

N60200.AR.002184  
NAS CECIL FIELD, FL  
5090.3a

PHASE 5 SAMPLING AND ANALYSIS WORK PLAN FOR POTENTIAL SOURCE OF  
CONTAMINATION 42 STEAM PLANT NAS CECIL FIELD FL  
11/12/1999  
TETRA TECH NUS INC

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

**November 12, 1999**

Phase V 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 polycyclic aromatic hydrocarbon (PAH), total recoverable petroleum hydrocarbon (TRPH), and metals contamination. A total of 25 soil samples will be collected from approximate locations as shown on Figure A and described in Table 1. The field crew will measure the approximate depth of soil on top of the general storehouse foundation.

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:

| <b>Analysis</b>                                 | <b>Analytical Method</b> | <b>Bottleware</b> | <b>Preservation</b> | <b>Holding Time<sup>(1)</sup></b>             |
|---|--------------------------|-------------------|---------------------|---|
| PAHs  | SW-846 8310              | 8-oz. glass jar   | Cool to 4°C         | 14 days to extraction;<br>40 days to analysis |
| TRPH  | Florida PRO              | 8-oz. glass jar   | Cool to 4°C         | 14 days to analysis                           |
| Arsenic, Chromium,<br>Barium, Antimony,<br>Lead | SW-846 6010B             | 8-oz. glass jar   | Cool to 4°C         | 180 days to analysis                          |

<sup>1</sup> 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/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 V Sampling and Analysis  
PSC 42, Steam Plant

| Sample ID  | Location  | Analysis |      |                    |
|--|---|----------|------|--------------------|
|  |   | PAHs     | TRPH | As, Cr, Ba, Sb, Pb |
| <b>CEF-P42-</b>  |   |          |      |                    |
| SS-401-01  | Approximately 25 feet east of CEF-P42-SS-101                        | X        | X    | X                  |
| SS-402-01  | Approximately 40 feet north of CEF-P42-SS-002                       | X        | X    | X                  |
| SS-403-01  | Approximately 40 feet north of CEF-P42-SS-402                       | X        | X    | X                  |
| SS-404-01  | Approximately 60 feet east of CEF-P42-SS-402                        | X        | X    | X                  |
| SS-405-01  | Approximately 40 feet north of CEF-P42-SS-404                       | X        | X    | X                  |
| SS-406-01  | Approximately 60 feet east of CEF-P42-SS-404                        | X        | X    | X                  |
| SS-407-01  | Approximately 40 feet north of CEF-P42-SS-406                       | X        | X    | X                  |
| SS-408-01  | Approximately 50 feet northeast of CEF-P42-SS-201                   | X        | X    | X                  |
| SS-409-01  | Approximately 50 feet northeast of CEF-P42-SS-408                   | X        | X    | X                  |
| SS-410-01  | Approximately 50 feet northeast of CEF-P42-SS-203                   | X        | X    | X                  |
| SS-411-01  | Approximately 50 feet northeast of CEF-P42-SS-410                   | X        | X    | X                  |
| SS-412-01  | Approximately 50 feet northeast of CEF-P42-SS-203                   | X        | X    | X                  |
| SS-413-01  | Approximately 50 feet northeast of CEF-P42-SS-204 (in railroad bed) | X        | X    | X                  |
| SS-414-01  | Approximately 50 feet east of CEF-P42-SS-205                        | X        | X    | X                  |
| SS-415-01  | Approximately 50 feet southeast of CEF-P42-SS-206                   | X        | X    | X                  |
| SS-416-01  | Approximately 50 feet southeast of CEF-P42-SS-415                   | X        | X    | X                  |
| SS-417-01  | Approximately 50 feet southeast of CEF-P42-SS-208                   | X        | X    | X                  |
| SS-418-01  | Approximately 50 feet southeast of CEF-P42-SS-417                   | X        | X    | X                  |
| SS-419-01  | Approximately 25 feet south of CEF-P42-SS-210                       | X        | X    | X                  |
| SS-420-01  | Approximately 25 feet south of CEF-P42-SS-419                       | X        | X    | X                  |
| SS-421-01  | Approximately 50 feet south of CEF-P42-SS-420                       | X        | X    | X                  |
| <b>Samples from Previous Locations for Additional Analyses</b> |   |          |      |                    |
| SS-101-01  | 15 feet north of CEF-P42-SS-001                                     |          |      | X                  |
| SS-109-01  | 15 feet east of CEF-P42-SS-007                                      |          |      | X                  |
| SS-110-01  | 15 feet south of CEF-P42-SS-007                                     |          |      | X                  |
| SS-116-01  | Midway between CEF-P42-SS-115 and CEF-P42-SS-117                    |          | X    | X                  |

