UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, Ca. 94105

APR 23 1991

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

Dear Mr. Avgerinos:

PHASE I RCRA FACILITY INVESTIGATION (RFI) WORKPLAN: LONG BEACH NAVAL SHIPYARD (AND LONG BEACH NAVAL STATION), EPA ID NO. CA6170023109

The U. S. Environmental Protection Agency (EPA) has reviewed the Installation Restoration Program Final Draft Site Inspection Work Plans, dated October 31, 1990, for both the Long Beach Naval Shipyard and Long Beach Naval Station. The enclosed Attachment contains a detailed listing of incomplete items. All of the information described in these instructions must be included in the workplans or, if not included, an acceptable justification of its absence must be submitted. A statement accompanying the revised workplans must clearly identify the pages or sections where changes were made based on the comments in the attachment.

One copy of the revised workplans must be submitted to this office within 30 days of receipt of this letter. Failure to submit the revised workplans by this date may result in denial of your Hazardous Waste Facility Permit.

If you have any questions, please contact Tom Canaday of my staff at (415) 744-2070.

Sincerely,

James C. Breitlow

James C. Breitlow, Chief
Permits Section
Hazardous Waste Management Division

Enclosures

cc: See next page

Paul Blais, Chief
Hazardous Waste Management Section
Department of Health Services
Toxic Substances Control Program
714/744 P Street
P.O. Box 942732
Sacramento, CA 94234-7320

Mohinder S. Sandhu, P.E.
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Certified Mail
P 388 195 430
Return Receipt Requested

ATTACHMENT

REQUEST FOR ADDITIONAL INFORMATION

Final Draft Inspection Work Plans for
Long Beach Naval Shipyard and Naval Station,
dated October 31, 1990
EPA ID No. CA6170023109
March, 1991

General Comments:

1. These comments address the following sites specified for Phase I RCRA Facility Investigations (RFIs) in both your U.S. Environmental Protection Agency (EPA) and California Department of Health Services (DHS) permits:

   - o Mole Solid Waste Operations
   - o Chemical Material and Waste Storage Area
   - o Mole Extension Operations
   - o Skeet Range Solid Waste Fill Area
   - o Boat Disposal Location
   - o Lot H Operations
   - * o Former Quonset Hut Site (in the vicinity of Building 129)
   - * o Tank Farm 303 (including stained soil along the east fence)

   * These two sites were not addressed in the workplans; please include all necessary information for these sites in the revised workplan.

   Since the compliance schedule in both your EPA and DHS permits is different for Phase I RFI and RFI sites, the RFI sites in the workplans will be reviewed at a later date.

2. For most of the sites the workplans propose very limited sampling over large areas in locations where there is very little external evidence to guide the sampling effort. This may be satisfactory if contaminants are found since the stated purpose of the sampling is confirmatory. However, we do not believe that a negative result could establish that contamination is not present in cases where there is strong evidence that disposal of some kind did occur. This kind of conclusion could only be supported by a much more extensive sampling effort.

3. The Phase I RFI Plan must include a Project Management Plan which describes the technical approach, schedules, budget, and personnel involved in preparation and implementation of the Phase I RFI Plan and Phase I RFI Report. The Project Management Plan shall also include a description of the qualifications of personnel performing or directing the Phase I RFI Plan, including contractor personnel, and shall document the overall management approach.

4. RCRA Corrective Action requirements include that surficial (i.e., within the top two feet) soil samples must also be taken in a measurement of potential soil contamination; please make all necessary changes to the workplans to incorporate additional samples at a depth of 1 to 2 feet.

5. A minimum of three ground water monitoring wells should eventually be installed at both the Mole and Site 6 if contamination is discovered. Final approval of the location of these wells will depend on the location of contamination, if any. The wells would be installed in a triangular pattern to facilitate determination of ground water flow characteristics. A continuous recording device may be required to determine ground water fluctuations.

6. Ground water monitoring wells drilled through potential areas of contamination should include a conductor casing. Describe ground water monitoring well construction materials.

