N00164.AR.002490
NSA CRANE
5090.3a

U S NAVY RESPONSE TO U S EPA REGION COMMENTS ON DRAFT UFP SAMPLING AND ANALYSIS PLAN ADDENDUM SOLID WASTE MANAGEMENT UNIT 5 (SWMU 5) NSA CRANE IN
1/21/2010
TETRA TECH

Response-to-Comments (RTC) Document
On
Uniform Federal Policy-Sampling and Analysis Plan (UFP-SAP) Addendum for Solid Waste Management Unit (SWMU) 5, Naval Support Activity (NSA) Crane
Addendum to:
UFP-SAP for SWMU 12, NSA Crane

Comments Received from US EPA on January 4, 2010
On Draft Version issued on November 13, 2009

RTC Prepared by Tetra Tech NUS, Inc.
Date Issued: January 21, 2010

1. Comment: Empirical Lab is signing on, presumably, as the 'verification' lab. Did we review PE data from them before, or perhaps receive a NELAP certification indicating they can do lead in soil? And the methods (including sample preparation procedures) they plan to use are not mentioned. They should submit their validated SOPs, and the verification lab should perform a soil grinding/homogenization step as part of their prep.

Response: Appendix C of the SWMU 12 SAP contains Empirical's DoD NELAP certification and validated SOPs, which will also apply to SWMU 5. Sample preparation/homogenization is covered in Empirical SOP-100 (Metals Digestion/Preparation), which can be found in Appendix C of the SWMU 12 SAP.

2. Comment: Crane is using 800 ppm as the lead industrial MCS. Section 17.1 states that when the concentration of lead does not pose unacceptable ecological risk, the project team will recommend no further excavation. This section should further discuss how that determination will be made given lower ecological numbers for lead.

Response: This remediation activity is being performed per an agreement with EPA Region 5 and is not a function of ecological or human health risk. Section 17.1 has been revised as follows:

Figure 5 shows the proposed limit of excavation at the SWMU 5 Old Burn Pit Site. As discussed in Worksheet #11, one composite floor sample and four grab sidewall samples will be collected from the proposed excavation area for informational purposes only. No further excavation is required per the agreement with EPA Region 5. Additional excavation may be performed at the discretion of the Navy RPM. The excavation floor samples will be collected at a rate of one composite sample for every 100 sf of exposed surface area, with a minimum of one sample collected from each depth interval. Excavation sidewall samples will be collected at a rate of one grab sample for every 25 linear feet of exposed sidewall, with a minimum of one sample collected from each directionally facing sidewall. The excavation floor composite sample will be made up from two locations—north of the soil hot spot and south of the soil hot spot, and will incorporate the appropriate amount of exposed surface area. The locations of each grab sample will be determined in the field (see section 17.1.1). Additional informational samples may be collected at the request of the Navy RPM. The basis of this approach is to excavate the most significant known contaminated surface soil while minimizing disturbance to the surrounding areas.

Section 10.2 (Previous Investigations) has been updated to include the final version of the Corrective Measures Proposal (CMP) Report, issued in September 2006. Section 10.2 has been revised as follows:

Based on the results of the 2005 RFI, a Corrective Measures Proposal (CMP) Report for SWMU 5 was developed and finalized in September 2006 (Tetra Tech). The CMP examined historical site investigations along with current site conditions to expand upon the SWMU 5 risk assessments. The CMP determined that it is possible that some individual plants and/or invertebrates are being impacted at locations where metals concentrations in soil are elevated. However, as discussed in OSWER Directive 9285.7-28P, Issuance of Final Guidance: Ecological Risk Assessment and Risk Management Principles for Superfund Sites, remedial actions generally should not be designed to protect organisms on an individual basis (with the exception of certain protected species) but to protect local populations and communities of biota (1999).

In addition, the Conceptual Site Model (CSM) in Section 10.3 has been expanded to describe and clarify the project cleanup goals. During discussions with the Navy and regulators, an overall strategy was developed to address contamination at the site in a manner that addresses the most significant contamination while minimizing disruption of the ecological community that has been established. The CSM in Section 10.3 will be revised as shown below:

The topography of the SMWU 5 Work Area is hilly and includes multiple drainage ways and a gully. SWMU 5 surface water drains into Culpepper Branch, a tributary of First Creek. Since it was used as a disposal area, natural revegetation has occurred. Through natural revegetation, an ecological community has been established at the site. Trees ranging up to 18 inches in diameter and thick underbrush are located across this area. Based on observations during site visits and the apparent similarity between the forested areas at and surrounding SWMU 5, the ash and metal contamination from Old Burn Pit activities do not appear to have significantly impacted the local populations of plants/invertebrates and/or the ecological community at the site.

