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LETTER AND COMMENTS ON BEHALF OF SEACOAST ANTI POLLUTION LEAGUE ON U S
NAVY RESPONSE TO COMMENTS REGARDING DRAFT FIELD INVESTIGATION REPORT
FOR SITES 10 AND 29 NSY PORTSMOUTH ME

7/20/1999

LEPAGE ENVIRONMENTAL SERVICES

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July 20, 1999

Peter Vandermark
Seacoast Anti-Pollution League
P. O. Box 1136
Portsmouth, New Hampshire 03802

Subject: Review of Responses to Comments on the *Draft Field Investigation Report, Site 10 (Building 238) and Site 29 (Teepee Incinerator)*

Dear Mr. Vandermark:

As you requested, we are transmitting comments to the Seacoast Anti-Pollution League (SAPL) concerning Navy's responses to our April 14, 1999, comments on the January 1999 *Draft Field Investigation Report, Site 10 (Building 238) and Site 29 (Teepee Incinerator)*. Many of the responses to our comments were acceptable. Note that we have retained the comment numbers and repeated the comments from our April 14th letter for the responses that require clarification.

6. Page ES-2, Executive Summary, paragraph 7. Well BA-02 is described as the upgradient well, and as having concentrations of contaminants in excess of Maximum Contaminant Levels (MCLs). If the well is indeed upgradient of Site 10, where are the contaminants coming from?

Response: At the time of the investigation, it was thought that the location of BA-02 was sufficiently upgradient of the site. Site conditions will now have to be reconsidered. This was the first sampling performed at the newly installed monitoring well (BA-02). It was noted during the sampling that the turbidity was extremely high (>400 NTU), and that the monitoring well will need to be redeveloped and resampled. At the current time it may be premature to identify an alternative source without additional analytical data.

Additional Comment: We agree that, as a first step, it makes sense redevelop and resample monitoring well BA-02 before considering an alternative source. However, should well redevelopment not reduce turbidity to acceptable levels, well materials and installation information, such as well screen size and the grain size of the geologic formation screened, should also be considered. When and how does the Navy intend to redevelop the well? This additional comment also applies to comment 23 in our April 14th letter.

July 20, 1999

Responses to Comments, *Draft Field Investigation Report, Sites 10 and 29*

8. Page ES-3, Executive Summary, paragraph 2. *“...it is necessary to perform a quantitative risk assessment to determine the potential human health risks associated with both soil and groundwater.”*

Given the proximity of Site 10 to the river, how will the Navy evaluate the potential for contamination to migrate to offshore areas? Will the quantitative risk assessment also address risks to offshore ecological receptors and for humans consuming seafood?

Response: The Navy will evaluate the potential for contamination to migrate to offshore areas based on input from EPA, MEDEP, and the RAB. The Navy plans on performing a quantitative risk assessment to address onshore concerns at Site 10. Please see our response to comment no. 7 regarding additional offshore investigations and risk assessments. [Response to comment 7 states: The Navy is currently preparing an Interim Offshore Monitoring Plan. The Navy proposes any additional offshore investigations and risk assessments will be based on the results of interim monitoring.]

Additional Comment: As previously stated in review comments on a variety of documents and at Restoration Advisory Board and technical meetings, SAPL remains concerned with the linkage of onshore contamination sources with impacts to offshore receptors. This includes human health considerations resulting from seafood ingestion and other exposures to contaminants. Additional investigations are proposed for a number of sites at the Shipyard. How will the Interim Offshore Monitoring Plan incorporate information from these new and on-going investigations?

10. Page ES-5, Executive Summary, paragraph 5. We disagree with the statement that “the nature and extent of contamination has been adequately defined” for Site 29. Previous and subsequent passages (last sentence on page ES-4; page 4-8) state that the limits of the former ash disposal area are not known and are likely to extend beyond the sampling locations. Also, the poor sample recovery at depth in TPI-SB-06 means that the vertical extent of contamination has not been adequately defined. Additional field investigations are needed to fully determine the extent and nature of contamination at Site 29.

Response: Please see our response to EPA comment no. 26. [Response to comment 26 states: The Navy feel that sufficient data has been collected to make remedial decisions for Site 29. Any remedial decision used in the development of a feasibility study for Site 29 would consider the entire area eastward of the extent of bedrock outcrop and accompanying hillside and not just to the location of the last boring (TPI-SB03).]

Additional Comment: While the Navy is willing to consider the ash disposal area to be more extensive horizontally than current information indicates, we still do not feel that the nature and extent of contamination have been adequately defined. The vertical extent of contamination has not yet been determined, nor have concentrations of contaminants across the site been adequately measured. How will the Navy address these data gaps when making remedial decisions?

