



TETRA TECH NUS, INC.

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

N00164.AR.001116
NSWC CRANE
5090.3a

PITT-07-7-036

July 24, 2007

Project No. 112G00447

Mr. Howard Hickey
NAVFAC MW
201 Decatur Avenue
Building 1A, Code EV
Great Lakes, Illinois 60088

Reference: CLEAN Contract No. N62467-04-D-0055
Contract Task Order (CTO) No. 0034

Subject: Draft Responses to United States Environmental Protection Agency (EPA) E-Mail Comments Dated July 13, 2007 on Resource Conservation and Recovery Act (RCRA) Addendum No. 2 to the Quality Assurance Project Plan (QAPP) for UXO 5 (Building 2044 Drop Tower/Test Rail Site) and UXO 7 (Ranges) Dated March 2007
Naval Surface Warfare Center (NSWC) Crane
Crane, Indiana

Dear Mr. Hickey:

Enclosed for your review and comment is the draft responses to the additional EPA comments received July 13, 2007 on the subject document regarding UXO 5 and 7. Original comments were received from the EPA regarding the subject document on April 17, 2007. Those comments were addressed and the responses were submitted to the Navy on May 22, 2007.

Upon Navy and EPA concurrence or resolution of the enclosed comment responses, the subject document will be revised incorporating both sets of EPA comments.

Please contact James Goerdt at 412-921-8425 (e-mail James.Goerdt@tnus.com) or me at 412-921-8308 (e-mail Ralph.Basinski@tnus.com) regarding any questions or comments.

Sincerely,

Ralph R. Basinski
Task Order Manager

RRB/mlg
Enclosure

cc: Mr. Tom Brent, NSWC Crane (letter and enclosure)
Ms. Lee Anne Rapp, NAVFAC Atlantic (PDF copy of letter via e-mail)
Ms. Bonnie Capito, NAVFAC Atlantic (PDF copy of letter via e-mail)
Mr. John Trepanowski, Tetra Tech (letter and enclosure)
Mr. James Goerdt, Tetra Tech (letter and enclosure)
Mr. Garth Glenn, Tetra Tech (letter only)
Project File – CTO 0034 (Midwest)

**RESPONSES TO ADDITIONAL UNITED STATES ENVIRONMENTAL
PROTECTION AGENCY COMMENTS (DATED 13 JULY 2007) CONCERNING
THE UXO 5 / UXO 7 QAAP ADDENDUM NO. 2 FOR NAVAL SURFACE
WARFARE CENTER CRANE (DATED MARCH, 2007)**

EPA Comment 1:

p. 1 - Sample tags are not required

Comment Response:

The requirement for "Sample tags" has been removed under Section 2.0 of SOP_CTO0034-10.

EPA Comment 2:

p. 2 - Mixing soil & sediment in a metal bowl w/steel spoon could introduce minor metals contamination; alternative mixing in Ziploc baggie may likewise interfere with organic analyses. Clarify the extent to which this may pose problems, or how this will be done w/respect to respective sample collections.

Comment Response:

A minute chance of minor metal contamination may exist when mixing soil and sediment in a stainless steel bowl with a stainless steel spoon especially if the spoon or bowl were to chip exposing the core of either mixing instrument. For this reason, the first sentence in Section 3.1.5 of SOP_CTO0034-10 has been amended to read:

"Place equal amounts of the soil cores for a given sample in a stainless-steel mixing bowl and homogenize using a disposable dedicated plastic trowel."

The main components of stainless steel are iron, carbon, and chromium. Other components could include nickel, molybdenum, niobium, and titanium. Stainless steel's corrosive resistance is due to chromium. The chromium in the steel combines with oxygen to form a chromium oxide (known as a passive film) on the outer surface of the product. The size of the chromium oxide atoms are similar to the size of chromium atoms; therefore, they pack tightly together to form the passive (rust-resistant) layer. The most likely element that would contribute to minor metal contamination from a stainless steel mixing bowl is chromium since that element and its oxides form the outer layer of stainless steel. However, this type of contamination is unlikely because chromium and chromium oxides pack tightly together on the surface of stainless steel; therefore, those atoms are not likely to break off like iron which flakes when it rusts because atomic iron is much smaller than its oxides. Even if minor metal contamination were to occur due to mixing in a stainless steel bowl (which is unlikely) Tetra Tech NUS, Inc. will not attribute that contamination to mixing the sample in a stainless steel bowl.

