

N00102.AR.002223
NSY PORTSMOUTH
5090.3a

LETTER REGARDING SEACOAST ANTI-POLLUTION LEAGUE REVIEW COMMENTS ON
FEBRUARY 2001 QUALITY ASSURANCE PROJECT PLAN FOR ADDITIONAL
INVESTIGATION AT SITE 10 NSY PORTSMOUTH ME
3/31/2001
LEPAGE ENVIRONMENTAL SERVICES

Lepage Environmental Services, Inc.

P. O. Box 1195 • Auburn, Maine 04211-1195 • 207-777-1049 • Fax: 207-777-1370

March 31, 2001

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

Subject: February 2001 *Site 10 Additional Investigation Quality Assurance Project Plan*

Dear Ms. Raymond:

We are submitting comments on the February 2001 *Site 10 Additional Investigation Quality Assurance Project Plan* (QAPP) on behalf of the Seacoast Anti-Pollution League (SAPL). Our review focused on Sections 5 through 9, and our comments are as follows:

- 1. General Comment.** It is not clear if this QAPP is intended to be the Work Plan and/or Sampling and Analysis Plan for the additional investigation at Site 10. If not, the QAPP should reference the Work Plan and/or the Sampling and Analysis Plan. If the QAPP is intended to serve as the Work/Sampling and Analysis Plan, the document requires additional information and a revised format. For example, as currently written, the QAPP is not sufficiently detailed or properly organized to allow field personnel to know what to do during the various field activities. The QAPP also does not spell out how the results of the additional investigation will be documented in a report. Therefore, the QAPP requires revision.
- 2. Page 4-2, Section 4.2.1 Modification of the Approved QAPP.** The second paragraph in the section states that the USEPA RPM's approval will be obtained for any major scope change. Will the MEDEP project manager's approval or concurrence also be sought and obtained?
- 3. Page 5-2, Section 5.2.1 Site Location and Description.** The first paragraph in the section states "Partially overlapping with Site 10 is Building 238; however, Building 238 is not part of this investigation." This sentence is confusing because the area of the proposed investigation includes the crawl space beneath Building 238. The Site 10 Investigation Area, as shown on Figure 5-3, overlaps with Building 238. Perhaps the intent of the quoted passage is to clarify that the interior of Building 238 (above the crawl space) is not included in the Site 10 investigation. The text should be revised appropriately here and on page 5-4 in Section 5.2.3. That said, information should be added (perhaps to Section 5.2.2) regarding where the waste battery acids were fed into the drain line/underground tank system, and if there is or was evidence of spills, overfilling, or other releases in that area.

4. Page 5-3, Section 5.2.2 Site History and Background. One of the depth intervals presented in the last sentence in the second full paragraph in the page appears to be wrong. Should the intervals be 1-3 feet bgs, 3-5 feet bgs (instead of 1-5 feet bgs), and 5-7 feet bgs?

5. Page 5-3, Section 5.2.2 Site History and Background. The summary of the 1998 Field Investigation soil sampling presented in the third and fourth full paragraphs on the page imply that lead was the only contaminant detected. In fact, the 1998 investigation found that concentrations of antimony and arsenic in surface soils, and arsenic in subsurface soils exceeded the Region III RBCs. The groundwater discussion in the fifth paragraph does not mention the elevated levels of lead and nickel (along with high turbidity) detected in the upgradient well, and the elevated concentration of thallium detected in the downgradient well. It is important to present this background information in this section of the QAPP; the text should be revised.

6. Page 5-4, Section 5.2.2 Site History and Background. The statement that groundwater beneath the site originates predominantly from upgradient areas should be revised to clarify that the statement refers to fresh groundwater.

7. Page 5-5, Section 5.2.3 Problem Definition. The third full paragraph on the page includes the statement that, because the concentration of lead in the one monitoring well actually located at Site 10 was below detection level "..., no impact to groundwater is evident." This statement is incorrect and misleading. The March 2000 *Field Investigation Report, Site 10 (Building 238) and Site 29 (Teepee Incinerator)* states on page ES-3 (and elsewhere in the report) that the concentration of thallium in well BA-01 exceeded federal Maximum Contaminant Levels (MCLs), Maine's Maximum Exposure Guidelines (MEGs) and the draft site-specific background for both freshwater and saltwater. Clearly this result shows there is an impact, at least for that one round of sampling. The text should be corrected here and in similar passages elsewhere in the QAPP to state that, based on limited data, groundwater at Site 10 has been adversely affected.

8. Page 6-1, Section 6.1.1.1 Target Analyte Suite. The first sentence in the second paragraph states that available chemical data from the March 2000 Field Investigation Report are summarized in Section 5.0. As we have noted in Comments 5 and 7, above, the information from the 1998 field investigation that is presented in Section 5 are inaccurate and misleading, and must be corrected.

