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NAS CECIL FIELD, FL
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PHASE 13 SAMPLING AND ANALYSIS WORK PLAN FOR OPERABLE UNIT 5 (OU 5) SITE 15 BLUE 10 ORDNANCE DISPOSAL AREA NAS CECIL FIELD FL

1/20/2005

TETRA TECH NUS INC

Phase XIII Sampling and Analysis Work Plan
Site 15, Blue 10 Ordnance Disposal Area
Naval Air Station Cecil Field
Jacksonville, Florida

January 20, 2005

The objective of this sampling is to investigate the potential for dioxins (PCDD/PCDF) to be present in the soil beyond the area to be excavated around the burn chamber and the static rocket stand and the potential for perchlorate to be present in the same area. The proposed soil sampling location is based on prior sampling events conducted by ABB and TtNUS that include over 500 samples. During this investigation, 2 soil samples will be collected from the 0 to 1 foot below ground surface (bgs) interval for dioxin analysis and two monitoring wells will be sampled, using low-flow methods, for perchlorate analysis. The location of the soil samples and monitoring wells are identified on Figure A and described in Table 1.

The sampling activities, quality assurance/quality control (QA/QC) procedures, and data validation requirements for field activities described in this work plan are in general agreement with the U.S. EPA Region IV Environmental Investigation Standard Operating Procedures (SOPs) and Quality Assurance Manual (EISOPQAM), FDEP SOPs FS3000, Remedial Investigation report for Sites 36 and 37, and current Tetra Tech NUS, Inc. (TtNUS) SOPs. Florida Administrative Code (FAC) 62-160, Quality Assurance Rule (FAC 62-160) was updated in April of 2002 and incorporates new SOPs developed and adopted by the FDEP for the collection and analysis of environmental media. Accordingly, the soil and groundwater activities that will be conducted in this work plan will abide by SOPs FS3000 (for soil) and FS2200 (for groundwater), both of which reference additional applicable SOPs as necessary.

The surface soil sample (0 to 1 foot bgs) will be collected as a grab sample using a plastic, disposable trowel. The proposed soil sample locations shall be surveyed by a registered land surveyor or located using GPS prior to sampling and marked with a wooden stake or pin flag labeled with the sample identification as listed in Table 1.

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 from the surface soil sampling in excess of sampling volume requirements will be placed back on the ground.

Requirements for sample handling, bottleware, preservation, and holding time for the analyses proposed for this sampling event are as identified in the following table:

Analysis	Analytical Method	Bottleware	Preservation	Holding Time(1)
SOIL				
PCDD/PCDF	SW-846 8290	(1) 4 oz. wide mouth glass jar	Cool to 4° C	14 days to analysis
GROUNDWATER				
Perchlorate	SW-846 8321	(1) 1-liter amber glass	Cool to 4° C	30 days to extraction; 45 days to analysis

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

Analytical results will be reported on a *28-day* turn around basis.

The laboratory contracted to do this work is as follows:

STL Pittsburgh
450 William Pitt Way

Phase XIII Sampling and Analysis Work Plan
Site 15, Blue 10 Ordnance Disposal Area
Naval Air Station Cecil Field
Jacksonville, Florida

January 20, 2005

[redacted]
Pittsburgh, PA 15238
Attention: Veronica Bortot
(xxx) xxx-xxxx
Fax: (xxx) xxx-xxx

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 soil
Lab MS/MSD	1/20 samples/matrix	1 soil (1)
Field Duplicate	1/10 sample/matrix	1 groundwater
Lab MS/MSD	1/20 samples/matrix	1 groundwater (1)

