location of each sample within these areas will be selected following evaluation in the field. It is recommended that the sample locations be identified on maps for samplers to follow.

Response: Please see the response to the previous comment, 3A.

Comment 4: [FWP: Section 6.0, Technical Approach]. Section 6.0 states that surface soil and pore water sample locations for the public beach are shown in Figure 4-3. Figure 4-3 could not be located. It is recommended that the map identifying the sampling locations be provided.

Response: The sample locations are shown on Figure A-9 at the end of the FSAP in Appendix A. The text has been corrected.

Comment 5A. [FWP: Section 6.1, Site 1 Waste Disposal Area - Perimeter Trenching - Soil Borings]. Section 6.1 of the FWP states that waste characterization samples may be collected to analyze for total petroleum hydrocarbons (TPHs) and semivolatile organic compounds (SVOCs) and for toxicity leachate procedure (TCLP) analysis. Note Table A-3 of the FSAP indicates that the sample number is yet to be determined (TBD). It is recommended that the revised document specify the number of samples to be collected for analysis from the perimeter trenches at Site 1.

Response: Until the materials are observed in the trenches, it is difficult to estimate the exact number of samples that will be taken. If a variety of wastes are encountered, more samples may be needed. If only clean soils or buried brush are encountered, less samples may be needed. Typically, professional judgment is used by the field geologists to determine the appropriate number of samples to be analyzed.

Comment 5B: Section 6.1 of the FWP also states that approximately two samples from soil boring will be collected for pH measurement, British thermal unit (BTU) estimation, and total organic carbon (TOC) content. Note this information is not included in Table A-3 of the FSAP. The FWP and FSAP should be revised to be consistent.

Response: The table will be revised to accurately reflect the text.

Comment 6: [FWP: Section 6.3.1, Point Molate Public Beach] Section 6.3.1 of the FWP states that eight onshore shallow soil samples, six sediment samples, and six pore water samples will be collected and analyzed from the public beach area (Site 4). Table A-1 of the FSAP also indicates the collection of these samples from Site 4. However, Tables A-2 and A-3 do not include this information. It is recommended that a rationale for this proposed sample collection with associated target analyte list be provided and the tables and text be revised to be consistent.

Response: Tables A-2 and A-3 have been revised to reflect this information. The rationale for the sampling at the Point Molate Public Beach is extensively discussed in Section 4.0 of the FWP.

Comment 7: [FSAP: Section 3.3.2, Trenching; Plate 5, Site 1 Waste Disposal Area and Site 4 South Shoreline Proposed Investigation Locations]. Section 3.3.2 of the FSAP states that trenching will be used to delineate the landfill boundaries. Section 3.3.2 also states that the proposed locations for the trenches are shown on Plate 5. It is unclear how landfill boundaries will be delineated in the absence of sample analysis. It is recommended that the discussion on this subject be expanded. The document should also discuss how the correct boundaries will be ensured.

Response: Please see the response to RWQCB Specific Comment Number 5 in Section 2.0. Sample analysis of uncontaminated cover material may not delineate the landfill. Clearly identifiable debris or stained soils would be needed to avoid non-detects, therefore a visual or PID screening observation will trigger sample selection.

The boundaries will be mapped by a number of observations, slope change, soil changes on surface and trenches, observable debris, samples analyzed, vegetation, and anecdotal evidence. While we can not ensure absolute boundaries, we believe we can map them to the accuracy required for engineering studies.

Comment 8: [FSAP: Section 3.3.4, Analytical Parameters for Soil Samples] Section 3.3.4 of the FSAP states that soil, fill, and sediment samples will be analyzed for various physical, chemical, and biological characteristics including metals and sulfides. The FSAP does not specify which samples will be analyzed for which parameters. It is recommended that the FSAP include this information.

Response: Respective analyses will be determined in the field using best professional judgement. Most samples will be analyzed for the first list in Section 3.3.4, while others will be analyzed for the analytes shown in Table A-3. An example for Site 1 would be: trenching encounters probable sandblast grit, if there is no soil staining, odor, or PID reading, there would be no analysis for hydrocarbons. This procedure can focus analytical laboratory work on the most likely detections.

