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NAS CECIL FIELD, FL
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SAMPLING AND ANALYSIS WORK PLAN FOR POTENTIAL SOURCE OF CONTAMINATION 51 GOLF COURSE NAS CECIL FIELD FL

3/31/1999

TETRA TECH NUS INC

NAS Cecil Field

PSC 51, Golf Course

Sampling and Analysis Work Plan

March 31, 1999

Sampling and analyses of surface soils are proposed for PSC 51 which consists of the golf course and the residential area next to the golf course. Sampling and analysis is being conducted to evaluate environmental conditions in this area based on information that arsenic-based herbicides/pesticides and other herbicides/pesticides are commonly applied to golf courses, particularly at the greens and tee boxes.

The objective of this sampling event is to collect surface soil samples:

1) along the perimeter of the golf course adjacent to the existing residential housing,
2) at the greens and tee boxes of holes 7, 8, and 9, and
3) in the drainage ditch along the 9th fairway.

Samples are to be collected from 0 to 1 foot deep and will be analyzed for herbicides/pesticides and arsenic as per the February 10, 1999 BCT meeting (Minutes Ref. No. 811; Decision No. 334).

A total of seventeen surface soil samples (CEF-P51-SS-001 through CEF-P51-SS-017) will be collected from the approximate locations identified on Figure A. A registered surveyor will record the coordinates of the sample locations. The sample locations are as follows:

- Ten samples will be collected from the residential area adjacent to the golf course evenly space between the 7th hole tee box and 9th hole green. If a wooded area exists in the area of the northern samples (CEF-P51-SS-006 through CEF-P51-SS-010), then these samples will be collected along the tree line adjacent to the fairway. Samples along the residential fence (CEF-P51-SS-004 and CEF-P51-SS-005) are to be collected several feet from the fence in the direction of the housing.
- One sample will be collected from each of the tee boxes and greens of holes 7, 8, and 9 to provide a representative subset of data for the entire golf course. The sampling crew shall work with the greens keeper / facility manager on timing, location and least destructive method for sampling in the golf course. The samples are to be collected in low areas in the direction of surface water run off.
- One sample will be collected in the western (downgradient) area of the drainage ditch along fairway 9 to evaluate surface water runoff conditions in an area where sediments have the potential to be deposited.

The sampling activities and procedures described in this Work Plan will be performed in accordance with the EPA Region 4 SOP/QAM and the Base-Wide Generic Work Plan for NAS Cecil Field. Specifically, the Base-Wide Generic Work Plan includes procedures for management of IDW in Volume I and the SOPs are 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 will not be necessary. Personal 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 of in a suitable trash receptacle. Removed soil in excess of sampling volume requirements will be placed back on the ground and turf replaced or repaired. Once the sample has been collected the location will be marked with a wooden stake or pin flag labeled with the sample ID. The locations will then be surveyed. The sampling crew will work with the survey crew to establish the best procedures to limit the time the pin flags are in the area of the golf course and residential area.

Sample 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]
Herbicides	SW-846-8151A	8-oz. glass jar	Cool to 4°C	14 days to extraction; 40 day to analysis
Pesticides	SW-846-8081A and 8141	8-oz. glass jar	Cool to 4°C	14 days to extraction; 40 day to analysis
Arsenic	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.

The samples are to be submitted for analysis with a 14-day turn around .

The laboratory contracted to do this work is as follows:

ACCUTEST SOUTHEAST
4405 Vineland Road, Suite C-15
Orlando, Florida 32811
Attention: Susan Gaudios
(407) 425-5700
Fax: (407) 425-0707

As agreed 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 the decontamination of sampling equipment will not be performed. 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 confirmatory sampling program.

Type of Samples	Frequency	Samples to be Collected
Field Duplicate	1/10 samples/matrix	2
Lab MS/MSD	1/20 samples	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 TtNUS personnel to eliminate false positive and false negative results.

