

N60200.AR.002472
NAS CECIL FIELD, FL
5090.3a

PHASE 2 SAMPLING AND ANALYSIS WORK PLAN FOR BUILDING 824 GROUNDWATER
SAMPLING NAS CECIL FIELD FL
6/8/2000
TETRA TECH NUS INC

**Phase II Sampling and Analysis Work Plan
Building 824 Groundwater Sampling
Naval Air Station Cecil Field
Jacksonville, Florida**

June 8, 2000

Well installation and sampling and analysis of groundwater is proposed in the area of groundwater monitoring well CEF-824A-01Sa, within Main Base Area 18 (MB-18), as shown in Figure A. Well CEF-824A-01Sa is located southeast of Building 824/824A, east of Building 1823, and west of the north-south high-speed refuelers.

As part of the Phase II investigation at MB-18, trichloroethene (TCE) and 1,1-dichloroethane (1,1-DCA) were detected in a direct-push technology (DPT) groundwater sample (85Q01301) collected from thirteen feet below ground surface (bgs). The concentration of TCE detected was greater than the Florida Department of Environmental Protection (FDEP) groundwater cleanup target goal (GTCL). A permanent monitoring well, CEF-824A-01Sa, was installed at this location, and analytical results (1998) showed naphthalene and 2-methylnaphthalene at concentrations in excess of GCTLs, and 1,1-DCA at a concentration less than the GCTL. TCE was not detected in the permanent well. This sample was identified as 85G01301. The well was resampled in May 2000, and TCE was detected.

The current investigation will include the installation of four shallow wells to investigate shallow groundwater in the area. These wells, along with CEF-824A-01Sa, will be sampled and analyzed for volatile organic compounds (VOCs) and polynuclear aromatic hydrocarbons (PAHs).

Note that there is another monitoring well located approximately 350 feet west that is designated CEF-824A-01S. The well being sampled as part of this plan was also identified as CEF-824A-01S, and the "a" suffix was added to distinguish it from the other well.

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.

The locations of the wells shown on Figure A are based on existing information about the storm sewers. Prior to locating the wells in the field, the location of the storm sewers will be confirmed based on the associated catch basins. Well locations will be adjusted as needed to avoid interference, and the same relative positions relative to the storm sewer will be maintained. For example, proposed well CEF-824A-02S is located southeast of the corner of the storm sewer running along Building 824A. CEF-824A-03S is to be located south of the east-west storm sewer. CEF-824A-04S and CEF-824A-05S are to be located north of the east-west storm sewer and between the two north-south storm sewers shown in Figure A.

The four new wells will be installed to a depth of 15 feet below ground surface. 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.

Well installation and 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 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⁾
VOCs	SW-846 8260B	2 40-ml glass; Teflon-lined septum	Cool to 4° C pH < 2 with HCl	14 days to analysis
PAHs	SW-846 8310	1 1-liter amber glass; Teflon-lined cap	Cool to 4° C	7 days to extraction; 40 days to analysis

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

Analytical results will be reported on a 7-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⁾

