

US EPA ARCHIVE DOCUMENT

**ABBREVIATED SAMPLING PLAN
BATTELEFIELD GOLF CLUB SITE
TDD No.: E43-026-09-07-026
August 17, 2009**

Site Name: Battlefield Golf Club Fly Ash Site

Site Location: 1001 South Centerville Turnpike Chesapeake, VA

Site Activities: Residential Well Sampling

EPA WAM: Christine Wagner

Tetra Tech Project Manager: Kevin Scott

Proposed Date of Activities: August 24 through September 11, 2009

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 collect groundwater from previously sampled residential wells located in the vicinity of the golf course. The samples will be submitted to a contract laboratory program (CLP) laboratory assigned by EPA Region 3's Analytical Services and Quality Assurance Branch (ASQAB) for target analyte list (TAL) metals analysis plus boron. The exact residential well locations will be determined by the EPA work assignment manager (WAM) and are anticipated to be scheduled on dates ranging from August 24, 2009 through September 11, 2009.

RESIDENTIAL WELL SAMPLING: Groundwater samples will be collected from residential wells in accordance with EPA SOP No. SESDPROC-305-R1, "Potable Water Supply Sampling". EPA SOP No. SESDPROC-305-R1 was developed in EPA Region 4, and is accepted for use in Region 3. Prior to collecting the sample, the water system of the home will be purged for a minimum of 15 minutes. To determine the adequacy of the purge, the pH, specific conductance and temperature of the water will be measured several minutes after the purge began and continue until stabilization has occurred. Stabilization occurs when, for at least three consecutive measurements, the pH remains constant within 0.1 standard unit, specific conductance varies no more than approximately 10 percent and the temperature is constant. After stabilization has occurred one sample will be collected from a valve or tap located at or as near to the well as possible, prior to any storage/pressure tanks or physical/chemical treatment systems. A second sample will be collected after any filters or treatment systems. If no filters

or treatment systems are located on the water supply, a second sample will not be collected from the residence. Each sample will be collected directly into one 1-liter certified-clean plastic sample container and will be preserved with nitric acid.

The collection of additional samples at a residence may be included in this sampling event as directed by the EPA WAM. These locations may include the collection of samples along the water line such as post-treatment or after the storage/pressure tank.

SAMPLE HANDLING: The location where each sample is collected within the home will be recorded 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 EPA Forms-II Lite program. Table 1 summarizes the analytical parameters, methods, and detection limits for this sampling event.

SAMPLE NUMBER	ANALYSIS	ANALYTICAL PARAMETERS	MATRIX	SAMPLE CONTAINER	PRESERVATIVE	DETECTION LIMIT
Up to 16	Total TAL Metals plus Hg and boron	CLP SOW ILM 05.4 ICP/MS +Hg+B	Potable Water	One 1-liter plastic container	HNO ³ (pH < 2) Ice	CRDL

Notes:

B = Boron

Hg = Mercury

SOM = Superfund Organic Method

CLP = Contract Laboratory Program

ICP/MS = Inductively coupled plasma/
Mass spectrometry

SOW = Statement of Work

CRDL = Contract-required detection limit

ILM = Inorganic low to medium

TAL = Target Analyte List

QUALITY ASSURANCE/QUALITY CONTROL: Field quality assurance/quality control (QA/QC) measures will be applied in accordance with Tetra Tech’s “Quality Assurance Project Plan (QAPP) for START,” 2006. Field QC measures will consist of collecting one matrix spike (MS) sample, one field duplicate sample, and a field blank. The MS sample will be used to measure the precision and accuracy

of the laboratory analytical program. The field duplicate sample will be used to test the reproducibility of sampling procedures and results. The field blank sample will be used to verify the proper handling of the samples during sample shipment and laboratory analysis.

DATA VALIDATION AND LABORATORY DELIVERABLES: All samples collected as part of the sampling event will be analyzed by a CLP laboratory. The CLP laboratories will generate all forms and deliverables required under the Statement of Work. Validation of all analytical data will be performed under the direction of the EPA Region 3 ASQAB in accordance with EPA Region 3 modifications to the EPA CLP national functional guidelines for data review (EPA 1994 and 1993). Specifically, the inorganic data will be validated at the IM2 level in accordance with the EPA Region 3 “Innovative Approaches to Data Validation” (EPA 1995). The IM2 data validation level is the highest validation level for inorganic data.

A 14-day verbal turn-around-time (TAT) will be requested for the analytical results. Validated data reports from the CLP laboratory are due 21 days after samples are received by the laboratory.