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LETTER AND U S NAVY RESPONSE TO U S EPA REGION III COMMENTS TO SECOND
ROUND DRAFT SITE INSPECTION REPORT SITE 7 OLD DUPONT DISPOSAL AREA FISC
WILLIAMSBURG VA
2/29/2012
CH2M HILL

Monica Marrow

From: Stephanie.Sawyer@CH2M.com
Sent: Wednesday, February 29, 2012 2:42 PM
To: Burchette.John@epamail.epa.gov; Wade.Smith@deq.virginia.gov; krista.parra@navy.mil
Cc: Marlene.Ivester@CH2M.com; scott.park@navy.mil
Subject: Response to EPA Second Round of Comments on the Draft Site 7 SI Report; Sent 2/29/12
Attachments: CAX Site 7 RTCs Round 2.pdf

To All:

Attached are the Navy's responses to the EPA's second round comments on the Draft Site 7 SI Report. The EPA comments were received via email on February 1, 2012 (see below). Once we have resolved these comments, we will submit the draft final Site 7 SI Report (red-lined for easy review) for review.

If anyone has any questions regarding these RTCs, please let me know.

Thanks,
Stephanie

From: John Burchette [<mailto:Burchette.John@epamail.epa.gov>]
Sent: Wednesday, February 01, 2012 3:49 PM
To: Sawyer, Stephanie/VBO
Cc: krista.parra@navy.mil; Ivester, Marlene/VBO; Wade.Smith@deq.virginia.gov
Subject: Re: Response to EPA Comments on the Draft Site 7 SI Report; Sent 1/11/12

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From: <Stephanie.Sawyer@CH2M.com>
To: John Burchette/R3/USEPA/US, <Wade.Smith@deq.virginia.gov>, <krista.parra@navy.mil>
Cc: <Marlene.Ivester@CH2M.com>, <Stephanie.Sawyer@CH2M.com>
Date: 01/11/2012 02:18 PM
Subject: Response to EPA Comments on the Draft Site 7 SI Report; Sent 1/11/12

To All:

Attached are the Navy's responses to the EPA's comments on the Draft Site 7 SI Report. The USEPA comments were received via email on November 2, 2011. As indicated by VDEQ in their letter dated November 10, 2011, VDEQ had no comments regarding the Draft SI Report. Once we have resolved these comments, we will submit the draft final Site 7 SI Report (red-lined for easy review) for

review.

We will be discussing these RTCs on January 19, 2011, during our Partnering Meeting, however if you have any questions prior to the meeting please let Krista and I know.

Thanks,
Stephanie

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***** ATTACHMENT NOT DELIVERED *****

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For further information, please contact the EPA Call Center at
(866) 411-4EPA (4372). The TDD number is (866) 489-4900.

***** ATTACHMENT NOT DELIVERED *****

[attachment "Response to EPA Comments on draft CAX Site 7 SI 1_11_12.pdf" deleted by John
Burchette/R3/USEPA/US]

Response to Comments

Draft Site Inspection Report

Site 7

Naval Weapons Station Yorktown Cheatham Annex

Williamsburg, VA

February 29, 2012

EPA RPM Comments:

EPA RPM Comment 1: The idea that COC's in groundwater can be screened out simply because they are less than the upgradient well is an incorrect use of background and/or screening techniques regardless of what was in the SAP. This is also inconsistent with what we are doing at all other sites. EPA agrees that the technique could be used to determine if detected chemicals are site related, but contaminants detected that are lower the upgradient wells should not be screened out unless the groundwater is going to be deferred to another operable unit. Detections exceeding screening criteria (not including less than upgradient wells) should be carried through.

Response: Recommendations made in the Step 3 – Is Further Investigation or Action Required subsection of Section 3.5 were revised to recommend an RI to characterize the extent of contamination from the site (i.e., any mention of specific contaminants that need to be verified and/or characterized at Site 7 was removed). In addition, as discussed in the response to EPA RPM Comment 2 in the January 11, 2012 RTC letter, Section 1.1.1 of the SI Report was revised to clarify the objectives of the SI. This section was revised to include text that states if the recommended path forward for the Site is an Expanded SI or Remedial Investigation, the entire SI data set would be carried forward for further quantitative risk assessment and if the recommended path forward is further investigation, the details regarding its implementation will be submitted under separate cover in a UFP-SAP.

