5-402.40

1528

Department of Energy

Ohio Field Office
Fernald Area Office
P. O. Box 538705
Cincinnati, Ohio 45253-8705
(513) 648-3155

JUN 19 1998

DOE-0885-98

Mr. James A. Saric, Remedial Project Manager
U.S. Environmental Protection Agency
Region V-SRF-5J
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

Mr. Tom Schneider, Project Manager
Ohio Environmental Protection Agency
401 East 5th Street
Dayton, Ohio 45402-2911

Dear Mr. Saric and Mr. Schneider:

TRANSMITTAL OF VARIANCES TO PROJECT SPECIFIC PLANS

This letter transmits for your records, variances to the following Project Specific Plans (PSP): PSP for Sampling of Soil Stockpile 5 for On-Site Disposal Facility (OSDF) Waste Acceptance Criteria (WAC) Attainment; Area 8 Phase I Certification Sampling, Rev 1; the Geotechnical Sampling and Testing Plan for the Southeast Borrow Area 1 Phase II; and the A2P1 Delineation of Areas Exceeding WAC. The variances do not involve a significant change in scope.

If you have questions or comments regarding these variances, please contact Kathleen Nickel at (513) 648-3166.

Sincerely,

Johnny W. Reising
Fernald Remedial Action
Project Manager

FEMP:Nickel

Enclosures: As Stated

cc w/encs:

T. Schneider, OEPA-Dayton (total of 3 copies of enc.)
F. Barker, Tetra Tech
AR Coordinator, FDF/78

cc w/o encs:

A. Tanner, DOE-FEMP
EDC, FDF/52-7

VARIANCE / FIELD CHANGE NOTICE

V/F No. 20.03.13.02-17

WBS NO.: 20.03.13.02 Project # 20400-PSP-0001 Rev 0

PROJECT TITLE: A2PI Delineation of Areas Exceeding WAC (Rev. 0)

Date: 6/3//98

VARIANCE / FIELD CHANGE NOTICE (Include justification):

1528

1) Variance/field change notice (V/FCN) 20.03.02-14 documented the request for HPGe measurements over the Inactive Flyash Pile area. As close to 100% coverage as feasible was requested and planned locations for measurements were identified. This V/FCN documents the planned locations which were inaccessible as the field work was conducted. The following areas could not be measured due to the steep slope along Paddys Run.

A2P1-IFP-5G	A2P1-IFP-48G	A2P1-IFP-90G	A2P1-IFP-122G
A2P1-IFP-9G	A2P1-IFP-54G	A2P1-IFP-91G	A2P1-IFP-123G
A2P1-IFP-15G	A2P1-IFP-55G	A2P1-IFP-100G	A2P1-IFP-124G
A2P1-IFP-21G	A2P1-IFP-60G	A2P1-IFP-100G-D	A2P1-IFP-125G
A2P1-IFP-27G	A2P1-IFP-60G-D	A2P1-IFP-101G	A2P1-IFP-126G
A2P1-IFP-33G	A2P1-IFP-66G	A2P1-IFP-102G	A2P1-IFP-127G
A2P1-IFP-34G	A2P1-IFP-67G	A2P1-IFP-111G	A2P1-IFP-128G
A2P1-IFP-39G	A2P1-IFP-73G	A2P1-IFP-112G	A2P1-IFP-129G
A2P1-IFP-40G	A2P1-IFP-80G	A2P1-IFP-113G	A2P1-IFP-130G
A2P1-IFP-40G-D	A2P1-IFP-80G-D	A2P1-IFP-114G	A2P1-IFP-131G
A2P1-IFP-41G	A2P1-IFP-81G	A2P1-IFP-115G	A2P1-IFP-132G
A2P1-IFP-42G	A2P1-IFP-89G	A2P1-IFP-121G	A2P1-IFP-132G-D
A2P1-IFP-47G			

The following locations were not measured for various other reasons listed below.

A2P1-IFP-7G (under gravel pile)	A2P1-IFP-80G-D (in a ravine)
A2P1-IFP-58G (on side of small hill)	A2P1-IFP-88G (in a ravine)
A2P1-IFP-80G (in a ravine)	A2P1-IFP-98G (in a ravine)
A2P1-IFP-99G (in a ravine)	

INFORMATION ONLY

Justification:

These measurements could not be taken at the above locations due to topographic variations and existing field conditions. Despite this fact, approximately 100% of the IFP footprint area was covered by the measurements taken (see the attached map of results).

