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Ser 09-117
March 24, 2009

Mr. Michael J. Daly
Remedial Project Manager
Federal Facilities Superfund Section
U.S. Environmental Protection Agency (EPA)
1 Congress Street, Suite 1100 (HBT)
Boston, MA 02114-2023

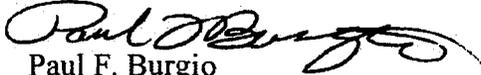
Ms. Claudia Sait
Remedial Project Manager
Maine Department of Environmental Protection (MEDEP)
Bureau of Remediation and Waste Management
17 State House Station
Augusta, ME 04333-0017

Dear Mr. Daly and Ms. Sait:

Enclosed you will find the Navy Responses to Regulator Comments (RTCs) on Draft Eastern Plume Monitoring Event 33, September 2008, Naval Air Station (NAS) Brunswick, Maine. These RTCs are provided for your review and concurrence.

If you have any questions or comments, please contact the Navy's Remedial Project Manager, Todd Bober at (215) 897-4911.

Sincerely,


Paul F. Burgio
BRAC Environmental Coordinator
By direction of BRAC PMO

Enclosure:
Navy Responses to RTCs on Draft Eastern Plume Monitoring Event 33,
September 2008, NAS Brunswick, Maine

**Responses to Comments Provided by the State of Maine
Environmental Protection Agency on the
Eastern Plume Monitoring Event 33 (September 2008) Report, January 2009
Naval Air Station, Brunswick, Maine**

Reviewer: Ms. Claudia Sait, MEDEP Project Manager
Date: March 4, 2009
Respondent: Navy
Date: March 24, 2009

Comment #	Location	Comment	Response
1	General	The data for ME-33 are consistent with the previous few rounds, notable exceptions are included in the specific comments below. The data support the conceptual model for migration of the plume east and south, with increasing concentrations at wells on the southeastern boundary of the plume. When detected, VOCs south of New Gurnett Road have remained very low, indicating migration of the plume has not significantly extended into that area. VOC detections in bedrock increased over the previous round at MW-323 and MW-308. Concentrations rebounded above the Maine Maximum Exposure Guidelines (MEGs) at MW-308 after declining to near non-detect levels in the previous round, and 1,1 DCE exceeded the MEG at MW-323 for only the second time over the course of monitoring.	Noted.
2	Page 2-8, Section 2.3.3 Appendix D Figure 79 of 188	<p><i>“As shown on trend graph number 79 of 188, ...”</i></p> <p>Since no low flow sampling for VOCs, other than for 1,4 Dioxane, was performed in the Spring of 2007 and both 2008 rounds the text and graphs cannot state that the low flows for VOC were non detect. Please correct the text and trend plots.</p>	<p>Concur. The text in the sentence starting with, “As shown on trend graph 79 of 188...”, will be revised to distinguish between low-flow 1,4-dioxane, low-flow VOCs, and PDB VOC results.</p> <p>The trend plots are accurate as plotted. Trend plot 79/188 is a combination of historical low-flow 1,4-dioxane and low-flow VOC data. After the finalization of the LTMP (ECC 2008), PDBs were used to collect VOCs which are shown on Figure 82/188.</p>
3	Page 2-13, Section 2.3.5 Table 1-1	<p><i>“Leachate Seep samples Seep-10 and Seep-11 had no detections of VOCs and SVOCs...”</i></p> <p>a. The seeps are not currently sampled for SVOCs; please revise the text.</p> <p>b. Although detections are within historic limits, VOCs at Seep-11 rebounded to the highest levels since Spring 2006 during ME-33. If the increases continue the trend is worthy of a mention in the text.</p>	<p>Concur.</p> <p>a) The text will be revised to remove SVOCs.</p> <p>b) When the next monitoring event occurs, SEEP-11 results will be noted if VOCs continue to increase.</p>

