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TRANSMITTAL LETTER REGARDING FINAL TECHNICAL MEMORANDUM SUPPLEMENTAL
SOIL SAMPLING RESULTS AND PROPOSED ADDITIONAL SAMPLING PLAN ROUND 2
UNEXPLODED ORDNANCE 7 (UXO 7) NSA CRANE IN
8/20/2012
TETRA TECH



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PITT-08-12-041

August 20, 2012

Project No. 112G01621

Mr. Tom Brent
NSA Crane
Code 09510 Building 3245
300 Highway 361
Crane, Indiana 47522-5009

Reference: CLEAN Contract No. N62472-03-D-0057
Contract Task Order No. F272

Subject: Final Technical Memorandum – UXO 7 Supplemental Soil Sampling Results and Proposed Additional Sampling Plan (Round 2), Naval Support Activity Crane, Crane, Indiana

Dear Mr. Brent:

Please find enclosed four printed copies of the revised pages and covers and four CDs with the files for the Final UXO 7 Supplemental Soil Sampling Results and Proposed Additional Sampling Plan, Naval Support Activity Crane, Crane, Indiana. The subject technical memorandum has been modified to address technical review comments provided by Peter Ramanauskas, EPA Region V, dated August 10, 2012. Those comments and Tetra Tech's responses to those comments are attached to this letter.

The enclosed materials include an updated cover, binder spine cover, and Technical Memorandum text indicating August 2012 as the date for the Final version of this Technical Memorandum. Please remove July 2012 covers and the July 2012 text and reference portion of the Technical Memorandum in your bound copies with the enclosed replacement files. Table 3-2 was revised to address an EPA comment, so please remove the previous version of Table 3-2 from the binder and replace it with the enclosed revised copy of Table 3-2. An updated CD (dated August 2012) is also enclosed and should replace the previous CD dated July 2012. Please forward copies of these materials to the other recipients of the July 2012 version, so they may update their UXO 7 Technical Memorandum in a similar fashion.

Please contact me at (412) 921-8524 (email: Richard.Rick.Barringer@tetrattech.com) or Jim Goerdt at (412) 921-8425 (email: James.Goerd@tetrattech.com) regarding any questions or comments.

Sincerely,

Richard A. Barringer
Project Manager

RAB/mlg
Enclosures

cc: Mr. Howard Hickey, NAVFAC MW (letter, attachment, enclosures, CD)
Mr. Ralph Basinski, Tetra Tech (letter, attachment, enclosures, CD)
Mr. Jim Goerd, Tetra Tech (letter, attachment, enclosures, CD)
Project File – CTO F272 (letter, attachment, enclosures, CD)

Responses to EPA Comments Dated August 10, 2012: Technical Memorandum for Supplemental Sampling (Round 2) at UXO 7 – Small Arms Range, NSA Crane, July 2012

- 1) Referring to Section 3.2.1., why is no deeper sample proposed for location X7-SB417 which had a detection of 715 mg/kg at 5 to 6 feet?

Response to Comment #1: Deeper samples are proposed for location X7SB417 during the proposed Round 2 sampling. Table 1-1 only includes the samples collected during Round 1. The deepest soil lead sample collected from location X7-SB417 during Round 1 was from a depth of 5 to 6 feet below the ground surface (X7-SB417-0506) and is indicated on page 9 of Table 1-1. As presented in the third paragraph of Section 3.2.1, that sample contained a lead concentration of 715 mg/kg lead. The proposed soil lead samples for Round 2 are presented in Table 3-2. Deeper samples are proposed for location X7-SB417 during Round 2 and include X7-SB417-0607 (6 to 7 feet below ground surface [bgs]) and X7-SB417-0708 (7 to 8 feet bgs) as presented on page 2 of Table 3-2.

No changes were made in response to this comment.

- 2) For XRF lead analysis, perhaps screen the top two intervals at each proposed locations so you have better confidence that they are clean locations. Some of the previous sampling revealed lead in excess of screening at the interval below the topmost interval.