EPA RPM Comment 5 Response. What was the TEQ for the 2004 sample?

Response: As shown in Table 3-1 of the SI Report, the Dioxin TEQ for CAS07N-SO04 (the only sample collected in 2004 that was analyzed for dioxins) was 33.5 picograms per gram.

EPA RPM Comment 13 Response. Are the pesticide detections below the new “rule of thumb for intended use” number we have been using?

Response: The pesticide concentrations referred to in this comment were detected in groundwater. At this time the CAX Partnering Team has not agreed to a “rule of thumb for intended use” concentration for pesticides detected in groundwater.

EPA RPM Comment 14 Response. Please clarify this [backfill was brought to the site from an outside source and certified clean] in the text.

Response: Section 3.1.3, 2008 Soil and Debris Removal, of the SI Report was revised to include a statement that the material used to backfill the site following the 2008 removal action came from off-base and was certified clean by the removal action contractor.

EPA BTAG Comments

EPA BTAG Comment 1: EPA BTAG Comment 1 recommended that sediment samples be collected in the York River to more directly assess the migration pathway from the site. As a result of a brief discussion with yourself and Krista Parra (Navy RPM), BTAG learned that discussions about sampling in the York

River will occur after completion of the Watershed Contaminated Source Document which is expected in a few months (e.g., March-April 2012). However, no such agreement is presented in these RTC. In fact, the RTCs actually provide considerable discussion on why sampling in the York River is not needed in the response to EPA RPM Comment # and EPA BTAG Comment 1. Several arguments were made for not wanting to sample in the river adjacent to the site. BTAG has comments on each of these statements.

a. The response to EPA RPM Comment 7 states that any material transported into the York River during storms would likely be widely dispersed and buried relative to pre-storm contaminant concentrations in the landfill area. This is entirely speculative, and no information is presented to support this statement. The sampling strategy must take transport of the material into account in order that potential risk may be assessed.

b. The response also states that there is uncertainty that contaminated material from the former landfill area remains in place today in the river adjacent to the site and at concentrations posing environmental risk. This uncertainty is exactly why sampling is needed. Sampling sediment is the most direct way to determine one way or the other whether contaminants were transported to the river.

c. The response also states that there are potential non-site related and non-Navy sources of contamination to the York River that would make it extremely difficult to determine if any identified York River sediment contamination originated at Site 7. No information is presented to support that there are other sources of contamination in the vicinity of Site 7. Therefore, this is not a valid argument for not sampling in the river off the site. BTAG is not aware of any other sources of contamination, particularly non-Navy sources, in this area of the river. Difficulty associated with the investigation and assessment does not preclude the need for it to occur.

d. The response to EPA BTAG Comment #1 states that there was likely a small lobe of potentially landfilled debris, contaminated fill material and ash that eroded into the York River, but there is no confirmation as to the amount of material within that lobe. The suspected erosion of this material further supports the need to sample sediment in the York River.

You emailed us a copy of a Table 3-5 Site 7 Decision Summary. This summary indicates that seven contaminants (endrin, arsenic, lead, manganese, mercury, selenium, thallium) had concentrations that exceeded background and ecological criteria. The conclusion is that an expanded SI would be completed to confirm selenium and thallium concentrations. The report needs to explain why concentrations of the other five contaminants listed above do not need to be confirmed.

Response: Comment noted. Since the January 11, 2012 Site 7 RTC letter was submitted, the Navy has agreed to prepare a Watershed Contaminant Source Document (WCSD) for the York River. Therefore, any York River sampling will be discussed during the Site 7 RI UFP-SAP, and no change to the SI is necessary. In addition, please see the response to EPA RPM Comment 1 above.

EPA BTAG Comment 2: The response to EPA BTAG Comment 1: It is not clear how much uncertainty exists in comparing soil concentrations to sediment screening values using post Hurricane Isabel (2003) data. If there were only a lobe of the landfill that was adjacent to the eroding bank, it is not clear that any of the soil data collected was from this lobe. The amount of material in this lobe is unknown. It is uncertain if the highest concentrations were detected with the sampling that did occur. An adequate discussion of these issues needs to be added to the report. This uncertainty further supports additional sampling in the York River.

