

N60200.AR.002056
NAS CECIL FIELD, FL
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PHASE 3 SAMPLING AND ANALYSIS WORK PLAN FOR POTENTIAL SOURCE OF
CONTAMINATION 45 FACILITY 11 NAS CECIL FIELD FL
8/26/1999
TETRA TECH NUS INC

**Phase III Sampling and Analysis Work Plan
PSC 45, Facility 11
Naval Air Station Cecil Field
Jacksonville, Florida**

August 26, 1999

Phase III sampling and analysis is proposed for PSC 45, Facility 11 as identified in Figure A. Sampling and analysis will be conducted to further delineate previously identified contamination that included polycyclic aromatic hydrocarbons (PAHs), total recoverable petroleum hydrocarbons (TRPH), arsenic, mercury, and/or vanadium in surface soil samples above the Florida Department of Environmental Protection (FDEP) residential soil screening and NAS Cecil Field Inorganic Background Data Set criteria.

The objective of this sampling event is to collect surface soil samples to further determine the extent of contamination in the following areas:

- North of Facility 11, surrounding the area of stressed vegetation and including the area between Facility 11 and Facility 7
- East of the aboveground storage tank areas (surrounding CEF-P45-SS-016)
- South of the aboveground storage tank areas (surrounding CEF-P45-SS-023), along 2nd Street
- Along 2nd Street, south of Facility 11

In addition, two monitoring wells will be installed to further define the extent of elevated vanadium concentrations in groundwater. One well, CEF-P45-MW-04S, will be installed approximately 60 feet south of CEF-007-01Sa and CEF-P45-MW-05S will be installed approximately 80 feet north of CEF-P45-MW-03S (see Figure A and Table 1).

A total of 11 soil samples will be collected during Phase III from the approximate locations identified on Figure A. Samples are proposed in the four separate areas of excavation being delineated, as described above. The soil samples to be collected and analysis to be performed are described in Table 1.

The sampling activities and procedures described in this work plan will be performed in accordance with the U.S. EPA Region 4 Environmental Investigation Standard Operating Procedures and Quality Assurance Manual (EISOPQAM) and the Base-Wide Generic Work Plan for Naval Air Station (NAS) Cecil Field. Specifically, the Base-Wide Generic Work Plan includes procedures for management of investigation-derived wastes in Volume I and standard operating procedures in the Project Operations Plan in Volume II.

The surface soil samples will be collected as grab samples using plastic, disposable trowels. Because disposable trowels will be used, decontamination of sampling equipment will not be necessary. The locations will be located in the field by a registered land surveyor and marked with a wooden stake or pin flag labeled with the sample identification. The sampling crew will work with the survey crew to establish the best procedures to limit the time the wooden stakes or pin flags are in the area. If the sample location requires movement based on field observations or conditions, the location where the sample was actually collected will be surveyed and reported.

The groundwater monitoring well will be installed in accordance with the EISPOQAM and the Base-Wide Generic Work Plan for NAS Cecil Field, except that split-spoon samples will not be collected. The monitoring well will be screened from approximately 5 to 15 feet bgs with 10-foot long 0.010-inch slotted screen. Well construction materials will consist of certified-clean 2-inch inside diameter, flush-threaded, polyvinyl chloride (PVC) screen and riser. A registered land surveyor will survey the completed monitoring well.

Personnel protection equipment and other waste trash (e.g. disposable trowels) will not be considered hazardous and will be disposed in a municipal landfill. Such trash will be collected in a plastic bag and disposed in a suitable trash receptacle. Removed soil in excess of sampling volume requirements will be placed back on the ground, and the turf will be replaced or repaired.

Sampling handling requirements, the bottleware required, preservation, and holding time requirements for the analysis proposed for this sampling event are as identified in the following table:

Analysis	Analytical Method	Bottleware	Preservation	Holding Time ⁽¹⁾
SOIL				
PAHs	SW-846 8310	8-oz. glass jar	Cool to 4°C	14 days to extraction; 40 days to analysis
TRPH	Florida PRO	8-oz. glass jar	Cool to 4°C	14 days to analysis
Arsenic, Vanadium	SW-846 6010B	8-oz. glass jar	Cool to 4°C	180 days to analysis
GROUNDWATER				
Lead, Vanadium	SW-846 8270C	1 liter glass or polyethylene	pH < 2 with HNO ₃	180 days to analysis

¹ Holding times are measured from the date/time of sample collection.

Analytical results will be provided on a 14-day turn around basis.

The laboratory contracted to do this work is as follows:

ACCUTEST SOUTHEAST
 4405 Vineland Road, Suite C-15
 Orlando, Florida 32881
 Attention: Susan Gaudios
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As agreed upon by the BCT, the collection of rinsate and trip blanks has been eliminated at NAS Cecil Field. In addition, field blanks will not be collected during this sampling program because there will be no decontamination of sampling equipment. In accordance with these changes, the following table summarizes the frequency and type of field Quality Assurance/Quality Control (QA/QC) samples to be collected for this sampling program.

Type of Samples	Frequency	Samples to be Collected
Field Duplicate	1/10 sample/matrix	1
Lab MS/MSD	1/20 samples	1 ⁽¹⁾

⁽¹⁾ MS/MSD is a laboratory QA/QC requirement, separate sample not required, only additional volume.

As agreed upon by the BCT, formal data validation has been eliminated from the installation restoration program at NAS Cecil Field. However, the analytical data packages generated by the analytical laboratory will be reviewed by Tetra Tech NUS personnel to eliminate false positives and false negative results.

Table 1

**Phase III Sampling and Analysis Work Plan
PSC 45, Facility 11**

Sample ID	Location	Analysis			
		PAHs	TPH	As	V (and Pb for GW)
SOIL					
CEF-P45-SS-201-01	15 feet south of CEF-P45-SS-001 (0 to 1 ft)			X	
CEF-P45-SS-202-01	15 feet north of CEF-P45-SS-009 (0 to 1 ft)			X	
CEF-P45-SS-203-01	Northeast of CEF-P45-SS-106, at the southwest corner of Building 7 (0 to 1 ft)				X
CEF-P45-SS-204-01	15 feet north of CEF-P45-SS-023 (0 to 1 ft)		X		
CEF-P45-SS-205-01	15 feet west of CEF-P45-SS-018 (0 to 1 ft)	X			
CEF-P45-SS-206-01	15 feet west of CEF-P45-SS-021 (0 to 1 ft)	X			
CEF-P45-SS-207-01	Corner of Building 11, northwest of CEF-P45-SS-106-01		X	X	X
CEF-P45-SS-208-01	Due south of CEF-P45-SS-207-01, along the fence around ASTs		X	X	X
CEF-P45-SU-209-03	At CEF-P45-SS-013-01/124-02 location (2 to 3 ft)	X	X		X
CEF-P45-SU-210-03	At CEF-P45-SS-018-01/127-02 location (2 to 3 ft)	X			
CEF-P45-SS-211-01	15 feet north of 45S00301	X			
GROUNDWATER					
CEF-P45-GW-04S-01	Approximately 60 feet south of CEF-007-01Sa				X
CEF-P45-GW-05S-01	Approximately 80 feet north of CEF-P45-MW-03S				X

PAH = Polycyclic Aromatic Hydrocarbons

TPH = Total Petroleum Hydrocarbons

As = Arsenic

V = Vanadium

Pb = Lead

