



STATE OF MAINE

DEPARTMENT OF ENVIRONMENTAL PROTECTION

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EDWARD O. SULLIVAN
COMMISSIONER

April 24, 1997

Mr. Fred Evans
Department of the Navy
Northern Division
Naval Facilities Engineering Command
10 Industrial Highway, Mailstop 82
Lester, PA 19113-2090

RE: Draft Work Plan, Teepee Incinerator (Site 29) and Building 238 (Site 10) for Portsmouth Naval Shipyard, Kittery, Maine, March 1997

Dear Fred:

The Maine Department of Environmental Protection (MEDEP or Department) has reviewed the document referenced above. I have provided our comments below.

Specific Comments

1) 2.2.2 Site 10 (Building 238), p. 2-8, para 3

"Reportedly, the associated piping was never removed and is located within a basement area of Building 238 that will require a confined space entry to investigate."

Please indicate if the piping is exposed or buried in the basement.

2) 3.1.1 Site 29 (Teepee Incinerator); p. 3-1, para 3

"Groundwater monitoring wells installed in the area include DW-3, ..."

The location and previous data associated with DW-3 (DSB-3) indicate that contamination associated with this location is most likely related to battery reclamation activities in the DRMO (e.g., surface soil Pb detected at 255,000 ppm, see Table 3-2). DW-3 does not appear to be located downgradient of the Teepee Incinerator or the associated ash disposal area. Therefore, inclusion of data from DW-3 (DSB-3) as part of the assessment of Site 29 may be misleading, particularly if it is included with a statistical assessment of the data.

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3) 3.1.1 Site 29 (Teepee Incinerator), p. 3-5, Figure 3-1

Please provide a rationale for the location of the proposed boring at the Former Incinerator Location. The location with the greatest potential for contamination may be near the incinerator entrance where waste was dumped prior to being moving into the teepee (see comment 4).

4) 3.1.1 Site 29 (Teepee Incinerator), p. 3-6 para 1

"Additionally, one soil boring will be drilled and sampled near the location of the former incinerator as shown in Figure 3-1."

Based on Figure 3-1 and photos in the Investigation of the Defense Reutilization and Marketing Office historical report it appears that the Navy will not collect this sample from the former location of the incinerator entrance. Photograph Number 46 in the historical report indicates that trash was, at times, pushed into the incinerator with a bulldozer. This indicates that trash may have been dumped onto the soil outside the incinerator before being pushed into the incinerator. Therefore, soil in this area may be contaminated and should be sampled.

5) 3.1.2 Site 10 (Building 238), p. 3-6, para 2

"Reportedly, recently discovered interview sheets used in developing the Initial Assessment Study (IAS) suggest the lines may have leaked."

Do these interview sheets provide significant information on other sites at the shipyard? If the Navy has not already done so, please provide the MEDEP with copies of the recently discovered interview sheets.

6) 3.2 Field Activities, p. 3-6, para 6

"Borings drilled in the natural material and near the location of the former incinerator will be sampled at depths of 0-1 foot and 2-4 feet. Borings drilled in the fill area will be sampled at the following intervals: 0-1 foot, 2-4 feet, 6-8 feet, and 10-12 feet."

Soil borings should be completed to auger refusal to adequately characterize unconsolidated subsurface materials at each location. Based on previous investigations the refusal depth of natural soils in the vicinity of DSB-10 is approximately 5.5 feet¹ (see attached table). Refusal (bedrock) depth for fill materials in the vicinity of DSB-8B is approximately 42 feet² (see attached table). Descriptions of samples taken from DSB-8B indicate contaminated fill extends to about 35 feet below ground surface (bgs). Substantial lead contamination was detected in natural soils at a depth of 39 feet bgs.

¹McLaren/Hart Environmental Engineering Corp., Draft RCRA Facility Investigation Report, Portsmouth Naval Shipyard, Kittery, Maine, July 17, 1992.

²McLaren/Hart Environmental Engineering Corp., op. cit.

Characterization of the deep fill materials is important given the direct contact of contaminants with groundwater migrating to the Piscataqua River. Given the depth of fill materials at Site 29, 5-foot sample intervals may be more appropriate than continuous split-spoon samples.

7) 3.2 Field Activities, p. 3-9, para 5

"Two subsurface soil samples will be retained for chemical analyses. One sample will be collected from just above the groundwater interface, and the other will be selected based upon visual observations."