Comment 9: [FSAP Section 4.1, Duplicates]. Section 4.3 of the FSAP states that duplicate samples will be collected at a frequency of approximately one in every 10 samples collected for each medium. However the FSAP does not identify the sampling points for field duplicate collection nor does it explain how field duplicate locations will be selected. It is recommended the FSAP identify locations for duplicate samples, preferably in table format for easy reference.

Response: Pre-selection of duplicate locations in this type of study may not be appropriate. Certain locations may not provide adequate soil for sampling due to poor core recovery. This was the case in the Phase I RI for IR Site 1. Additionally, selecting obviously-contaminated samples for duplicate analysis provides more information than selecting two non-detect samples unless the emphasis of the study is to prove a site is not contaminated. This field investigation is based on biased or judgmental sampling to evaluate the nature and extent of environmental affects from source areas.

Comment 10: [FSAP: Section 6.0, Analytical Protocol and Procedures: Table A-6, Miscellaneous Analyses CRDL]. Section 6.0 of the FSAP states that chloride and sulfate will be analyzed by EPA Methods 9250 and 9035 or 9036 respectively. However Table A-6 of the FSAP does not include the contract required detection limits (CRDLs) for chloride and sulfate. It is also unclear which samples will be analyzed for these anions. Further, Table A-6 includes CRDLs for nitrate and nitrite; those anions are not discussed in the FSAP. It is recommended that these issues be clarified.

Response: This clarification has been made.

Comment 11: [FSAP: Figure A-9, IR Site 4 Public Beach Area Soil Sampling Locations]. Figure A-9 of the FSAP identifies 14 sampling locations for Site 4. Note that Table A-1 indicates that out of 14 samples eight are soil samples and six sediment samples. The sampling locations are not labeled on Figure A-9. It is recommended that soil and sediments sampling locations be identified.

Response: The shoreline shown on the map was intended to differentiate soil (away from shore) from sediment locations. Figure A-9 has been revised for clarity.

Comment 12: [FSAP: Tables A-1, Summary of Phase II Investigation Methods; A-2, Site Specific Investigation Rationale; A-3, Sampling and Analysis Summary] Tables A-1 through A-3 provide incomplete and inconsistent information for the investigations at the facility. It is recommended that the tables be revised to provide additional and consistent information as outlined below. It is also recommended that this information be provided in narrative format in the FSAP.

Response: Comment noted. Tables A-1 through A-3 have been modified accordingly.

Comment 12A: Table A-1 does not include information for trenching and piezometer installation for Site 1, while Table A-2 discusses rationale for trenching and installing a piezometer, and Table A-3 indicates that samples may be collected for waste characterization from the trenches.

Response: Table A-1 has been modified to include trenches and piezometers.

Comment 12B: Table A-1 indicates that eight soil, six sediment, and six pore water samples will be collected from Site 4; however, Tables A-2 and A-3 do not reflect this.

Response: Tables A-2 and A-3 have been corrected.

Comment 12C: Table A-1 indicates that 14-21 surface soil samples will be collected from Background Areas, while Tables A-2 and A-3 do not include this information.

Response: The tables have been corrected.

Comment 12D: Table A-1 indicates that no soil borings will be drilled in Background Areas, but Tables A-2 and A-3 indicate that it is yet to be determined (TBD) whether soil borings will be collected.

Response: No soil borings will be drilled in the background areas. Table A-1 has been corrected.

Comment 12E: Tables A-2 and A-3 indicate two wells (MW12-02 and MW10-17) will be monitored, however these are not identified in A-1.

Response: Table A-1 has been corrected.

Comment 12F: Table A-2 indicates eight trenches for Site 1, while Table A-3 indicates only four trenches.

Response: Table A-3 has been corrected.

Comment 13: [FSAP: Attachment A, Updated Method detection Limits and Reporting Limits for SVOCs and PAH Analysis]. Organic method detection limits (MDL) and reporting limits (RL) are provided by Applied P & CH Laboratory. It is unclear whether Applied P & CH is the laboratory chosen for analyses. It is recommended that the selected laboratory for analysis be identified.