The site has been divided into two areas - constructible and non-constructible (due to topography). The SWMU 5 Work Area (e.g., the hot spot excavation area) is in the non-constructible area of the site. In addition to its topography, parts of the non-constructible area have general heavy metal contamination in the soil and contain ash from previous Old Burn Pit activities. Therefore, future development will not occur near the hot spot (05SB06) and this area will remain undeveloped and wooded. Under current and future land use, ecological receptors are the only populations that may be exposed to the lead contamination from the soil hot spot.

The 2005 RFI risk assessment concluded that the one surface soil hot spot located within the contaminated area of SWMU 5 is a source of lead contamination that poses an unacceptable risk to ecological receptors. Surface soil samples were collected from eight widely scattered locations across the site during the RFI sampling. Because of the size of the site, these sampling locations were typically greater than 100 feet apart. The hot spot sampling location (05SB06) had the highest surface soil lead concentration at the site (16,900). The next highest surface soil lead concentration was 450 mg/kg (05SB02) and the remaining lead surface soil sample concentrations were less than 400 mg/kg. The RFI report stated that metal shavings in the sample collected at 05SB06 likely contributed to the elevated level of lead.

However, it was determined during the development of the CMP (Tetra Tech, 2006) that because the site comprises only a small portion of the overall habitat for ecological receptors in this area, any localized impacts to ecological receptors (including wildlife) at SWMU 5 will not impact the overall ecology in this area of NSA Crane. Based on this observation, potential risk to ecological receptors is not a basis for this remediation activity at SWMU 5.

During discussions with regulators, an overall strategy was developed and approved that addressed the lead hot spot while minimizing disruption of the ecological community that has been established at the site and in surrounding areas. Therefore, the Navy and regulators agreed on an approach that includes limited excavation of the 05SB06 lead hot spot while minimizing disturbance of the established ecological community. The hot spot excavation area will be 6 feet in length, 6 feet in width, and 2 feet deep. The excavation will be filled with "clean fill" (e.g., soil with a lead concentration less than 400 mg/kg). Tetra Tech will perform informational verification

sampling to document the concentration of lead remaining in the subsurface soil in the excavation floor and sidewalls.

3. Comment: I'm not certain whether the contractor performing the field XRF measurements is signing on to this QAPP Addendum. Would this be Tetra Tech NUS? Also - where is the SOP for their procedure? Is it identical to how it was performed for SWMU 12?

Response: Tetra Tech NUS will be performing the field XRF measurements for SWMU 5 with the same equipment type and following the same sampling procedure used for SWMU 12. Appendix A of the SWMU 12 SAP contains Tetra Tech SOPs, including SOP-05 (Field Portable X-Ray Fluorescence Analysis of Soil and Sediment Samples).

4. Comment: In SAP Worksheet 15, p. 20, a Project Quantitation Limit Goal of 133 ppm is stated. If this is the capability of the field XRF, then this should be stated.

Response: Worksheet #15 refers to Laboratory reference limits, not field screening techniques. The Project Quantitation Limit Goal is determined as one third of the project action limit for a particular contaminant of concern. Because the SWMU 12 project action limit for lead was 400 mg/kg, the Project Quantitation Limit Goal was 133 mg/kg. For the SWMU 5 media cleanup standard for the construction worker is 800 mg/kg, the Project Quantitation Limit Goal for lead has been revised to 266 mg/kg. The laboratory's Quantitation Limit will remain 11 mg/kg; thus, laboratory analytical results will not need to be qualified. The Worksheet #15 table has been revised as shown below:

Analyte	CAS Number	Media Cleanup Standard (MCS) /Project Action Limit (mg/kg)	Project Action Limit Reference	Project Quantitation Limit Goal (mg/kg)	Laboratory-Specific Limits	
					Quantitation Limit (mg/kg)	Method Detection Limit (mg/kg)
Lead	7439-92-1	800	Technical Memorandum	**266**	11	0.033

5. Comment: Footnote 1 to Worksheet 20, p. 25 states that MSs are included, but the number to be collected is zero. How are MSs being 'included' then?

Response: MSs will not be collected for SWMU 5. Worksheet #20 and its footnotes have been revised as shown below:

Matrix	Analytical Group	No. of Sampling Locations	No. of Field Duplicates	No. of MSs[1]	No. of Field Blanks	No. of Equip. Blanks	No. of VOA Trip Blanks	No. of PT Samples	Total No. of Samples to Lab[1]
Soil	Lead	5	1	0	0	0	0	0	6

[1] This is the minimum total number of samples.

6. Comment: Worksheet 5 refers to "Removal Action Subcontractor" only in a generic sense? Is this a TBD outfit that will be performing XRF field analyses? (See comment 4, above.)

Response: Worksheet #5 has been updated to identify the" Removal Action Subcontractor" as Lee & Ryan. The Removal Action Subcontractor, Lee & Ryan, will not be responsible for verification sampling or field analysis. Tetra Tech NUS will perform XRF field analyses, as noted in Section 11.3. The Removal Action Subcontractor box on Worksheet #5 will be revised as shown below:

Angelo Dattilo
Lee & Ryan
Removal
Action Sub.
317-467-6577