7. All sampling analysis should be performed by a DHS certified lab; please make necessary changes to the workplans.

8. Indicate that all samples will be discrete, not composite samples.

Specific Comments:

Sites 1 & 2 - Mole Solid Waste Operations and Chemical Material and Waste Storage Area

Identify the location of disposal trenches and former storage areas for containerized wastes using earlier maps and/or aerial photographs of the Mole or other methods. Include the method of identification, e.g., maps and or photographs, in the revised workplans. According to Figure A-2, none of the proposed four sampling locations are in the area of Site 2; please make necessary corrections. The limited number of proposed sampling locations may potentially miss contaminated areas. Ground water may not be a good indicator of potential contamination due to the proximity of sampling locations to the seawall and tidal influence. According to the Initial Assessment Study (IAS), there may have been at one time, four trenches about 8 to 9 feet deep, 6 to 10 feet wide, and 50 feet long. In the absence of confirmatory information concerning the location of trenches, a surface geophysical technique such as ground penetrating radar can be used for locating waste trenches.

Include additional soil samples at a depth of 1 to 2 feet as requested in General Comment #4. After identifying trench locations, in addition to the proposed four sampling locations, include at least one random sampling location per trench. Moreover, soil samples should be collected at a depth of 5 feet, as proposed, as well as at the base of the trenches.

Ground water should be analyzed for metals (EPA Methods 6010/7000) due to the close proximity of the water table.

Soil and ground water should be analyzed for organometallics, such as tributyltin, since spent sandblast material may have been disposed of at this site.

Site 4 - Mole Extension Operations

The two sampling locations should be located in areas of Mole extension operations as evidenced in aerial photographs of June 1972 or by other methods. Include the method of locating sampling locations, e.g., maps and/or photographs, in the revised workplans.

Include additional soil samples at a depth of 1 to 2 feet as requested in General Comment #4.

Soil and ground water should be analyzed for organometallics, such as tributyltin, since spent sandblast material may have been disposed of at this site.

Site 5 - Skeet Range Solid Waste Fill Area

Provide the depth of the landfill. Provide more than one sampling location. If trenches were used for disposal, identify their location using earlier maps and/or aerial photographs or other methods (such as ground penetrating radar). Include the method of locating sampling locations, e.g., maps and/or photographs, in the revised workplans. Include at least one random sampling location per trench, if used. Include additional soil samples at a depth of 1 to 2 feet as requested in General Comment #4. Soil samples can be collected at a depth of 5 feet, as proposed, however, soil samples should also be collected at the base of the landfill or trenches.

Site 6 - Boat Disposal Location

The criss-cross sampling strategy places too many sampling locations near the perimeter of the site; please make necessary changes or provide sampling locations based on the location of trenches using earlier maps and/or aerial photographs. Include the method of locating sampling locations, e.g., maps/or photographs, in the revised workplans.

Include additional soil samples at a depth of 1 to 2 feet as requested in General Comment #4.

Soil and ground water should be analyzed for organometallics, such as tributyltin, since spent sandblast material may have been disposed of at this site.

Site 10- Lot H Operations

Provide sampling locations away from the corners of this site since generally, site corners are areas of reduced activity. The proposed four sampling locations may be moved more towards the center of the site or based on maps and/or aerial photographs (or other methods) revealing past waste disposal practices. Include the methods of locating sampling locations, e.g., maps and/or photographs, in the revised workplan.

Include additional soil samples at a depth of 1 to 2 feet as requested in General Comment #4. Provide additional, deeper soil samples since solvents may have been disposed of at this site.

Soil and ground water should be analyzed for PCBs (EPA Method 8080) and organometallics, such as tributyltin, since waste oils and spent sandblast material may have been disposed of at this site. Analysis parameters should include pH for both soil and ground water.

Appendix A: Field Quality Assurance/Quality Control Program

6.0 Field Procedures

Use Teflon lined caps for glass containers where organics are the analytes of interest. Use polyethylene containers with polypropylene or polyethylene caps when metals are the analytes of interest.

Soil sample containers should be stainless steel under low pH soil conditions, such as potential conditions at the Lot H Past Operations site.

