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Ivester, Marlene/HRO

From: Thomson.Bob@epamail.epa.gov
Sent: Tuesday, June 02, 2009 3:09 PM
To: Ivester, Marlene/HRO
Cc: Friedmann, William/VBO; tom.kowalski@navy.mil; christopher.r.murray@navy.mil; wmsmith@deq.virginia.gov
Subject: RE: EPA Comment #7 on the Yorktown/CAX BG Study WP

Please finalize the Work Plan. The ticks are waiting and hungry.....

Robert Thomson, PE, REM
 Office of Federal Facility Remediation
 US EPA - Region 3
 215-814-3357

-----<Marlene.Ivester@CH2M.com> wrote: -----

To: Bob Thomson/R3/USEPA/US@EPA
From: <Marlene.Ivester@CH2M.com>
Date: 06/01/2009 04:37PM
cc: <William.Friedmann@CH2M.com>, <tom.kowalski@navy.mil>, <christopher.r.murray@navy.mil>, <wmsmith@deq.virginia.gov>
Subject: RE: EPA Comment #7 on the Yorktown/CAX BG Study WP

Rob,

Thank you for your quick response.

Yes, the language from the response to Comment #7 will be added to the final WP to make it clear how the soil associations will be grouped.

The Navy, as well as HILL, is aware that the actual statistical approach will be dependent on the results and distribution of data. I will make sure that it is clear in the WP that the proposed approach may not be the actual approach and that all parties will agree on the approach once we have the results.

Do we have the go ahead for a final WP? Does everyone agree?

Thanks,
 Marlene

From: Thomson.Bob@epamail.epa.gov [mailto:Thomson.Bob@epamail.epa.gov]
Sent: Monday, June 01, 2009 4:18 PM
To: Ivester, Marlene/HRO
Cc: Friedmann, William/VBO; tom.kowalski@navy.mil; christopher.r.murray@navy.mil; wmsmith@deq.virginia.gov
Subject: Re: EPA Comment #7 on the Yorktown/CAX BG Study WP

Marlene:

The response for Comment # 7 contained in the May 39, 2009 email satisfactorily addresses EPA concern, however, the Region would like to see the text of the response worked into the final Work Plan, as it helps to explain (especially to the public) how the soil associations will be grouped. Please include this text in the final Work Plan

For comments 1, 2, 9, and 10, as discussed in the Partnering meeting, it is difficult to speculate what statistical approach to use without seeing the actual data. As long as the Navy is aware that the statistical approaches can change based upon the distribution of the data, EPA is agreeable to keep our options

10/12/2009

open and flexible until we can see that data.

Robert Thomson, PE, REM
Office of Federal Facility Remediation
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-----<Marlene.Ivester@CH2M.com> wrote: -----

To: Bob Thomson/R3/USEPA/US@EPA
From: <Marlene.Ivester@CH2M.com>
Date: 05/29/2009 11:30AM
cc: <William.Friedmann@CH2M.com>, <tom.kowalski@navy.mil>, <christopher.r.murray@navy.mil>, <wmsmith@deq.virginia.gov>
Subject: EPA Comment #7 on the Yorktown/CAX BG Study WP

Rob,

Per the April 30 Yorktown Partnering meeting discussion, you said we should be able to wrap up through email the EPA's original Comment #7 on the BG Study WP. Therefore, below, I offer a revised response (below in blue, following the comment's sequence of events).

EPA's original comment was:

7. Section 3.2.1: The factors used to determine how soil associations will be grouped are not clearly defined in the draft Work Plan. Please define these factors in the revised Work Plan.

Our RTC letter asked for clarity and EPA then commented:

The Navy's response did not fully address the concerns EPA outlined in Specific Comment #7. The Navy's response is not clear about the factors influencing the grouping of soil associations. The response indicates that the clarification requested was already presented in the draft Work Plan, in several different paragraphs. However, the text referenced did not address or answer the concern, which is whether the grouping of soil associations will be based on similarities in soil characteristics or in contaminant concentrations? Usually for background studies, samples are segregated based on soil characteristics. If that is not what is proposed in the draft Work Plan, then an explanation needs to be provided for review.

Our revised response is:

Yes, the samples will be segregated based on soil characteristics. There are four soil associations located at both WPNSTA Yorktown and CAX - 1 (Bohicket, Johnston, Axis), 2 (Dogue, Pamunkey, Uchee), 3 (Emporia, Slagle, Craven-Uchee Complex), and 4 (Slagle, Emporia, Emporia Complex). WPNSTA Yorktown has a fifth soil association (5 - Slagle, Bethera, Craven-Uchee); however, data from Soil Association 5 at WPNSTA Yorktown was excluded from the BG data set because this soil association comprises a relatively small portion of the Facility and there are no known CERCLA sites located with the areas of this soil association.

When determining the suitability to combine soil types and soil depths, the largest determining factor is the soil composition (i.e. grain size, organic content). The soil grain size distribution and organic content can impact a contaminant's transport properties as well as alter the contaminant's properties. Soil types are closely associated to the geographic features which represent varying deposition environments (i.e. wetlands are associated with low, quiet waters producing predominantly silt to mud deposits). The highest variability in a contaminant's characteristics within a soil occur between soils composed of sands to those composed of silts and muds. Soils with higher organic contents generally have the capacity to accumulate inorganic compounds and as such would produce higher concentrations of naturally occurring metals. For this reason, high organic soils (Bohicket, Johnston, Axis) are not combined with sandier, low-organic content soils (Slagle, Emporia).

Soils which are considered similar in their physical composition are then compared statistically. This process is repeated to determine if soil depths may also be considered for combination based on their physical composition. The purpose of conducting this process is to increase the statistical pool of data leading to a higher confidence in the statistics.

Does this response sufficiently address Comment #7. If not, please explain what other information you are seeking. Thanks.

If you agree with the above response, a paragraph using the language above will be added after the two bullets on Page 3-1 to clarify how the soil associations will be grouped. Do you concur?

Lastly, with respect to the remaining comments that required resolution (Comments 1, 2, 9, and 10 - all stats related), as we discussed during the April 30 meeting, we (CH) would make it clear in the WP that the statistical model we proposed and the one that we'll actually use could change, based on the analytical results, and that once the results are available, there will be a Team meeting (including statistical experts) to agree upon the approach to use. Therefore, can we consider Comments 1, 2, 9, and 10 resolved as well?

If you agree that we have resolved the remaining five comments, then we can go final w/ the WP and schedule the fieldwork.

If you have any questions, please contact me or Bill.

Thanks so much,
Marlene