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LETTER AND U S NAVY RESPONSES TO VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY COMMENTS ON DRAFT SECOND COMPREHENSIVE FIVE YEAR REVIEW NAB LITTLE CREEK VIRGINIA BEACH VA (PUBLIC DOCUMENT)
02/28/2014
CH2M HILL

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February 28, 2014

Virginia Department of Environmental Quality
Attn: Mr. Paul Herman, P.E.
629 Main Street, 4th Floor
Richmond, VA 23219

Subject: Responses to VDEQ Comments on the
Draft Second Comprehensive Five-Year Review
Joint Expeditionary Base Little Creek, Virginia Beach, Virginia
Navy CLEAN 8012, Contract N62470-11-D-8012, Contract Task Order WE61

Dear Mr. Herman:

On behalf of the Navy, CH2M HILL is pleased to submit the following response to the comments from VDEQ received via email on February 7, 2014 on the *Draft Second Comprehensive Five-Year Review*, Joint Expeditionary Base Little Creek, Virginia Beach, Virginia (CH2M HILL, December 2013):

Comment 1: Executive Summary: The signature page mentions 1,4-dioxane in association with long-term protectiveness at Site 11. In the 4th paragraph please add some text explaining why 1,4-dioxane is a protectiveness issue now. The Executive Summary should provide additional information explaining why the compound is an issue and only at Site 11.

Response: The 4th paragraph has been revised as requested.

Comment 2: Executive Summary: Please consider rewriting the opening sentence of each protectiveness statement as follows, "The remedy at Site xx is in place, functioning as designed, and is currently protective of human health and the environment." Wording the sentence this way better reflects the flow of the remedial action implementation and evaluation process. Concerning the protectiveness statements for Sites 9, 10, and 11, please revise as the remedies are expected to be protective in the long term. A suggested revision would be, "However, in order to evaluate the long-term protectiveness of the remedy, a groundwater sampling plan ... "

Response: The requested revisions have been made. However, the word “currently” has been removed from those sites that do not have long-term protectiveness issues.

Comment 3: Figure ES-1: The captions for each of the groundwater sites should be updated regarding the remedy implementation and LUCs.

Response: The figure has been updated as requested.

Comment 4: Executive summary, Page vii: The sinkhole at a Site 13 well was noted in Section 2.3 and should be noted here.

Response: During the August 2013 Partnering Meeting, removal of less “significant” issues/recommendations, including the sinkhole, was discussed. To alleviate the need for follow-up tracking of these less significant items, EPA requested these items not be presented

as issues/recommendations. As a result, the sinkhole, as well as other recommendations for additional sites, were not identified as an issue/recommendation and not included in the executive summary. A secondary category, not requiring follow-up/tracking, has been added to each site (executive summary and main text) where applicable to identify these additional recommendations.

Comment 5: General Comment: Each site write-up includes a "Results of implemented Action" section and an "Issues, Recommendations, and Follow-up Actions" section. For each site, please ensure any "recommendations" or "should be considered" items that are presented in the former are adequately documented in the latter. For example, at Site 12, recommendations to reassign/remove wells from the monitoring network or to inject more substrate are discussed in Section 8.4.2 but are not acknowledged in Section 8.6.

Response: See response to Comment 4.

Comment 6: Section 4.2.2: Please revise the last sentence of the 2nd paragraph as follows, "Two locked gates control vehicle access to the landfill across access roads entering the sites eastern side and western ear."

Response: The requested revision has been made.

Comment 7: Section 5.1: No Remedial Design document was prepared for Sites 9 and 10. Only a LUC RD was needed. Delete the RD entry for June 2004. Concerning the "Administrative Record" column, why aren't the LUC RD, Construction Completion Report, and LUC RD Revision 1 documents included in the AR?

Response: The June 2004 RD entry has been deleted. Because the LUC RD, Construction Completion Report, and LUC RD Revision 1 documents are post-ROD and were not considered or relied on in the decision process they are not included in the AR, these files are contained in the post-decision file.

Comment 8: Section 5.2.4: Please verify the distance from and direction to the golf course wells.

Response: The distance and direction have been updated accordingly.

Comment 9: Table 5-4: In the 2nd “Issue" does the term "range" refer to the Site 9 driving range? If so, please add Site 9 to the sentence. If not, please add some qualifiers to the word "range" such as "combat exercise range".

Response: The term “range” does not refer to the Site 9 driving range. The entry has been updated to clarify the fence line as belonging to the combat exercise range.

Comment 10: Section 5.4.2, Site Inspections: Please consider inserting the word "recently" between "ruts" and “identified" in the 1st sentence of the last paragraph.

Response: The requested revision has been made.

Comment 11: Section 5.5.1, Soil Cover O&M: Please note the "additional tire ruts" were discovered in a different area of the cover.

Response: The requested revision has been made.

Comment 12: Section 5.5.1, LTM Activities: Please consider rewriting the opening of the last sentence as follows, "While this determination could not be made”.

Response: The requested revision has been made.

Comment 13: Section 6.2.4: In the 3rd paragraph, please add the acronym (CD) following the term "cyclodextrin solution".

Response: The text has been updated to include the use of the acronym for cyclodextrin.

Comment 14: Section 6.4.2, Long-term Monitoring, Groundwater: Please revise the middle portion of the 1st sentence of the 2nd paragraph as follows, "however, as explained in the paragraphs below an overall decrease in total COCs ...” and note how the overall decrease of 28% is calculated.

Response: The sentence has been revised to state: “As shown in **Figure 6-4**, the overall lateral extent of the Columbia aquifer plume has slightly increased in size; however, as explained in the following sentence, an overall decrease in total COCs of 28 percent has been recognized since remedy implementation. The percentage change in total COCs since remedy implementation was calculated as the sum of COC concentrations in each LTM monitoring well during FYR sampling divided by the sum of COC concentrations in each monitoring well during pre-injection baseline sampling.”

