PROJECT SPECIFIC PLAN FOR EXCAVATION CONTROL IN THE AREA 6 OU1 STOCKPILE AREA (SUPPLEMENT TO 20300-PSP-0011)

SOIL AND DISPOSAL FACILITY PROJECT

FERNALD CLOSURE PROJECT
FERNALD, OHIO

MARCH 2004

U.S. DEPARTMENT OF ENERGY

20603-PSP-0001
REVISION B
DRAFT

PROJECT SPECIFIC PLAN FOR EXCAVATION CONTROL IN THE AREA 6 OU1 STOCKPILE AREA (SUPPLEMENT TO 20300-PSP-0011)

Document Number 20603-PSP-0001
Revision B

DRAFT

APPROVAL:

Jyh-Dong Chiou, Project Manager — Date
Demolition, Soil and Disposal Project

Frank Miller, Characterization/Waste Management Manager — Date
Demolition, Soil and Disposal Project

Tom Buhrlage, Soil Sampling Manager — Date
Demolition, Soil and Disposal Project

Brian McDaniel, Real-Time Instrumentation Measurement Program Manager — Date
Demolition, Soil and Disposal Project

Linda Barlow, Waste Acceptance Organization — Date
Safety, Health and Quality

Reinhard Friske, Quality Control — Date
Demolition, Soil and Disposal Project

FERNALD CLOSURE PROJECT

Fluor Fernald, Inc.
P.O. Box 538704
Cincinnati, Ohio 45253-8704

TABLE OF CONTENTS

Page

1.0 Introduction 1-1
1.1 Purpose 1-1
1.2 Scope 1-1
1.3 Variance / Field Change Notice (V/FCN) Documentation 1-2
1.4 Personnel 1-2

2.0 Area-Specific Work Remaining Status 2-1
2.1 OU1 Stockpile Area 2-1
2.1.1 History 2-1
2.1.2 Predesign 2-1
2.1.3 Excavation Control 2-1
2.1.3.1 ASCOCs 2-1
2.1.3.2 Excavation Types 2-2
2.1.3.3 Locations 2-4
2.1.4 Precertification 2-4

3.0 Instrumentation and Techniques ..... Sec. 3 & 4
3.1 Measurement Instrumentation and Techniques ..... Sec. 3 & 4
3.1.1 Real-Time ..... Sec. 3 & 4
3.1.1.1 Sodium Iodide Data Acquisition (RTRAK, RSS, GATOR, EMS) ..... Sec. 3 & 4
3.1.1.2 HPGe Data Acquisition ..... Sec. 3 & 4
3.1.1.3 Excavation Monitoring System ..... Sec. 3 & 4
3.1.1.4 Radon Monitor ..... Sec. 3 & 4
3.1.2 Surface Moisture Measurements ..... Sec. 3 & 4
3.2 Real-Time Measurement Identification ..... Sec. 3 & 4
3.3 Real-Time Data Mapping ..... Sec. 3 & 4
3.4 Real-Time Surveying ..... Sec. 3 & 4

4.0 Predesign ..... Sec. 3 & 4

5.0 Excavation Control Measures ..... Sec. 5 & 6

5.1 Excavation Design Control Requirements ..... Sec. 5 & 6
5.1.1 Contamination Zone ..... Sec. 5 & 6
5.1.2 Floors, Roads and Foundations ..... Sec. 5 & 6
5.1.3 Real-Time Lift Scans ..... Sec. 5 & 6
5.1.4 AWAC Lift Scans ..... Sec. 5 & 6
5.2 Organic Screening and Physical Sampling Requirements ..... Sec. 5 & 6
5.2.1 Above-WAC Photoionization Detector (PID)/Gas Chromatograph (GC) Screening ..... Sec. 5 & 6
5.2.2 All Other Physical Sample Requirements ..... Sec. 5 & 6
5.2.3 PID Screening and Physical Sampling Procedures ..... Sec. 5 & 6
5.2.4 Physical Sample Identification ..... Sec. 5 & 6

TABLE OF CONTENTS
(Continued)

Page

6.0 Precertification ..... Sec. 5 & 6
- 6.1 Initial Precertification NaI Scan at Base of Design Grade ..... Sec. 5 & 6
- 6.2 Precertification HPGe Measurements in 20 ppm FRL (Uranium) Areas ..... Sec. 5 & 6
- 6.3 Precertification HPGe Measurements in 82 ppm FRL (Uranium) Areas ..... Sec. 5 & 6
- 6.4 Delineating Hot Spots Following Precertification HPGe Measurements ..... Sec. 5 & 6

7.0 Quality Assurance/Quality Control Requirements ..... Sec. 7, 8, 9, 10 & 11
- 7.1 Quality Control Samples – Real-Time Measurements and Physical Samples ..... Sec. 7, 8, 9, 10 & 11
- 7.2 Data Validation ..... Sec. 7, 8, 9, 10 & 11
  - 7.2.1 Physical Sample Data Validation ..... Sec. 7, 8, 9, 10 & 11
  - 7.2.2 Real-Time Data Verification/Validation ..... Sec. 7, 8, 9, 10 & 11
- 7.3 Applicable Documents, Methods and Standards ..... Sec. 7, 8, 9, 10 & 11
- 7.4 Surveillances ..... Sec. 7, 8, 9, 10 & 11
- 7.5 Implementation and Documentation of Variance/Field Change Notices (V/FCN) ..... Sec. 7, 8, 9, 10 & 11