11. Page ES-5, Executive Summary, paragraph 5. *"...it is recommended that a quantitative risk assessment be performed, to determine the potential human health risk associated with soil at the site."*

Given the proximity of Site 29 to the river, and given the high levels of contaminants found at the sampling locations immediately adjacent to the shore, the Navy must also evaluate the potential for contamination to migrate to offshore areas. Will the quantitative risk assessment also address risks to offshore ecological receptors and for humans consuming seafood, including risks associated with dioxin?

Response: Please see our response to SAPL comment no. 8. [See response on previous page.]

Additional Comment: As previously stated in review comments on a variety of documents and at Restoration Advisory Board and technical meetings, SAPL remains concerned with the linkage of onshore contamination sources with impacts to offshore receptors. This includes human health considerations resulting from seafood ingestion and other exposures to contaminants. Additional investigations are proposed for a number of sites at the Shipyard. How will the Interim Offshore Monitoring Plan incorporate information from these new and on-going investigations?

12. Page ES-5, Executive Summary, paragraph 6. *"The results of the focused human health risk assessment (HHRA) must be viewed in light of the fact that the evaluation was restricted to a risk analysis of dioxin concentrations only. The risk estimates for individuals potentially exposed to the soils maybe higher if other contaminants are present in the soils."*

The results of the investigation have clearly demonstrated that other contaminants are present in the soils, and that these contaminants are present at concentrations that exceed various risk screening criteria. This passage must be revised to reflect this.

Response: Please see our response to EPA comment no. 25.

Additional Comment: EPA's comment 25 and the Navy's response refers to Site 10, not Site 29. Therefore, we still need a response to our original comment.

20. Page 2-2, Section 2.1.2, Soil Boring Drilling and Subsurface Soil Sampling, paragraph 1. Why was the boring at TPI-SB02 only advanced to natural buried soil? The dates on the boring log for TPI-DW11 are 6/8/98 on page 1 and 6/24/98 on page 2. Why was there such a long delay in completing the boring?

Response: Boring TPI-SB02 was the first boring drilled as part of this investigation, and the Work Plan was misinterpreted for depth of advancement, i.e., natural material versus bedrock. All subsequent boring were advanced to refusal.

Additional Comment: This response should be added to the report to explain why the Work Plan was not followed.

29. Page 2-9, Section 2.7.1, Comparison with Preliminary PRGs and Other Criteria, paragraph 4. *“Neither the preliminary PRGs nor the Region III RBCs for soil consider the contaminant leaching from soil to groundwater. Hence, contaminant concentrations in soil were also compared to the generic Federal Soil Screening Levels (SSLs)...”*

Page 14-5 of the March 1998 Work Plan states the following: *“Note that the PRGs for soil do not take into consideration the leaching from soil to groundwater. However, the leaching of chemicals from soil to groundwater would be accounted for by evaluating the concentrations in groundwater and the modeling of contaminant migration from onshore to offshore environment (discussed in Section 14.3.3).”* Why did the Navy deviate from the method described in the Work Plan? Is the use of SSLs more conservative or more representative? Please provide the rationale for using SSLs in place of the approach described in the Work Plan and the effect on risk screening.

Response: Comment noted. The Navy used the Federal Soil Screening Levels (SSLs) for Transfers from Soil to Groundwater, and from Soil to Air as a conservative screen to determine which chemicals in soil may be leaching into groundwater. Using SSLs or other promulgated pollutant mobility criteria is a common approach used for a screening investigation. Hence the approach used is considered more representative at this stage of the RI process. Groundwater modeling is typically not performed until after the site is adequately characterized. Performing modeling prior to the site being adequately characterized may require the modeling be performed again. The Navy believes using SSLs in place of the approach described in the Work Plan will indicate that more analytes have a potential transfer from soil to groundwater or air than the groundwater modeling originally proposed.

Additional Comment: The information in this response (both the rationale and effect on risk screening) must be added to the report as it explains a significant departure from the procedures and processes described in the final Work Plan.

30. Page 2-10 & 2-11, Section 2.7.1, Comparison with Preliminary PRGs and Other Criteria. The data comparison process described on the lower part of page 2-10 does not exactly follow the March 1998 Work Plan. Soil concentrations were to be compared with industrial soil PRGs. If PRGs were not available, then comparison would be made to Shipyard-specific background. If there was no background data, then the data would be compared with Region III RBCs. Is there an advantage in comparing the data with all three screening criteria? Please clarify. Comment 29, above, concerning the use of SSLs also applies here, as does comment 2 regarding site-specific background and comment 19 about the absence of background soil samples analyzed for dioxin.

Response: In an effort to provide the most conservative comparison, rather than place hierarchy on any particular criteria, the data was compared to all, and if a compound exceeded any of the criteria, the chemical was noted as an exceedance. Also, please see our responses to SAPL comments 2, 19, and 29.

Additional Comment: The information in this response (both the rationale and effect on risk screening) must be added to the report as it explains a significant departure from the procedures and processes described in the final Work Plan.

