STATE OF CALIFORNIA - ENVIRONMENTAL PROTECTION AGENCY
DEPARTMENT OF TOXIC SUBSTANCES CONTROL
REGION 4
245 WEST BROADWAY, SUITE 350
LONG BEACH, CA 90802
(213) 590-4868

PETE WILSON, Governor

August 13, 1991

Naval Complex Long Beach
Document Number: 01491083001
AR File:

Mr. T.G. Avgerinos
Director, Environmental Protection Division
Public Works Department
Long Beach Naval Shipyard
Long Beach, California 90822-5099

Lieutenant Commander J.L. Snyder
Civil Engineer Corps, U.S. Navy
Long Beach Naval Station
Long Beach, California 90822-5000

Dear Mr. Avgerinos and Lieutenant Commander Snyder:

**RCRA FACILITY INVESTIGATION WORK PLANS: LONG BEACH NAVAL SHIPYARD AND LONG BEACH NAVAL STATION, (EPA ID NO. CA6170023109)**

The California Department of Toxic Substances Control (DTSC) has reviewed the following documents which have been developed pursuant to the Department of Defense Installation Restoration Program (IRP) to meet RCRA Corrective Action requirements:

Naval Shipyard Long Beach, California
Installation Restoration Program
Revised Final
Site Inspection Work Plan
Date: July 10, 1991

Naval Station Long Beach, California
Installation Restoration Program
Revised Final
Site Inspection Work Plan
Date: July 10, 1991

Naval Shipyard Long Beach, California
Installation Restoration Program
Site Inspection
Project Management Plan
Date: April 15, 1991

Naval Station Long Beach, California
Installation Restoration Program
Site Inspection
Project Management Plan
Date: April 15 1991

Naval Shipyard Long Beach, California
Draft Phase 1
RCRA Facilities Investigation (RFI) Work Plan for Tank Farm Site Near Building #303
Date: June 19, 1991

DTSC concurs with the Objective (Section 1.1) of the Revised Final Site Inspection (SI) Work Plans for both the Long Beach Naval Shipyard and Long Beach Naval Station which states that the purpose of the SI is not to fully evaluate the magnitude or extent of contamination, but rather to determine whether contamination exists at concentrations to warrant further action. DTSC is hereby approving the above documents, with conditions as specified in the enclosed Attachment.

Both the Long Beach Naval Shipyard and Long Beach Naval Station must conduct an assessment of all on-site underground storage tanks, both active and inactive, and notify DTSC of any newly identified solid waste management units (SWMUs) in accordance with the conditions of your Hazardous Waste Facility Permit. Moreover, you shall promptly notify DTSC of any other potentially contaminated sites at both the Long Beach Naval Shipyard and Long Beach Naval Station, including any sites potentially contaminated with PCBs (such as areas where electrical equipment has been managed).

Future documents for the investigation and reporting of potential contamination at the Long Beach Naval Shipyard and Long Beach Naval Station should be prepared in accordance with RCRA Corrective Action requirements, including both guidance documents and the requirements of your Hazardous Waste Facility Permit. In the event that this is not possible, a comprehensive RCRA cross-reference checklist must be provided with each work product, clearly stating how RCRA requirements are met.

No later than September 30, 1991, you shall begin implementing the Revised Final SI Work Plans, including initiation of field work (e.g., sampling activities). You shall submit quarterly progress reports to DTSC, the first of which is due December 31, 1991. The quarterly progress reports shall contain: a description of completed work, summaries of findings, summaries of all approved changes made during the reporting period, summaries of all problems or potential problems encountered during the reporting period, projected work for the next reporting period, and schedule status. No later than June 30, 1992, you shall complete all field work and submit a

draft RFI Report to DTSC (including all RFI and Phase I RFI sites) in accordance with the requirements of the Revised Final SI Work Plans, this written approval and your Hazardous Waste Facility Permit. The draft RFI Report must also include comprehensive proposals for further investigative actions, when necessary, at both the Long Beach Naval Shipyard and Long Beach Naval Station.

Please note that DTSC normally allows much less time to complete initial RFI field work and to submit a draft RFI report than we are allowing you. We are allowing an expanded schedule, until June 30, 1992, to take into account any contracting delays. We would appreciate you taking all necessary steps to ensure that the draft RFI Report is submitted on time.

If you have any questions, please contact Mr. Joe J. Zarnoch of my staff at (213) 590-4872.