9. Pages 6-2 - 6-4, Section 6.1.1.2 COPC Screening Levels and Quantitation Limits. Were Maine criteria considered as screening levels? If not, why not? If the proposed screening criteria listed on pages 6-2 and 6-3 are less stringent than Maine standards, the Maine standards should be used instead. We also note that the federal cancer risk level cited on page 6-4 is less protective than Maine's guideline. The more protective Maine risk level should be applied to Site 10 data.

10. Page 6-4, Section 6.1.1.2 COPC Screening Levels and Quantitation Limits. The fourth reason given as supporting that conservative COPC screening levels are being developed states “the fact the lead has been identified as the primary site contaminant and the site lead detection limit is much less than any lead action level.” This statement causes us concern as it indicates a potential short-coming of the proposed investigation. While we agree that concentrations of lead in soil at the site are significant, we are concerned that, by focusing on lead only, the other contaminants will not be given appropriate consideration. An example of this is the statement we cite in Comment Number 7, above, about there not being any groundwater impacts. There is also an unwritten assumption that all other contaminants at the site will behave in that same manner as lead, such that lead is a good indicator of overall site contamination. As the 1998 sampling results for well BA-01 indicate, this assumption does not hold true for groundwater. The QAPP should be revised to include a discussion of the behavior, including fate and transport, of the contaminants detected at the site, and an analysis of the appropriateness of using lead as the indicator contaminant for both soil and groundwater. The additional investigation report should include similar discussion and analysis that takes into account both existing and new data.

11. Page 6-4, Section 6.1.1.2 COPC Screening Levels and Quantitation Limits. The last sentence in the section should state that IDLs for arsenic exceed screening criteria. The sentence also says that the quality of the data is not expected to impact the DQOs because of the four mitigating factors noted previously. As we noted in Comment Number 10, above, the use of lead as the indicator contaminant for all other Site 10 contaminants in all media may not be appropriate. The very limited data currently available show that lead is not a good indicator of groundwater impacts at the site. Therefore, we believe that the decision to not follow EPA Region 1 *Compendium of Quality Assurance Plan Guidance* regarding the further reduction of project action levels by a factor of 2 to 5 to obtain project quantitation needs to be revisited.

12. Page 6-6, Section 6.1.2 Sampling Tasks. The use of the term “stratified” to describe dividing the site into three areas is a bit confusing, as it implies layering. Perhaps “divided” or a similar term would be better.

13. Page 6-6, Section 6.1.4 Analytical Tasks. The first paragraph states that offshore sampling of sediment and surface water will not be conducted as part of the investigation. What Operable Unit 4 monitoring locations are located in the vicinity of Site 10 and what are the results to date?

14. Page 6-10, Table 6-2. What is the significance of the screening level for thallium carbonate, rather than thallium alone, being provided? Is the achievable laboratory IDL for thallium also for thallium carbonate? If not, what are the implications of comparing two different compounds?

15. Page 7-1, Section 7.1 PROJECT QUALITY OBJECTIVES. This section identifies the two principal study questions as: “Is risk at Site 10 unacceptable to human receptors?” and, “Are onsite contaminants migrating to the offshore in concentrations great enough to create a current

or future unacceptable impact?" The third question, "What is the extent of contamination at Site 10 in soils and groundwater?", is described as being of secondary concern because the extent of contamination is not a decision driver for this investigation, although it will be used to support the Feasibility Study for Site 10. We are dismayed by this down-grading of the importance of adequately characterizing the site. How can the risks to human receptors and potential impacts to the offshore be evaluated properly if there isn't sufficient information to determine what contaminants are present at the site, what the concentrations of the contaminants are, and where the contaminants are located in soil and groundwater? Certainly the currently-available information, which is based on limited soil sampling and only one sample from one monitoring well, is not sufficient to determine potential risks. Determining the extent of site contamination should be the basis for answering the two "primary" questions. The Navy's overall approach to the Site 10 additional investigation should be restated.

16. Page 7-3, Section 7.1 PROJECT QUALITY OBJECTIVES. We are concerned with the decision to declare that the contaminated area extends 5 feet in all directions outside the drain line to the sampling perimeter if sampling results do not equal site-specific PRGs (preliminary remediation goals). We believe the Navy should be prepared to conduct additional sampling to adequately delineate (bound) soil contamination in Area 1 (Area 1 corresponds to the area around the drain pipeline where high metals concentrations, especially lead, have already been detected). This comment applies to similar passages elsewhere in the QAPP (page 7-9, for example).

17. Pages 7-4 & 7-5, Section 7.2, PROJECT ACTION LIMITS. The exposure scenarios for potential future receptors should include dermal contact with groundwater as water reportedly appears in the crawl space beneath Building 238 at high tide. Were State of Maine water quality criteria considered as action levels? If not, why not? If so, why weren't they selected, and are the selected criteria more conservative than Maine criteria?