REQUESTED BY: Mike Rolfes Date: June 4, 1998

X IF REQD	VARIANCE/FCN APPROVAL	DATE	X IF REQD	VARIANCE/FCN APPROVAL	DATE
X	QUALITY ASSURANCE R. Smith	6-4-98		PROJECT MANAGER	
	DATA QUALITY MANAGEMENT		X	SCEP REAL TIME MGR John Hewitt	6/4/98
	ANALYTICAL CUSTOMER SUPPORT		X	A[illegible] Vicky L. Zimmerman	6/4/98
	OTHER			OTHER	

VARIANCE/FCN APPROVED [X]YES [ ]NO

REVISION REQUIRED: [ ]YES [x]NO

DISTRIBUTION

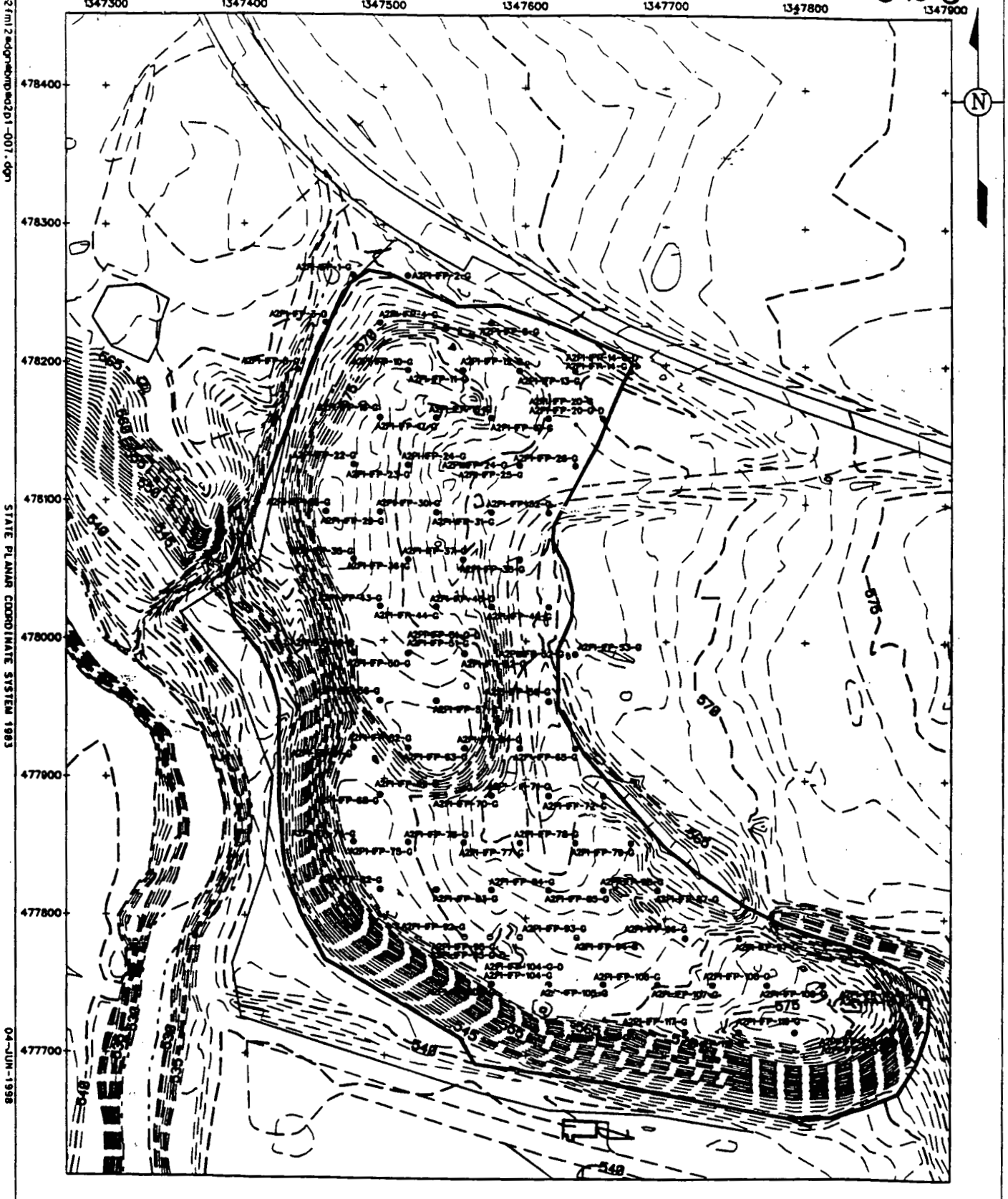
PROJECT MANAGER:	DOCUMENT CONTROL: Jeanie Rosser	OTHER:
QUALITY ASSURANCE:	OTHER:	OTHER:
FIELD MANAGER:	OTHER:	OTHER:

ORIGINAL

3

V/F No. 20.03.13.02-17 Page 2 of 2

P528



LEGEND:

DRAFT

FEMP BOUNDARY

SCALE

100 50 0 100 FEET

A2P1-IFP SURFACE SCAN HPGE MEASUREMENTS TOTAL URANIUM (ppm)

4

1528

TRANSMITTAL

ECDC PROJECT DOCUMENT CONTROL

112804

JARR5585

To: NICKEL, KATHLEEN A

Date: 06/05/98

Control No: **NA**

Location/Mail Stop: 45

From: ECDC

FOLLOW INSTRUCTIONS BELOW

APPROVED VARIANCE/FCN 20400

Project	CWO	Document No	Rev	Title of Document	Comments
20400 VARIANCE		20.03.13.02-17	0	AREA 2 PHASE I DELINEATION OF AREAS EXCEEDING WAC (REV 0)	INFORMATION ONLY

As a controlled document holder, you are required to destory any old revisions of this document. Sign and date below, verifying receipt of these documents. **Return this record of receipt to ECDC PROJECT DOCUMENT CONTROL, 52-7.** Return receipt within ten (10) days of transmittal date.