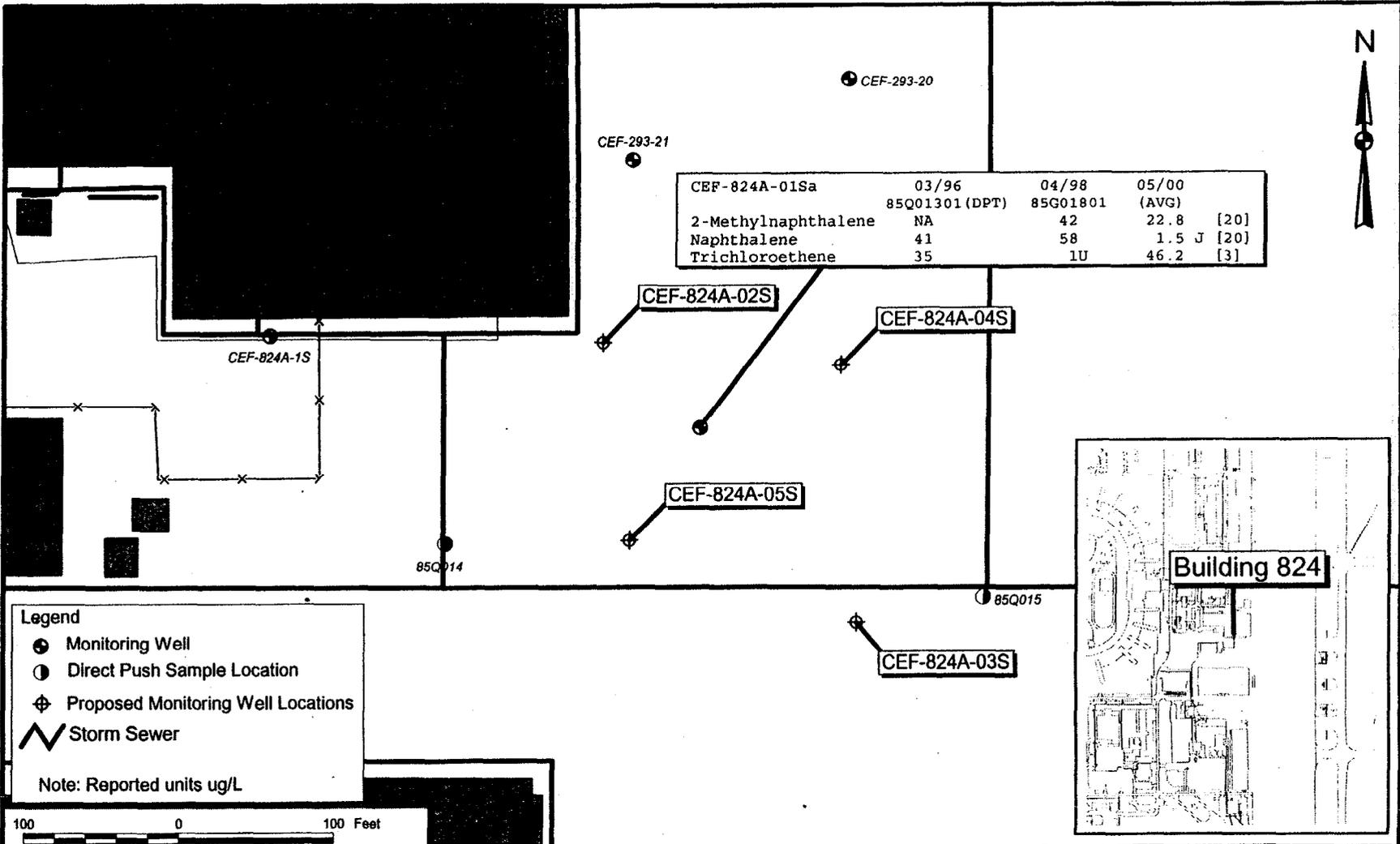
(1) MS/MSD is a laboratory QA/QC requirement, separate samples not required, only additional volume (2x).

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
Building 824A Groundwater Sampling

Sample ID	Location	Analysis	
		VOCs	PAHs Method 8310
CEF-824A-GW-01Sa-03	From existing well CEF-824A-01Sa	X	X
CEF-824A-GW-02S-01	From new well CEF-824A-02S	X	X
CEF-824A-GW-03S-01	From new well CEF-824A-03S	X	X
CEF-824A-GW-04S-01	From new well CEF-824A-04S	X	X
CEF-824A-GW-05S-01	From new well CEF-824A-05S	X	X



CEF-824A-01Sa	03/96	04/98	05/00
	85Q01301 (DPT)	85G01801	(AVG)
2-Methylnaphthalene	NA	42	22.8 [20]
Naphthalene	41	58	1.5 J [20]
Trichloroethene	35	1U	46.2 [3]

Legend

- Monitoring Well
- ⊙ Direct Push Sample Location
- ⊕ Proposed Monitoring Well Locations
- ~ Storm Sewer

Note: Reported units ug/L



DRAWN BY	DATE
MJJ	14Apr00
CHECKED BY	DATE
COST/SCHEDULE-AREA	
SCALE	
AS NOTED	



PROPOSED WELL LOCATION AND
GROUNDWATER EXCEEDANCES
BUILDING 824
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

CONTRACT NUMBER 0039	
APPROVED BY	DATE
APPROVED BY	DATE
DRAWING NO. FIGURE A	REV 0