Bernhardt, Aaron

From: Keckler.Kymberlee@epamail.epa.gov
Sent: Friday, October 17, 2008 3:41 PM
To: Bernhardt, Aaron
Cc: Hoskins.Bart@epamail.epa.gov; Rich, Corey; Kenneth_Munney@fws.gov; mark.lewis@po.state.ct.us; Conant, Richard CIV NAVFAC MIDLANT; Pinkoski, Ronald CIV NAVFAC; rtfinlayson@GFNET.com; Jurka, Val CIV NAVFAC Atlantic, Ev33
Subject: Re: RTC Area A Wetland Phase IV SAP
Attachments: RTC_EPA_Draft Phase IV SAP_Area A Wetland.doc

Comment 2: The Navy is welcome to maintain all chemicals in the PEC quotient. However, depending on the results, the data may still need to be interpreted beyond a PEC quotient for total COPC. Since the goal is to correctly identify the true risk-driving chemicals, an approach similar to what was done with the ERM-Qs in the Thames River Validation Study (e.g., PEC quotients for PAHs, pesticides, and metals) may help identify the most useful correlation between COPC and toxicity. The quotients for each analyte group (PAHs, pesticides, and metals) should be limited to those contaminants that have exceeded a PEC somewhere on the site in previous sampling rounds to avoid including chemicals that are not driving risk, such as mercury and nickel. It also appears unlikely that PCBs are a risk-driving chemical as they are only included on the analyte list based on a single detection, in order to confirm or deny the presence of PCBs. To reiterate EPA's concern, it is important that the PEC quotients do not mask the potential importance of a short list of COPC. For example, the previous concentration of DDTs at T3B exceeded the PEC by a factor of 8, while the total PEC quotient for the sample was calculated to be 1.17. If this sample showed toxicity but other samples with similar or higher PEC quotients (but low [DDTs]) were not toxic, one might recognize that sediment at T3B is toxic but not attribute the effects to COPC. This would ignore the possible role DDTs play in the toxic effect.

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10/17/2008 08:31 AM

To: Kymberlee Keckler/R1/USEPA/US@EPA
cc: Bart Hoskins/R1/USEPA/US@EPA, "Rich, Corey" <Corey.Rich@tetratech.com>, <Kenneth_Munney@fws.gov>, <mark.lewis@po.state.ct.us>, "Conant, Richard CIV NAVFAC MIDLANT" <richard.conant@navy.mil>,

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Subject
RTC Area A Wetland Phase IV SAP

Kymberlee,

Attached is RTC document for EPA's comments on the Phase IV SAP for the Area A Wetland. We are planning on conducting the sampling the week of October 27, 2008, so please let us know as soon as possible whether you have any concerns with the responses. Also, please let us know whether you will want to have someone present during the sampling. The tentative schedule is to carve out the locations on Monday afternoon and Tuesday, and then start collecting samples on Tuesday. The sampling should be completed by Thursday (Friday at the latest).

Thanks,

Aaron

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(See attached file: RTC_EPA_Draft Phase IV SAP_Area A Wetland.doc)

RESPONSES TO EPA'S OCTOBER 15, 2008 COMMENTS ON THE DRAFT SAMPLING AND ANALYSIS PLAN FOR THE PHASE IV REMEDIAL INVESTIGATION FOR THE AREA A WETLAND – SITE 2B NAVAL SUBMARINE BASE – NEW LONDON, GROTON, CONNECTICUT OCTOBER 16, 2008

GENERAL COMMENTS

Comment 1: SAP Worksheet #11

In the first full paragraph on page 23 of 92, the text states: "Sediment in the eastern part of the wetland will serve as a reference sediment...." As noted in previous communications, and as suggested elsewhere in the SAP, the samples selected as reference locations will only serve as reference samples if COC concentrations are not elevated. Please modify the text to indicate this uncertainty about the reference samples.

Response:

The following text will be added to the end of the referenced paragraph to address this comment: "The data from the quick-turn chemical analysis of the proposed reference samples will be reviewed and evaluated by the project team to ensure that at least two of the selected locations are appropriate reference locations. This evaluation will consist of a comparison of reference concentrations to sediment screening levels and New London surface soil background concentrations to determine whether it is likely that the chemical concentrations in the reference samples are similar to background concentrations and are likely to cause a toxic response."

Comment 2: SAP Worksheet #11

The text on page 26 of 92 discusses the use of PEC quotients to establish dose response curves. Please note that the list of chemicals used in the PEC quotients may need to be revised depending on site data. As discussed previously, to ensure that the PEC quotient is not "diluted" by including chemicals with low concentrations, it may be necessary to eliminate some chemicals from the list.