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4	Page 2-14, Section 2.3.7	The detection of vinyl chloride at PW-EP-01 and PW-EP-02 indicates that degradation of the chlorinated VOCs is occurring as the plume discharges to the surface water. The detections are also notable as some of the few detections for vinyl chloride over the course of monitoring at the Eastern Plume. (No response required.)	Noted.
5	Page 3-1, Section 3.1	<p>MEDEP generally accepts the conclusions and recommendations presented in this section, except as noted below:</p> <p>a. <u>Bullet 1, Recommendation:</u></p> <ol style="list-style-type: none"> 1. MEDEP agrees that there is potential for optimization once EW-5B is brought online and the results of the Groundwater Model and 1,4 Dioxane Remedial Investigation are available. MEDEP suggests expanding this recommendation to include the development of a treatment system for the 1,4 dioxane found at EW-05B so it can go on line. 2. MEDEP always looks forward to discussing the Long Term Monitoring network with the Navy and EPA. Modifications to the Long Term Monitoring Plan (ECC 2008) must follow the criteria outlined in Section 3.4 which specifies periodic refinements subject to the Five Year Reviews (The Third Five-Year Review will be coming up in 2010). If the Navy wants to start discussing potential wells for elimination or change in frequency that will allow enough time for the three consecutive rounds of low flow sampling and analyses must include EPA Method 8260 SIM for vinyl chloride. 3. As a reminder, during the 2004 LTMP optimization (EA. 2004. <i>Revised Proposal for Optimizing Groundwater Samples Collected as Part of the Long Term Monitoring</i>) it was agreed that P-132 and MW-305 would be sampled in the Fall 2005 then replaced. MW-105A was also agreed to be replaced. What is the schedule for replacing these wells? <p>b. <u>Bullet 2: Conclusion:</u> The results for Seep 11 this round were below the screening criteria, however there were detections for more VOCs than were found in the previous 3 rounds. The SED-11 location also had VOC detections in the April 2008 round (the first analysis for VOCs according to MEDEP's data). Overall plume migration has been determined to be to the south and east toward Mere Brook and Merriconeag Stream, based on relatively recent LTMP data. It was also a</p>	<p>a) Bullet 1, responses:</p> <ol style="list-style-type: none"> 1. Concur. Currently the Navy is evaluating 1,4-dioxane treatment technologies. EW-5B. This will be added to the bullet: "Navy is currently investigating 1,4-dioxane treatment technologies, so that groundwater hot-spots with 1,4-dioxane commingled with VOCs can be effectively treated. 2. Concur. Modifications to the LTM network will follow the procedures outlined in the LTMP (ECC 2008). It is noted that elimination or change in the monitoring frequency requires three consecutive rounds of low flow sampling and analyses for vinyl chloride using EPA Method 8260 SIM. Optimization of the Long-Term Monitoring Program for the Eastern Plume would be developed in conjunction with input from the EPA and MEDEP. 3. Noted. The <i>Proposal for Optimizing Groundwater Samples Collected as Part of the Long Term Monitoring</i> (EA 2004) was not finalized or formally accepted by the regulators. It follows that these monitoring wells are not currently scheduled for replacement. However, the Navy proposes to discuss the topic with the project stakeholders to determine the best path forward to resolve this issue. <p>b) Noted. SED-11 was sampled for VOCs and 1,4-dioxane in April 2008 (ME 32) per the LTMP (ECC 2008). The SED-11 VOCs were consistent with the VOCs detected in the seep water sample (SEEP-11). SEEP-11 has historically been a location with some VOC detections. In Spring of 2004, 2005, and 2006, TCE exceeded the clean up standard at SEEP-11. This recent very slight increase in TCE and other VOCs at SEEP-11 should continue to be evaluated to see if the cyclical history of VOC</p>

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		<p>single surface water detection of VOCs near MW-313 that triggered the porewater sampling along Mere Brook.</p> <p>c. <u>Bullet 2, Recommendation:</u> MEDEP will consider a reduction of the surface water and seep sampling locations based on the criteria for program modification outlined in Section 3.4 of the Long Term Monitoring Plan and the environmental monitoring objectives required by the Record of Decision as part of the Third Five-Year Review coming up shortly. The Navy must also consider how it will achieve the goals required by the Record of Decisions to monitor changes in the plume boundaries and potential migration pathways and monitor effectiveness of the remedial action for the protection of human health and environment if it eliminates this monitoring.</p> <p>d. <u>Bullet 4:</u> MEDEP generally concurs with the conclusions and recommendations, but is unclear how the Background Study will impact the optimization of the approach to remedial action for the Eastern Plume. The Background Study is not focused on VOCs and 1,4 Dioxane, please revise or clarify the recommendation.</p> <p>e. <u>Bullet 6, Recommendation:</u> The Navy must provide the basis for its statement that MW-308 was improperly constructed because it is not conclusive from the boring log. If this statement cannot be substantiated it should be deleted or heavily qualified. Once the results of the groundwater monitoring of the new bedrock wells are available, stakeholders can evaluate whether abandonment of the MW-308 is warranted.</p>	<p>detections continues.</p> <p>c) Concur. Modifications to the LTM network will follow the procedures outlined in the LTMP (ECC 2008).</p> <p>d) Concur. The reference to the Background Study will be removed from this recommendation.</p> <p>e) Concur. Based on the information reviewed, it appears that the well was not constructed with a double casing in a manner that would prevent downward migration from the lower sand into the shallow bedrock. The Navy fully agrees, however, that no action will be taken on monitoring well MW-308 until the results of TtNUS/Navy bedrock investigation are available and Navy/stakeholders evaluate whether abandonment of the MW-308 is warranted. The bullet to remove the well and the statement regarding improper construction will be removed, as suggested.</p>
7	Page 3-3, Section 3.2	The goals as outlined in this section are not goals in the Long Term Monitoring Plan but are the uses of the data. MEDEP recommends either changing the goals to reflect those listed in the LTMP or deleting the phrase "LTMP Goal" from in front of each bullet.	<p>Concur. The data uses described on page 1-3 of the LTMP (ECC 2008) are to satisfy the LTMP goal to obtain data necessary to document the long-term changes in environmental media at the Eastern Plume in accordance with the ROD.</p> <p>The following change will be made: delete, "LTMP-Goal" and substitute "LTMP Data Use Objective".</p>