Sincerely,

Mohinder S. Sandhu, P.E.
Branch Chief
Facility Permitting Branch

Enclosures

cc: Mr. Lester Kaufman, Chief
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bcc: Mr. John Scandura, Chief, SMB
Mr. Al Arellano, SMB
Mr. Juan Jiminez, SMB

**ATTACHMENT**

**CONDITIONS OF APPROVAL**

August 1991

**General Conditions:**

1. The Revised Final SI Work Plans do not necessarily meet RCRA Facility Investigation (RFI) Corrective Action requirements. Should no contamination be found where there is evidence that disposal or a release of some kind did occur, then additional effort as determined by DTSC (including additional sampling and analysis) may be required to support the conclusion that no contamination is present. Should contamination be found, then additional effort as determined by DTSC (including additional sampling and analysis) will be required to adequately describe the horizontal and vertical extent, direction, velocity, and/or concentration of hazardous constituents.

2. Please submit all prior sampling and analysis information for all sites, at both the Long Beach Naval Shipyard and Long Beach Naval Station, as part of the draft RFI Report.

3. The Navy shall conduct hydrogeologic studies at both the Long Beach Naval Shipyard and the Long Beach Naval Station to comply with all RCRA Corrective Action requirements, including identification and characterization of site stratigraphy and the underlying ground water regime, such as the depth of aquifers, the rate, volume and direction of ground water flow, potential hydraulic interconnections of water-bearing zones, and areas where ground water is confined and unconfined. These studies should be based on field data, tests, cores, and any other necessary methods, in addition to the ground water monitoring wells being installed, to obtain a representative and accurate classification and description of the hydrogeologic units which may be a part of migration pathways.

   Among our concerns is the detection of heavier hazardous waste constituents ("sinkers", e.g., some chlorinated compounds) in ground water which may not necessarily be detected with the sampling strategy proposed in the Revised Final SI Work Plans. This information should be submitted to DTSC in the draft RFI Report to allow a more informed decision on additional investigations.

4. Surficial (i.e., within the top two feet) soil samples at terrestrial sites may be required in accordance with RCRA Correction Action guidelines, however, this requirement may be postponed until the next phase of investigation.

5. The use of a surface geophysical technique, such as ground penetrating radar (GPR), may be required to further delineate areas of contamination even if "hot spots" are discovered during initial phases of investigation. However, the use of this technique may be postponed until the next phase of investigation.

6. Soil and ground water samples from Sites 1, 2, 4, 6, and 10 (Mole Solid Waste Operations, Chemical Material and Waste Storage Area, Mole Extension Operations, Boat Disposal Location and Lot H Operations, respectively) must be analyzed for organotins, including mono-, di- and tributyltin, at locations with high metal concentrations as determined by DTSC. The Navy may conduct this analysis for organotins by (1) sampling and analyzing at the next phase of investigation or (2) collecting additional samples during the SI field work and holding them, pending the results of metals analysis.

   If the latter option is chosen, a report describing sample metal concentration data for Sites 1, 2, 4, 6, and 10 must be submitted to DTSC no later than thirty (30) days prior to expiration of the maximum holding time for organotins and analysis must be conducted prior to expiration of the maximum holding time.

7. Soil samples collected from sites suspected of having contamination from disposal or spillage of acidic or alkaline materials must be analyzed for pH. These sites include: Site 3 (Industrial Waste Disposal Pits), Site 8 (Building 210 Trichloroethylene (TCE) Disposal Site), Site 9 (Building 129 Spills), and Site 10 (Lot H Operations).

8. On-site background samples for the Long Beach Naval Shipyard and Long Beach Naval Station may not be appropriate due to the industrial nature of the site and site construction material (hydraulic fill). However, cleanup levels will be established by DTSC at a later phase of the investigation.

9. All ground water monitoring wells at the Long Beach Naval Shipyard and Long Beach Naval Station shall be constructed in a manner that maintains the integrity of the drill hole and prevents cross-contamination of saturated zones. Absolutely no glues, adhesives, organic solvents, or other materials that could adversely affect water quality samples may be used to construct the borehole or the monitoring well casing (e.g., do not use PVC pipe glue). The annular space above the well screened depth shall be sealed with a 5 percent bentonite and 95 percent cement grout. All wells must be logged during drilling under the direct supervision of a California registered geologist or certified engineering geologist. A Water Well Driller's Report should be filed with the California Department of Water Resources (DWR) for each new well installed or decommissioned. Each new well should be marked with permanent and legible identification on the outside of the well and on the inner casing or well cap. Each new well should be surveyed to determine the elevation of the water level measuring reference point. Measurements shall be made from a point permanently designated for each well casing and referenced as both depth to water and an elevation relative to mean sea level.

   Prior to sample collection from ground water monitoring wells (including the well point for the Tank Farm Site near Building #303), wells shall be purged until at least three standing water volumes are evacuated and consecutive field measurements of pH, conductivity and temperature (taken after each well volume is purged) converge to a consistent value, i.e., the following criteria: (1) pH: +/- 0.1 unit; (2) conductivity: +/-10%; and (3) temperature: +/- 1 °C.

