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LETTER REGARDING SEACOAST ANTI-POLLUTION LEAGUE REVIEW COMMENTS ON
TEST PITTING INVESTIGATION AT SITE 30 NSY PORTSMOUTH ME
11/16/2001
LEPAGE ENVIRONMENTAL SERVICES

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November 16, 2001

Portsmouth Naval Shipyard
Code 106.3R, Building 44
Attn: Ms. Marty Raymond
Portsmouth, New Hampshire 03804-5000

Subject: September 2001 *Test Pitting Investigation Report, Building 184, Site 30, March/April 2001 Activity Report*

Dear Ms. Raymond:

We are submitting comments on behalf of the Seacoast Anti-Pollution League (SAPL) regarding the September 2001 document entitled *Test Pitting Investigation Report, Building 184, Site 30, March/April 2001 Activity*. Comments are as follows:

- 1. General Comment.** SAPL supports the general concepts of the Navy's recommendations to perform a removal action to address the pit and to implement measures to protect the health and safety of workers and other people using Building 184.
- 2. Page ES-1, EXECUTIVE SUMMARY.** The purpose of the investigation, not just the purpose of the report, should be clearly stated right up front in the Executive Summary. This statement of purpose should match the objectives identified in the data quality objectives (DQO) process. It should also clearly state that the investigation was narrowly focused and not intended to provide a complete characterization of the nature and extent of contamination associated with the former acid pit or a comprehensive risk assessment.
- 3. Page ES-3, EXECUTIVE SUMMARY.** The first bullet of recommendations states that maintenance/housekeeping workers should use appropriate PPE [personal protective equipment] during the removal of crystals. It is necessary that the workers performing this task be trained appropriately and that all applicable health and safety measures (not just the use of PPE) be taken. The steel-toed safety boots mentioned later in the bullet are not appropriate or adequate protection where acidic conditions are of concern. What measures will be implemented to ensure that other workers in the building will not disturb or otherwise come in contact with the crystals? This comment also applies to the text on pages 3-6 and 4-2.
- 4. Page ES-3, EXECUTIVE SUMMARY.** What is the timeframe for the non-time critical removal action recommended in the second bullet?

5. Pages 1-2 - 1-4, Section 1.2 SITE HISTORY AND DESCRIPTION. The description of the acid pit on page 1-2 states that the pit bottom slopes toward a drain at the center. Is there any information regarding where the drain goes and what condition the drainage system may be in? Does it tie into the plumbing that reportedly (on page 1-4) exits the west side of the building and then ties into the sewer? This is an important consideration for potential contamination migration. Are there other pits in addition to the acid-proof pit investigated (such as the galvanizing furnace pit and the kettle pit mentioned on page 1-3) beneath the building floor that may also be of concern? It is also not clear if the pickling tanks are still present within the pit, and if so, what the tanks consist of.

6. Page 1-4, Section 1.3 PREVIOUS INVESTIGATIONS. The first two sentences in the section describe the crystals as occurring along the edges of the former acid-proof pit. If the pit has been filled and covered over with concrete, what is considered to be the edge of the pit?

7. Page 1-5, Section 1.3 PREVIOUS INVESTIGATIONS. The second paragraph on the page contains the following statement: *The conclusion and recommendation of the Site Screening Report for Site 30 were as follows: "Although the extent of contamination appears to be adequately defined ..."* This statement ignores comments on the Site Screening Report and on the Work Plan for the 2001 investigation submitted by SAPL and the Maine Department of Environmental Protection (MEDEP) that dispute this conclusion. Reevaluation of water level and tidal data indicates that only one of the four monitoring wells installed during site screening appears to be downgradient of Building 184. It is not appropriate or accurate to make any statements in this investigation report about the adequacy of contaminant definition at Building 184 without qualifiers that accurately describe the limited extent of the site screening investigation. That is, conclusions on groundwater contamination are based on one sample from one well downgradient of the potential source. Therefore, any statement regarding the relationship between the potential contaminant source and parameters detected (or not detected) in soil and groundwater samples should also include a qualifier that only one sampling location is actually situated downgradient of the potential source. Furthermore, the potential contaminant migration pathway of the drain and connecting piping has not been evaluated. The text should be revised here and in other similar passages. In addition, the third paragraph states that, based on comments received on the Site Screening Report, "limited sampling" is needed to collect additional data on the source area in order to make a recommendation of further action or no further action at the site. It is misleading to not also mention the numerous comments that have also been made regarding the need for additional groundwater data evaluation in order to make informed decisions.

8. Page 1-5, Section 1.3 PREVIOUS INVESTIGATIONS. The bullet at the bottom of the page states that personnel within the building are not likely to be exposed to the crystals because the area of crystal growth is covered with herculite, a plastic-coated canvas. This statement is cause for some confusion. This is the only place in the investigation report that we found any mention of the herculite. The impression given in other sections of the report is that, with the

exception of crystals found within the pit itself, the crystals occur on the interior surfaces of the building and are openly exposed to the air and human activity. When was the herculite installed? Is it acid-resistant? Do the crystals build up behind the herculite? Is there the potential for acid generation if crystals and moisture (the building is described on page 2-2 as humid with dripping steam pipes) accumulate behind the herculite? What's to prevent building occupants from disturbing, penetrating, or removing the herculite?

