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NAS CECIL FIELD, FL
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SAMPLING AND ANALYSIS WORK PLAN FOR POTENTIAL SOURCE OF CONTAMINATION
42 STEAM PLANT NAS CECIL FIELD FL
4/14/1999
TETRA TECH NUS INC

**Sampling and Analysis Work Plan
PSC 42, Steam Plant
Naval Air Station Cecil Field
Jacksonville, Florida**

April 14, 1999

Sampling and analysis of surface soils is proposed for PSC 42, the Steam Plant Yellow Water Public Works Area, as shown in Figure A. Sampling and analysis will be conducted to further delineate the contamination identified during previous sampling activities that detected polycyclic aromatic hydrocarbons (PAHs), total recoverable petroleum hydrocarbons (TRPH), arsenic, barium, and dichlorodiphenyltrichloroethane (DDT) in surface soil samples above Florida Department of Environmental Protection (FDEP) residential soil screening and NAS Cecil Field inorganic background data set criteria. PAHs were detected in three of five surface soil samples and TRPH, arsenic, barium, and DDT was detected in one of the five surface soil samples as shown in Figure B.

The objective of this sampling event is to collect surface soil samples (0' to 1' Interval) to determine the extent of the contamination. Phase I will collect soil samples along the former rail line, in the area of the former Coal Pocket, and south and west of the former Boiler House location. The soil samples will be analyzed for PAHs, TRPH, pesticides, and the Target Analyte List for metals per the February 11, 1999 Base Realignment and Closure Team (BCT) meeting (Minutes Ref. No. 821). Phase II will include collection of additional soil samples (if needed), at depth surface soil samples (1' to 2' Interval) and installation and sampling of two monitoring wells. The locations of the groundwater monitoring wells and at depth samples will be decided after reviewing data from Phase I.

A total of 15 soil samples will be collected during Phase I from the approximate locations identified on Figure A and summarized in the attached table. The soil samples to be collected and the analysis of the samples are described below.

- Three surface soil samples (-001 to -003) will be collected along the former rail line. These soil samples will be analyzed for PAHs, metals, and TRPH.
- Three surface soil samples (-004 to -006) will be collected around the former Coal Pocket, near the previous soil sample 98S01801. The samples will be analyzed for PAHs, metals, and TRPH.
- One surface soil sample (-007) will be collected southeast of the Boiler House, approximately 50 feet east of the previous soil sample 98S01901 to form a grid pattern along with samples -004 and -005. The soil sample will be analyzed for PAHs, metals, and TRPH.
- Three surface soil samples (-008 to -010) will be collected around the previous soil sample 98S01901. These soil samples will be analyzed for PAHs, metals, TRPH, and Pesticides.
- One surface soil sample (-011) will be collected southwest of the former Boiler House to delineate that area.
- Three surface soil samples (-012 to -014) will be collected south of the Boiler House near the previous soil sample 98S02001. The soil samples will be analyzed for PAHs, metals, and TRPH.
- One surface soil sample (-015) will be collected west of the Boiler House. This soil sample will be analyzed for PAHs, metals, and TRPH.

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 for surface soil sampling will not

be necessary. The location shall be located in the field by a registered 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 locations of the sampling points are moved, based on field conditions, then the location where the sample was collected will be re-surveyed.

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 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⁾
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
Pesticides	SW-846 8081A	8-oz. glass jar	Cool to 4°C	14 days to extraction; 40 days to analysis
Inorganics	SW-846 6010B	8-oz. glass jar	Cool to 4°C	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
 (407) 425-5700
 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 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	2
Lab MS/MSD	1/20 samples	1 ⁽¹⁾