The maximum holding time for metal samples, when analysis of mercury is required, should not be greater than 28 days. Please make the necessary changes since at least one site (Lot H Past Operations) is suspected of having mercury contamination.

Measurement of monitoring well static water level elevations are important to determine whether the predicted horizontal and vertical flow gradients have changed since the last measurements. Measurements should include the depth to standing water and the depth to the bottom of the well casing intake screen. This information is required both to calculate the volume of stagnant water in the well and to provide a check on the integrity of the well (e.g., to identify problems with silting). Measurements should be made on all wells the first day at the site prior to pumping any well,and again immediately before collecting samples. Instruments used to make the

measurements should be capable of obtaining reliable measurements to within ± 0.01 foot. While a steel tape may suffice, water tends to bead up on the tape, making accurate water level determination difficult. An electronic depth-sounding device is preferred for measuring the depth to water. Measurements should be referenced to a marked point whose elevation has been surveyed by a licensed surveyor; this point is usually the top of the well by a licensed surveyor; this point is usually the top of the well casing. The depth measuring device must be thoroughly cleaned between wells to prevent cross contamination.

If present in high concentrations, relatively insoluble organic liquids may form either a floating phase on the top of the well water or a dense layer at the bottom of the aquifer depending on the density of the liquid. Samples collected from within the well may contain a mixture of both of these layers and consequently be representative of neither the contaminant layer nor the bulk of the well water. Determination of the presence of these layers is important in interpretation of well water data as well as in evaluation of subsurface transport and mitigation measures. Organic liquid-water interface probes are available commercially which can determine the existence and thickness of these layers by lowering the probe into the well before evacuation. It must be carefully lowered into the surface of the liquid and down to the bottom of the water column. A transparent bottom-opening bailer can also be used to detect and collect floating layers. If an immiscible layer is detected, its thickness should be recorded and a sample collected.

Field measurements of pH and specific conductance should be made in quadruplicate for statistical analysis.

Laboratory decontamination of sampling equipment is preferable to field decontamination but is not always possible. In general, when a piece of equipment must be cleaned in the field and reused, it should only be used to collect samples expected to be more highly contaminated. It must never be used if it appears discolored or otherwise obviously contaminated.

Pumps should be cleaned in the field by pumping a solution of non-phosphate detergent through the pump and associated tubing. This solution should be followed by tap water, then followed by purified water. The purified water rinse should be repeated three times.

Bailers should be disassembled and cleaned by washing in non-phosphate detergent, followed by rinses with tap water, purified, spectroscopic grade solvent, and deionized water. They should then be air dried, reassembled using powderless surgical gloves, and wrapped in aluminum foil. Solvents which have been successfully used to decontaminate sampling equipment include hexane, acetone, and isopropyl alcohol. EPA recommends the use of hexane because of its ability to dissolve many hydrophobic compounds. Because it is not water soluble, it is often difficult to use in the field (e.g., surfaces

must be thoroughly dry before applying the hexane). Isopropyl alcohol and acetone has the advantage of drying wet surfaces quickly, dissolving many organic compounds, and being less toxic and less flammable than other suggested solvents.

7.0 Sample Custody

Sample labels should include the following minimum information:

- site location
- field ID number
- collection date and time
- name of collector
- preservation

Custody seals should be used for all samples to demonstrate that no tampering has occurred.

Samples should be delivered to the laboratory as soon as possible; this is usually within 1 or 2 days. Packages for shipping hazardous materials must comply with the Code of Federal Regulations, Title 49, Parts 171 through 179. Individual air carriers may have additional requirements.
Provide rationale for proposed organic water and organic/inorganic soil sample analysis procedures as described in Section 7.3.2. Sample containers should be completely filled to avoid headspace loss.

8.0 Laboratory Procedures

Describe analytical procedures for asbestos and organometallics, such as tributyltin.

Include analytical method detection limits.

Include laboratory turnaround time.

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Mr. T. G. Argyrinos
Director, Environmental Protection Division
Public Works Department
Long Beach Naval Shipyard
Long Beach, [illegible]

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