Response: The laboratory cannot be chosen until the sampling schedule is identified (that is, after work plan approval). However, all detection and reporting limits are specified in the basic order agreements (BOA) contracts and Applied P&CH Laboratory complies with this requirement.

GENERAL COMMENTS:

Comment 1: [FWP: Section 4.0, Baseline Human Health Risk Assessment Methodology]. Section 4.0 of the FWP states that although some of the information to be presented in standard tables is already available and included here, it was not presented in the standard table format due to time constraints. It is suggested that the information be presented in standard table format in the revised FWP.

Response: Where appropriate, information included in Section 4.0, Baseline Human Health Risk Assessment Methodology, will be reformatted and presented in the standard tabular format specified in Risk Assessment Guidance for Superfund Part D (EPA 1998).

Comment 2: [FSAP: Section 1.0, Introduction] Section 1.0 of the FSAP states that the proposed field work will follow the same protocols detailed in the FSAP (PRC 1994). Section 1.0 also states that this FSAP is designed to be used in conjunction with the QAPP (TtEMI 1998), the maps provided in the FSW, and TtEMI standard operating procedures (SOPs). It is recommended that these documents be made available during the proposed field work.

Response: These documents will be available for the sampling crew.

Comment 3: [FSAP: Section 4.1, Duplicates, 4.2, Equipment Blanks]. Sections 4.1 and 4.2 state that duplicate samples and equipment blank samples will be submitted as described in Section 7.0. However section 7.0 describes data evaluation and validation and information is elsewhere.

Response: This error has been corrected.

Comment 4: [FSAP: Section 8.0, Database Management]. Section 8.0 of the FSAP states that sample handling procedures are outlined in Section 7.0 of the FWP. Section 7.0 of the FWP includes reference material only. It is recommended that these discrepancies be corrected.

Response: These discrepancies have been corrected.

5.0 RESPONSE TO EPA COMMENTS ON THE QAPP

Responses to Mr. Eidelberg's comments on the NFD Point Molate Quality Assurance Project Plan (QAPP) dated July 17, 1998 are provided below.

CONCERNS:

Comment 1A: [Sections 2.1.1, Project Organization; Figure 3, Project Organization Chart] Section 2.1.1 states that the project team organization chart is presented in Figure 3. However, Figure 3 could not be located in the document. It is recommended that a concise organization chart showing the relationships and the lines of communication among all project participants be provided. The organizational chart must also identify any subcontractor relationships relevant to data operations.

Response: The organizational chart is found on Figure 3 of the document, however the figure was not separated with a title page. This title page will be included.

Comment 1B: The organizational chart should also identify the Navy QA officer (QAO). A QAO, who is a government employee, will ensure that any possible conflict of interest is eliminated in performing independent evaluations of this QA efforts.

Further, the document states only one duty for the Navy QAO, that of interacting with the contractor's project QAO about laboratory certification requirements. In order to preclude the possibility that an interested party would think the Navy is not actively involved in the quality assurance oversight of the contractor's work, it is recommended that additional appropriate duties be specified for the Navy QAO.

Response: The additional duties of the Navy QAO has been included in the document as well as in the organizational chart.

Comment 2: [Section 2.4, Quality Objectives and Criteria for Measurement Data (ASQE)]. Section 2.4 states that data will be collected based on data quality objectives (DQOs) statements. Although the work plan discusses DQOs in terms of the seven step DQO process described in EPA guidance QA/G-4, the QAPP does not specify its use. It is recommended that the QAPP also specify the development of DQOs in terms of the seven step process outlined by EPA guidance.

Response: This document is supposed to be a baseline for the FSAP for individual sites. Project- or activity-specific QAPP addendums will be prepared to supplement this basewide QAPP. Each addendum will describe the development of DQOs using the seven step process outlined by EPA guidance. Please see the FWP for the seven step process for the Phase II RI.

Comment 3: [Section 2.7.4, Storage and Disposal]. Section 2.7.4 states the subcontractor will use a magnetic tape storage device and all raw data will be retained on magnetic tape organized in accordance with the appropriate instrument. Section 2.7.4 also states that records, at the Navy's discretion, will be transferred to a Navy facility for longer storage. Region 9 does not consider it adequate for the laboratory to archive the tapes; the tapes should be obtained by the Navy along with other laboratory data deliverables. The QAPP should also include a provision for providing magnetic tapes to Region 9 upon request.