Signature

Date

IF TERMINATION OR TRANSFER OCCURS, NOTIFY ECDC PROJECT DOCUMENT CONTROL AT 4481

5

TRANSMITTAL
ECDC PROJECT DOCUMENT CONTROL

1528 102954 JARR5585

To: NICKEL, KATHLEEN A
Control No: NA
Location/Mail Stop: 45

Date: 04/01/98

From: ECDC

FOLLOW INSTRUCTIONS BELOW
VARIANCE / FCN 20710-PSP-0005

Project	CWO	Document No	Rev	Title of Document	Comments
VARIANCE		50.03.59.07-4	0	GEOTECHNICAL SAMPLING AND TESTING PLAN FOR THE SOUTHEAST BORROW AREA 1 PHASE II (REV 2)	INFORMATION ONLY

As a controlled document holder, you are required to destory any old revisions of this document. Sign and date below, verifying receipt of these documents. **Return this record of receipt to ECDC PROJECT DOCUMENT CONTROL, 52-7.** Return receipt within ten (10) days of transmittal date.

Signature Date

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VARIANCE / FIELD CHANGE NOTICE

1528

V/F 50.03.59.07-4

WBS NO.: 50.03.59.07, Document No. 20710-PSP-0005

Page 1 of 1

PROJECT TITLE: Certification of A1PII Sector 1, Sector 2a, and Conveyance Ditch

Date: 3/25/98

VARIANCE / FIELD CHANGE NOTICE (Include justification):

Field Change Notice:

This variance documents the addition of 3 samples in the Certification Unit (CU) A1PII-S2-01. The following table lists the sample identification labels, locations, and Target Analyte List.

Sample Ids	Northing	Easting	TAL
A1PII-S2-2A-01-17M	481751.92	1350987.535	TAL D
A1PII-S2-2A-01-17P	481751.92	1350987.535	TAL E
A1PII-S2-2A-01-17R	481751.92	1350987.535	TAL A
A1PII-S2-2A-01-18M	481751.864	1351138.236	TAL D
A1PII-S2-2A-01-18P	481751.864	1351138.236	TAL E
A1PII-S2-2A-01-18R	481751.864	1351138.236	TAL A
A1PII-S2-2A-01-19M	481750.00	1351256.717	TAL D
A1PII-S2-2A-01-19P	481750.00	1351256.717	TAL E
A1PII-S2-2A-01-19R	481750.00	1351256.717	TAL A

Justification:

These samples are being added to determine if any run-off from the East Impacted Stockpile contaminated the CU.

INFORMATION ONLY

REQUESTED BY: Alex Duarte Date: 3/25/98

X IF REQD	VARIANCE/FCN APPROVAL	DATE	X IF REQD	VARIANCE/FCN APPROVAL	DATE
X	QUALITY ASSURANCE K Fajita	4-1-98	X	CHARACTERIZATION LEAD	3/31/98
	DATA QUALITY MANAGEMENT		X	FIELD MANAGER	3/31/98
	ANALYTICAL CUSTOMER SUPPORT		X	AREA PROJECT MANAGER	3-31-98
	OTHER			OTHER	

VARIANCE/FCN APPROVED [X]YES [ ]NO

REVISION REQUIRED: [ ]YES [x]NO

DISTRIBUTION

PROJECT MANAGER:	DOCUMENT CONTROL: Esther Dittmer	OTHER:
QUALITY ASSURANCE:	OTHER:	OTHER:
FIELD MANAGER:	OTHER:	OTHER:

7

1528

TRANSMITTAL
ECDC PROJECT DOCUMENT CONTROL

110554
ROSS9966

To: NICKEL, K.
Control No: INFO
Location/Mail Stop: 45

Date: 05/20/98

From: ECDC

FOLLOW INSTRUCTIONS BELOW
22000-PSP-0001/VARIANCE

Project	CWO	Document No	Rev	Title of Document	Comments
22000 VARIANCE		50.03.52.03-3	0	PSP FOR SAMPLING OF SOIL STOCKPILE 5 FOR OSDF WAC ATTAINMENT	

As a controlled document holder, you are required to destory any old revisions of this document. Sign and date below, verifying receipt of these documents. **Return this record of receipt to ECDC PROJECT DOCUMENT CONTROL, 52-7.** Return receipt within ten (10) days of transmittal date.