Response: Figure 3-1 (the Historical Conceptual Site Model) in the SI Report was revised to include the soil sample locations collected in 2004 in order to clarify where historical soil samples were collected (i.e., inside/outside the lobe of landfill material). In addition, please see the response to BTAG Comment 1 above regarding sampling in the York River.

EPA BTAG Comment 3: The response to EPA BTAG Comment 2 states "...all 2008 post-removal samples (bottom and side wall) were within the 0 to 24-inch depth range relative to the current (backfilled) site elevation." From this description, it is not clear why all samples within the 0 to 24-inch depth range would not be backfill material. The text needs to be clarified.

Response: Excavation depths were determined by the depth of debris and ash that was present onsite and lead concentrations detected in the post-removal confirmation samples, as described in Section 3.1.3 of the SI Report and are not consistent throughout the site (Note: Shaw's 2008 CCR includes both pre- and post-backfill survey data). Therefore, post-removal confirmation soil samples that were collected from within 24" of the **current land surface** (36 out of the 47 soil samples) were used in evaluating potential ecological risks. As an example, if a post-excavation soil sample was collected, and one foot of backfill material was added above it, the post-excavation soil sample was used in the ecological risk evaluation because it was collected from a location that is **currently** within the 0-24" depth range for ecological receptors. However, if a post-excavation soil sample was collected and three feet of backfill was added above it, the post-excavation soil sample was not used in the risk evaluation because it is **currently** outside the 0-24" depth range for ecological receptors. The Ecological Risk Screening Results sub-section of Section 3.4.3 was revised to clarify that 36 out of the 47 post-removal confirmation soil samples are located within 24" of the **current** land surface and used to evaluate potential risk to ecological receptors.

EPA BTAG Comment 4: The response to EPA BTAG Comment 3: One purpose of an SI is to determine if a release has occurred. Limited samples were collected in the SI to make this determination. This limited sampling may be inadequate to properly assess risk to ecological receptors. The Navy needs to document that the spatial coverage of samples is adequate to support the screening level ecological risk assessment and the use of "...more reasonable assumptions to select refined COPCs."

Response: Forty-seven post removal confirmation samples were collected from throughout Site 7 (as depicted in Figure 3-5 of the SI) and evaluated in this SI (36 of which were used to evaluate potential risk to ecological receptors). The Navy feels the number of soil samples collected from this one-acre site is more than adequate to support the screening level ERA conducted in the SI. No changes to the SI Report are necessary.

EPA BTAG Comment 5: The response to EPA BTAG Comment 4: With the uncertainties that have been identified by the Navy, it is unclear whether the site presents a risk to ecological receptors in and adjacent to the York River. The Navy identified debris from this site that was scattered far from the site in the river. What was released from this site to the York River is unknown and cannot be accurately estimated from existing data.

Response: Please see the response to EPA BTAG Comment 1 above.

EPA BTAG Comment 6: The response to EPA BTAG Comment 5 does not adequately address the BTAG recommendation.

Response: Please see the response to EPA BTAG Comment 1 above.

EPA BTAG Comment 7: The response to EPA BTAG Comment 7: There are enough uncertainties with the data and the methodologies used that it is likely the data could only be reasonably used to assess risk to ecological receptors at the screening-level stage.

Response: Please see the response to EPA BTAG Comment 4 above.

EPA BTAG Comment 8: The response to EPA BTAG Comment 11 needs to adequately explain why UTLs were used in one instance and UCLs were used in another instance. The Navy needs to clearly explain why background 95% UTLs were used instead of 95% UCLs and why 95% UCLs were used for exposure point concentrations and not UTLs.

Response: The 95% UTL is a commonly used statistic for background evaluations and provides an upper bound estimate (tolerance limit) of the background concentration in an entire data set. The 95% UCL is a commonly used statistic in risk assessments and provides an upper bound estimate of an arithmetic mean concentration, that is, there is 95% confidence that the mean will be less than or equal to the 95% UCL value. Thus, the different purposes of the evaluations (background and risk assessment) determined which statistic (UTL vs. UCL) was appropriate.

EPA BTAG Comment 9: The response to EPA BTAG Comment 12: While the data shown in this response does indicate that the marine and freshwater screening criteria used do exceed the maximum concentration of nitroglycerin. However, uncertainty still exists because there is no marine screening value for this contaminant. This uncertainty needs to be addressed.