9. Page 2-1, Section 2.1 DESCRIPTION OF TEST PIT FINDINGS. The last paragraph on page 2-1 contains the statement that water levels in the pit were noted to be recovering. The meaning of this statement is not clear. Information must be added to this section concerning how the water level in the pit responded to pumping and the cessation of pumping, how much water was removed by pumping, and if the water levels in the monitoring wells outside the building showed any fluctuations.

10. Page 2-11, Section 2.2.2.2 Summary of Data Validation Qualifiers. The first bullet on page 2-11 states that the holding times for measuring pH were exceeded for all samples. Given the nature of the contamination observed in the building, the potential for under-estimating risk causes particular concern. What is the likely effect of exceeding the holding times by two or three days on the results? Are reported pH values expected to be higher or lower than if they were measured immediately upon receipt of the samples at the laboratory? What is the effect on risk screening results? Were there any pH determinations in the field?

11. Page 2-13, Section 2.2.4 Discussion of Pit Fill Material Data. Where does the sulfate in the pit material come from? Is it derived from material leaching from the bricks and cement lining the pit? What is the cause of the low pH in the fill material?

12. Page 2-14, Section 2.2.5 Discussion of Pit Water Data. The text on page 3-1 states that the pit water is not groundwater. What is the basis for that conclusion? If the water in the pit is not groundwater, where did it come from? Where does it go? The first paragraph in Section 2.2.5 ends with the statement that a pH greater than that of the crystal solutions indicates that the pit water is in contact with soil, which possibly had a natural buffering action. This statement raises several questions. What are the "crystal solutions"? Is the soil mentioned the fill material or is it assumed that the pit water has been in contact with naturally-occurring soil? If the latter, how does the water get into the pit? Is the pit water the source of the moisture that migrates via capillary action to the walls and produces the crystalline growth? If so, what is the mechanism for achieving a lower pH in the crystals? If not, what is the source of the moisture that produces the crystals? Additional information and explanation is needed in this section.

13. Page 3-1, Section 3.0 RISK SCREENING. Why is the evaluation of risk to potential residential receptors is not discussed except in a single bullet in the Summary section at the end of this chapter? What consideration is given to exposure to the low pH of the pit water?

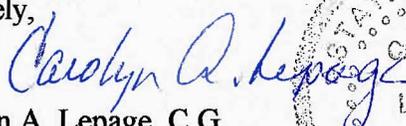
14. Page 3-3, Section 3.2 RISK SCREENING OF CHEMICAL CONCENTRATIONS IN TEST PIT FILL MATERIAL SAMPLES. The selection of the dilution attenuation factor (DAF) of 20 rather than 1 (indicating no dilution) may not be appropriate or protective. The text states that the EPA has selected a default value of 20 to account for contaminant dilution and attenuation during the transport through the saturated zone to a compliance point (i.e., receptor well). What are the EPA's assumptions regarding the travel distance to the receptor well, as well as the nature of the material the contamination travels through and the ability of that material to attenuate the contaminants of concern? If the exposure scenarios consider that the potential receptor (industrial worker, construction worker, resident) are located at Building 184, it would appear that very little travel, and therefore little attenuation, would likely occur. So perhaps a DAF closer to one than to 20 is appropriate. What are the assumptions regarding travel distances (and material traveled through) in the exposure scenarios? This comment applies to other sections where a DAF is specified (see page 3-5, for example).

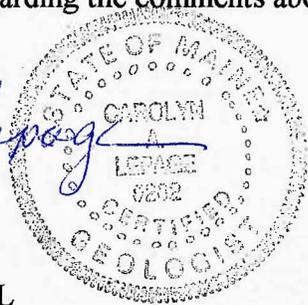
15. Page 3-5, Section 3.4 SUMMARY OF SCREENING-LEVEL RISK ANALYSIS. The third bullet contains the statement that the site history and the investigation conducted to date suggest that the Building 184 source area was very limited. What is considered to be "very limited"? Is it the limits of the acid-proof pit? The footprint of the building itself? The investigation report states in several places (see page 4-1) that the test pit investigation was intended to provide an indication of the chemical nature of the material in the pit and was not intended to be a complete characterization of the pit. Therefore, statements regarding the extent of contamination (see Comment 7, above) or of the source area must be properly qualified.

16. Appendix A. The title pages in this section describe the Foster Wheeler Field Investigation Assistance Report as "final". However, this is the first opportunity the investigation assistance report has been available for review. The report should have been labeled "draft".

17. General Comment. Section 4.3 of the Test pitting Work Plan stated that all materials removed would be photographed. These and any other photos taken during the investigation should be included in the investigation report.

If you have any questions regarding the comments above, please give me a call at 207-777-1049.

Sincerely,

Carolyn A. Lepage, C.G.
President



cc: James Horrigan, SAPL
Iver McLeod, MEDEP
Meghan Cassidy, EPA