Signature

Date

IF TERMINATION OR TRANSFER OCCURS, NOTIFY ECDC PROJECT DOCUMENT CONTROL AT 4481

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VARIANCE / FIELD CHANGE NOTICE 1528

V/F No. 50.03.52.03-3

WBS NO.: 50.03.52.03 Project # 22000-PSP-0001 Rev 0

Page 1 of 3

PROJECT TITLE: PSP for Sampling of Soil Stockpile 5 for OSDF WAC Attainment

Date: 5/18/98

VARIANCE / FIELD CHANGE NOTICE (Include justification):

Variance:

Archive samples collected above and below the above-WAC intervals (see table below for total U results) will be submitted to the onsite laboratory for total uranium analysis (TAL 50.03.52.03-B). The interval below the >WAC interval in the SP5-8 and SP5-1 borings has already been submitted to the lab (due to >100 ccpm). The archive samples to be submitted to the lab under this variance are as follows:

SP5-1-B2-R (depth 10' 2" - 10' 8" ; above the >WAC interval)
SP5-8-B3-R (depth 7' 11" - 8' 5" ; above the >WAC interval)

Justification:

Total U analysis is necessary to verify the vertical extent of above-WAC soil in each of the two borings.

Variance:

This variance describes additional samples to be collected from SP5 as stated in the PSP (Section 1.4) if above-WAC soils are encountered. Above-WAC soil for total uranium was detected in boring locations 1 and 8 of SP5 during the first round of sampling per the PSP as follows:

Location	Sample ID	Depth	Screening Result (ccpm)	Lab Result (mg/kg)	Estimated Total Pile Depth
SP5-1	SP5-1-B1 -R	10' 8" - 11' 2"	10,000	3,300	11' 1"
SP5-8	SP5-8-B1 -R	8' 5" - 8' 11"	2,000	1,800	15' 5"

Additional borings will be located to encompass a triangular-shaped sector in the southwest corner of SP5 in order to bound the above-WAC soil horizontally and vertically. Five borings and one contingency location have been selected for soil coring and field screening as illustrated in Figure 2-2 attached.

Soil cores will be collected for the entire height of the pile at each of the five borings (and possibly contingency location 21) and each core will be surveyed with a beta-gamma probe (frisker). Any soil interval ≥100 ccpm will be collected by removing a 6-inch interval (bounding the ≥100 ccpm area) for total uranium analysis (TAL 50.03.52.03-B) per the PSP. As stated in the PSP, any debris in the core sample (e.g., concrete, wood, rubber, wire, etc.) that can be separated will be removed from the sample prior to containerizing.

An archive soil sample will be collected from each of the five borings at the 597.1 feet elevation (which is 6 inches above the >WAC interval in SP5-8) and archived for possible future analysis for total uranium. The archive sample intervals for the five borings are provided below. Also, archive samples will be collected above and below any interval exhibiting ≥100 ccpm for possible analysis in the future.

The total depths to be cored at each location are as follows:

Location	Total Depth (ft.)	Archive Sample Interval	Archive Sample ID
SP5-8A	15.4	8.8' - 9.3'	SP5-8A-1-R-V
SP5-8B	15.5	8.9' - 9.4'	SP5-8B-1-R-V
SP5-8C	15.5	8.9' - 9.4'	SP5-8C-1-R-V
SP5-19	**14.7****	6.9 - 7.4' *	SP5-19-1-R-V
SP5-20	7.1	0.4' - 0.9'	SP5-20-1-R-V
SP5-21A	**13.5****	6.9' - 7.4'	SP5-21A-1-R-V

(SP5-21 and SP5-21 was contingent upon results of Location 8C or 20 exhibiting >100 ccpm. This ccpm was exceeded in SP5-8C, therefore SP5-21 and SP5-21A (see note below) was completed.)

COC CONTROLLED COPY NO. INFO

* Original Variance #3 (5/11/98) designated the wrong archive sample interval (6.9'-7.4'). If necessary, a second archive may be collected in the future if the 8.1'-8.6' interval is needed for analysis (597.1 elevation).

** The depths in boldface are corrected from oringinal variance #3 where they were reversed for SP-19 and SP-21. A second boring six inches offset of SP5-21, referred to as SP5-21A is necessary to collect an archive sample from the correct interval of 6.9' - 7.4' (instead of 8.1'-8.6' as stated in original 5/11/98 variance #3).

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Any biased samples (≥100 ccpm) collected from the cores will be assigned identifiers as follows consistent with the PSP and variance #1:

A "B" for biased will be used before the depth code as: *SP5-8A-B1-R* , where the "B1" represents the first biased sample collected from boring location 8A.

Any archive samples collected will be assigned a "-V" suffix (Ex: SP5-8A-B2-R-V) to designate an archive.

