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NSA CRANE
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TRANSMITTAL LETTER REGARDING FINAL SAMPLING AND ANALYSIS PLAN SITE INSPECTION MUNITIONS RESPONSE SITES AND AREAS OF CONCERN NSA CRANE IN
9/30/2009
TETRA TECH

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PITT-09-9-064

September 30, 2009

Project No. 112G01621

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

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

Subject: ***Final***
Sampling and Analysis Plan for Site Inspections at NAVFAC Midwest Munitions Response Sites and Areas of Concern, Naval Support Activity Crane, Crane, Indiana

Dear Mr. Hickey:

Enclosed for your records is a copy of the final subject document for B-143 Drop Test Area (AOC-1), Pyro Area Outside Test Burn Pad (AOC-2), Test Pads Behind B-198 (UXO-6), Lake Oberlin (AOC-4), and the West Gate Small Arms Range Complex (AOC-6). The electronic files used to produce the final plan have been recorded on the enclosed Compact Disk (CD) and are certified as "virus free." The CD includes both native (updatable) format and Adobe Acrobat (.pdf) format files, as is typically required for task order electronic data deliverables for NAVFAC. A complete version of the document in .pdf format is located on the enclosed CD, along with Worksheets 1 through 37 in MS Word format.

The review comments received on the Draft UFP-SAP (August 2009) from the NAVFAC Chemist are presented with this transmittal letter on the attached comment/response matrix. To expedite the acceptance/approval process for this UFP-SAP, a conference call was convened on September 1, 2009 with representatives from Tetra Tech, NAVFAC, and NSA Crane to discuss the comments and evaluate solutions. The completed review comment/response matrix along with proposed document revisions in track change format were sent via e-mail to conference call participants, which was then followed up by the signature approval page of the document. The completed signed approval page for this final plan was received on September 14, 2009 and is included in the enclosed document.

Specific modifications to the enclosed document from the draft August 2009 version addressed NAVFAC Chemist technical comments, and those pages are noted in page headers as Revision 1 and are dated September 2009. Additional plan updates were needed to complete certain planning tables or to provide clarification on several items identified by Mr. Tom Brent. Thank you for your prompt review of the document.

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Please contact James Goerdt at (412) 921-8425 (email: James.Goerdt@tetratech.com) or the undersigned at (412) 921-8524 (email: Richard.Barringer@tetratech.com) regarding any questions or comments.

Sincerely,

Richard Barringer

Rick Barringer
Project Manager

RAB/mlg
Enclosures

cc: Mr. Tom Brent, NSA Crane (letter and 4 copies of enclosures)
Ms. Bonnie Capito, NAVFAC Atlantic (PDF copy of letter via e-mail)
Mr. John Trepanowski, Tetra Tech (letter and enclosures)
Mr. Glenn Wagner, Tetra Tech (letter only)
Mr. Garth Glenn, Tetra Tech (letter only)
Mr. Ralph Basinski, Tetra Tech (letter and enclosures)
Mr. Rick Barringer, Tetra Tech (letter and enclosures)
Dr. Tom Johnston, Tetra Tech (letter only)
Mr. James Goerdt, Tetra Tech (letter and enclosures)
Project File – CTO F272 (letter and enclosures)

Reviewer: Bowers/Hickey
Document: Munitions Response Sites
Date: 28-Aug-09

Comment Number	Worksheet and/or Section	Rating (High or Low)	Statement or Issue	Comment	Response
1	general	H	analytical	Upon review of the laboratory SOP for Crane Lab several serious issues came to light. The first issue is that many of the standards are of unknown purity. This means the analytical results will be directly proportional to the purity of the standards. If the purity of the standard is 80% then the result should be 80% of the "true" value. The second issue is that there is no way to validate the true concentration of the standards with purity values. The laboratory should have standards from an independent source to verify the purity of the primary standard. A standard that is 99% pure may not be and the true value is unknown because there is no way to verify its purity. Suggest the laboratory procure certified standards from two separate vendors to ensure accurate results.	This comment was reviewed in a conference call among a Navy Chemist (Jon Tucker), NSA Crane (Tom Brent) and Tetra Tech (Rick Barringer, Tom Johnston, and Ralph Basinski) on September 1, 2009. The results of the conference call were added to WS 9. Modifications were also made to WSs 11 and 37. Copies of the modified WSs (track change re-attached)
2	WS 11.3.6	H	CSM	On page 71 please clarify the statement that a "surface soil sample will be collected from the tank itself". The conceptual site model does not mention the tank being full of dirt.	Another term to describe the solid materials that may have settled in the open aboveground collection tank might be "residue". Section 11.3.1 of the UFP-SAP indicates that the goal of the SI at UXO 6 is to evaluate whether munitions constituents (MC) are present at the site in concentrations above screening levels for surface soil. The tank "residue" sample data will be compared to surface soil screening levels on the SI report, and the UFP-SAP text will revised to refer to this sample as "residue."
3	11	H	DQO	AOC 2 is the only site that will not compare the analytical results to both Human Health and ECO risk screening values. Please ensure a rationale is provided why ECO was not necessary for AOC 2.	AOC 2 is unlike the other pyrotechnic and munitions testing/training areas being assessed in this SI. All of the other SI sites were active for a discrete period of time and since their last use have been allowed to return to a more natural state (i.e., the B143 Drop Test Area at AOC 1, the Test Pads Behind Building 198 at UXO 6, the Lake Oberlin test area at AOC 4, and the small arms ranges at AOC 6). Unlike those other MRP sites, AOC 2 is located inside a functioning and operational production area at NSA Crane. Large sections of concrete rubble have been placed inside the basins (somewhat visible in Figure 10.3-2 in the SAP), so potential residues are not accessible. The two six-foot by six-foot concrete basin structures are inside a fenced enclosure within the active Pyrotechnic Production Area, immediately adjacent an explosive hazardous waste storage area, an aboveground biodiesel storage tank, and Building 126.

