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TRANSMITTAL LETTER FOR THE STATE OF NEW JERSEY DEPARTMENT OF
ENVIRONMENTAL PROTECTION COMMENTS ON WORK PLAN FOR PRE-REMEDICATION
AT DEPTH SAMPLING OF OPERABLE UNIT 5 (OU 5) SITE 13 DEFENSE PROPERTY
DISPOSAL OFFICE YARD NWS EARLE NJ
5/5/2005
TETRA TECH



TETRA TECH NUS, INC.

661 Andersen Drive • Pittsburgh, PA 15220
Tel 412.921.7090 • Fax 412.921.4040 • www.tetrattech.com

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May 5, 2005

Project Number 112G00050

Ms. Michele DiGeambeardino
Naval Facilities Engineering Command
EFANE (Code EV21/MD)
10 Industrial Highway, Mail Stop #82
Lester, PA 19113-2090

Reference: CLEAN Contract No. N62472-03-D-0057
Contract Task Order No. 033

Subject: Draft Letter Report
Pre-Remediation at Depth Sampling
Site 13 – Defense Property Disposal Office Yard (OU-5)
Naval Weapons Station Earle, Colts Neck, New Jersey

Dear Ms. DiGeambeardino:

Please find enclosed one copy of subject report. This report outlines the results of the at-depth sampling that occurred in the excavation areas of Site 13, NWS Earle in February and March 2005. In previous documents it had been decided to excavate a minimum of one foot of material from the excavation areas. The sampling was conducted to estimate the required excavation depth greater than one foot.

Attached to this cover letter are the responses to NJDEP comments on the work plan for this sampling effort (Appendix F, Addendum to the Quality Assurance Project Plan Pre-design Sediment Sampling, TiNUS, February 2005). The draft letter report also addresses NJDEP comments and proposes actions to address those comments.

Copies the draft letter report also have been sent to USEPA and NJDEP as indicated on the distribution list below.

Should you have any questions, please contact me at (412) 921-8259 in our Pittsburgh office.

Sincerely,

Daniel C. Witt, P.E.
Project Manager

DW/kf
Enclosures

c: Mr. Roger Boucher, EFANE (w/o enclosure)
Ms. Jessica Mollin, USEPA (2 copies)
Mr. Robert Marcolina, NJDEP (2 copies)
Ms. Alicia Hartmann, NWS Earle (1 copy)
Mr. Dan Zari, NWS Earle (1 copy)
Mr. John Mayhew, EFANE (1 copy)
Mr. Jason Speicher, EFANE (1 copy)



TETRA TECH NUS, INC.

Ms. Michele DiGeambeardino
EFANE
May 5, 2005

Mr. Aaron Bernhardt, Tech NUS, Inc. (1 copy)
Mr. Joe Clifford, TN&Associates, Inc (1 copy)
Mr. John Trepanowski, Tetra Tech NUS, Inc. (1 copy)
Project File 112N00050

**NJDEP Comments on Appendix F, Addendum to the Quality Assurance Project
Plan
Pre-design Investigation Sampling**

- 1. Page F-2, Section F.2.3, Sampling Methodology – The report proposes to collect two randomly located grab samples from each depth interval within each sample area (SA), and combine these two samples to produce a composite sample for that SA. However, NJDEP Technical Requirements for Site Remediation, N.J.A.C. 7:26E-3.4(c) does not allow collection of composite samples for site investigation and characterization. N.J.A.C. 7:26E-3.4(c) states that composite sampling shall not be performed, except as necessary for waste classification.**

Response: The purpose of the sampling was to collect data prior to construction to determine the required excavation depth in the excavation areas. In order to complete the sampling and to afford time for review and evaluation prior to the start of construction a compressed schedule was used for this project. The sampling was to start approximately 3 weeks after the issuance of the work plan (Appendix F) for this work. Given the tight schedule the Navy elected to collect the samples prior to receipt of regulator comments. Therefore the composite samples discussed in Comment 1 have already been collected.