Further, clarification is requested concerning data archiving policies. It is this reviewer's understanding that Navy policy is that all records pertaining to environmental cleanup and assessments must be retained for 50 years, and EPA Region 9 believes that hardcopy laboratory data, and electronic data that cannot be derived from the hardcopy data, are records.

Response: This section has been edited to reflect these changes. Hard copy data will not be usable in 50 years due to deterioration, therefore magnetic tapes are being used.

Comment 4A: [Section 4.1.1, Performance Audits]. Section 4.1.1 describes laboratory performance audit requirements. However the QAPP does not indicate that PE samples will be submitted to the selected laboratory for analysis. Region 9 recommends that a provision for analyzing double blind PE samples, disguised as environmental samples, be included in the QAPP. The QAPP should also specify the frequency, acceptance criteria, and corrective actions for PE samples. The results of PE sample analyses should be available to Region 9 upon request.

Response: The performance evaluation sample criteria has been included into Section 4.1 of the QAPP. The corrective action, frequency, and acceptance criteria have also been included.

Comment 4B: The QAPP does not indicate that copies of laboratory audit reports will be submitted to EPA. Region 9 recommends that copies of laboratory audit reports summarizing auditing activities and findings, and any corresponding corrective actions that were implemented as a result of these audits, be submitted to Region 9.

Response: Copies of laboratory audit reports and performance evaluation results will be provided to EPA Region 9. These changes are included in the revisions to the QAPP.

Comment 5: [Table 3, Field QC Samples]. The footnote to Table 3 states that the MS/MSDs for soil samples will be selected by the laboratory. Region 9 recommends that MS/MSD samples be identified in the field sampling plan and on the chain of custody to ensure that the laboratory does not inadvertently select a background sample. It is recommended that a provision of identifying MS/MSD samples be included in the QAPP.

Response: The MS/MSD samples will be identified by the samplers using the FSAP as guidance. The sample identified as the MS/MSD sample will be listed on the chain-of-custody.

Comment 6A: [General]. The QAPP references the TtEMI statements of works (SOWs) for information on analytical methods, laboratory QC requirements, data package contents, electronic data deliverables, and data validation. However, the TtEMI SOW was not provided. It is recommended that the pertinent referenced information be provided in the QAPP. Alternatively, the TtEMI SOWs may be provided for review, unless the SOWs are internal TtEMI documents; in this case, the SOWs should be an attachment to the QAPP.

In addition, when external references are made, it is recommended that the QAPP facilitate the access of such information by referencing the pertinent section, title, and page number. This recommendation is made as a QAPP should not be an exercise in researching pertinent details, rather the QAPP should provide readily apparent clarity as to what must be done.

Response: Copies of the SOWs TtEMI has written for Navy CLEAN are commonly available to project personnel and are included with specific project plans. Additional specific information can be provided as requested.

Comment 6B: The QAPP states that the selected laboratory will provide a QA plan, including instrument calibration procedures, handling and documentation of standards, and laboratory SOPs. It is recommended that the selected laboratory be identified and the laboratory QA plan be submitted for review.

Response: The laboratories are required to submit their QA plans and SOPs to TtEMI before they are awarded a BOA. The subcontractor laboratory will differ from project to project and is identified in each site-specific FSAP. The SOPs for methods that deviate from the routine analytical methods will be included in the FSAP. This QAPP is a baseline for the entire installation, and therefore, specific requirements are not included.

Comment 7: [General]. The QAPP accurately describes data categories as screening and definitive data in Section 2.4.1; however, this perspective was lost in all subsequent descriptions of data quality. Rather most of the QAPP relies on definition of data in terms of field and laboratory as if the terms were synonymous with screening and definitive data, respectively, which they are not. It is recommended that the data quality descriptions of the entire QAPP be consistent with Section 2.4.1.

Response: Comment noted. However, field and laboratory data can be both definitive and screening data. Trying to replace field and laboratory data with screening and definitive data would make the document difficult to read and therefore, no changes have been made.