Comment Number	Worksheet and/or Section	Rating (High or Low)	Statement or Issue	Comment	Response
4	12	L	analytical	The source blank will determine whether the initial water used in cleaning the sampling tools is contaminated. Suggest the deletion of source blank as the water should be free of analytes at any appreciable concentrations.	Comment noted. Future UFP-SAPs will not evaluate source water blanks.
5	15	H	DQO	Please provide justification where MCS for dye compound values came from. Does sufficient toxicity values exist to quantify Human Health or Eco Risk?	Criteria for these dye compounds were not available in the normal sources (IRIS, HEAST, ORNL, etc). Therefore the human health and ecological risk MCS were calculated based on toxicity criteria developed from available information in the open literature. Where toxicity data was not available for the dye compound in the open literature, than surrogates were used. This approach was reviewed and approved by the US EPA Region 5 toxicologist for the NSA SWMU 2 (Dye Burial Grounds) RFI. More recently these values have been used for the SWMU 2 LTM, which has been approved by the agency. Dyes are the only indicator compound that, if detected, would provide definitive proof of releases of MC from range testing operations. The lead regulatory agency for the MRP SI, Indiana Department of Environmental Management (IDEM) has agreed to analysis of samples for dye compounds and the utilization of the calculated MCS for the MRP SIs at NSA Crane. IDEM has also agreed that the sites will be NFA if the dyes are not detected or if detected, below the MCS. In the event that dyes are detected in concentrations above one or more of the MCSs during the SI than it will be necessary to proceed to an RFI. At that time the Navy can determine the most optimal course of action. These actions include authorizing / funding performance of dye toxicity studies, consideration of remedial actions, etc.
6	15	H	Analytical	Worksheet 15 AOC 6 for PAH analysis list several compounds having identical MDLs and QLs. An analytical method should not have the same value for both MDL and QL. Please ensure the correct values are listed.	The QLs for Benzo(a)pyrene and Dibenz(a,h)anthracene are 0.015mg/kg and these compounds also have MDLs of 0.005 mg/kg. Page 91 of Worksheet 15 has been revised to indicate these changes.
7	18.5	H	Clarification	Table for AOC 6, the total number of samples stated for NG analysis is 10; however, the numbers listed add up to 11. The total number of XRF planned is 156 while worksheet 11 states 157 samples will be analyzed. Please ensure the numbers of samples matches with the number of samples that are planned to be taken.	The total number of composite samples to be collected for NG analysis is 11, each composite sample will consist of 10 individual grab samples. Clarification has been added to page 108 of Worksheet 17 "All composite samples **(11 total),** consisting of 10 individual grab samples near firing lines where NG is most likely to be found, will be shipped to the fixed-base laboratory and analyzed for NG." The total number of XRF samples planned for collection is 156. Worksheets 11 and 17 have been revised to indicate that overall ,156 XRF samples are planned for collection. Worksheet 18.5 and Figure 17-5 currently have 156 XRF samples.

Comment Number	Worksheet and/or Section	Rating (High or Low)	Statement or Issue	Comment	Response
8	19a	H	Clarification	The matrix for perchlorate analysis is listed as water; however, the samples being planned are soil. Please change the matrix for perchlorate from water to soil.	The matrix for perchlorate analysis has been changed to Soil on page 122 of Worksheet 19a.
9	20	H	Clarification	The number of samples planned for the lab is listed as 13 for NG analysis but the numbers add up to 14. Please update the table to accurately reflect the number of samples planned to go to the laboratory.	The total number of NG samples has been changed to 14 on Page 124 of Worksheet 20.
10	31	H	Missing Info	The Explosives Sciences Branch laboratory is not NFESC approved and must have a project specific approval performed prior to analytical testing. Please provide an updated table entry. See comment # 1.	A footnote has been added to page 162 of Worksheet 31: [2] Navy Crane Laboratory does not currently have NFESC certification. At this time a project specific approval is being requested.

Note:
High Rating - Requires comment to be addressed prior to Government Chemist signature.
Low Rating - RPM may use their discretion. The change is advised but not required for the SAP to be signed by