Justification:

The additional borings are necessary to determine the boundaries of above-WAC (total uranium) soil to be excavated from the pile in the vicinity of boring location SP5-1 and SP5-8. The 597.1 feet elevation AMSL represents the elevation in the stockpile that will be archived and analyzed if necessary to further establish the elevation of below-WAC to be used to support the excavation plan. In general, the information to be gained from this variance is required to design an excavation plan for SP5 to segregate above-WAC soil from below-WAC soil.

REQUESTED BY: Mike Frank Date: 5/18/98

X IF REQD	VARIANCE/FCN APPROVAL	DATE	X IF REQD	VARIANCE/FCN APPROVAL	DATE
X	QUALITY ASSURANCE	5-18-98	X	PROJECT MANAGER	5-20-
	DATA QUALITY MANAGEMENT		X	FIELD SAMPLING MGR.	5/18/9
	ANALYTICAL CUSTOMER SUPPORT		X	ENV. MONITORING PROJECT MANAGER	
	OTHER			REAL-TIME MANAGER	

VARIANCE/FCN APPROVED [X]YES [ ]NO

REVISION REQUIRED: [ ]YES [x]NO

DISTRIBUTION

MANAGER:	DOCUMENT CONTROL: Jeanie Rosser	OTHER:
QA/SURANCE:	OTHER:	OTHER:
FIELD MANAGER:	OTHER:	OTHER:

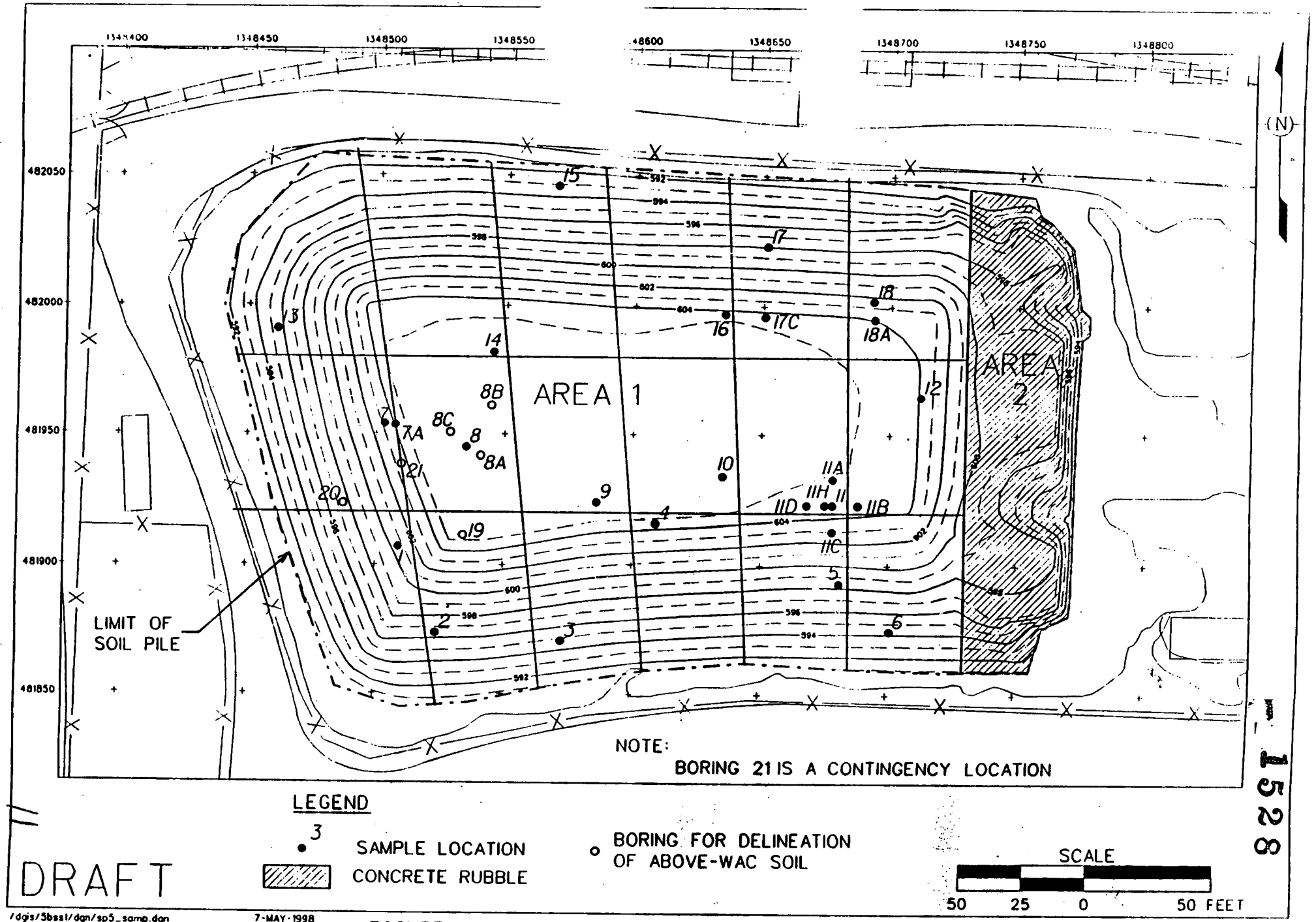

FIGURE 2-2 SOIL STOCKPILE 5 SAMPLING LOCATIONS

TRANSMITTAL 1528 110325
ECDC PROJECT DOCUMENT CONTROL JARR5585

To: NICKEL, KATHLEEN A
Control No: INFO
Location/Mail Stop: 45

Date: 05/19/98

From: ECDC

FOLLOW INSTRUCTIONS BELOW
VARIANCE / FCN 21010

Project	CWO	Document No	Rev	Title of Document	Comments
21010 VARIANCE		50.03.74.02-4	0	AREA 8, PHASE I CERTIFICATION SAMPLING , REV 1	INFORMATION ONLY

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Signature Date

IF TERMINATION OR TRANSFER OCCURS, NOTIFY ECDC PROJECT DOCUMENT CONTROL AT 4481

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VARIAN / FIELD CHANGE NOTICE 1528	V/F 50.03.74.02-4
WBS NO.: 50.03.74.02	Page 1 of 1
PROJECT TITLE: PSP for Area 8, Phase I Certification Sampling (21010-PSP-0001), Rev. 1	Date: 5/8/98

VARIANCE / FIELD CHANGE NOTICE (Include justification):

Variance:
Two of the four archive samples per CU will be analyzed to ASL D at the on-site laboratory by gamma spectrometry. These samples were selected as the two that are located the farthest from one another in each CU. The eight archived samples analyzed are as follows:

FROM A8PI-01:	FROM A8PI-02:	FROM A8PI-03:	FROM A8PI-04:
A8P1-C-01-3R	A8P1-C-02-8R	A8P1-C-03-2R	A8P1-C-04-1R
A8P1-C-01-15R	A8P1-C-02-13R	A8P1-C-03-15R	A8P1-C-04-16R

All laboratory protocol and performance criteria will be the same as those specified in the PSP and laboratory task order (except for analyses taking place on-site instead of off-site). Following preparation and the non-destructive gamma spectrometry analysis, the soil will be returned to the archive. If necessary to support the A8PI certification, these samples can then be submitted to an off-site laboratory, and analyzed a second time per the certification PSP.

Justification:
The analyses under this variance are strictly to support comparability efforts for the real-time instrumentation. The results of these eight analyses will not in anyway be used in a certification decision.

REQUESTED BY: Chris Sutton Date: 5/8/98

X IF REQD	VARIANCE/FCN APPROVAL	DATE	X IF REQD	VARIANCE/FCN APPROVAL	DATE
X	QUALITY ASSURANCE	5-7-98	X	PROJECT MANAGER	5/19
	DATA QUALITY MANAGEMENT		X	CHARACTERIZATION LEAD	5/19
X	ANALYTICAL CUSTOMER SUPPORT			FIELD SAMPLING LEAD	
	OTHER			OTHER	

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

DISTRIBUTION

PROJECT MANAGER:	DOCUMENT CONTROL:	OTHER:
QUALITY ASSURANCE:	OTHER:	OTHER:
FIELD MANAGER:	OTHER:	OTHER:

ORIGINAL

INFORMATION ONLY

13

TRANSMITTAL 1528 113297

ECDC PROJECT DOCUMENT CONTROL DRAG8938

To: NICKEL, KATHLEEN A Date: 06/08/98

Control No: **NA**

Location/Mail Stop: 45

From: ECDC

FOLLOW INSTRUCTIONS BELOW

VARIANCE ON 20400-PSP-0001 / R0

Project	CWO	Document No	Rev	Title of Document	Comments
20400 VARIANCE		20.03.13.02-18	0	AREA 2 PHASE I DELINEATION OF AREAS EXCEEDING WAC (REV 0)	INFORMATION ONLY

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Signature Date

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VARIANCE / FIELD CHANGE NOTICE 1528

V/F No. 20.03.13.02-18

WBS NO.: 20.03.13.02 Project # 20400-PSP-0001 Rev 0

Page 1 of 1

PROJECT TITLE: A2PI Delineation of Areas Exceeding WAC (Rev. 0)

Date: 6/3//98

VARIANCE / FIELD CHANGE NOTICE (Include justification):

1) Modify the request in Variance/Field Change Notice (V/FCN) 20.03.13.02-12 for collecting and analyzing Interceptor Ditch #1 samples from location SWU-INT-26 and SWU-INT-27. The depth for SWU-INT-26 was changed to 6 feet. The physical sample location for SWU-INT-27 was moved to the top of the bank and was renamed SWU-INT-27A. The coordinates for SWU-INT-27A are 1347797.1 (easting) and 477645.4 (northing).