18. Page 7-9, Section 7.4 RISK, Extent of Contamination in Soil. The section opens with the assumption that lead is the representative metal for determining the nature and extent of contamination. As we pointed out in Comment Number 10, above, this assumption regarding the behavior of the various contaminants at the site must be more thoroughly evaluated and documented in both the QAPP and in the additional investigation report. This is particularly important because the limited groundwater quality data currently available shows that lead is not a good indicator of groundwater impacts at the site.

19. Page 7-9, Section 7.4 RISK, Protection of Groundwater. It is not clear in this section how many rounds of groundwater data will be collected. One round of sampling will not be sufficient to recommend no further action for groundwater.

20. Page 8-2, Section 8.1.2 Groundwater Sampling Rationale. As we have already noted in several comments above, statements to the effect that groundwater has not been impacted at Site

10 are inaccurate and misleading, and must be corrected. We also recommend that the "temporary" wells be retained until sufficient data is collected to characterize groundwater at the site (see Comment Number 19, above).

21. Pages 8-3 & 8-4, Section 8.2.1 Area 1. Subsurface soils should also be collected at depths below the water table in the four Area 1 borings. Soil should be logged continuously to characterize geologic conditions, and additional soil samples should be collected at location 1-C (the MEDEP has suggested adding samples at 10-12 feet bgs, 20-22 feet bgs, and just above bedrock at 1-C). All soil samples, not just the samples below the water table, should be analyzed for TOC, CEC, and grain size.

22. Pages 8-4 & 8-5, Section 8.2.2 Area 2. Subsurface soils should also be collected at depths below the water table in the six Area 2 borings. Soil should be logged continuously to characterize geologic conditions, and additional soil samples, including one from just above bedrock, should be collected at location 2-F. All soil samples, not just the one "deeper" sample at location 2-F, should be analyzed for TOC, CEC, and grain size.

23. Pages 8-5 & 8-6, Section 8.2.3 Area 3. Subsurface soils should also be collected at depths below the water table in the six Area 3 borings. Soil should be logged continuously to characterize geologic conditions, and additional soil samples, including one from just above bedrock, should be collected at location 3-C. All soil samples, not just the one "deeper" sample at location 2-F, should be analyzed for TOC, CEC, and grain size.

24. Pages 8-6 & 8-7, Section 8.3 PROPOSED GROUNDWATER MONITORING WELL LOCATIONS, SAMPLING, AND ANALYSES. As we pointed out in Comment Number 20, above, one round of sampling is not enough to characterize groundwater at the site. Therefore, the "temporary" wells must not be abandoned until there is sufficient data. These wells should also be protected from damage and infiltration in the same manner as the "permanent" well. The pump test mentioned on page 8-7 does not appear to be the same pump test described on page 9.9+. Additional information is needed.

25. Page 8-21, Figure 8-1. We concur with the MEDEP (Comment Number 13, dated 3/22/01) that the gap between Area 1 and the sampling points to the east in Area 3 requires the addition of a sampling location for adequate characterization.

26. Page 9-4, Section 9.2.3 Hollow-Stem Augering and Split-Barrel Soil Sampling. As we noted in several comments above, soil samples should be collected and logged continuously.

27. Page 9-6, Section 9.3.2 Temporary Monitoring Wells. The "temporary" monitoring wells should also have protective steel casings installed to prevent damage to the wells. More than one round of data will be necessary, so the wells cannot be abandoned after the initial sampling.

- 28. Page 9-9, Section 9.4.3 Monitoring Well Testing.** Information regarding the analysis of data, including tidal effects, should be added to this section.
- 29. Page 11-3, Table 11-1.** The Acceptance Criteria should be provided in the table, rather than referring the reader to the operations manual.
- 30. Pages 13-7 & 13-8, Tables 13-1 & 13-2.** The number of PES (Performance Evaluation Samples) should be corrected in the tables. Also, PES should be added to the acronym list in Section 2.
- 31. Page 14-2, Section 14.0 DATA ACQUISITION REQUIREMENTS.** As we have already pointed out in Comment Number 11, the issue of quatitation levels should be revisited. Elevated detection limits may impact the project quality objectives. In addition, one round of sampling will not be sufficient to determine no further action for groundwater at Site 10.
- 32. Page 17-2, Section 17.0 QA MANAGEMENT REPORTS.** What will be included in the *Site 10 Addition Investigation Report* besides the data validation reports?
- 33. Appendix A.** The individuals and organizations that participated in the Data Quality Objectives meeting(s) and conference call(s) should be identified. Were USEPA and MEDEP personnel involved?

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: Jim Horrigan, SAPL
Iver McLeod, MEDEP
Meghan Cassidy, USEPA