The Draft RFI Report³ indicates the capacity of the former UST was 9680 gallons and that a 2-inch hole was discovered in the bottom of the tank. Soil boring performed in the vicinity of the tank indicated fill materials extended to approximately 7.5 to 9 feet bgs. Assuming the diameter of the tank is approximately 5-7 feet, the location of the hole in the tank suggests the greatest contamination may be found at or near the bedrock surface (i.e. 7-9 feet bgs). A soil sample should be collected from this depth for laboratory analyses.

8) 4.1 Field Operations, p. 4-1, para 1

"A laboratory has not been identified as yes to perform ..."

Change " as yes" to "of yet".

9) 4.1.1 Subsurface Soil Boring and Monitoring Well Drilling, p. 4-1 & 4-2

a) "The other two borings [in fill materials at Site 29] will be advanced to the water table."

See Comment 6.

b)

Sample Location	Sample Interval
2 Borings drilled in natural material	0-1 foot (surface soil), 2-4 feet
2 Borings drilled in fill area	0-1 foot (surface soil), 2-4 feet, 6-8 feet, 10-12 feet

The bold font "2" should be a "3". It would be helpful if the Navy provided a similar table for Site 10.

³McLaren/Hart Environmental Engineering Corp., op. cit.

c) "At a minimum, the boring log will contain the following information, when applicable, for each boring:"

Please include the following with the list provided in the work plan;

Visual observations of contamination and fill materials (e.g. metal fragments, wood, screws, etc.).

d) "One sample will be obtained from the water table interface and the other will be based upon visual observations [at Site 10].

See Comment 7.

10) 4.1.2 Monitoring Well Installation, p. 4-2, para 5 & 6

a) "The top of the screened interval will be placed approximately two feet above the high tidal water table, assuming sufficient water remains in the well during low tide to obtain groundwater samples"

Tidal fluctuations of greater than 7 feet have been observed in monitoring wells at the PNSY site. Assuming the proposed well is directly connected to the Piscataqua River, placement of the top two feet of a 10-foot well screen above the high tide water table may not provide adequate water in the well to sample at low tide. Previous borings indicate relatively shallow bedrock (i.e. 7-9 feet bgs.) at Site 10. Given the tidal range, monitoring well installation may require coring of bedrock to ensure the groundwater column in the well is an adequate depth for sample collection at low tide.

b) "The annular space above the bentonite seal will be grouted with neat cement or a bentonite/cement mixture from the top of the bentonite seal to the surface."

It has been the experience of the MEDEP that use of cement for grouting the annular space in a monitoring well may impact the water quality in the well. Every effort should be made to insure the quality of the groundwater extracted from the well is representative of the aquifer. Therefore, the MEDEP suggests using an inert substance such as clean fill of filter sand to backfill the annular space above the bentonite seal. Use of cement to seal a protective casing is appropriate and has not been observed to effect water quality in monitoring wells.

11) 4.1.4 Building 238 Sampling, p. 4-6, para 2

a) "The samples will be collected from the floor of the basement beneath the overhead piping. The piping will then be examined in an effort to determine areas where leaks or cracks in the piping could be present. Samples will be collected from the basement floor beneath these areas using stainless-steel trowels."

The first sentence in this sequence appears to be misplaced. Please modify the text to indicate soils will be collected in areas where potential pipe leaks were observed.

b) "The samples will be placed directly into the appropriate sample containers and analyzed for TAL metals."

Analysis of pH should also be indicated here.

12) 5.0 Sample Matrices, parameters, and Frequency of Collection, Table 5-1, p. 5-2

Table 5-1 indicates only one duplicate sample will be collected for seventeen (17) dioxin analyses. Section 6.3.3 of the work plan indicates 10% of the total sample size is used to determine the number of duplicate sample necessary for quality assurance. This suggests that an additional dioxin field duplicate is required to meet the quality assurance objectives.

13) 8.0 Calibration Procedures and Frequency, p. 8-1

Only MEDEP approved PIDs or FIDs should be used for field screening. See attached memo for additional information.

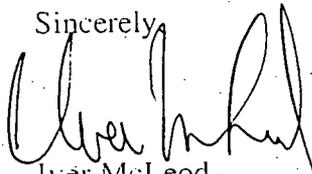
14) 14.1.3 Survey Data, p. 14-2, para 2

"All coordinates will be submitted as state plane 1987 datum."

State plane datums for the State of Maine include only the 1927 datum and the 1983 datum.

Please feel free to contact me at (207) 287-8010 if you have any questions.

Sincerely,



Iver McLeod
Project Manager
Bureau of Remediation and Waste Management

attachments

pc w/ attachments:

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