33. Page 3-5, Section 3.3.3 Hydrogeology, paragraph 1. There appears to be a typographical error in the fourth line. According to Figure 3-2 on page 3-28, the water level measured at DD2SG was 92.97, not 94.77.

Additional Comment: It appears that the responses to comments 33 and 34 were switched.

35. Pages 3-6+, Section 3.4 Nature and Extent of Contamination. This field investigation report is supposed to include a comparison to previously collected data (see page 14-7 of the March 1998 Work Plan). This data comparison appears to be lacking. When will the Navy provide the results of the data comparison?

Response: A comparison to previously collected data will be conducted as part of the human health risk assessment to be performed at the completion of the follow up work to be performed at Site 10.

Additional Comment: The information in this response must be added to the report as it explains a significant departure from the procedures and processes described in the final Work Plan.

38. Pages 3-8 - 3-11, Section 3.5 Risk Assessment Screening - Comparison with Preliminary PRGs and Other Criteria. Several comments we have already made above also apply to this section, including comments 2, 7, 28, 29, 30, and 35.

Response: Comments noted. Please see our responses to comments 2, 7, 28, 29, 30, and 35.

Additional Comment: As noted above, we had additional comments on the responses to comments 29, 30, and 35.

44. Page 4-6, Section 4.4 Nature and Extent of Contamination (Except Dioxin). As stated in comment 35, above, this field investigation report is supposed to include a comparison to previously collected data. When will the Navy provide the results of the data comparison?

Response: A comparison to previously collected data will be performed as part of the human health risk assessment to be performed at the completion of the follow up work to be performed at Site 29.

Additional Comment: The information in this response must be added to the report as it explains a significant departure from the procedures and processes described in the final Work Plan.

47. Page 4-8, Section 4.4.2 Subsurface Soil, paragraphs 1-4. There are several references to compounds detected being common laboratory contaminants. The Navy appears to be implying that the detections are the result of contamination in the laboratory. The data to support this must be cited, laboratory data sheets included, or the statements must be deleted. In addition, the locations for maximum detections of various contaminants are given, but the maximum concentrations are not. Please add this information. To help put the pesticide results in perspective, background information concerning the pesticide building located at the site and pesticide use and handling must also be included in an appropriate section of the report.

Response: Please see our response to EPA comment no. 6 regarding laboratory contamination and our response to EPA comment no. 11 regarding the pesticide building.

Additional Comment: This response does not completely address the last sentence of our comment. The response to EPA comment no. 11 speaks to the testing results of rinse water following cleaning of the pesticide building and to the lack of reported spills in or around the building. It does not answer the question regarding pesticide use and handling at the site.

49. Page 4-9, Section 4.4.3 Groundwater, paragraphs 3 and 4. The third paragraph states that the phthalates detected in samples are common laboratory contaminants and may not be considered site-related contaminants. The Navy must provide information to justify this conclusion. Information concerning the magnitude of the maximum concentrations of barium and cadmium detected must also be provided.

Response: Please see our response to EPA comment no. 6.

Additional Comment: EPA comment 6 and the Navy's response address laboratory QA/QC sample results. The last sentence of our comment still requires a response.

50. Page 4-10, Section 4.5 Risk Assessment Screening-Comparison with Preliminary PRGs and Other Criteria (Except Dioxin). Several comments we have already made above also apply to this section, including comments 2, 10, 28, 29, 30, and 35.

Response: Comments noted. Please see our responses to comments 2, 10, 28, 29, 30, and 35.

Additional Comment: As noted above, we had additional comments on the responses to comments 10, 29, 30, and 35.

52. Page 4-11, Section 4.5 Risk Assessment Screening-Comparison with Preliminary PRGs and Other Criteria (Except Dioxin), paragraph 3. *“Because no SSLs exist for Freon-113,..., these compounds could not be further evaluated for migration potential.”*

The March 1998 Work Plan identified a means of evaluating migration potential (see comment 29, above). Since application SSLs is impossible, will the Navy now follow the method outlined in the Work Plan?

Response: Please see our response to SAPL comment no. 29 [which states: Comment noted. The Navy used the Federal Soil Screening Levels (SSLs) for Transfers from Soil to Groundwater, and from Soil to Air as a conservative screen to determine which chemicals in soil may be leaching into groundwater. Using SSLs or other promulgated pollutant mobility criteria is a common approach used for a screening investigation. Hence the approach used is considered more representative at this stage of the RI process. Groundwater modeling is typically not performed until after the site is adequately characterized. Performing modeling prior to the site being adequately characterized may require the modeling be performed again. The Navy believes using SSLs in place of the approach described in the Work Plan will indicate that more analytes have a potential transfer from soil to groundwater or air than the groundwater modeling originally proposed.]