8.0 Safety and Health ..... Sec. 7, 8, 9, 10 & 11

9.0 Equipment Decontamination ..... Sec. 7, 8, 9, 10 & 11

10.0 Disposition of Wastes ..... Sec. 7, 8, 9, 10 & 11

11.0 Data and Records Management ..... Sec. 7, 8, 9, 10 & 11
- 11.1 Real-Time ..... Sec. 7, 8, 9, 10 & 11
- 11.2 Physical Samples ..... Sec. 7, 8, 9, 10 & 11

APPENDICES

Appendix A OU1 Stockpile Area Variances and Sample Results

LIST OF TABLES

Table 2-1 Physical Sample Analytical Requirements
Table 2-2 Limits for Area 6 OU1 Stockpile Area Excavation Control COCs
Table 2-3 Excavation Monitoring/Sampling Requirements

LIST OF FIGURES

Figure 2-1 U, Tc-99, PCB Areas

LIST OF ACRONYMS AND ABBREVIATIONS

ALS	Analytical Laboratory Services
ASCOC	area-specific constituent of concern
ASL	analytical support level
AWWT	Advanced Wastewater Treatment (Facility)
CDL	Certification Design Letter
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
COC	constituent of concern
CU	certification unit
DOE	U.S. Department of Energy
DQO	Data Quality Objective
DSDP	Demolition, Soil and Disposal Project
EMS	Excavation Monitoring System
FACTS	Fernald Analytical Computerized Tracking System
FCP	Fernald Closure Project
FPA	former Production Area
FRL	final remediation level
FTF	Fire Training Facility
GC	gas chromatograph
GPS	global positioning system
GMA	Great Miami Aquifer
HPGe	high-purity germanium (detector)
LAN	Local Area Network
NaI	sodium iodide
OSDF	On-Site Disposal Facility
OU	Operable Unit
PID	photoionization detector
PPE	personal protective equipment
ppm	parts per million
PSP	Project Specific Plan
PWID	Project Waste Identification and Disposition Report
QA/QC	Quality Assurance/Quality Control
RSS	Radiation Scanning System
RTIMP	Real-Time Instrumentation Measurement Program
RTRAK	Real-Time Radiation Tracking System
RWP	Radiological Work Permit
SCQ	Sitewide CERCLA Quality Assurance Project Plan
SED	Sitewide Environmental Database
SEP	Sitewide Excavation Plan
SMMP	Soil and Miscellaneous Media Sampling
SWL	Solid Waste Landfill
TAL	Target Analyte List
TCLP	Toxicity Characteristic Leaching Procedure
V/FCN	Variance/Field Change Notice
VOC	volatile organic compound
WAC	Waste Acceptance Criteria
WAO	Waste Acceptance Organization
WPRAP	Waste Pits Remedial Action Project

1.0 INTRODUCTION

This project specific plan (PSP) describes the data collection activities necessary to support excavation control of the Operable Unit (OU) 1 Stockpile Area, located within Area 6. The format of this PSP differs from that of previously submitted PSPs as this PSP only presents the specific information regarding the OU1 Stockpile Area. The general information that is routinely addressed in a PSP, can be found in 20300-PSP-0011, *Project Specific Plan Guidelines for General Characterization for Sitewide Soil Remediation.* While this PSP (20603-PSP-0001) has section headings similar to a full-length PSP, where the information in the section is identical to the information in the general PSP (20300-PSP-0011) a reference to the general PSP is made, and the information is not repeated.

1.1 PURPOSE

The purpose of this PSP is to provide specific direction regarding the excavation of the OU1 Stockpile Area. This document provides the expected guidelines of excavation control, including reasons for sample collection, constituents of concern, and physical sample analytical requirements (see Table 2-1).

1.2 SCOPE

The area included within the scope of this PSP is the OU1 Stockpile Area. The schedule for implementation of this PSP is expected to begin late winter/early spring of 2004. Excavation of the area south of the Pit 4 cap area and beneath the Pit 4 cap footprint of the OU1 Stockpile Area began in the fall of 2003. The area will not be certified immediately following excavation due to ongoing activities in the surrounding contiguous areas. However, access to the OU1 Stockpile Area will be limited after excavation activities are completed to avoid potential re-contamination of the area.

As noted in the above paragraph, excavation in the OU1 Stockpile Area has commenced. All variances documenting the work in the area of the OU1 Stockpile Area, issued under 20650-PSP-0001, *Project Specific Plan for Predesign Sampling in Area 6 SP-7/OU1 Stockpile Area*, are attached as Appendix A.

This PSP is not considered a work authorization document (for implementation of fieldwork) per SH-0021, Work Permits. Work authorization documents directing the implementation of fieldwork, per SH-0021, may include applicable Environmental Services procedures, Fluor Fernald work permits, Radiological Work Permit (RWP), penetration permits, and other applicable permits.