Comment 8: [Section 2.4.1.2, Definitive Data]. The text has a bulleted item "Chain of Custody (when appropriate)." It is recommended that clarification be provided for when chains of custody are used.

Response: The "when appropriate" statement has been removed from that section. Definitive data require chains of custody for all samples. Screening data will require chains of custody when appropriate.

Comment 9: [Section 2.4.1.1, Screening Data]. It is recommended that clarification for how confirmation samples are chosen be provided, and that a description of how the confirmation data is interpreted be included.

Response: The text has been revised to state that at least three samples with results higher than the action level and at least three samples below the action level or non-detect will be selected for analysis.

Comment 10: [Section 2.4.2, Precision]. The text lacks clarity due to the combining of descriptions of field and laboratory without a readily apparent separation. It is recommended that there be two subsections under Section 2.4.2, one for field and one for laboratory measurements.

There is a frequency requirement of 10% for field measurements of water samples, however, there is no description of soil samples. It is recommended that clarification be provided for the frequency requirement for soil samples.

Response: The precision section was separated into two subsections. The main body of the section describes the precision criteria and principles. The subsections describe the field and laboratory precision. The soil precision limits have been added to this section.

Comment 11: [Section 2.4.3, Accuracy]. The text states that evaluation of sampling accuracy will be based on the results of the analysis of field blanks. It is submitted that this is actually an estimate of bias due to contamination during the sampling procedures and handling of the sample containers. It is recommended that detailed clarification be provided on how the use of negative control samples alone is sufficient to assess sampling accuracy.

The text states "The accuracy of field measurements will be verified through the proper calibration of field equipment at the recommended frequency." It is submitted that this is not verification of accuracy. The current description of field measurements quality control is inadequate as there is no periodic measure of bias.

Response: The field blanks are now discussed in the representativeness section of the QAPP. The Navy believes that accuracy of field measurements is verified through proper calibration at specified frequencies.

Comment 12: [Section 2.4.5, Completeness]. The text states that samples are collected in, and analyzed in accordance with, the EPA document G-9. As G-9 provides tools for data quality assessment, the QAPP should provide a detailed explanation on how samples can be collected and analyzed in accordance with the QA procedures outlined in G-9.

The text states "Data must also meet and be suitable for accomplishing the specific DQOs of the FSAP" with regard to completion. It is recommended that clarification be provided, as it is not clear how this will be taken into account to calculate a completeness value given the QAPP's definition of how completeness is calculated.

Response: The QAPP has been modified according to these suggestions. A more specific text based on the QA/G-9 guidance has been added. Valid data will be obtained when: (1) samples are collected and analyzed in accordance with the QAPP and SOW, (2) analytical results are evaluated in accordance with QA/G-9, and (3) none of the QC criteria are exceeded. A more specific definition of the completeness calculation has now been included.

Comment 13: [Section 2.7.1, Summary Data Package]. The text states that the full data packages should be bound if possible. If full data packages are not bound, the material must have a table of contents signed by the laboratory and all material in the package must be sequentially paginated.

Response: This statement has been added to Section 2.7.2 under full data packages. Summary data packages are an independent part of the full data package. Section 2.7.1 states that the summary data package not be bound. This section of the data package is useful for cursory validation.

Comment 14: [Section 2.7.3, Electronic Deliverables]. While there is a reference to the format for deliverables, there is no description concerning the use, archiving, and validation of electronic data. It is recommended that this information be provided.

Response: The text in this section has been modified to include the electronic data pathways. The electronic data deliverables (EDD) will follow the data package throughout the whole validation process. The validation qualifiers will be included on the EDDs.

Comment 15: [Section 3.3.4, Sample Labels]. The text states that “blue ice” may be used for maintaining the sample temperature at 4°C. Please provide clarification whether “blue ice” refers to plastic container ice packs. If this is the case, it should be noted that Region 9 believes it is prudent to use crushed ice so that the samples are immediately cooled after sampling. Blue can be used for shipping purposes.

Response: The reference to “blue ice” has been removed from this section. Crushed ice will be the only method used for cooling the samples.

