

N60200.AR.002706  
NAS CECIL FIELD, FL  
5090.3a

PHASE 4 SAMPLING AND ANALYSIS WORK PLAN FOR POTENTIAL SOURCE OF  
CONTAMINATION 40 A-4 ABANDONED WASTEWATER TREATMENT PLANT NAS CECIL  
FIELD FL  
10/18/2000  
TETRA TECH NUS INC

**Phase IV Sampling and Analysis Work Plan  
PSC 40, A-4 Abandoned Wastewater Treatment Plant  
Naval Air Station Cecil Field  
Jacksonville, Florida**

October 18, 2000

Phase IV sampling and analysis of groundwater is proposed for PSC 40, Abandoned Wastewater Treatment Plant as shown in Figure A. During previous groundwater sampling activities, total aluminum, beryllium, iron, lead, and vanadium concentrations in well CEF-682-02 exceeded Florida Department of Environmental Protection (FDEP) groundwater criteria and/or IBDS values. Dissolved concentrations of these same inorganics were less than criteria. However, the samples had very high concentrations of suspended solids. In a previous resampling attempt, the well purged dry (during purging and redevelopment), and was very slow to recharge. Turbidity of the recharged water was very high. Based on these observations, it was concluded that the well was defective, and that a new well needs to be installed. The objective of Phase IV sampling is to install one new monitoring well near monitoring well CEF-682-02 and collect groundwater samples for total and dissolved analysis for specific metals. One well will be installed and sampled, as shown on Figure A and described in Table 1.

The groundwater monitoring well will be installed in accordance with the Environmental Investigation Standard Operating Procedures and Quality Assurance Manual (EISPOQAM) and the Base-Wide Generic Work Plan for NAS Cecil Field, except that split-spoon samples will not be collected. The new well will be similar in construction to CEF-682-02 and will be located about 5 feet to the south of well CEF-682-02, as shown on Figure A. 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. The well will stick up 2.5 to 3 feet above the ground surface and will be provided with a protective casing and locking cap. The well is to be designated CEF-P40-01S. A registered land surveyor will survey the completed monitoring 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.

The groundwater sample will be collected using low-flow purge methods. **The sample will be collected no sooner than one week after development of the well is completed.**

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:

<b>Analysis</b>	<b>Analytical Method</b>	<b>Bottleware</b>	<b>Preservation</b>	<b>Holding Time<sup>(1)</sup></b>
Aluminum, beryllium, iron, lead, and vanadium	SW-846 6010B	1 liter glass or polyethylene	pH < 2 with HNO <sub>3</sub>	180 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.

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	0
Lab MS/MSD	1/20 samples/matrix	1 <sup>(1)</sup>

(1) MS/MSD samples are a laboratory QA/QC requirement. Separate samples are not required, only additional volume (2X),