1.3 VARIANCE/FIELD CHANGE NOTICE (V/FCN) DOCUMENTATION

The Variance/Field Change Notice (V/FCN) process is utilized to document the occurrence of two situations. The first is to document a change in protocol occurring when a modification in the characterization approach is required (e.g., a different decision process for defining the extent of contamination or for verifying that soil is below-WAC or below-FRL concentrations). Factors that will be considered under special circumstances include safety of the workers, cost effectiveness, the need for a timely response, and impending weather conditions. This type of V/FCN requires agency approval prior to implementation.

The second situation requiring a V/FCN is to provide direction and documentation of sampling and analytical activities and to provide variable information that is dependent upon field conditions and cannot be specified initially in this PSP. As part of the excavation control process, the collection of physical samples will be documented with V/FCNs as well as with applicable field logs. In this situation the use of this V/FCN form is not used to document a change in the protocol of this PSP, but is used to document sampling and analytical activities in order to demonstrate that these activities are compliant with the protocols of this PSP. Additionally, the Data Group Form, FS-F-5157 will be generated per Procedure EW-1021, Preparation of the Project Waste Identification and Disposition (PWID) Report, following the generation of data from the analysis of physical samples.

If a V/FCN is required, the Characterization Manager or designee will document the change and requirements through the V/FCN process in accordance with Section 7.5 of 20300-PSP-0011, *Project Specific Plan Guidelines for General Characterization for Sitewide Soil Remediation.*

1.4 KEY PERSONNEL

Reference Section 1.4 of 20300-PSP-0011, *Project Specific Plan Guidelines for General Characterization for Sitewide Soil Remediation.*

2.0 AREA-SPECIFIC WORK REMAINING STATUS

2.1 OU1 STOCKPILE AREA

2.1.1 History

The OU1 Stockpile Area is a flat, irregularly shaped area of approximately 5 acres lying between the waste pits and the former process area. The area is bounded on the west by the rail spur and on the east by the haul road and was used at one time as temporary storage of clay soil from liner construction activities for Waste Pit 4. Individual soil piles (of approximately one truckload each) can be seen in this area in site photos from 1988 but do not appear in later site photos.

2.1.2 Predesign

This supplemental PSP differs from the typical supplemental PSP because predesign activities are complete. The predesign investigation of the OU1 Stockpile Area was completed per 20650-PSP-0001, *Project Specific Plan for Predesign Sampling in Area 6 SP-7/OU1Stockpile Area*. Therefore, the required subsections for this section per 20300-PSP-0011 are not applicable and are not listed.

2.1.3 Excavation Control

2.1.3.1 ASCOCs

The preliminary lists of ASCOCs, located in the *Implementation Plan for Area 6 OU1 Stockpile Area*, 20603-PL-0001 and data from the predesign investigation of the OU1 Stockpile Area resulted in the following lists of primary and secondary COCs:

Primary COCs

- Radium-226
- Radium-228
- Thorium-228
- Thorium-232
- Total Uranium

Secondary COCs

- Aroclor-1254
- Aroclor-1260
- Technetium-99

The data collected in the OU1 Stockpile Area was compared to the OSDF WAC. The only constituents that were above-WAC in the area are technetium-99 and total uranium. However, PCBs (aroclor-1254 and aroclor-1260) were detected at one location with concentrations above the FRL at depths below the uranium contamination. Therefore, the constituents controlling excavation in the OU1 Stockpile Area are technetium-99, total uranium and PCBs (aroclor-1254 and aroclor-1260).

2.1.3.2 Excavation Types

The types of excavation identified in the OU1 Stockpile Area are those that are either above-WAC (driven by total uranium or technetium-99) or above-FRL (driven by total uranium or PCBs). Real-time scanning for total uranium will be performed for both above-WAC uranium areas and above-FRL uranium areas per 20300-PSP-0011, Section 5.1. Physical sampling for excavation control for above-WAC technetium-99 contamination and above-FRL PCB contamination will be performed per 20300-PSP-0011, Section 5.2. Table 2-1 addresses the physical sample volumes, preservation requirements and analysis information. Table 2-2 lists the excavation control COC limits for the potential COCs that may drive excavation in the Area 6 OU1 Stockpile Area. Table 2-3 addresses the excavation monitoring and sampling requirements.

TABLE 2-1
PHYSICAL SAMPLE ANALYTICAL REQUIREMENTS

Analyte[a] (TAL)	Method	Sample Matrix	ASL	Preserve	Hold Time	Container[b]	Minimum Sample Mass
Technetium-99 (TAL A)	LSC	Solid	B	None	12 months	Plastic or Glass	50 grams
Total Uranium (TAL B)	ICP/MS	Solid	B	None	12 months	Plastic or Glass	50 grams
Aroclor-1254 and Aroclor-1260 (TAL C)	GC	Solid	B	Cool 4°C	14 days	Glass	30 grams (90 grams)[c]

[a]One sample per release shipped to an off-site laboratory shall be identified on the Chain of Custody/Request for Analysis form as "designated for laboratory QC".
[b]Sample container types may be changed at the direction of the Field Sampling Lead, as long as the volume requirements, container compatibility requirements, and SCQ requirements are met.
[c]One sample per sampling event (or one per 20 collected, whichever is more frequent) must be triple the specified mass in order for the laboratory to perform contract required quality control analysis. The sample with triple mass shall be "designated for laboratory QC".

