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NAS CECIL FIELD, FL
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PHASE 2 SAMPLING AND ANALYSIS WORK PLAN FOR MAIN BASE AREA 18
GROUNDWATER SAMPLING NAS CECIL FIELD FL
2/18/2000
TETRA TECH NUS INC

**Phase II Sampling and Analysis Work Plan
Main Base Area (MB) 18 Groundwater Sampling
Naval Air Station Cecil Field
Jacksonville, Florida**

February 18, 2000

Monitoring well installation, sampling, and analysis of groundwater is proposed for part of MB 18 east of Building 815, as shown in Figure A. During previous sampling, well CEF-M18-MW-02I had concentrations of volatile organic compounds (VOCs) in excess of Florida Department of Environmental Protection (FDEP) criteria.

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.

Prior to the installation of wells, utilities must be located or cleared at each location.

To investigate shallow groundwater, well CEF-M18-MW-02S will be installed to a depth of 15 feet bgs at the CEF-M18-MW-02I location, where VOCs were detected in excess of FDEP criteria. CEF-M18-MW-04I will be installed downgradient of the CEF-M18-MW-02 well cluster at the intermediate depth of 35 feet bgs. Well CEF-M18-MW-01S is upgradient of CEF-M18-MW-2I, and during recent sampling, did not have VOC concentrations exceeding FDEP criteria. Therefore, additional upgradient well installation is not required as part of this investigation. Because total benzene, toluene, ethylbenzene, and xylene (BTEX) concentrations in CEF-M18-0MW-02S are less than 250 µg/L, no deeper monitoring well is proposed at the CEF-M18-MW-02I location.

Well screen will be 0.010-inch slot for both wells, with a screen length of 10 feet for the shallow well and five feet for the intermediate well. Each well will be constructed certified-clean well construction material and constructed of 2-inch, flush-threaded PVC well screen and riser. The locations and top of casing elevations will be surveyed by a registered surveyor. The groundwater will be sampled using low-flow techniques.

The well installation, 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.

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.

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

Analysis	Analytical Method	Bottlenecks	Preservation	Holding Time ⁽¹⁾
VOCs	SW-846 8260B	2 40-ml glass; Teflon-lined septum	Cool to 4° C pH < 2 with HCl	14 days to analysis

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

Analytical results will be reported 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: Linda Williams
 (407) 425-6700
 Fax: (407) 425-0707

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 minimal 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/matrix	1 ⁽¹⁾

(1) MS/MSD is a laboratory QA/QC requirement, separate samples not required, only additional volume (2x).

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 II Sampling and Analysis
 MB 18 Groundwater**

Sample ID	Location	Analysis
		VOCs
CEF-M18-GW-02S	At CEF-M18-MW-02I location, East of Building 815	X
CEF-M18-GW-04I	Southeast (downgradient) of CEF-M18-MW-02S and MW-02I; approximately 180 feet east and 370 feet south of CEF-M18-MW-02S	X

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