*Response to Comment #2: Agreed. There have been instances when soil lead contamination at depth was not expressed within the top sampled interval at a specific sampling point. To better evaluate soil-lead concentrations at a location, the technical sampling approach will be revised to now include XRF lead screening of the two uppermost soil samples at a location. If neither of the **two uppermost** soil samples evaluated by XRF indicates soil-lead concentrations greater than the field screening level of 125 ppm, then the deeper collected samples will not require analysis by XRF. This is now clearly stated in multiple locations in the text including: Section 3.2.1c, Section 3.2.2c, and 3.2.3c, and explained in footnote 4 of Table 3-2. The following changes were made in response to this comment:*

Section 3.2.1 bullet c now reads as follows:

- Proposed Sampling at the 400-yard Firing Berm (Figure 3-3):
 - a.
 - b.
 - c. All proposed samples will be collected and processed for XRF field analysis for lead. The two upper intervals will be analyzed by XRF. *If neither of the **two uppermost** soil samples evaluated by XRF indicates soil-lead concentrations greater than 125 ppm, then the deeper collected samples will not require analysis by XRF.* Additionally, should an interior sample exhibit an XRF lead concentration less than the field screening level of 125 ppm, then any proposed associated exterior sample will not be analyzed. Should a proposed exterior sample location exhibit an XRF lead concentration greater than the field screening level of 125 ppm, additional step-out samples will then be collected.
 - d.

Section 3.2.2 bullet c now reads as follows:

- Proposed Sampling at the Drainageway between 400-yard and 500-yard Berms (Figure 3-4):
 - a.
 - b.
 - c. All proposed samples will be collected and processed for XRF field analysis for lead. The two upper intervals will be analyzed by XRF. *If neither of the **two uppermost** soil samples evaluated by XRF indicates soil-lead concentrations greater than 125 ppm, then the deeper collected samples will not require analysis by XRF.* Additionally, should an interior sample exhibit an XRF lead concentration less than the field screening level of 125 ppm, then any proposed associated exterior sample will not be analyzed. Should a proposed exterior sample location exhibit an XRF lead concentration greater than the field screening level of 125 ppm, additional step-out samples will then be collected.
 - d.

Section 3.2.3 bullet c now reads as follows:

- Proposed Sampling at the Dirt Mound (Figure 3-5):
 - a.
 - b.
 - c. All proposed samples will be collected and processed for XRF field analysis for lead. The two upper intervals will be analyzed by XRF. *If neither of the **two uppermost** soil samples evaluated by XRF indicates soil-lead concentrations greater than 125 ppm, then the deeper collected samples will not require analysis by XRF.* Additionally, should an interior sample exhibit an XRF lead concentration less than the field screening level of 125 ppm, then any proposed associated exterior sample will not be analyzed. Should a proposed exterior sample location exhibit an XRF lead concentration greater than the field screening level of 125 ppm, additional step-out samples will then be collected.
 - d.

Footnote 4 of Table 3-2 has been modified to state:

- 4 *All proposed samples will be collected and processed for XRF field analysis for lead; however, if the **two uppermost** sample intervals at a specific location exhibit XRF lead concentrations less than 125 ppm, then the collected lower sample intervals at that specific location will not undergo XRF analysis. Additionally, should an interior sample exhibit an XRF lead concentration less than 125 ppm, then any proposed associated exterior sample will not be analyzed. Should a proposed exterior sample location exhibit an XRF lead concentration greater than 125 ppm, additional step-out samples will be collected.*

- 3) Confirm that these additional samples will be collected utilizing the SOPs and QA procedures outlined in the Supplemental Sampling Activities at UXO 7 Ranges work plan approved October 21, 2011.**

Response to Comment #3: The additional Round 2 soil samples will be collected utilizing the SOPs and QA procedures outlined in the Supplemental Sampling Activities at UXO 7 Ranges approved October 21, 2011. This statement has been added as new text in Section 3.0.