ASL – analytical support level
GC – gas chromatograph
ICP/MS – inductively coupled plasma/mass spectrometry
LSC – liquid scintillation counting

TABLE 2-2
LIMITS FOR AREA 6 OU1 STOCKPILE AREA EXCAVATION CONTROL COCs

COCs	WAC Maximum Concentration	FRL	MDC
Total Uranium	1030 mg/kg	82 mg/kg	8.2 mg/kg
Technetium-99	29.1 pCi/g	30 pCi/g	2.9 pCi/g
Aroclor-1254 and –1260	N/A	0.13 mg/kg	0.013 mg/kg

TABLE 2-3
EXCAVATION MONITORING/SAMPLING REQUIREMENTS

Type of Contamination Zone	Types of Samples/Measurements and Data Use		
	Sideslope of Each Excavation Lift	Floor of Each Excavation Lift	Floor/Sideslope at Design Depth for Contamination Zone
Above-WAC Tc-99	• Physical Tc-99/Lab (for WAC)	• None	• Physical Tc-99/Lab (for WAC)
Above-WAC Uranium	• Real-time for Uranium WAC	• None	• Real-time for Uranium WAC
Above-FRL Uranium	• Real-time for Uranium FRL	• Real-time for Uranium (WAC)	• Real-time for Uranium FRL*
Above-FRL Aroclor-1254 and Aroclor–1260	• Physical Aroclor-1254 and -1260/Lab (for FRL)	• None	• Physical Aroclor-1254 and -1260/Lab (for FRL)

*During the real-time uranium FRL scan, the data collected will be evaluated later for precertification purposes.

2.1.3.3 Locations

The list of above-WAC and above-FRL areas (see Figure 2-1) and associated COCs are as follows:

Above-WAC Areas	**COC**	**Depth (feet)**
Area 1 – North of the Pit 4 Cap Stockpile	Total Uranium	0 – 0.5
Area 2 – Northwest of the Pit 4 Cap Stockpile	Technetium-99	0 - 0.17
Area 3 – Southwest of the Pit 4 Cap Stockpile	Total Uranium	0 - 0.17

Above-FRL Areas	**COC**	**Depth (feet)**
Area 1 – South of the Pit 4 Cap Stockpile	Aroclor-1254 and -1260	2 - 2.5

2.1.4 Precertification

Precertification will be performed per 20300-PSP-0011, Section 3.0 and Section 6.0.

