TETRA TECH

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Project Number 112G00873

Mr. Valdis Jurka
Naval Facilities Engineering Command, Mid-Atlantic
Environmental Restoration
Bldg. Z-140, Room 103
9742 Maryland Avenue
Norfolk, Virginia 23511-3095

Reference: CLEAN Contract No. N62467-04-D-0055
Contract Task Order 0439

Subject: Responses to Comments on Final QAPP for
Phase III Investigation at the Area A Wetland
Naval Submarine Base-New London, Groton, Connecticut

Dear Mr. Jurka:

Tetra Tech NUS, Inc. (Tetra Tech) is pleased to submit electronically the responses to comments on the Final Quality Assurance Project Plan (QAPP) for Phase III Investigation at the Area A Wetland, Groton, Connecticut for your files. Copies were e-mailed to the distribution list provided below.

If you have any questions regarding the responses, please contact me at (412) 921-8433.

Sincerely,

Aaron Bernhardt
Project Manager

AB/mlg
Enclosure(s)

cc: Ms. Lee Anne Rapp, NAVFAC Atlantic
Ms. Bonnie Capito, NAVFAC Atlantic
Mr. Richard Conant, NSB-NLON
Ms. Kymberlee Keckler, EPA - Region I
Mr. Mark Lewis, CTDEP
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RESPONSES TO EPA's NOVEMBER 6, 2007 COMMENTS ON THE DRAFT QAPP FOR PHASE III INVESTIGATION FOR AREA A WETLAND – SITE 2B NAVAL SUBMARINE BASE - NEW LONDON, GROTON, CONNECTICUT

DECEMBER 14, 2007

GENERAL COMMENTS

Thank you for the opportunity to review the Responses to EPA's September 7, 2007 comments on the *Draft QAPP for Phase III Investigation for Area A Wetland – Site 2B*, dated October 2, 2007 and the *Revised QAPP for Phase III Investigation for Area A Wetland – Site 2B*, dated October 2007. Detailed comments are provided in Attachment A.

Response: None required.

Comment 1:

The Comment 3 response is acceptable and has been incorporated. It should be noted, however, that Worksheet #18 lists the entire analytical suite for 2W-SD57. The response to comments only indicated that the sample would be analyzed for PAHs and metals; the sample collected on 10/18/07 was only slated for PAHs and metals. Worksheet #18 should be corrected if the QAPP is otherwise revised.

Response:

The reviewer is correct that sample 2W-SD57 was only analyzed for PAHs and metals. The QAPP will not be revised but this will be noted in the data evaluation report.

Comment 2:

The Comment 4 response is acceptable, except that the corresponding core sample is 2WSC05, not 2WSC11. It is noted that 2WSC05 has been relocated in the revised Figure 1-4

Response:

Because the corresponding core samples were collected at the same locations as the sediment samples, the core samples were renamed with the same location identifier as the sediment samples. This will be noted in the data evaluation report.

ATTACHMENT A COMMENTS

Comment 1:

Response acceptable and incorporated, except that the list of SOP has a typo: CA-70 should be CA-709.

Response:

The QAPP will not be revised but future references to that SOP in other QAPPs will be corrected.

Comment 2:

Response acceptable and incorporated, but the "replacement page" was not provided to EPA before starting the field event.

Response:

Comment noted. The final QAPP was mailed out prior to the field event being started, but it may not have been received by EPA prior to starting the field event.

Comment 10:

Comment has been retracted.

Response:

Comment noted.

Comment 15:

The original comment, referring to Appendix C, Tables 5-1 & 5-2, asked why some chemicals were selected as COPC but not retained for food chain modeling (*e.g.,* aluminum, iron, acetone, barium, vanadium). The response explains that only chemicals considered to be important bioaccumulative chemicals were included in the food chain model. While this approach is often considered acceptable in practice, caution should be taken so that potential risk of directly toxic non-bioaccumulative chemicals is not ignored. Inadvertent ingestion of sediment is a potential pathway for receptors in this ecological risk assessment, that could pose risk if concentrations of non-bioaccumulative chemicals are detected at high concentrations. This does not seem to be expected at this site, but it is a possibility. In order to not miss potential risk in this case, even non-bioaccumulative chemicals should be carried through the food chain model.

Response:

The Navy agrees to carry non-bioaccumulative chemicals through the food chain model. Note that some of those chemicals, such as aluminum and iron, may result in hazard quotients greater than 1.0 because their respective concentrations in sediment are naturally high compared to their toxicity reference values (TRVs). The TRVs are developed using highly bioavailable forms of the metals, but most metals, are not bioavailable in the environment. Another potential problem with evaluating risks to wildlife from non-bioaccumulative chemicals is that bioaccumulation factors are often not available, so a value of 1.0 is often assumed--which likely overestimates exposure. Because of this, the average BAF for non-bioaccumulative chemicals will be used as a surrogate BAF for non-bioaccumulative chemicals that do not have BAFs. This will be discussed in the risk characterization section and/or uncertainty analysis section.