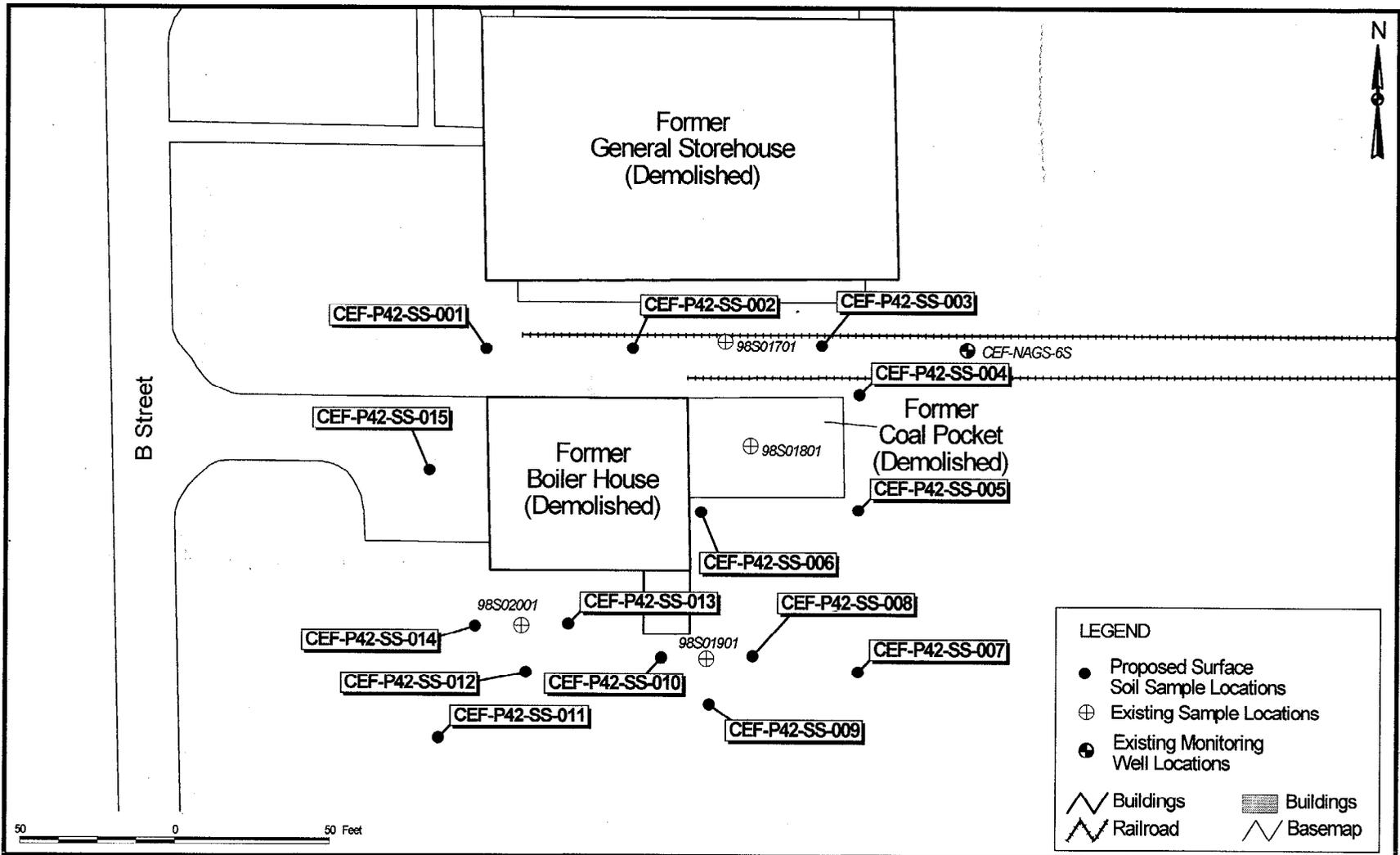
As agreed upon by the BCT, formal data validation has been eliminated from the installation restoration program at NAS Cecil Field. However, the analytical data packages generated by the analytical laboratory will be reviewed by Tetra Tech NUS personnel to eliminate false positives and false negative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

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Table 1

**Sampling and Analysis
PSC 42, Steam Plant**

Sample ID CEF-P42-SS	Location		Analysis			
			PAHs	TRPH	Pesticides	Metals
-001	Rail Line	Between rail lines - west	X	X		X
-002	Rail Line	Between rail lines - middle	X	X		X
-003	Rail Line	Between rail lines - east	X	X		X
-004	Coal Pocket	Northeast corner	X	X		X
-005	Coal Pocket	Southeast corner	X	X		X
-006	Coal Pocket	Southwest corner	X	X		X
-007	Boiler House	50' east of 98S01801	X	X		X
-008	Boiler House	Around 98S01801, 15' East	X	X	X	X
-009	Boiler House	Around 98S01801, 15' South	X	X	X	X
-010	Boiler House	Around 98S01801, 15' West	X	X	X	X
-011	Boiler House	50' Southwest of 98S02001	X	X		X
-012	Boiler House	Around 98S02001, 15' South	X	X		X
-013	Boiler House	Around 98S02001, 15' East	X	X		X
-014	Boiler House	Around 98S02001, 15' West	X	X		X
-015	Boiler House	West of Boiler House	X	X		X