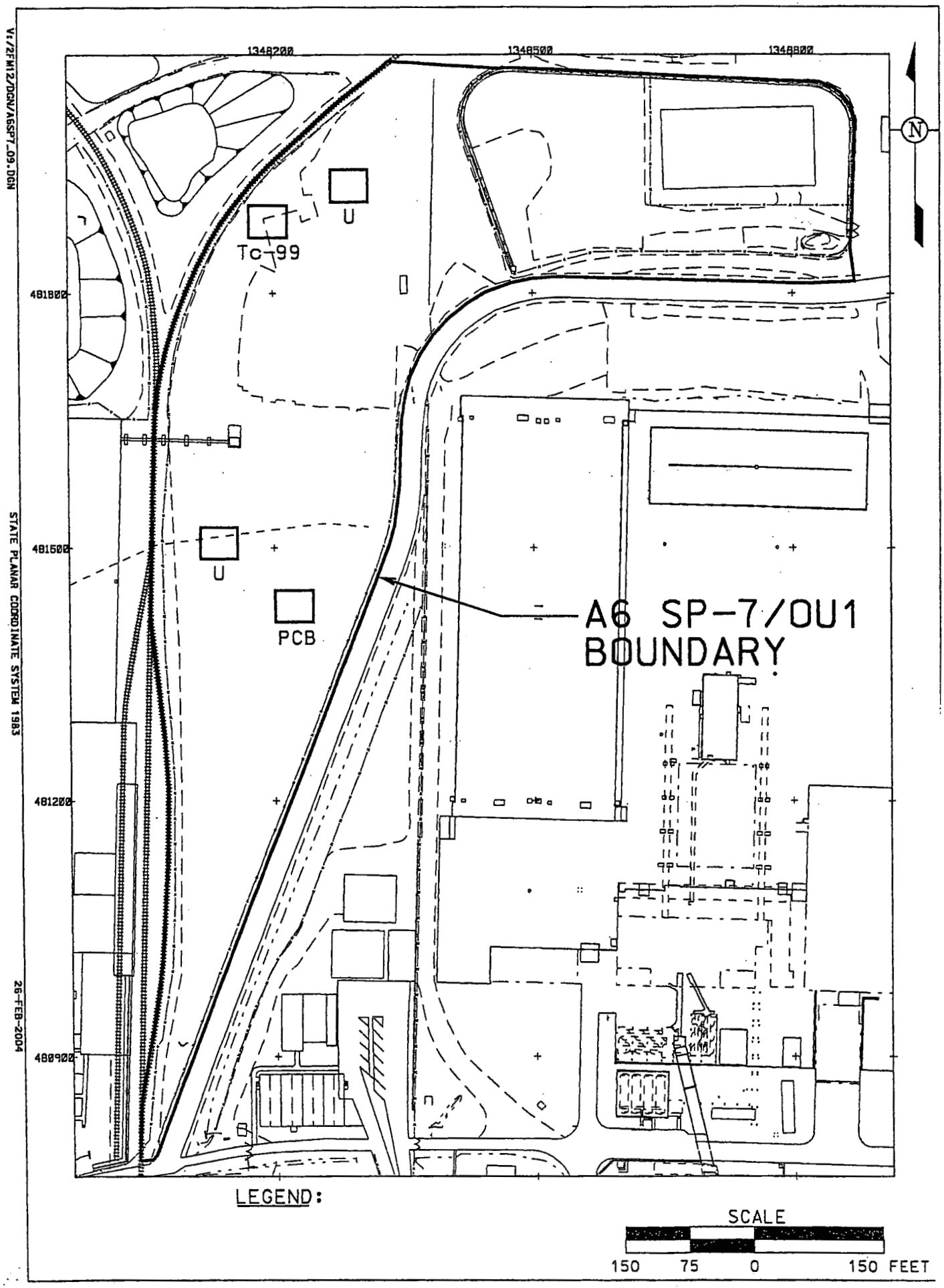

FIGURE 2-1. U, Tc-99, PCB AREAS

3.0 INSTRUMENTATION AND TECHNIQUES

Reference the corresponding section of 20300-PSP-0011, *Project Specific Plan Guidelines for General Characterization for Sitewide Soil Remediation* for each of the following sections:

3.1 MEASUREMENT INSTRUMENTATION AND TECHNIQUES

3.1.1 Real-Time

3.1.1.1 Sodium Iodide Data Acquisition (RTRAK, RSS, GATOR, EMS)

3.1.1.2 HPGe Data Acquisition

3.1.1.3 Excavation Monitoring System

3.1.1.4 Radon Monitor

3.1.2 Surface Moisture Measurements

3.2 REAL-TIME MEASUREMENT IDENTIFICATION

3.3 REAL-TIME DATA MAPPING

3.4 REAL-TIME SURVEYING

4.0 PREDESIGN

This supplemental PSP differs from the typical supplemental PSP because predesign activities are complete. The predesign investigation of the OU1 Stockpile Area was completed per 20650-PSP-0001, *Project Specific Plan for Predesign Sampling in Area 6 SP-7/OU1 Stockpile Area.* Therefore, the required subsections for this section per 20300-PSP-0011 are not applicable and are not listed.

5.0 EXCAVATION CONTROL MEASURES

Reference the corresponding section of 20300-PSP-0011, *Project Specific Plan Guidelines for General Characterization for Sitewide Soil Remediation* for each of the following sections:

5.1 EXCAVATION DESIGN CONTROL REQUIREMENTS

5.1.1 Contamination Zone

5.1.2 Floors, Roads and Foundations

5.1.3 Real-Time Lift Scans

5.1.4 AWAC Lift Scans

5.2 ORGANIC SCREENING AND PHYSICAL SAMPLING REQUIREMENTS

5.2.1 Above-WAC Photoionization Detector (PID)/Gas Chromatograph (GC) Screening

5.2.2 All Other Physical Sample Requirements

5.2.3 PID Screening and Physical Sampling Procedures

5.2.4 Physical Sample Identification

6.0 PRECERTIFICATION

Reference the corresponding section of 20300-PSP-0011, *Project Specific Plan Guidelines for General Characterization for Sitewide Soil Remediation* for each of the following sections:

6.1 INITIAL PRECERTIFICATION NaI SCAN AT BASE OF DESIGN GRADE

6.2 PRECERTIFICATION HPGE MEASUREMENTS IN 20 PPM FRL (URANIUM) AREAS

6.3 PRECERTIFICATION HPGE MEASUREMENTS IN 82 PPM FRL (URANIUM) AREAS

6.4 DELINEATING HOT SPOTS FOLLOWING PRECERTIFICATION HPGE MEASUREMENTS

7.0 QUALITY ASSURANCE/QUALITY CONTROL REQUIREMENTS

Reference the corresponding section of 20300-PSP-0011, *Project Specific Plan Guidelines for General Characterization for Sitewide Soil Remediation* for each of the following sections:

7.1 QUALITY CONTROL SAMPLES - REAL-TIME MEASUREMENTS AND PHYSICAL SAMPLES

7.2 DATA VALIDATION

7.2.1 Physical Sample Data Validation

7.2.2 Real-Time Data Verification/Validation

7.3 APPLICABLE DOCUMENTS, METHODS AND STANDARDS

7.4 SURVEILLANCES

7.5 IMPLEMENTATION AND DOCUMENTATION OF VARIANCE/ FIELD CHANGE NOTICES (V/FCN)

8.0 SAFETY AND HEALTH

Reference the corresponding section of 20300-PSP-0011, *Project Specific Plan Guidelines for General Characterization for Sitewide Soil Remediation* for this section.

9.0 EQUIPMENT DECONTAMINATION

Reference the corresponding section of 20300-PSP-0011, *Project Specific Plan Guidelines for General Characterization for Sitewide Soil Remediation* for this section.

10.0 DISPOSITION OF WASTES

Reference the corresponding section of 20300-PSP-0011, *Project Specific Plan Guidelines for General Characterization for Sitewide Soil Remediation* for this section.