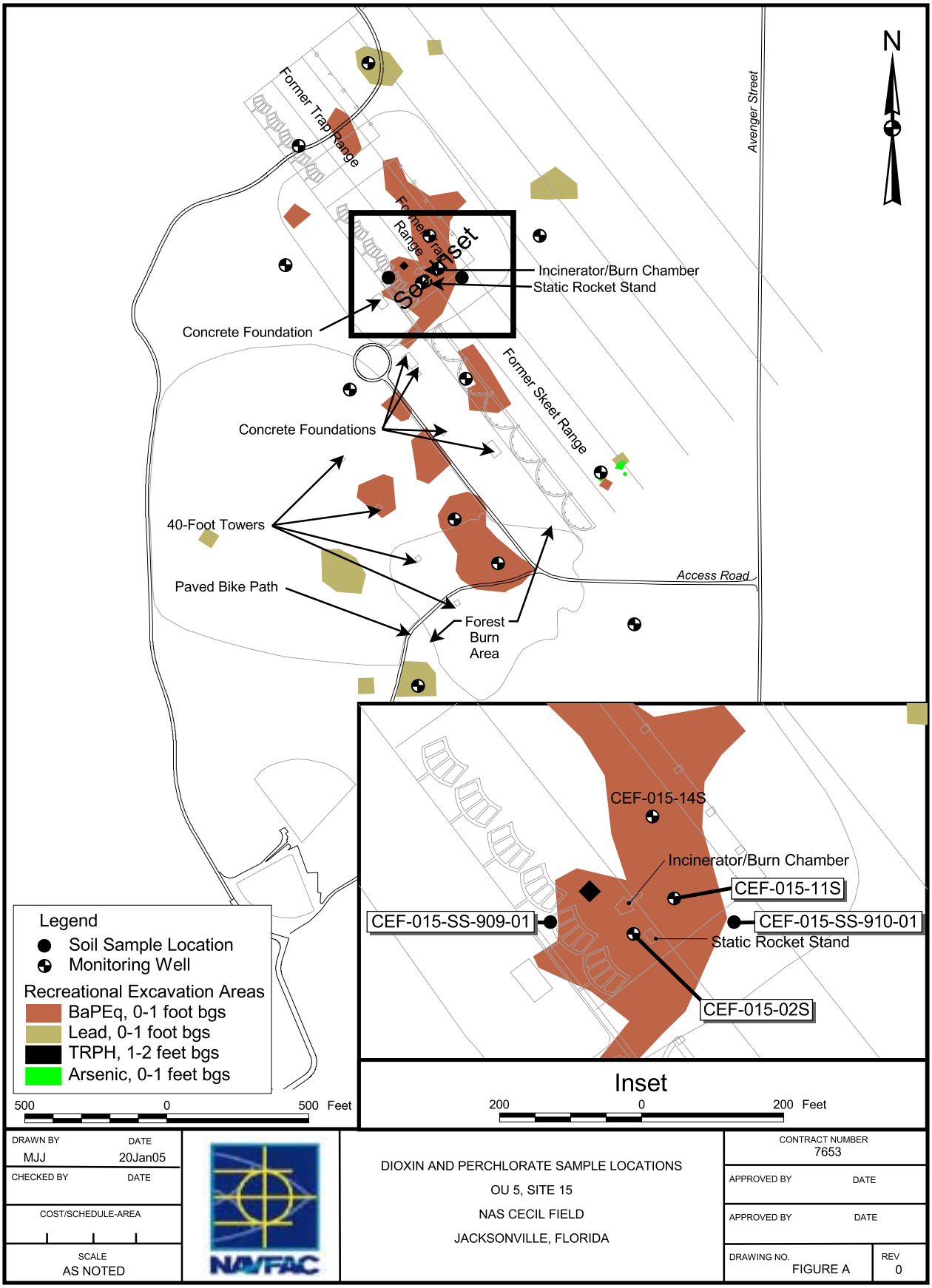
(1) MS/MSD is a laboratory QA/QC requirement, separate samples not required, only additional volume (2x).

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 XI Sampling and Analysis Work Plan
Site 15, Blue 10 Ordnance Disposal Area

Sample ID	Location	Sample Interval (bgs)	Analysis
SOIL			
CEF-015-SS-909-01	Approximately 130' west of rocket stand	0-1'	PCDD/PCDF
CEF-015-SS-910-01	Approximately 125' east of rocket stand	0-1'	PCDD/PCDF
GROUNDWATER			
CEF-015-GW-02S-03	CEF-015-02S	NA	Perchlorate
CEF-015-GW-11S-03	CEF-015-11S	NA	Perchlorate



DRAWN BY: MJJ	DATE: 20Jan05	DIOXIN AND PERCHLORATE SAMPLE LOCATIONS OU 5, SITE 15 NAS CECIL FIELD JACKSONVILLE, FLORIDA	CONTRACT NUMBER: 7653
CHECKED BY	DATE		APPROVED BY / DATE
COST/SCHEDULE-AREA			APPROVED BY / DATE
SCALE: AS NOTED			DRAWING NO.: FIGURE A / REV: 0

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