

DEPARTMENT OF THE NAVY  
Naval Station, Long Beach (90822-5000)  
Long Beach Naval Shipyard (90822-5000)  
Long Beach, California

LBNSY  
5090  
Ser 410/441

NAVSTA  
5090  
Ser N4/3052  
18 Oct 91

17 OCT 1991

Department of Toxic Substance Control  
Region 4  
Attn: Mohinder S. Sandhu  
245 West Broadway, Suite 350  
Long Beach, California 90802

Gentlemen:

We are in receipt of your letter dated 13 August 1991, in which you provided comments on the Revised Final Site Inspection (SI) Work Plans for Naval Station Long Beach (NAVSTA) and Long Beach Naval Shipyard (LBNSY). Enclosure (1) is our response to your comments.

For LBNSY, we are aware of only one additional potentially contaminated site. During 1990 annual underground storage (UST) tank testing, Tank P.4.1. located near building #4 was found to be leaking. Acting on our behalf, Southwest Division of Naval Facilities Engineering Command has begun to negotiate with qualified contractors for the removal of this tank and the site investigation needed to determine the appropriate remedial actions. A summary of the LBNSY UST program and status, including planned UST projects will be submitted by 31 October 1991.

For NAVSTA, the only additional potentially contaminated site involves underground gasoline tanks at the Naval Exchange Service Station. Status of this site is provided in enclosure (2), along with a summary of the NAVSTA UST program.

For NAVSTA and LBNSY, a summary of the PCB Management Program and status will be submitted by 31 October 1991.

Should any other potentially contaminated sites be discovered, LBNSY and NAVSTA will promptly notify The Department of Toxic Substance Control.

The following SI project milestones affect both NAVSTA and LBNSY:

Began SI Field Work	17 September 1991
Submit Draft SI Report to DTSC	30 June 1992
DTSC Comments on Draft SI Report Due	30 July 1992
Submit final SI Report DTSC	14 October 1992

Joint quarterly progress reports will be submitted as follows:

31 December 1991  
30 April 1992

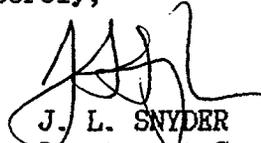
Future work products will include a RCRA cross-reference check list and quarterly report which will be submitted.

LBNSY point of contact is Mr. Ken Masden, Environmental Protection Division, Code 410, (213) 547-6888. NAVSTA point of contact is Ensign Steve Cox, (213) 547-6320.

Sincerely,



T. G. AVGERINOS  
Director  
Environmental Protection Division  
Public Works Department  
Long Beach Naval Shipyard  
By direction of the Shipyard Commander



J. L. SNYDER  
Lieutenant Commander  
Civil Engineer Corps  
Staff Civil Engineers  
Naval Station, Long Beach  
By direction of the Commanding Officer

Encl:

- (1) Response Actions to DFSC Review Comments on SI (RFI) Work Plans
- (2) NAVSTA UST Management Plan

Copy to:

Ms. Caroline Douglas  
Federal Facilities Coordinator  
U.S. Environmental Protection Agency  
Region 9  
75 Hawthorne Street (H-8-1)  
San Francisco, California 94105

Mr. Dick Smith  
City of Long Beach Health Department  
2655 Pine Avenue  
Long Beach, California 90806

Mr. Jim Ross  
Regional Water Quality Control Board  
101 Center Plaza Road  
Monterey Park, California 91754

RESPONSE TO DTSC COMMENTS OF 13 AUGUST 1991 ON SI WORK PLANS  
NAVSTA AND NSY LONG BEACH  
26 September 1991

GENERAL CONDITIONS

1. COMMENT: 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) will 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) may be required to adequately describe the horizontal and vertical extent, direction, velocity, and/or concentration of hazardous constituents.

RESPONSE: Concur.

2. COMMENT: 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.

RESPONSE: All prior sampling and analysis information available will be submitted as a separate report by 31 October 1991.

3. COMMENT: 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 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 investigation.