Comment 16: [Section 5.2.3.3, Full Data Validation]. The text concerning data validation lacks clarity. It is recommended that clarification be provided for the following observations:

The text states that full data validation will be conducted on 10 percent of the data packages and goes on to state that full data validation will be required on 10 percent of a sample delivery group. The text was not straightforward, but is interpreted to mean that 10 percent of 10 percent of the sample data are fully validated, that is 1 percent of the data. It is recommended that a minimum of 10% of the data be fully validated. It would be acceptable to choose to 10% of the data packages to be fully validated.

It is recommended that criteria for how data packages are chosen for validation be stated.

It is recommended that a provision for a greater frequency of validation be provided for, if significant problems are detected.

Response: The paragraph has been modified to clarify that ten percent of the samples will be cursory validated, and the project chemist will assign the samples to be fully validated using professional judgment. The Navy will decide if a higher level of validation is required.

Comment 17: [General]. It is recommended that for volatiles in soil analyses that field methanol preservation be used. There are other acceptable preservation methods, however, in general, simple preservation of soils at 4 °C in a widemouth jar is not considered best sampling practice by the Region 9 QA office. If the Navy is unable to use a preservation method other than listed in Table C-2, it requested that the Navy provide clarification for how volatiles in soil data accuracy will be assessed and a rationale for why the current method is acceptable on a technical basis.

Response: The majority of the analytical methods used by the Navy are CLP methods. The newest version (8/94) of the CLP SOW does not suggest using methanol preservation.

Comment 18: [Appendix D: Daily Quality Control Report]. The site location “Naval Air Weapons Station China Lake” should be replaced with the current site “Naval Fuel Depot Point Molate Richmond.”

Response: The correction has been made.

REFERENCES

- Bechtel Environmental, Inc. and Dames and Moore (BEDM). 1991. Hydrogeologic Investigation Alkane, Office Hill, S.P. Hill and Quarry Tankfields. Prepared for Chevron USA, Inc., Richmond, California. September 30.
- BEDM. 1992. Hydrogeologic Investigation Point Orient, Poleyard and Asphalt Tankfields. Prepared for Chevron USA, Inc., Richmond, California. June 23.
- Dragun, James. 1988. The Soil Chemistry of Hazardous Materials. Hazardous Materials Control Institute.
- ERM-West, Inc.. 1990. Shallow Soil Investigation for Point Molate Naval Fuel Depot. Prepared for Department of Navy, Naval Facilities Engineering Command, San Bruno, California. September 24.
- Moore, James and Ramamoorthy, S. 1984. Organic Chemicals in Natural Waters, Applied Monitoring and Impact Assessment.
- PRC Environmental Management (PRC). 1994. Waste Disposal Area Draft Phase I Remedial Investigation Report. Prepared for Department of the Navy, Naval Facilities Engineering Command, San Bruno, California. October 7.
- U.S. Environmental Protection Agency. EPA. 1993a. "Presumptive Remedy for CERCLA Municipal Landfill Sites." OSWER Directive 9355.0-49FS. EPA 540-F-93-035. October.
- EPA. 1993b. Presumptive Remedies: Policy and Procedure. OSWER Directive 9355.0-47FS. EPA 540-F-93-047. September.
- EPA. 1996. "Application of the CERCLA Municipal Landfill Presumptive Remedy to Military Landfills (Interim Guidance)." OSWER Directive 9355.0-62FS. EPA 540-F-96-007. April.
- EPA. 1997. Landfill Presumptive Remedy Saves Time and Cost. OSWER Directive 9355.0-661. EPA 540/F-96/017. January.
- EPA. 1998. "Risk Assessment Guidance for Superfund, Volume I, Human Health Evaluation Manual (Part D, Standardized Planning, Reporting, and Review of Superfund Risk Assessments)." EPA Office of Emergency and Remedial Response. Interim. EPA/540/1-89/002. January.
- EPA. 1998b. EPA Memorandum from Phillip Ramsey to Jeffrey M. Paull, on the review of "Naval Fuel Depot (NFD) Point Molate Phase II Remedial Investigation Draft Final Field Work Plan." August.
- U.S. Department of the Navy (Navy). 1997. U.S. Navy Policy for Statistically Analyzing Background Data Supporting Environmental Risk Assessment in the State of California. Southwestern Division Policy 4444.4. October 15.