

US EPA ARCHIVE DOCUMENT

**ABBREVIATED SAMPLING PLAN  
Battlefield Golf Club Site**

**SITE NAME:** Battlefield Golf Club Fly Ash Site **TDD#:** E43-030-09-07-004

**SITE LOCATION:** 1001 South Centerville Turnpike Chesapeake, VA

**SITE OR FACILITY TYPE:** Active golf course constructed over fly ash

**DATE:** July 27, 2009

**EPA WAM:** Donna Santiago

**START PREPARER:** Donna Davies

**QA REVIEWER:** Josh Cope

**PROPOSED DATE OF ACTIVITIES:** Week of August 3, 2009

**PROPOSED SHIPMENT DATE:** Week of August 3, 2009

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**OBJECTIVE OF SAMPLING:** The Battlefield Golf Club Fly Ash site consists of an active golf course that was constructed over fly ash. The objective of this sampling event is to obtain split samples of the fly ash and submit the samples through EPA's contract laboratory program (CLP) for target analyte metals (TAL) analysis plus boron. The fly ash samples will be obtained during the installation of leachate construction wells scheduled to be installed on the site by the City of Chesapeake's environmental consultant, Camp Dresser & McKee, Inc. (CDM).

**FLY ASH SAMPLING METHOD:** During the week of August 2, 2009, CDM is scheduled to install three leachate wells on the site. The wells will be installed in accordance with the attached CDM document entitled, "Leachate Well Installation Procedure, Battlefield Golf Course, Chesapeake, VA", July 19, 2009. During the installation of these wells, CDM will collect samples of the fly ash encountered during the construction of each well. A fly ash sample will be collected from the upper, middle, and lower 3-foot interval of each boring. Each sample will be placed in a glass bowl and homogenized using a stainless-steel spoon. After homogenization, Tetra Tech will provide CDM with a certified-clean 8-ounce wide mouth glass jar to be filled with fly ash. Tetra Tech will record the characteristics of each fly ash sample. At completion of the leachate well installation, Tetra Tech will determine which fly ash samples to submit for laboratory analysis. This determination will be based on the visual characteristics of each sample. If the samples appear to be visually similar, four fly ash samples will be randomly chosen for laboratory analysis. If the fly ash samples do not appear to be visually similar each fly ash sample consisting of different characteristics will be submitted for laboratory analysis.

**SAMPLE HANDLING:** The location of each leachate well will be recorded using a global positioning system (GPS) and noted in the site logbook in accordance with Tetra Tech SOP No. 024, "Recording of Notes in Field Logbook" 1999. The collected samples will be labeled, packaged, and shipped in accordance with Tetra Tech SOP No. 019, "Packaging and Shipping Samples" 2000 to the EPA-assigned CLP laboratory. Chain-Of-Custody tracking will be provided by the carbon-less EPA forms in Forms-II Lite, and shall be filled out to correspond

with the direct transfer of samples from the field. Table 1 summarizes the analytical parameters, methods, and detection limits.

<b>TABLE 1 ANALYTICAL PARAMETERS</b>						
<b>NO.OF SAMPLES</b>	<b>ANALYSIS</b>	<b>ANALYTICAL METHOD</b>	<b>MATRIX</b>	<b>CONTAINER TYPE (per location)</b>	<b>PRESERVATIVE</b>	<b>DETECTION LIMIT</b>
Up to 7	TAL Metals and boron	CLP SOW ILM 05.4 ICPAES & Boron	Soil	One 8-ounce CWM jar	Ice	CRDL

**Notes:**

CLP = Contract Laboratory Program

CRDL = Contract-required detection limit

CWM = Clear wide mouth

ICPAES = Inductively coupled plasma atomic emission spectroscopy

ILM = Inorganic low to medium

SOM = Superfund Organic Method

SOW = Statement of Work

**QUALITY ASSURANCE/QUALITY CONTROL:** Field QA/QC measures will be applied in accordance with Tetra Tech's "Quality Assurance Project Plan (QAPP) for START," 2006.