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8	Page 3-3 Section 3.2, Bullet 1, Para 2	Please revise the update the review submittal date on the Background Study Work Plan to Winter 2008 or delete this sentence altogether since the Background Study is not focused on VOCs and 1,4 Dioxane.. To update this statement MEDEP suggests the following language: <i>“Investigations were conducted in Fall 2005 through the present along the confluence of Mere Brook and Merriconeag Stream to further ...”</i>	Concur. The sentence will be deleted and the statement will be updated.
9	Page 3-3 Section 3.2, Bullet 2, Para 2	The Navy may want to consider moving the last two sentences in this paragraph regarding new porewater samples into the first bullet since it more reflects improved water quality assessment rather than system effectiveness.	Noted. A new bullet will be added to account for the porewater samples.
10	Figures	Figures depicting the inferred extent plume boundary using exceedances of the MEGs or MCLs must be revised to encompass MW-323.	Concur. Figures depicting the inferred extent of the plume boundary will include MW-323.
11	Figure 1-4	Please correct the flow arrow direction downgradient of the Weapons Compound.	Concur. The flow arrow will be corrected.
12	Figure 1-5 and Table 1-2	Please note the groundwater elevations for MW-331, MW-207AR, and MW-105A and MW-309A/B as “Artesian Well” on the figure as they are shown in the table, to avoid the reader interpreting the “NA” designation as a missed reading.	Concur. Figure 1-5 will be updated as “artesian well” rather than NA to avoid confusion.
13	Table 1-5 Notes and Appendix A Page 106 of 138	The calibration sheet indicates the conductivity probe also was malfunctioning based on its “Post-calibration” reading. Conductivity data appear reasonable, but should be noted as questionable or estimated due to the calibration error.	Concur. A footnote will be added to Table 1-5 that indicates the monitoring wells associated with this conductivity probe and a statement indicating that the readings should be considered high biased.
END OF COMMENTS			

**Responses to Comments Provided by the United States
Environmental Protection Agency on the
Eastern Plume Monitoring Event 33 (September 2008) Report, January 2009
Naval Air Station, Brunswick, Maine**

Reviewer: Mr. Mike Daly, EPA Project Manager
Date: March 11, 2009
Respondent: Navy
Date: March 24, 2009

Comment #	Location	Comment	Response
1		There is strong merit to most of report's recommendations concerning modest sampling reductions as part of the EP long-term monitoring (LTM) program and EPA could support these specific proposals. EPA suggests a conference call between the Navy & regulators to discuss these recommendations further and how they could be incorporated into the current EP LTM program.	Noted.
2		<p>Continuing on the theme of the 3rd recommendation presented in Section 3.1, when considering larger potential LTM/performance monitoring program optimization opportunities, it should be kept in mind that there are concurrently on-going site characterization and ground water flow modeling/extraction well optimization studies that will likely require future modification of the current Eastern Plume (EP) LTMP design. Specifically, the Navy is simultaneously improving the CSM in terms of the nature & extent of VOC and 1,4-dioxane EP contamination while also conducting ground water flow modeling studies to evaluate/optimize the current extraction well system and to potentially locate and construct additional extraction well(s) to provide more effective hydraulic plume containment in the vicinity of the Mere Brook/Merriconeag Stream confluence. EP LTM program objectives, in terms of demonstrating effective ground water extraction efforts for contaminant source reduction and plume containment, as well as overall attainment of cleanup goals within the plume, will substantively change as a result of all these studies. Until these studies are finalized and there is Navy & regulator concurrence on their conclusions, any future near-term proposals to modify the EP LTM program would be premature.</p> <p>EPA applauds and strongly supports the Navy's efforts at accelerating remedial optimization efforts to provide more effective containment of the EP before it discharges to the confluence area and modifying the treatment train to effectively treat the 1,4-dioxane to cleanup goals with a conservative treatment level safety factor included in the treatment system design.</p>	Noted.

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3		EPA does not support any proposal to de-commission MW-308 (as is suggested as part of the last recommendation) until all data from the Navy/TetraTech's study is finalized and there is Navy & regulator concurrence on the report's conclusions.	Concur. Any proposal to de-commission any on-site well will follow LTMP procedures and require the approval of MEDEP and EPA. Regarding MW-308, any further action taken on this well will be based on the results of the on-going bedrock investigations which the Navy has undertaken in the area of MW-308 followed by concurrence with MEDEP and EPA.