PAHs = Polycyclic aromatic hydrocarbons

TPRH = Total recoverable petroleum hydrocarbons

As = Arsenic

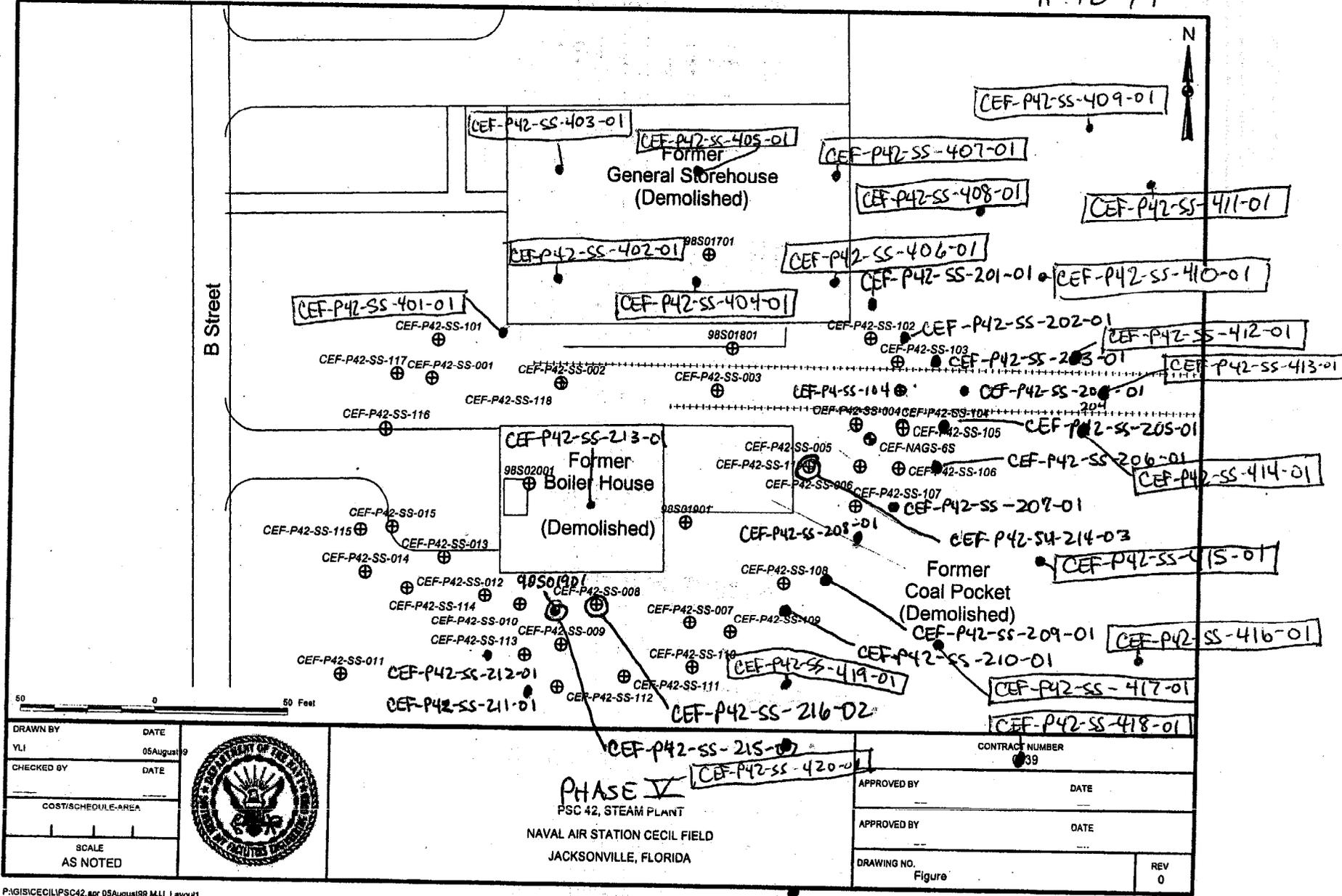
Cr = Chromium

Ba = Barium

Pb = Lead

Sb = Antimony

11-12-99



50 0 50 Feet

|                    |                      |
|--------------------|----------------------|
| DRAWN BY<br>YLI    | DATE<br>05 August 99 |
| CHECKED BY         | DATE                 |
| COST/SCHEDULE-AREA |                      |
| SCALE<br>AS NOTED  |                      |



**PHASE V**  
 PSC 42, STEAM PLANT  
 NAVAL AIR STATION CECIL FIELD  
 JACKSONVILLE, FLORIDA

|                       |          |
|-----------------------|----------|
| CONTRACT NUMBER<br>39 |          |
| APPROVED BY           | DATE     |
| APPROVED BY           | DATE     |
| DRAWING NO.<br>Figure | REV<br>0 |

CEF-P42-SS-421-01