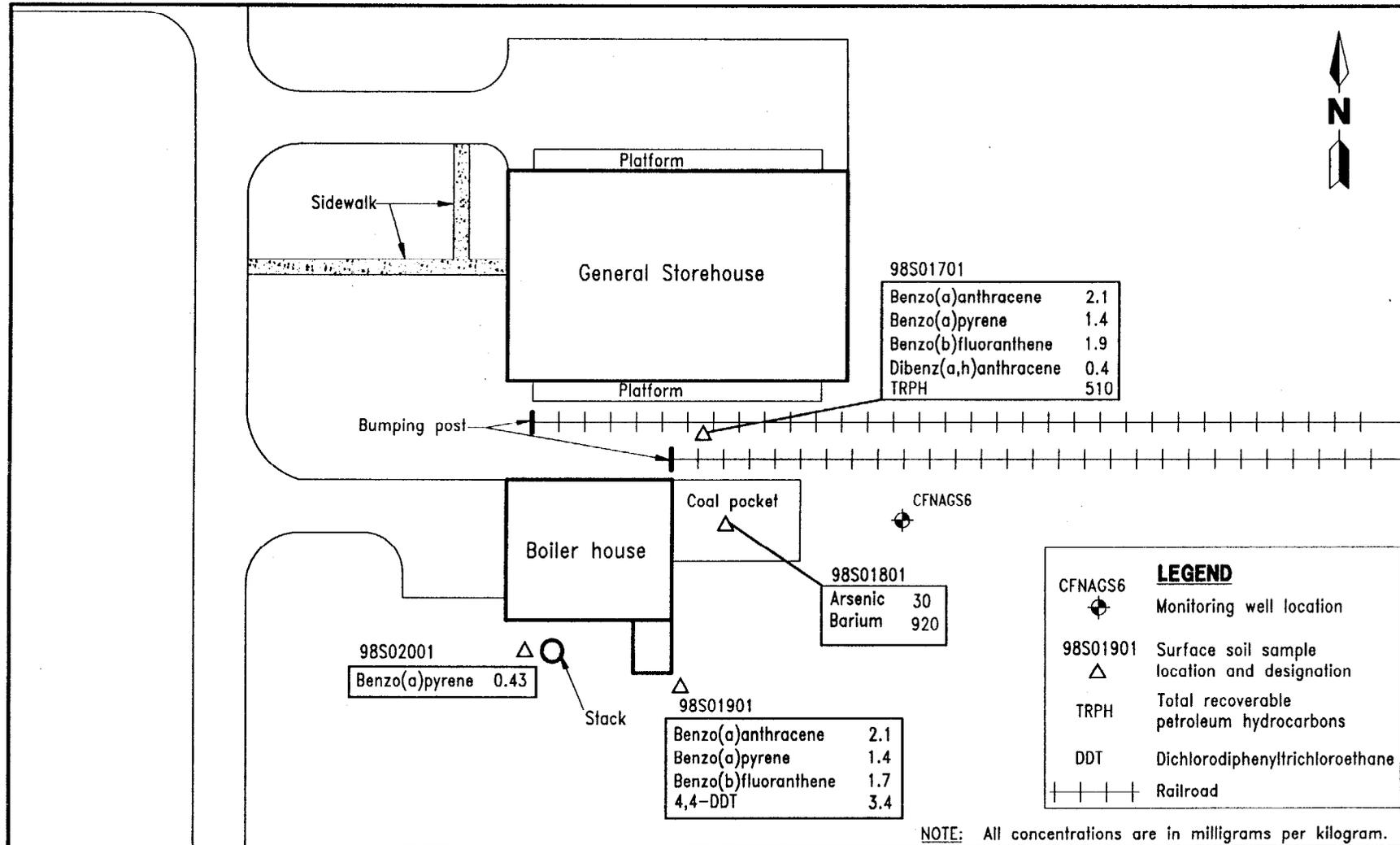


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CHECKED BY	DATE
COST/SCHEDULE-AREA	
SCALE AS NOTED	



PROPOSED SOIL SAMPLE LOCATIONS
 PSC 42, STEAM PLANT
 NAVAL AIR STATION CECIL FIELD
 JACKSONVILLE, FLORIDA

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



0 30 60
 SCALE: 1 INCH = 60 FEET

FIGURE B *PSC 42*
**FORMER STEAM PLANT
 SUMMARY OF ANALYTES EXCEEDING
 SCREENING CRITERIA**



**SAMPLING AND ANALYSIS OUTLINE
 AND REPORT
 YELLOW WATER WEAPONS AREA**

**NAVAL AIR STATION CECIL FIELD
 JACKSONVILLE, FLORIDA**