Collection of composite samples for the purpose of confirmation following remediation is an accepted practice that has been used in other states and other USEPA Regions. The collection of composite sample has the advantage of providing a more representative concentration of an area than a single discrete sample. This is because single discrete samples only represent a single point within the area (which could be high or low compared to the actual representative concentration) whereas composite samples consisting of two grabs provides a better estimate of the concentration within the sampled area. In addition, each area represented by a composite sample at Site 13 were relatively small (1/12th of an acre) so that the chance of a large hot spot being missed is minimized. The USEPA Soil Screening Guidance User's Guide (EPA/540/R-96-01B, April 1996) recommends composite samples for characterization of surface soils (which is the very similar to characterizing the surface of an excavation following construction). The Soil Screening Guidance states that because the objective of surface soil screening is to estimate the mean contaminant concentration, the physical averaging that occurs during the compositing is consistent with the intended use of the data.

The required footprint of the excavation areas was determined through an ecological risk evaluation and is documented in the Technical Memorandum – Sediment Sampling Summary – 2003 Events (TtNUS 2004). In that memorandum, the acceptability of the residual surface contamination was evaluated using food chain models that used

average chemical concentrations over the assumed home range of a shrew (1 acre). Therefore, because human and ecological receptors are exposed to chemicals over a larger area than represented by a single sample, composite samples used to determine the excavation depth are appropriate.

In summary, the Navy believes that composite samples provide valuable information that can be used to estimate the required depth of excavation. However, because the New Jersey Administrative Code (7:26E-26E-3.4(c)) is clear about the use of composite samples, discrete samples will be collected following excavation to satisfy the NJAC requirements and confirm the composite results. It is proposed that discrete samples be collected as a quality control check of the composite samples. It is proposed that 25% of the SAs be resampled discretely to confirm the composite sample results. There are 12 SAs, therefore 3 SAs would be sampled following excavation. A discrete sample would be collected from the center of each SA being resampled. The SAs proposed to be sampled discretely will be outlined in the Letter report which presents the results of the composite sampling.

2. Page F-5, Section F.2.4, Screening levels and Data Evaluation - The report indicates that the results of each composite sample will be compared to the screening levels presented in Table F-3 of the report. However, no sediment criteria (levels) are given for the individual PCBs including aroclor-1016, aroclor-1221, aroclor-1232, aroclor-1242, aroclor-1248, aroclor-1254, and aroclor-1260 in Table F-3. Only a value of 371 ppb is given for total PCBs.

The NJDEP documentation called, "Guidance for Sediment Quality Evaluation" dated November 1998 has screening levels for freshwater sediments for PCBs including aroclor-1016 (7 ppb), aroclor-1248 (30 ppb), aroclor-1254 (60 ppb), and aroclor-1260 (5 ppb). Therefore, it is recommended that these screening levels be used for evaluating the results of composite sediment samples for individual aroclors.

Response: The "Guidance for Sediment Quality Evaluation" indicated that the values cited be used for screening in the Baseline Ecological Evaluation (BEE). The BEE is generally completed early in a project to determine if further study is required. The data collection outlined in Appendix F of the QAPP was to determine the final excavation depths. This project has moved past the initial investigation stage, therefore it is more appropriate to refer back the Record of Decision and the methods and values used in the Technical Memorandum – Sediment Sampling Summary (TMSSS) (TINUS 2004) to evaluate the sample results. The excavation footprint was established in the TMSSS through ecological risk evaluations and negotiations with the Biological Technical Assistance Group (BTAG) Coordinator who has the authority to negotiate for both USEPA and NJDEP with regard to ecological issues.

The record of decision for this site discusses the cleanup of contaminated sediments

for silver and total PCBs. Total PCBs were used in determining the excavation footprint and it is believed that total PCBs should be used in determination of the excavation depth.

The proposed excavation depths based on the composite samples is discussed in the Letter Report which presents all of the composite sample results. As was discussed in the response to Comment Number 1, it is proposed that discrete samples be used to confirm the composite sample results following excavation. Finally, note that at a minimum, the top one foot will be removed from the entire excavation area and replaced with clean material; in some areas the excavation will be even deeper. Because aquatic organisms are typically found within the top few inches of sediment, it is not appropriate to use the cited sediment screening values to determine the depth of excavation at Site 13. Also, even though part of the excavation area is classified as a wetland, the habitat is more terrestrial than aquatic (i.e., there is typically no standing water).