Comment 15: Section 6.4.2, Long-term Monitoring, Vapor Intrusion: In the last sentence of the last paragraph please note indoor air sampling may be necessary after the re-injection of substrate or any modifications to the remedy.

Response: The paragraph has been revised as requested.

Comment 16: Section 6.5.1, Implementation of LUCs: Please add the following phrase to the end of the 1st sentence, "and subsequent revisions”. Regarding the LUC boundary, should we add the 100-foot VI buffer to the figures? A change to the survey plat isn't necessary but including the VI LUC buffer on the figures and in the Base Master Plan will ensure the VI component of the LUC is applied to all buildings within 100 feet of the plume. This would be a floating LUC boundary that would shrink and grow with the plume.

Response: Decision matrices driving vapor intrusion evaluation as part of ongoing LTM address vapor intrusion impacts to buildings that are currently or may become within 100 feet of the plume. No changes to the document were made.

Comment 17: Section 6.5.1, Opportunities for Optimization: As no remedy optimization has been conducted, please delete the word "continued" from the 2nd sentence.

Response: The requested revision has been made.

Comment 18: Section 6.7: Please consider revising the opening sentence as follows, "The remedy at Site 11 is in place, functioning as designed, and is currently protective of human health and the environment."

Response: The requested revision has been made.

Comment 19: Section 7.3.2, Summary of Estimated Remedy Costs: The Navy should request the cost information from the contractor and include the data in this Five-Year Review.

Response: Section 7.3.2 has been updated with remedy cost information.

Comment 20: Section 7.5.2, Changes in Toxicity and Other Contaminant Characteristics: Was 1,4-dioxane a reported constituent for previous sample events? In the 2nd paragraph please note whether or not 1,4-dioxane was a constituent on the previous sample analyte list.

> **Response:** 1,4-dioxane has not been included in the previous sample analyte list. The paragraph has been revised to state: "Although 1,4-dioxane has not been included in the sample analyte list for previous sampling, 1,1,1-TCA has not been detected in samples collected from Site 11a. Therefore, 1,4-dioxane is not expected to be present at the site and no further investigation of this constituent is warranted for long-term protectiveness of the remedy."

Comment 21: Section 7.7: Please consider revising the opening sentence similar to the revision suggested in Comment #18.

> **Response:** The opening sentence has been revised as suggested.

Comment 22: Section 8.2.2 and 8.2.3: In each section please verify the distances and directions to the golf course ponds/wells from Site 12.

> **Response:** The distances and directions have been verified and updated.

Comment 23: Section 8.4.3: Please verify the 3rd sentence relative to the figure referenced.

> **Response:** The sentence has been deleted as this figure is not included in the document.

Comment 24: Section 8.5.2, Changes in Toxicity and Other Contaminant Characteristics: See Comment #20. Was 1,4-dioxane part of the previous analyte lists?

> **Response:** 1,4-dioxane has not been included in the previous sample analyte list. The paragraph has been revised to state: "Although 1,4-dioxane has not been included in the sample analyte list for previous sampling, 1,1,1-TCA has not been detected in groundwater samples collected from Site 12 and PCE has been identified as the VOC historically released. Therefore, 1,4-dioxane is not expected to be present at the site and no further investigation of this constituent is warranted for continued protectiveness of the remedy."

Comment 25: Section 8.7: Please consider revising the opening sentence similar to the revision suggested in Comment #18.

> **Response:** The opening sentence has been revised as suggested.

Comment 26: Figure 8-7: Please highlight PCE rather than TCE in the inset diagram.

> **Response:** The requested revision has been made.

Comment 27: Section 9.3.2, Long-term Monitoring: In the 2nd to last sentence insert the word "not" after the word "do".

> **Response:** The requested revision has been made.

Comment 28: Section 9.5.2, Changes in Toxicity and Other Contaminant Characteristics: See Comment #20. Was 1,4-dioxane part of the previous analyte lists?

> **Response:** 1,4-dioxane has not been included in the previous sample analyte list. The paragraph has been revised to state: "Although 1,4-dioxane has not been included in the sample analyte list for previous sampling, 1,1,1-TCA has not been detected in groundwater

samples collected from Site 13 and PCE has been identified as the VOC historically released. Therefore, 1,4-dioxane is not expected to be present at the site and no further investigation of this constituent is warranted for continued protectiveness of the remedy"

Comment 29: Section 9.7: Please consider revising the opening sentence similar to the revision suggested in Comment #18.

Response: The opening sentence has been revised similar to the revision suggested in Comment #18.

Comment 30: Figure 9-9: Please add the cis-1,2-DCE degradation diagram inset.

Response: The requested revision has been made.

Comment 31: Appendix C, Site Inspection Checklist - Site 10, Section XI, Overall Observations: Please briefly describe the debris observed during the 5YR site visit and note the future actions to be taken to prevent such disposal.

Response: The requested revision has been made.

Comment 32: Appendix D - Roger White Interview: What measures is the Navy taking to ensure IDW drums do not linger on site too long?

Response: As noted in the interview summary, the drums are characterized and removed within the required 90 day timeframe. Future removal efforts will be expedited as feasible given laboratory turnaround times. No changes to the document have been made.

Please do not hesitate to contact me at 757-671-6280 if you have any questions concerning these responses.

Sincerely,

Nathaniel Price, P.E.
Project Manager

cc: Mr. Bryan Peed/NAVFAC Mid-Atlantic
Mr. Jeffrey Boylan/USEPA
Administrative Record File