**ENCLOSURE(2)**

RESPONSE TO DTSC COMMENTS

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RESPONSE: Hydrogeologic studies will be included in the RI/FS phase.

4. COMMENT: 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.

RESPONSE: Concur. Surficial soil sampling will be conducted during the RI/FS phase.

5. COMMENT: 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.

RESPONSE: Concur.

6. COMMENT: 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 Operation, 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 organotin 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 from 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.

RESPONSE: Sampling and analysis for organotins at locations with high metal concentrations will be conducted during the RI/FS phase.

7. COMMENT: 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).

RESPONSE: Concur. Soil samples from sites 3, 8, 9, and 10 will be analyzed for soil pH during the SI phase.

## RESPONSE TO DTSC COMMENTS

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8. COMMENT: 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.

RESPONSE: Concur. The results of background samples will be reviewed during the SI phase. If any anomalies are detected, additional background sampling will be conducted during the RI/FS phase.

9. COMMENT: All ground water monitoring wells at the Long 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: +1-0.1 unit; (2) conductivity: + or - 10%; and (3) temperature: +1 - 1° C.

RESPONSE: Drilling will be performed by the hollow-stem auger method to maintain the integrity and prevent cross-contamination of the borehole during monitoring well construction.

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RESPONSE: (cont.)

Flush coupled casing and well screens will be used as monitoring well materials as stated in the Work Plan.

The grout specified in the Work Plan consists of 5 percent bentonite and 95 cement.

Resumes of the supervising staff have been submitted to DTSC. William Orr has over 4 years of field experience and is a registered Professional Engineer and Douglas VanNote has over 5 years of field experience and is a registered Professional Geologist, in 3 states, and a Certified Professional Geologist.

All monitoring wells will be permanently identified on the outside of the well and on the inner well cap.

Surveying in compliance with the California State Plane Coordinate System will be performed on all boring and monitoring well locations. This will include Northing and Easting coordinates and mean sea level elevations.

10. COMMENT: The installation of groundwater 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.

RESPONSE: Due to the unknown pH and organic concentrations of the monitoring well locations flush coupled Schedule 40 PVC casing will be used for all monitoring well construction. High grade stainless steel casing may be utilized in future investigations with manufacturer input as long as the pH and organic concentrations are known.

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

RESPONSE: Metal analyses results will include total chromium (all species of chromium including hexavalent chromium). If any significant concentrations of chromium is observed from the analytical results, hexavalent chromium will be recommended for further testing during the RI/FS phase at these locations. Currently, EPA is still developing a standard methodology for hexavalent chromium analyses. The variability of the method along with the required holding time of 24 hours, make it difficult to obtain reliable data.

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12. COMMENT: 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.

RESPONSE: The Naval Station and Naval Shipyard SI is being conducted under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA). The Target Compound List is the list of parameters used in the CERCLA remedial investigations. The list of parameters in the SW 846 test methods are based on specific analytical method capabilities as opposed to being regulatory lists or lists of parameters of concern. In addition, the list of parameters in the SW 846 test tend to vary between different laboratories.

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

RESPONSE: Concur. This procedure is described in Appendix A of the SI work plans for Long Beach Naval Station and Long Beach Naval Shipyard.

SPECIFIC CONDITIONS:

1. COMMENT: The Final Draft SI Work Plan for the Long Beach Naval Station (dated 31 October 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 FI Report and use Method 418.1, in addition to the analyses

RESPONSE: Concur. Prior sampling information for site 4 will be submitted as a separate report by 31 October 1991.

2. COMMENT: 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.

RESPONSE: Concur.

3. COMMENT: At 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.

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COMMENT: (cont.)

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

RESPONSE: In response to paragraph 1: There are no known reports which document dredging activities.

In response to paragraph 2: Concur. EPA method 8080 analysis will include pesticides and PCBs.

4. COMMENT: 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).

RESPONSE: In response to paragraph 1: Concur. Additional downgradient groundwater monitoring wells may be required at the RI/FS phase to fully characterize site.

