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FIELD TASK MODIFICATION REQUEST FORM REGARDING THE SAMPLING AND  
ANALYSIS PLAN AT SOLID WASTE MANAGEMENT UNIT 23 ( SWMU 23) BATTERY SHOP  
BUILDING 36 NSA CRANE IN  
04/29/2013  
TETRA TECH



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# FIELD TASK MODIFICATION REQUEST FORM

<b>Project/Installation Name</b> <u>NSA Crane, SWMU 23 – Battery Shop Building 36</u>	<b>CTO &amp; Project Number</b> <u>CTO F27Q; 112G03539</u>	<b>Task Modification Number</b> <u>001</u>
<b>Modification to:</b> <u>SWMU 23 Sampling and Analysis Plan (SAP), August 2012</u>	<b>Site Location</b> <u>NSA Crane</u>	<b>Date of Request</b> <u>April 29, 2013</u>

**Background.** Tetra Tech performed Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) sampling in October and November 2012 at SWMU 23 – Battery Shop Building 36. This work included the collection of surface and subsurface soil, sediment, and surface water samples and analysis for multiple compounds including volatile organic compounds (VOCs), metals, polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), and total petroleum hydrocarbons (TPH). Figure 1 presents the locations of all soil sample locations. Within some areas of the site, the vertical limits of either metals or PAHs were not defined during the investigation. No groundwater samples were collected during this initial phase of the RFI at SWMU 23. Per the SAP, groundwater monitoring wells would be installed if the soil characterization samples indicated excessive risks to human or ecological receptors exist within SWMU 23.

The purpose of this FTMR is to identify the additional sampling and analyses to be conducted for data gaps to better define limits of contamination in soil in some areas. This new information will be used to complete the RFI and provide accurate potential remediation costs.

All work will be conducted in compliance with the field and analytical procedures described in the August 2012 SWMU 23 Sampling and Analysis Plan (SAP).

The degree and extent of contamination at SWMU 23 is relatively widespread and reasonably well bounded. The primary chemicals of potential concern (COPCs) in surface soil are the metals arsenic, chromium, copper, lead, mercury, and zinc (Figure 2A). The predominant metal is lead, which was detected at elevated levels mainly in the vicinity of the northernmost drainage pipe and the debris removal area. In addition, several PAH concentrations exceeded human health and ecological screening values in the surface soil samples. The predominant PAH is benzo(a)pyrene, which was detected mainly at the edge of the parking lot area and in the vicinity of the suspect disposal area.

The primary COPCs in subsurface soil, which include the metals arsenic and copper and the PAH benzo(a)pyrene, are very limited and localized (Figure 2B).

The primary COPCs in the drainageway surface water (Figure 2C) and sediment (Figure 2D) are the metals arsenic, chromium, cobalt, copper, and lead, which were detected in the drainageway located on the western boundary of the SWMU, and near the debris removal area.

Soil characterization sampling will be completed in three general areas of the site (Figure 3) including the central most area of the suspect liquid disposal location (PAHs), the fall-out area of the northernmost drainage pipe (metals), and the designated debris removal area (metals). Additionally, a sediment sample will be collected midway between 23SD005 and 23SD006 to better delineate potential sediment contamination downstream of the debris removal area (Figure 3).

Additional soil sampling will be performed to:

- **Delineate Extent of PAH Contamination.** A preliminary risk evaluation has determined that PAH contamination in soil presents ecological and human risk in the area of the suspect liquid disposal area. Sample locations 23SB002, 23SB003, and 23SB004 show PAH, specifically, benzo(a)pyrene, concentrations in excess of applicable screening values. Additional sampling will be completed in the areas to the northwest (downgradient) and the southeast (upgradient) to delineate the horizontal extent of contamination. This information will be used to estimate remedial costs.

Planned sample locations 23SB027, 23SB028, and 23SB029 will be located within the gravel parking lot southeast of the detected PAH contamination along the suspect liquid disposal line as shown on Figure 3. Planned sample locations 23SB030, 23SB031, and 23SB032 will be located just downgradient of the gravel parking lot northwest of the detected PAH contamination as shown on Figure 3. Table 1 presents these samples, along with associated laboratory analysis.

- **Delineate Extent of Metals Contamination.** Two separate areas within SWMU 23 show metals (i.e. lead) concentrations in excess of applicable screening values which have led to excess risk to human health.

Sample location 23SB010 shows a lead concentration in excess of the applicable screening value. Additional sampling will be completed downgradient of this area to delineate the horizontal extent of contamination in this area. This information will be used to estimate remedial costs.

Planned sample locations 23SB033 and 23SB034 will be located to the north and northwest of sample location 23SB010 as shown on Figure 3. Table 1 presents these samples, along with associated laboratory analysis.

Sample locations 23SB014 and 23SB017 show lead concentrations in excess of the applicable screening value. Additional sampling will be completed in this area to delineate the horizontal extent of contamination. This information will be used to estimate remedial costs.

Planned sample locations 23SB035, 23SB036, and 23SB037 will be located to the north and northwest of the debris removal area as shown on Figure 3. Table 1 presents these samples, along with associated laboratory analysis.

**Potential Seep Sampling:**

During the next planned sampling event at SWMU 23, efforts will be undertaken to scout the heavily wooded hillside to determine if seeps exist within the SWMU 23 boundary. If it is determined that seeps do exist at the site, samples will be collected and analyzed for VOCs, metals, and PAHs. This information will aid in determining whether potential contaminants are located within the surficial groundwater of the site downgradient of the site.



4-29-13

**James Goerd, Tetra Tech Project Manager / Date**