Hand augers were used instead of the Geoprobe due to field terrain. Field and sampling protocol remained the same as stated in V/FCN 20.03.13-12 except: a) a general description of sample media were noted on the field activity log instead of each interval being lithologically described; 2) only the bottom, non-flyash interval of the boring was archived since the entire core exhibited zero corrected counts per minute (ccpm) . No field quality control samples were necessary for this event since it was covered in earlier sampling.

Justification
Initial field drawings indicated the depth for these borings to be 0-13 feet. Review of revised drawings after regrading in the area indicated the need for a revised depth.

REQUESTED BY: Mike Rolfes Date: June 5, 1998

X IF REQD	VARIANCE/FCN APPROVAL	DATE	X IF REQD	VARIANCE/FCN APPROVAL	DATE
X	QUALITY ASSURANCE	6-8-98	X	PROJECT MANAGER	6/8/98
	DATA QUALITY MANAGEMENT		X	SCEP SAMPLING & CHARACTERIZ. LEAD	6/5/98
	ANALYTICAL CUSTOMER SUPPORT		X	A2P1 CHARACTERIZATION LEAD	6/5/98
	OTHER			OTHER	

VARIANCE/FCN APPROVED [X]YES [ ]NO

REVISION REQUIRED: [ ]YES [x]NO

DISTRIBUTION

PROJECT MANAGER:	DOCUMENT CONTROL: Jeanie Rosser	OTHER:
QUALITY ASSURANCE:	OTHER:	OTHER:
FIELD MANAGER:	OTHER:	OTHER:

INFORMATION ONLY

TRANSMITTAL

F 1528

113746

ECDC PROJECT DOCUMENT CONTROL

JARR5585

To: NICKEL, K.

Date: 06/10/98

Control No: **INFO**

Location/Mail Stop: 45

From: ECDC

FOLLOW INSTRUCTIONS BELOW

APPROVED VARIANCE / FCN

Project	CWO	Document No	Rev	Title of Document	Comments
22000 VARIANCE		50.03.52.03-4	0	PSP FOR SAMPLING OF SOIL STOCKPILE 5 FOR OSDF WAC ATTAINMENT	

INFORMATION ONLY

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Signature

Date

IF TERMINATION OR TRANSFER OCCURS, NOTIFY ECDC PROJECT DOCUMENT CONTROL AT 4481

16

VARIANCE / FIELD CHANGE NOTICE

V/F No. 50.03.52.03-4

WBS NO.: 50.03.52.03 Project # 22000-PSP-0001 Rev 0

Page 1 of 24

PROJECT TITLE: PSP for Sampling of Soil Stockpile 5 for OSDF WAC Attainment

Date: 6/4/98

VARIANCE / FIELD CHANGE NOTICE (Include justification):

Variance:

- 1528

This variance provides the final list of SP-5 samples that were submitted to the onsite laboratory for total uranium or Tc-99 analyses. The attached table lists all samples submitted for analysis including random samples, biased samples (>100 ccpm), or soil sample intervals above or below biased intervals that were analyzed to bound the above-WAC soil. Archive samples are not included in the attached table.

The attached table also includes one planned sample that was not collected due to obstructions within the stockpile. This cancelled sample, SP5-6-3, is presented in the table with a line-through edit.

This variance also documents the following relocated points:

Boring	Distance Moved	Reason for Relocating
SP5-3	5' north	Inadequate pile depth for random samples
SP5-7	4' east	Original point near top surface; moved for Geoprobe access
SP5-8	2' north	Ferrous material detected by magnetometer
SP5-10	3' east	Ferrous material detected by magnetometer
SP5-15	12' south	Inadequate pile depth for random samples
SP5-18	7' south	Original point near top surface; moved for Geoprobe access

INFORMATION ONLY

The new coordinates for these points have been entered into the Sitewide Environmental Database (SED).

Several boring locations required several attempts (adjacent holes) after encountering subsurface refusal. Boring locations that required multiple boreholes, or some locations that were moved, were designated with a alphabetic suffix (e.g., 7A, 17A, 17B, 17C, etc.). Additional locations added to bound above-WAC soil were also designated in the same fashion (location 8A through 8C).

In those instances where an original planned point had to be relocated prior to sampling, the sample depth intervals were recalculated based on the new pile height at that point.

Justification:

ORIGINAL

The samples included on the final sample list represents samples analyzed to characterize the soil pile and delineate above-WAC soil intervals to prepare for excavation of the stockpile. All relocated sample points serve the same characterization intent as the originally selected point. The cancelled sample does not impact the data set for the stockpile due to the relatively low levels of uranium and Tc-99 reported for the remaining samples.