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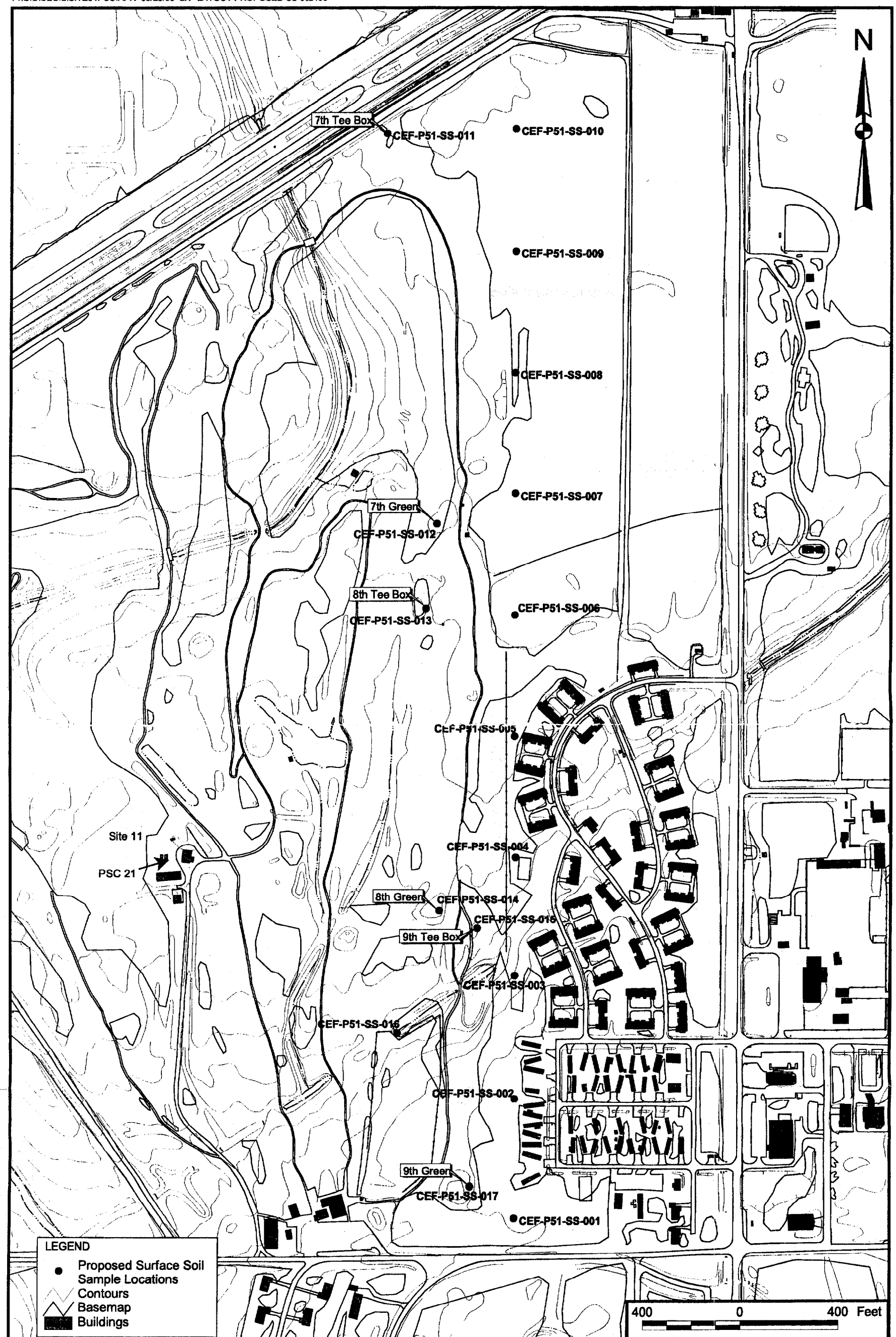

DRAWN BY LIY	DATE 3/25/99	PROPOSED SURFACE SOIL SAMPLE LOCATIONS PSC 51, GOLF COURSE NAVAL AIR STATION CECIL FIELD JACKSONVILLE, FLORIDA	CONTRACT NUMBER 0039
CHECKED BY	DATE		APPROVED BY — DATE —
COST/SCHEDULE-AREA			APPROVED BY — DATE —
SCALE AS NOTED			DRAWING NO. Figure A / REV 0

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