Response:

The Navy does not agree that any chemicals should be eliminated from the PEC quotient because they might "dilute" the quotient. The PEC quotient will be related to the observed toxicity in sediment samples so any "dilution" of the value is already accounted for in the value. For example, a PEC quotient of 1.5 may be related to a toxic response, while a PEC quotient of 0.8 may be related to a non-toxic response at the site. The PEC quotients in other site samples would then be compared to the PEC quotients of 1.5 and 0.8 to determine potential risks to sediment invertebrates. As long as the same chemicals are included in the PEC quotient calculation for all locations, chemicals with low concentrations across the site would have the same impact on the PEC quotient in all samples. Therefore, the Navy does not believe that it will be necessary to eliminate any chemicals from the list to artificially inflate the PEC quotient.

Comment 3: SAP Worksheet #12

If non-disposable equipment is used, then rinsate blanks are necessary (page 29 of 92). Please document the decontamination process to ensure that it is adequate.

Response:

The Navy does not agree that rinsate blanks are necessary for this investigation even if non-disposable sampling tools (i.e., trowels) are used for the following reasons:

1. The laboratory recently indicated (after the SAP was submitted) that they will require 2 gallons of sediment per location for the toxicity testing (1 gallon for each species). The non-disposable sampling equipment will be cleaned so no visible sediment remains on the equipment. Because the remaining amount of sediment on the equipment would be very small compared to the sample volume (greater than two gallons after including the volume needed for chemical analysis), any non-visible sediment would not contribute appreciably to the overall chemical concentrations in the sediment sample from that location.

2. The primary purpose of this investigation is to correlate chemical concentrations in sediment with toxic responses from the toxicity tests. Therefore, if a small amount of residual sediment was retained on the sampling equipment between sample locations, this sediment would be accounted for in the toxicity test and the chemical analysis of that sample.

Note that Worksheet #19 will be modified to indicate that 2 gallons of sediment are required for the toxicity testing.

Comment 4: SAP Worksheet #14

The text at the top of the page refers to a plastic trowel used to collect sediment samples. Will this trowel be decontaminated or is a dedicated trowel used for each sample location?

Response:

Because the laboratory will need two gallons of sediment, stainless steel spoons or hand trowels may be a more efficient method of collecting the sediment samples than plastic spatulas. Also, a clean five gallon bucket may be used to homogenize the sediment samples if roasting pans with a capacity of 2.5 gallons cannot be located. Therefore, the text in the third and fourth paragraphs under "**Sediment Sampling**" in Worksheet #14 will be modified as follows (bold/italicized text will be added):

"After all of the locations are cleared, Tetra Tech will commence sediment sampling. The following sampling procedures will be used if water is not present at the location. Prior to collecting the sample, large woody debris will be removed from an approximately one-foot square area using a new disposable plastic trowel ***or a clean stainless steel spoon or trowel***. The ~~plastic~~ trowel ***or spoon*** will be used to excavate four inches of sediment, which will then be placed into a new aluminum roasting pan ***or clean plastic bucket*** and processed as described below.

The following sampling procedures will be used if water is present at the location and does not allow the previous method to be used. A petite ponar grab or Eckman dredge will be slowly lowered by hand and pressed into the sediment to a four-inch depth (below the woody debris layer). The sampler will be closed, raised out of the water, and emptied into a new aluminum roasting pan ***or clean plastic bucket***. This procedure will be repeated until approximately four inches of sediment is collected (below the woody debris layer). At that point, the large woody debris will be removed from the aluminum pan **or bucket** and the sample processed as described below."

The "**Equipment Decontamination**" section also will be modified as follows:

"The decontamination procedures presented in Tetra Tech SOP SA-7.1 in Appendix A on the attached CD will be followed for this project. The ***clean stainless steel spoons or trowels, plastic buckets,*** ponar, ***or*** ~~and~~ Eckman samplers (if used) will be decontaminated between uses at the sample locations. The ***equipment*** ~~samplers~~ will be scrubbed clean of all visible debris, sprayed down with a soap and water solution, and rinsed in distilled water. To minimize decontamination, new disposal trowels and bowls will be used to process each sediment sample and will be discarded after one use***, if possible***. Therefore, decontamination of this equipment will not be necessary. Personal protective equipment and emergency decontamination procedures are discussed in the HASP."

Comment 5: SAP Worksheet #20

Please clarify the MS/MSDs for pH and grain size (page 48 of 92).

Response:

MS/MSDs will be eliminated from Worksheet #20 for TOC, pH, and grain size.

Comment 5: SAP Worksheet #23

The worksheet reveals that the two toxicity SOPs are modified for this project, but it does not describe the modifications (pages 52 and 53 of 92). Please add a footnote to include where these modifications are documented (*i.e.* in the SOP, or the section of the SAP).

Response:

A footnote will be added to the "Yes" text in the last column to indicate that Section 11 of both toxicity test SOPs in Appendix B present the site-specific modifications that were made to the SOPs for the toxicity testing.