Response: Because this is an SI, there is no formal uncertainty section in the ecological risk screening appendix. However, the original response to EPA BTAG Comment 12 provided the information used to determine that the chemical could be screened out with acceptable uncertainty. This response is provided again below:

Marine surface water screening values for all explosives with screening values ranged from 8.00 µg/L to 5,000 µg/L (Table B-2), all of which are well above the maximum detected concentration (0.23 µg/L) of nitroglycerin. Note also in Table B-2 that the freshwater screening value for nitroglycerin is 138 µg/L, several orders of magnitude above the maximum detected concentration of nitroglycerin at the site. Thus, it is reasonable to screen out nitroglycerin on this basis. No changes are proposed to the SI Report to address this comment.

EPA BTAG Comment 10: The response to EPA BTAG Comment 13: The text needs to identify how many and which locations had multiple depths sampled. Using text like "...concentrations in the surface strata were generally similar to, or higher than, the corresponding subsurface strata..." can be interpreted to mean that some concentrations in the subsurface exceeded the concentrations in the surface strata.

Response: Except for Sample 04 (the ash sample), all of the sample locations used in the SI had both a surface and a subsurface sample. None of the subsurface sample concentrations exceeded their corresponding surface sample concentrations. As noted in the original response, the use of the surface soil data resulted in a more conservative evaluation, and this will be clarified in the SI (Appendix H).

EPA BTAG Comment 11: The response to EPA BTAG Comment 15: The Navy suggests the use of the lead ER-M means the incidence of adverse effects is 35.8 percent. This means that over 1/3 of the organisms would experience adverse effects. This incidence of adverse effects is too high to be considered acceptable.

Response: As noted in the original response, concentrations between the ER-L and ER-M represent the "possible effect" range within which effects could occasionally occur. Thus, the ER-L and ER-M together

provide an estimate of the range of potential risks within the context of the conservative nature of the exposure estimates. In addition, the ER-L and ER-M values were used in the ecological risk screening, conducted using pre-TCRA soil data (2004), to estimate the historical potential soil to sediment transport from the site to the York River and as a result of the 2008 removal action, the soil associated with these samples has been removed from the site. The Navy will be completing a WCSD for the York River; therefore, any sampling of the York River and subsequent assessment of potential risk as a result of migration from Site 7 will be discussed during the Site 7 RI SAP, and no change to the SI is necessary.

EPA BTAG Comment 12: The referred responses to EPA BTAG Comment 18 do not address this comment.

Response: Please see the response to EPA BTAG Comment 1 above.

EPA BTAG Comment 13: The response to EPA BTAG Comment 20 does not adequately address the potential for contamination from Site 7 to have entered the York River or its shoreline.

Response: Please see the response to EPA BTAG Comment 1 above.

EPA BTAG Comment 14: The response to EPA BTAG Comment 21: The confirmation sampling results and backfill contaminant concentrations need to be compared to screening values for terrestrial receptors (e.g., plants, invertebrates, birds, and mammals) to ensure that risk is not still present at this site.

Response: Post-removal confirmation soil samples were compared to the screening values agreed to in the SI UFP-SAP (as shown in Table 3-3) and exceedances of these screening values are discussed in Section 3.4.2 of the SI Report. Since the backfill material was certified clean by the removal action contractor (see response to “EPA RPM Comment 14 Response,” above, about clarifying this in the text) and previous comments received from the EPA, indicating that they were unclear as to why backfill material would be included in a ecological risk evaluation if it was certified clean by the removal subcontractor (May 2010 comments on the UFP-SAP), analytical data certifying that the backfill material was clean was not compared to screening criteria or evaluated in the SI. No changes will be made to the SI Report.

EPA BTAG Comment 15: The response to EPA BTAG Comments 22, 23, and 27: Information (e.g., shoreline erosion rate (0.58 meters per year), approximately 15 to 20 feet of erosion to the eastern bank of the landfill occurred in 2003, and Site 7 debris being found far from the site in the York River) needs to be used to plan additional sampling in the York River and adjacent shoreline areas.

Response: Please see the response to EPA BTAG Comment 1 above.

EPA BTAG Comment 16: The response to EPA BTAG Comment 25: There are sufficient uncertainties with the use of terrestrial data taken after the erosion occurred to support the collection and analysis of sediment and/or surface water samples from the York River and adjacent shoreline.

Response: Please see the response to EPA BTAG Comment 1 above.