There are two existing possibilities for a Ziploc baggie interfering with organic analyses:

1. Organic contaminants on the surface of soils contact the surface of the Ziploc bag and adhere to it.
2. Plasticizers from the surface of the Ziploc baggie adhere to the surface of contacted soil particles.

Generally, organic contaminants have a high affinity for other organics; therefore, organic compounds in the soil/sediment should already be adhered to the surface of soil. Even if some of the organic material on the surface of soil which contacts the surface of the bag is transferred to the surface of the bag it should not affect the analyses because the surface area of the soil in the bag will be much larger than the surface area of the bag. Therefore, the overall concentration of organics in the mixed soil should not be sufficiently affected such that it would make a difference in the concentration found during instrumental analyses.

The soils/sediments are not being tested for plasticizers; therefore, it should not matter if some of those plasticizers from the bag adhere to soil particles.

EPA Comment 3:

Section 3.2's sub-sections are not numbered correctly.

Comment Response:

Section 3.2 of SOP_CTO0034-10 has been renumbered correctly.

EPA Comment 4:

Footnote 2 in Table 3-1 (p. 5 of 5) is incomplete. "REF!" on p. 5 of 5, bottom of 4th column, should be defined.

Comment Response:

The column formatting on footnote 2 in Table 3-1 has been corrected to show the following complete sentence:

"Sample depth to a maximum of 24 inches."

The reference at the bottom of column 4 on table 3-1 has been corrected to properly read "TBD".

EPA Comment 5:

The minimum criteria values soil for 2-Amino-4,6-dinitrotoluene and 4-Amino-2,6-dinitrotoluene are listed as zero.

Comment Response:

The minimum criteria soil values for 2-Amino-4,6-dinitrotoluene and 4-Amino-2,6-dinitrotoluene have been amended to reflect the minimum criteria listed in table 1-3.

EPA Comment 6:

Cases where vague terms like 'presence or absence' or 'significant concentrations' appear in text should be referred to a decision Table such as Table 1-4.

Comment Response:

Step 3 – Inputs Required To Make The Decision, includes as necessary, screening levels for explosives and TAL metals to determine if it is necessary to expand the study area and whether or not to proceed to an RFI. Section 1.5, titled "Risk Screening" provides reference to the risk screening levels that will be used in determining whether or not further actions are necessary.

No changes were made to the QAPP regarding this comment.

EPA Comment 7:

EPA Comment # 18 - Perhaps one of the four aliquots collected for your explosives composite samples could be randomly chosen as the grab sample for metals. This would allow for a more direct comparison to basewide background metal grab samples.

Comment Response:

If a portion of one of these aliquots were removed to be used as a metals grab sample then (theoretically) the remaining aliquot (which would be added to the three other aliquots) would not be representative because it would weigh less than the three other aliquots. Also, the portion taken from one of the aliquots (metals grab sample) would be mixed before analyses (without being mixed into the other aliquots) which also comprises sample representativeness. Furthermore, the compositing method currently described in the QAPP is easier to manage in the field and a blunder in the field would comprise results more than choosing the sampling method currently in the QAPP vs. the method suggested in EPA Comment 7.

No changes were made to the QAPP regarding this comment.

EPA Comment 8:

EPA Comment 29 - Please provide decision rules for use of data which has been split into 'regions' and how those regions would be established.

Comment Response:

The decision rules for use of data which has been split into 'regions' is based upon professional judgment as described in the following Navy Guidance Document:

GUIDANCE FOR ENVIRONMENTAL BACKGROUND ANALYSIS - VOLUME 1: SOIL. NFESC User's Guide: UG-2049-ENV. April 2002.

No changes were made to the QAPP regarding this comment.

EPA Comment 9:

EPA Comment 31 - Without re-reviewing the Laucks QAPP, Table 1-4 indicates that explosives will be measured using SW-846 Method 8330 which is HPLC with UV detection. Will Laucks couple HPLC with MS detection for this project? Metals will not be run by GC-MS but by ICP-MS (i.e. SW-846 Method 6020). Table 1-3 indicates that PAHs will be run using SW-846 Method 8270C, which is GC-MS, not HPLC (i.e. - SW-846 Method 8310). Where relevant, changes should be made accordingly.

Comment Response:

Laucks will not couple HPLC with MS for this project. PAHs will be run using SW-846 8270C (GC-MS).

No changes were made to the QAPP regarding this comment.