11.0 DATA AND RECORDS MANAGEMENT

Reference the corresponding section of 20300-PSP-0011, *Project Specific Plan Guidelines for General Characterization for Sitewide Soil Remediation* for each of the following sections:

11.1 REAL-TIME

11.2 PHYSICAL SAMPLES

APPENDIX A

OU1 STOCKPILE AREA VARIANCES AND SAMPLE RESULTS

1

Variance No.	Variance Date	Variance Description	Significant? (Y or N)	Date Signed	Date Distributed	EPA/OEPA Approval
20650-PSP-0001-04	12/1/03	Collection of grab soil samples in Area 6 OU1 Stockpile Area from the only designed Tc-99 above-WAC Area for technetium-99 analysis	N	12/2/03	12/3/03	N/A
20650-PSP-0001-05	12/30/03	Collection of grab soil samples in Area 6 OU1 Stockpile Area from designed Total Uranium above-WAC area for total uranium analysis.	N	2/24/04	3/2/04	N/A

2

VARIANCE / FIELD CHANGE NOTICE	Significant? (Yes or No): No	V/F: 20650-PSP-0001-04
WBS NO.: PROJECT/DOCUMENT/ECDC # 20650-PSP-0001 Rev.1		Page: 1 of 3
PROJECT TITLE: Project Specific Plan for Predesign Sampling in Area 6 SP-7/OU-1 Stockpile Area		Date: 12/1/03

VARIANCE / FIELD CHANGE NOTICE (Include justification):
DRAFT

EXCAVATION CONTROL SAMPLING

This Variance/Field Change Notice (V/FCN) documents the collection of grab soil samples in Area 6 OU1 Stockpile Area from the only designed Tc99 AWAC Area for technetium-99 analysis. A formal PSP to describe the OU1 Stockpile Area was submitted and is in the process of review. The designed above-WAC area was excavated. Figure 1 provides a general drawing of the approximate area that is to be sampled. Samples are to be collected in the above-WAC technetium-99 area that has been excavated to verify above-WAC technetium-99 has been removed, see Figure 1.

Consistent with typical excavation control guidance as described in the Area 3A/4A Excavation Characterization PSP (Section 2.6.8.3), sample locations will be marked every 20' on each sidewall within 0-4' of the floor. A minimum of 1 location per sidewall is required. The excavation floor will be divided into a 20'X 20' grid and one location will be marked in each block. A minimum of 2 locations will be marked on the floor. One sample will be collected from each location for technetium-99 (TAL G). If there are no discernible sideslopes then four samples will be field-located in the excavation at representative spacing. Therefore, approximately four to six samples will be collected for technetium-99 (TAL G) from this area.

See Attachment 1 for the TAL and the Sampling and Analytical Requirements.

The first sample ID shall be A6OU1-NWT-DG-1^TC and each additional sample ID will be sequentially numbered (e.g. second sample ID is A6OU1-NWT-DG-2^TC).

Where:
A6OU1 = Area 6 Operable Unit 1 Stockpile Area
NWT = Northwest Tc99 AWAC area
DG = Design Grade
1,2,3, etc. = Consecutive Sample Numbers (Locations)
TC = technetium-99

Surveying required: Yes. Surveying of sample locations will occur after samples have been collected.
Field QC samples required: No
Field data validation: Yes
Analytical data validation: No
Data package requirements: ASL B

Justification:
Physical sampling is required to ensure all above-WAC technetium-99 contamination has been removed during excavation.

REQUESTED BY: Ron White Date: 12/1/03

X IF REQD	VARIANCE/FCN APPROVAL	DATE	X IF REQD	VARIANCE/FCN APPROVAL	DATE
X	QUALITY ASSURANCE: R. Friske	12-1-03	X	PROJECT MANAGER: J.D. Chiou	12/1/03
	DATA QUALITY MANAGEMENT		X	CHARACTERIZATION MANAGER: F. Miller	12/1/03
X	ANALYTICAL CUSTOMER SUPPORT: Heather McCoy	12/2/03		RTIMP Manager	
X	WAO: Linda Barb	12/2/03	X	SAMPLING MANAGER: T. Bylenga for T.B.	12/2/03

VARIANCE/FCN APPROVED [X]YES [ ]NO REVISION REQUIRED: [ ]YES [x]NO

DISTRIBUTION

PROJECT MANAGER:	DOCUMENT CONTROL: Jeannie Rosser	OTHER:
QUALITY ASSURANCE:	CHARACTERIZATION MANAGER: Frank Miller	OTHER:
FIELD MANAGER:	OTHER:	OTHER:

ORIGINAL

V/F: 20650-PSP-0001-04
Attachment 1

SAMPLING AND ANALYTICAL REQUIREMENTS

Analyte	Lab	Sample Matrix	ASL	TAT[a]	Preserve	Holding Time	Container	Sample Mass
TAL A (Technetium-99)	Onsite	Solid	B	9 a.m. second day	None	12 months	Appropriate Size Plastic Container	50 g

[a] This TAT signifies when the data is due back to the project irrespective of data entry into the database. All subsequent batches are due in 1day increments

TAL 20650-PSP-0001-A
(ASL B)