Additional Comment: Our comment 29 and the Navy’s response focus on the use of SSLs, rather than the procedure described in the Work Plan, to determine which chemicals in soil may be leaching into groundwater. The response to comment 29 does not address what the Navy will do should there not be an SSL available for a potential contaminant, which is the point of our comment 52. Therefore, comment 52 still requires a response.

55. Page 4-17, Section 4.6.2.1 Calculation of the Exposure Point Concentration, paragraph 2. What is the basis for stating that the soils at TPI-DW11 are not potentially affected by wind dispersion of contaminants?

Response: Please see our response to EPA comment no. 19.

Additional Comment: EPA comment no. 19 focuses on the statement that risk estimates might increase if other contaminants present in soils and other media were evaluated. It does not focus on the potential affects of wind dispersion of contaminants on soils at TPI-DW11. Our comment still requires a response.

57. Page 4-19, Section 4.6.4 Risk Characterization and Uncertainty Analysis, paragraph 1 and table. The text should clearly state that the cancer risks exceed the State of Maine acceptable risk of 1E-05.

Response: Please see our response to MEDEP comment no. 19.

Additional Comment: MEDEP comment no. 19 simply asks for “these compounds” to be changed to “this compound”, which the Navy agreed to. Our comment still requires a response.

59. Page 4-20, Section 4.6.4 Risk Characterization and Uncertainty Analysis, paragraph 1. *“Site-specific background soil samples have not been analyzed for dioxins.”*

Does the Navy intend to collect and analyze background soil samples for dioxins? As we have noted in comment 10, above, additional site characterization is also needed to define the extent and nature of contamination.

Response: The Navy proposes not collecting and analyzing background samples for dioxins to determine a remedy for the site at this time. However, the Navy recognizes an air study should be performed to determine where offsite samples should be collected in the area. The Navy is currently investigating what site-specific meteorological data is available for Portsmouth Naval Shipyard to assist in the study.

Additional Comment: When does the Navy anticipate performing the air study?

60. Page 4-21, Section 4.6.4 Risk Characterization and Uncertainty Analysis, last bullet. As we pointed out in comment 57, above, the State of Maine acceptable risk for cancer is 1E-05. This should be incorporated in the last bullet. In addition, the total cancer risks should be presented.

Response: Please see our response to SAPL comment no. 57. Also, please note that total cancer risks for dioxin are presented.

Additional Comment: The response to SAPL comment no. 57 refers the reader to MEDEP comment no. 19, which simply asks for “these compounds” to be changed to “this compound”. It does not address exceedance of the State of Maine acceptable cancer risk level. We understand that dioxin risk is reported. Are there other potentially cancer-causing contaminants at the site that also pose a risk? What are the total risks for all contaminants? Our comment still requires a response.

66. Page 5-3, Section 5.2 Site 29 (Teepee Incinerator), paragraph 5. As we stated in comment 10, above, we disagree with the statement that “the nature and extent of contamination has been adequately defined” for Site 29. The limits of the former ash disposal area are not

known and are likely to extend beyond the sampling locations. The vertical extent of contamination has not been adequately defined. Results for surface and subsurface soils near the perimeter of the site exceed screening criteria. Additional field investigations are needed to fully determine the extent and nature of contamination at Site 29. In addition, given the proximity of some of the highest levels of contamination to the shoreline, contaminant migration and potential impacts to offshore areas must also be evaluated. Modeling is mentioned on page 14-7 of the March 1998 Work Plan should PRGs be exceeded. Wind dispersion and airborne deposition of contaminated particles should also be evaluated. These investigations should be completed before a quantitative risk assessment is performed. This risk assessment should take into account exposures to all media, not just soil.

Response: The Navy feel that sufficient data has been collected to make remedial decisions for Site 29. Any remedial decision used in the development of a feasibility study for Site 29 would consider the entire area eastward of the extent of bedrock outcrop and accompanying hillside. A sentence will be added to the last paragraph stating that the risk assessment will include data from all media previously collected from Site 29 as well as incorporating data collected during follow-up groundwater sampling work to be performed at Site 29.

Additional Comment: While the Navy is willing to consider the ash disposal area to be more extensive horizontally than current information indicates, we still do not feel that the nature and extent of contamination have been adequately defined. The vertical extent of contamination has not yet been determined, nor have concentrations of contaminants across the site been adequately measured. How will the Navy address these data gaps in making remedial decisions? The issue of performing modeling (which is mentioned on page 14-7 of the March 1998 Work Plan) should PRGs be exceeded has not been addressed in the response. The response also refers to data previously collected at Site 29 as well as data to be collected during follow up groundwater sampling. These do not appear to include wind dispersion and airborne deposition data. Please clarify.

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: Iver McLeod, DEP
Meghan Cassidy, EPA
Marty Raymond, Portsmouth Naval Shipyard