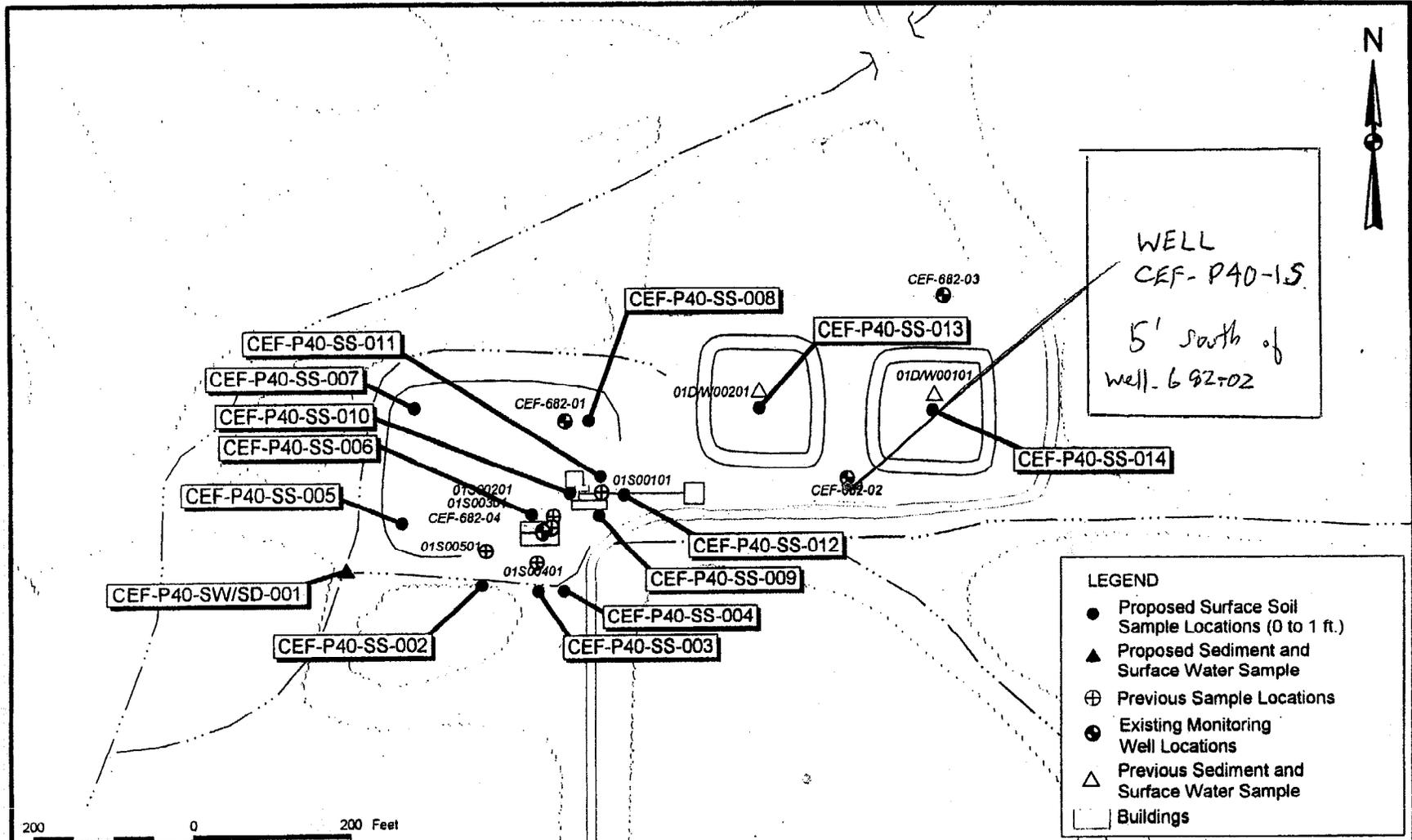
As agreed upon by the BCT, formal data validation has been eliminated from the installation restoration program at NAS Cecil Field. However, the analytical data packages generated by the analytical laboratory will be reviewed by Tetra Tech NUS personnel to eliminate false positives and false negative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

**Table 1**

**Phase IV Sampling and Analysis  
PSC 40, Abandoned Wastewater Treatment Plant**

Sample ID CEF-P40-	Location	Analysis				
		Aluminum	Beryllium	Iron	Lead	Vanadium
GW-01S-01	Monitoring well CEF-P40-01S	X	X	X	X	X
GF-01S-01	Monitoring well CEF-P40-01S, filtered through 1-micron filter	X	X	X	X	X

Use 1-micron filter for filtered sample.



WELL  
 CEP-P40-15  
 5' south of  
 well-682-02

**LEGEND**

- Proposed Surface Soil Sample Locations (0 to 1 ft.)
- ▲ Proposed Sediment and Surface Water Sample
- ⊕ Previous Sample Locations
- Existing Monitoring Well Locations
- △ Previous Sediment and Surface Water Sample
- Buildings

200 0 200 Feet

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



PROPOSED SAMPLE LOCATIONS  
 PSC 40, ABANDONED WASTEWATER TREATMENT PLANT  
 NAVAL AIR STATION CECIL FIELD  
 JACKSONVILLE, FLORIDA

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