Analyze	WAC Limit	MDC
Technetium-99	29.1 pCi/g	2.91 pCi/g

MDC - minimum detection concentration

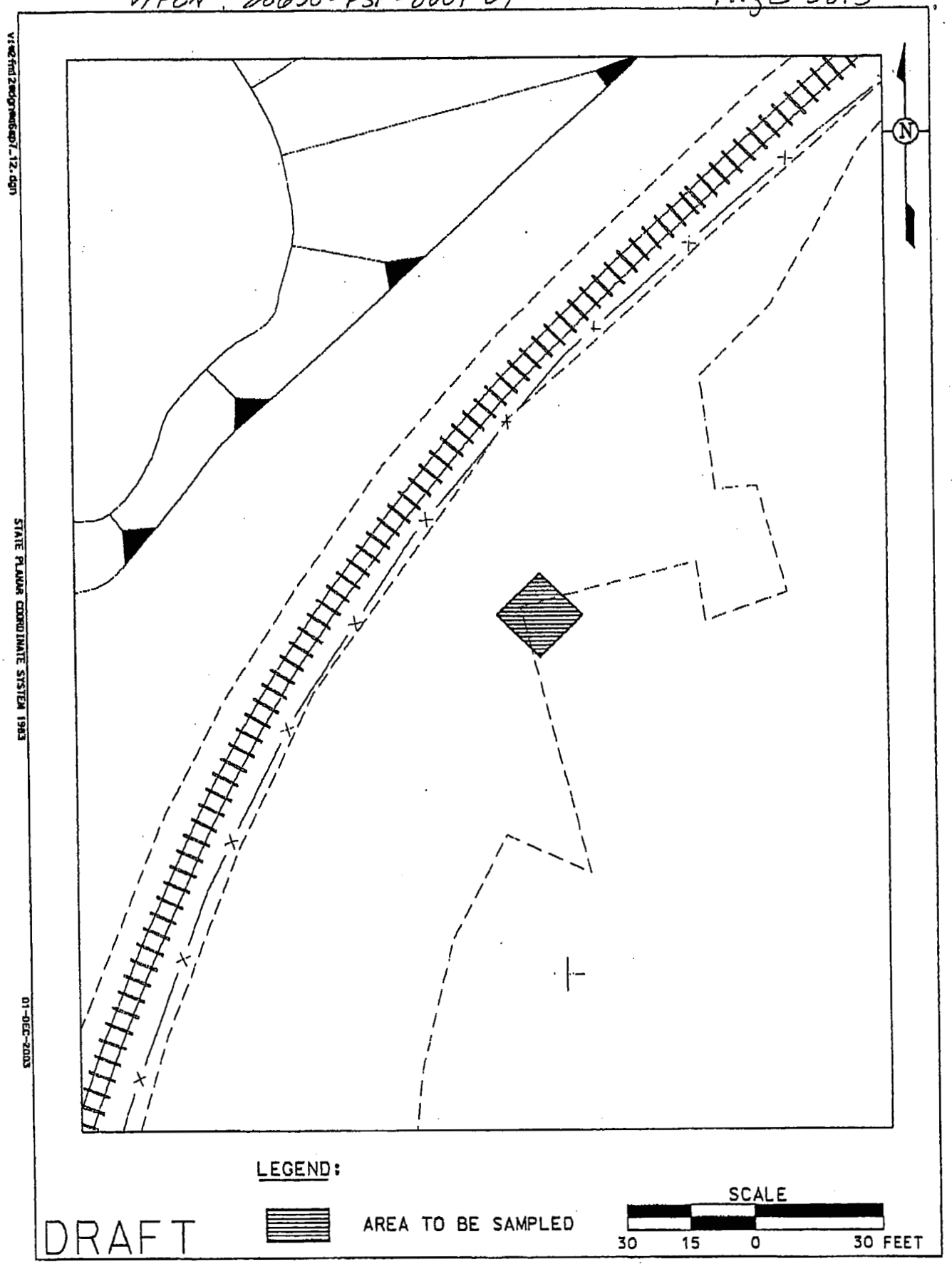
v:\2fnd2\dgn\6sp7_12.dgn
STATE PLANAR COORDINATE SYSTEM 1983
01-DEC-2003
N
LEGEND:
AREA TO BE SAMPLED
SCALE
30 15 0 30 FEET
DRAFT

Figure 1

VARIANCE / FIELD CHANGE NOTICE	Significant? (Yes or No): No	V/F: 20650-PSP-0001-05
WBS NO.: PROJECT/DOCUMENT/ECDC # 20650-PSP-0001 Rev.1		Page: 1 of 2
PROJECT TITLE: Project Specific Plan for Predesign Sampling in Area 6 SP-7/OU-1 Stockpile Area		Date: 12/30/03

VARIANCE / FIELD CHANGE NOTICE (Include justification):

EXCAVATION CONTROL SAMPLING

This Variance/Field Change Notice (V/FCN) documents the collection of grab soil samples from the Area 6 OU1 Stockpile designed total uranium AWAC Area. A formal PSP to describe the OU1 Stockpile Area was submitted and is in the process of review. Samples are to be collected from the excavated above-WAC total uranium area to verify that all above-WAC total uranium has been removed.

Consistent with typical excavation control guidance as described in the Area 3A/4A Excavation Characterization PSP (Section 2.6.8.3), sample locations will be marked every 20' on each sidewall within 0-4' of the floor. A minimum of 1 location per sidewall is required. The excavation floor will be divided into a 20'X 20' grid and one location will be marked in each block. A minimum of 2 locations will be marked on the floor. One sample will be collected from each location for total uranium (TAL E). If there are no discernible sideslopes then four samples will be collected in the excavation at representative spacing. Therefore, approximately four to six samples will be collected for total uranium (TAL E) from this area.