In response to paragraph 2: Concur. Soil and groundwater samples taken along the property line north of Bldg. 210 will be analyzed for pH and metals during the SI phase.

5. COMMENT: 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 boring for site 9 (Building 129 sills) 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 organic (Method 8240) and semivolatile organic (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, included solvents used for decreasing and paint removal; metal contamination may have resulted from process tank spillage.

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COMMENT: (cont.)

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).

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).

RESPONSE: In response to paragraph 1: Concur. Soil boring for site 9 will include two samples collected per boring at a depth of 5 and 10 feet.

In response to paragraph 2: Concur. Soil and ground water samples from site 9 will be analyzed for pH, metals volatile organic method 8240), and semi-volatile organic (method 8270) during the SI phase.

In response to paragraph 3: A detailed contamination testing of the floor in Building 129 would require major relocation of existing heavy equipment and facilities. The intent of the SI is to use a more reasonable approach by sampling near the building in which potential spills are likely to have collected. The paved floor under the building is a pile supported 3-foot thick reinforced concrete raft foundation. Thus, it is unlikely that spilled chemicals would have permeated through cracks large enough in the raft foundation to have contaminated the underlying soils beneath the building. Nevertheless, soils and groundwater samples will be collected to determine whether contamination exists.

6. COMMENT: The sampling location 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 scrapyards 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.

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RESPONSE: In response to paragraph 1: Concur. Soil and groundwater samples for site 10 will be taken as shown in the workplan for the Long Beach Naval Shipyard from the center of the site (see monitoring well 28).

In response to paragraph 2: The exact location of the radar equipment storage is unknown. However, sampling for mercury will be conducted at all 5 sampling location as described in the Long Beach Naval Shipyard work plan. The maximum holding time for mercury analysis samples will be observed as 28 days (see table A-7 in the Long Beach Naval Shipyard Work Plan).

7. COMMENT: Prior to initiation of 57 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 Work Plan from the Long Beach Naval Shipyard indicates that Site 11 is located south of the road connecting Weaver Street to Skipjack 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 Public Works Department (as well as any other sampling/analysis information for this site) as part of the draft RFI Report.

RESPONSE: In response to paragraph 1: Concur. An enlarged map of site 11 is provided in Encl (1).

In Response to paragraph 2: Concur. Prior sampling and analysis information will be submitted as a separate report by 31 October 1991.

8. COMMENT: 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.

RESPONSE: Concur. Prior sampling and analysis information will be submitted as a separate report by 31 October 1991.

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9. COMMENT: Soil boring SB-1 and SB-2 should be located within areas of visibly stained soil at the end of the asphalt as shown in Figure 5-1 of the Draft Phase 1 RCA RFI Work Plan for Tank Farm Site near Building 303.

RESPONSE: Concur. Soil Boring SB-1 and SB-2 will be located within the visibly stained soil area.

## UNDERGROUND STORAGE TANK (UST) MANAGEMENT PROGRAM

### Naval Exchange Service Station

-piping from two UST's determined to have leaked in October, 1990; estimate 20,000 gallons of gasoline leaked into the ground.

-pumping of free product off the water table began in November, 1990 and is continuing.

-Site Assessment was initiated immediately upon discovery of the leak, and a Draft Site Assessment report has been completed (to be forwarded under separate cover); Final Site Assessment expected to be complete December, 1991.

-one 10,000 gallon diesel UST has been out of service since October, 1990 (had passed annual leak detection test)

-one 20,000 gallon UST still in operation; passed leak test in October, 1990; annual leak testing to be conducted 7 October, 1991.

### Eight remaining active UST's

-annual tightness testing conducted August, 1991; all passed.

-plan on closing all but two, and replacing with above ground tanks; remaining two will have automatic monitoring systems installed (contract awarded September, 1991; to complete by March, 1992).

### Eight abandoned UST's

-design for closure and removal has been awarded; expect design completion by December, 1991; removal/assessment contract to be awarded March/April, 1992

**ENCLOSURE(2)**