10. The installation of ground water monitoring wells with stainless steel casing (e.g., the screened interval and blank casing) may not be appropriate under low pH or high total dissolved solids (TDS) conditions because of corrosion problems. If it is determined that corrosion will not be a problem, then stainless steel well casing shall be used. Any change in well casing material must be approved by DTSC prior to installation.

11. All metal analysis results shall include quantification of hexavalent chromium.

12. Target Compound List (TCL) elements/compounds must be equivalent to or exceed the list of elements/compounds specified in Test Methods for Evaluating Solid Wastes (SW-846), third edition, November 1986.

13. All sample containers must be completely filled to avoid headspace loss.

**Specific Conditions:**

1. The Final Draft SI Work Plan for the Long Beach Naval Station (dated October 31, 1990), which was previously reviewed by DTSC, did not include that prior soil sampling results from Site 4 (Mole Extension Operations) indicated high concentrations of total petroleum hydrocarbons (TPHs). Please submit this sampling analysis information as part of the draft RFI Report and use Method 418.1, in addition to the analyses described in Table 7-1 of the Revised Final SI Work Plan, to analyze for TPHs in soil at this site.

2. To adequately characterize Site 5 (Skeet Range Solid Waste Fill Area), sampling and analysis at more than the one location provided, may be needed at the next phase of investigation.

3. A least some of the proposed nine sediment samples for Site 7A (Harbor Sediments Around the Naval Station) and five sediment samples from Site 7B (Harbor Sediments Around Piers 1, 2, and 3) should be in undredged areas, if possible, near wastewater or drydock discharge points. The Revised Final SI Work Plans for the Long Beach Naval Shipyard and Long Beach Naval Station indicate that the shipyard harbor has been dredged and sediment samples have been analyzed for pesticides, heavy metals and other contaminants. Please submit this sampling analysis information as part of the draft RFI Report.

   EPA Method 8080 analysis results of sediment samples for Sites 7A and 7B should include pesticides in addition to PCBs.

4. Considering the lapse of time between trichloroethylene (TCE) disposal and sampling/analysis at Site 8 (Building 210 TCE Disposal Site), as well as the subsurface mobility of TCE, additional downgradient ground water monitoring wells will be required to adequately characterize this site.

   According to our information, acids and plating solutions were also dumped onto the ground along the property line north of Building 210. In addition to analysis for halocarbons, soil and ground water samples should be analyzed for pH and metals (Method 6010/7000).

5. To clarify a discrepancy in Section 4.1.3.1 of Appendix A in the Revised Final SI Work Plan for the Long Beach Naval Shipyard, all soil borings for Site 9 (Building 129 Spills) should include two samples collected per boring at a depth of 5 and 10 feet.

   In addition to halocarbons and total petroleum hydrocarbons, soil and ground water samples from Site 9 should also be analyzed for pH, metals (including hexavalent chromium), volatile organics (Method 8240) and semivolatile organics (Method 8270). According to our information, the chemicals which may have leaked through the wooden floor of the quonset hut included acids (e.g., chromic acid), hydroxides, phenols, and solvents. Wastes managed at other areas of Site 9 included solvents used for degreasing and paint removal; metal contamination may have resulted from process tank spillage.

   To adequately characterize Site 9, additional soil samples should be collected from within Building 129 in the previous wood block floor/process tanks area (even if the floor was paved beneath the wood blocks).

6. The sampling locations for Site 10 (Lot H Operations) should not necessarily be on the outside perimeter of the site, but within anticipated areas of disposal. Although actual storage of materials was near the perimeter areas, disposal of battery acid, mercury, spent solvents and waste oils may have occurred more towards the center of the site.

At least one soil sample should be collected from the former scrapyard radar equipment storage area. Samples for metal analysis collected from Site 10 (as well as all other sites suspected of having mercury contamination) have a maximum holding time of twenty-eight (28) days.

7. Prior to initiation of SI sampling activities, please submit to DTSC an enlarged map of Site 11 (Hillside East of Drydock 1) indicating the proposed sampling locations. Figure A-3 of Appendix A of the Revised Final SI Work Plan for the Long Beach Naval Shipyard indicates that Site 11 is located south of the road connecting Weaver Street to Shipjack Road. However, if spent sandblast material was disposed of along the hillside north of the connecting road, then additional sampling locations for this area must be submitted to DTSC prior to initiation of SI sampling activities.

   Please submit the sampling analysis information collected by the Pubic Works Department (as well as any other sampling/analysis information for this site) as part of the draft RFI Report.

8. Please submit the 1989 report prepared by the Earth Technology Corporation describing sampling analysis results for Site 12 (Parking lot X Toxic Sandblast Disposal) as part of the draft RFI Report.

9. Soil borings SB-1 and SB-2 should be located <u>within</u> areas of visibly stained soil at the end of the asphalt as shown in Figure 5-1 of the Draft Phase I RCRA RFI Work Plan for Tank Farm Site Near Building #303.