See Attachment 1 for the TAL and the Sampling and Analytical Requirements.

The first sample ID shall be A6OU1-NETU-DG-1^TU and each additional sample ID will be sequentially numbered (e.g. second sample ID is A6OU1-NETU-DG-2^TU).

Where:
A6OU1 = Area 6 Operable Unit 1 Stockpile Area
NETU = Northeast Total U AWAC area
DG = Design Grade
1,2,3, etc. = Consecutive Sample Numbers (Locations)
TU = total uranium

Surveying required: Yes, Sample locations will be surveyed in and flagged prior to sample collection. See Attachment 1 for exact coordinates.
Field QC samples required: No
Field data validation: Yes
Analytical data validation: No
Data package requirements: No

Justification:
Physical sampling is required to ensure all above-WAC total uranium contamination has been removed during excavation.

REQUESTED BY: Denise Arico Date: 12/30/03

X IF REQD	VARIANCE/FCN APPROVAL	DATE	X IF REQD	VARIANCE/FCN APPROVAL	DATE
X	QUALITY ASSURANCE: R. Frisks [signature]	2/24/04	X	PROJECT MANAGER: J.B. Chiou [signature]	2/24/04
	DATA QUALITY MANAGEMENT		X	CHARACTERIZATION MANAGER: F. Miller [signature]	2/24/04
X	ANALYTICAL CUSTOMER SUPPORT:			RTIMP Manager	
X	WAC [signature]	2-24-04	X	SAMPLING MANAGER: T. Buhriage [signature]	2/24/04

VARIANCE/FCN APPROVED [X]YES [ ]NO REVISION REQUIRED: [ ]YES [x]NO

DISTRIBUTION

PROJECT MANAGER:	DOCUMENT CONTROL: Jeannie Rosser	OTHER:
QUALITY ASSURANCE:	CHARACTERIZATION MANAGER: Frank Miller	OTHER:
FIELD MANAGER:	OTHER:	OTHER:

ATTACHMENT 1

SAMPLING AND ANALYTICAL REQUIREMENTS

Analyte	Lab	Sample Matrix	ASL	TAT[a]	Preserve	Holding Time	Container	Sample Mass
TAL E. (Total U)	Onsite	Solid	B	9 a.m. second day	None	12 months	Appropriate Size Plastic Container	50 g

[a] This TAT signifies when the data is due back to the project irrespective of data entry into the database. All subsequent batches are due in 1day increments

TAL 20650-PSP-0001-E
(ASL B)

Analyze	WAC Limit	MDC
Total Uranium	1030 mg/kg	10.3 mg/kg

MDC - minimum detection concentration

SAMPLE COORDINATES

Sample ID	Northing	Easting	Elevation
A6OU1-NETU-DG-1^TU	481930.204	1348292.132	587.709
A6OU1-NETU-DG-2^TU	481930.875	1348284.695	587.423
A6OU1-NETU-DG-3^TU	481923.157	1348284.886	587.468
A6OU1-NETU-DG-4^TU	481923.948	1348292.963	587.638
A6OU1-NETU-DG-5^TU	481928.771	1348288.302	585.891
A6OU1-NETU-DG-6^TU	481924.688	1348289.163	585.876

Boring	Parameter	Sample Date	Result	Qualifier	Units	SampleID
A6OU1-NETU-DG-1	Uranium, Total	12/31/2003	29	NV	mg/kg	A6OU1-NETU-DG-1^TU
A6OU1-NETU-DG-2	Uranium, Total	12/31/2003	29.2	NV	mg/kg	A6OU1-NETU-DG-2^TU
A6OU1-NETU-DG-3	Uranium, Total	12/31/2003	6.61	NV	mg/kg	A6OU1-NETU-DG-3^TU
A6OU1-NETU-DG-4	Uranium, Total	12/31/2003	57.2	NV	mg/kg	A6OU1-NETU-DG-4^TU
A6OU1-NETU-DG-5	Uranium, Total	12/31/2003	45.8	NV	mg/kg	A6OU1-NETU-DG-5^TU
A6OU1-NETU-DG-6	Uranium, Total	12/31/2003	48.1	NV	mg/kg	A6OU1-NETU-DG-6^TU
A6OU1-NWT-DG-1	Technetium-99	11/17/2003	0.68	UNV	pCi/g	A6OU1-NWT-DG-1^TC
A6OU1-NWT-DG-2	Technetium-99	11/17/2003	-1.16	UNV	pCi/g	A6OU1-NWT-DG-2^TC
A6OU1-NWT-DG-3	Technetium-99	11/17/2003	1.38	UNV	pCi/g	A6OU1-NWT-DG-3^TC
A6OU1-NWT-DG-4	Technetium-99	11/17/2003	1.11	UNV	pCi/g	A6OU1-NWT-DG-4^TC
A6OU1-NWT-DG-5	Technetium-99	11/17/2003	0.82	UNV	pCi/g	A6OU1-NWT-DG-5^TC
A6OU1-NWT-DG-6	Technetium-99	11/17/2003	-1.11	UNV	pCi/g	A6OU1-NWT-DG-6^TC