REQUESTED BY: Mike Frank Date: 5/13/98

X IF REQD	VARIANCE/FCN APPROVAL	DATE	X IF REQD	VARIANCE/FCN APPROVAL	DATE
X	QUALITY ASSURANCE R Fiske	6-8-98	X	PROJECT MANAGER	6-5-9
	DATA QUALITY MANAGEMENT		X	FIELD SAMPLING MGR. Mike Frank	6-5-98
	ANALYTICAL CUSTOMER SUPPORT			ENV. MONITORING PROJECT MANAGER	
X	OTHER RPM Characterization Lead	6/9/98		REAL-TIME MANAGER	

VARIANCE/FCN APPROVED [X] YES [ ] NO

REVISION REQUIRED: [ ] YES [x] NO

DISTRIBUTION

PROJECT MANAGER:	DOCUMENT CONTROL: Jeanie Rosser	OTHER:
QUALITY ASSURANCE:	OTHER:	OTHER:
FIELD MANAGER:	OTHER:	OTHER:

Soil Pile 5 (SP-5) Samples Submitted for Analyses

Sample Identifier	Relative Fraction for Sample Depths	Soil Pile Depth at Sample Location	Discrete Sample Interval Depth From Surface (ft)	Target Analytes
SP5-1-1-R	0.44	11.1 ft	4.9 - 5.4 ft	Total U, Tc-99
SP5-1-2-R	0.64		7.1 - 7.6 ft	Total U, Tc-99
SP5-1-3-R	0.86		9.5 - 10.0 ft	Total U, Tc-99
SP5-1-B1-R	NA		10.7 - 11.2	Total U
SP5-1-B2-R	Adjacent to >WAC sample		7.9 - 8.4 ft	Total U
SP5-1-B3-R	NA		11.2 - 11.7 ft	Total U
SP5-2-1-R	0.21	6.75 ft	1.4 - 1.9 ft	Total U, Tc-99
SP5-2-2-R	0.62		4.2 - 4.7 ft	Total U, Tc-99
SP5-2-3-R	0.76		5.1 - 5.6 ft	Total U, Tc-99
SP5-2-B1-R	NA		1 - 1.4 ft	Total U
SP5-3-1-R	0.02	4.48 ft	0.1 - 0.6 ft	Total U, Tc-99
SP5-3-1-S	0.02 + 0.5ft		0.6 - 1.1 ft	SVOC's
SP5-3-2-R	0.39		1.7 - 2.2 ft	Total U, Tc-99
SP5-3-2-S	0.39 + 0.5ft		2.2 - 2.7 ft	SVOC's
SP5-3-3-R	0.66		3.0 - 3.5 ft	Total U, Tc-99
SP5-3-3-S	0.66 + 0.5ft		3.5 - 4.0 ft	SVOC's
SP5-4-1-R	0.10	13.95 ft	1.4 - 1.9 ft	Total U, Tc-99
SP5-4-2-R	0.41		5.7 - 6.2 ft	Total U, Tc-99
SP5-4-3-R	0.95		13.3 - 13.8 ft	Total U, Tc-99
SP5-4-B1-R	NA		13.5 - 14.0 ft	Total U
SP5-5-1-R	0.13	8.0 ft	1.0 - 1.5 ft	Total U, Tc-99
SP5-5-2-R	0.34		2.7 - 3.2 ft	Total U, Tc-99
SP5-5-3-R	0.93		7.4 - 7.9 ft	Total U, Tc-99
SP5-6-1-R	0.15	2.44 ft	0.4 - 0.9 ft	Total U, Tc-99
SP5-6-2-R	0.46		1.1 - 1.6 ft	Total U, Tc-99
~~SP5-6-3-R~~	Sample cancelled; refusal at 2' after 3 attempts			Total U, Tc-99
SP5-7A-1-R	0.10	14.6 ft	1.5 - 2.0 ft	Total U, Tc-99

Sample Identifier	Relative Fraction for Sample Depths	Soil Pile Depth at Sample Location	Discrete Sample Interval Depth From Surface (ft)	Target Analytes
SP5-7A-1-S	0.10 + 0.5ft		2.0 - 2.5 ft	SVOC's
SP5-7A-2-R	0.41		6.0 - 6.5 ft	Total U, Tc-99
SP5-7A-2-S	0.41 + 0.5ft		6.5 - 7.0 ft	SVOC's
SP5-7A-3-R	0.84		12.3 - 12.8 ft	Total U, Tc-99
SP5-7A-3-S	0.84 + 0.5ft		12.8 - 13.3 ft	SVOC's
SP5-8-1-R	0.24	15.52 ft	3.7 - 4.2 ft	Total U, Tc-99
SP5-8-2-R	0.73		11.3 - 11.8 ft	Total U, Tc-99
SP5-8-3-R	0.91		14.1 - 14.6 ft	Total U, Tc-99
SP5-8-B1-R	NA		8.4 - 8.9 ft	Total U
SP5-8-B2-R	NA		8.9 - 9.4 ft	Total U
SP5-8-B3-R	Adjacent to >WAC sample		10.2 - 10.7 ft	Total U
SP5-8-B4-R	NA		14.7 - 15.2 ft	Total U
SP5-8C-B2-R	Sample selection based on intervals ≥100 ccpm beta/gamma field reading	15.5 ft	14.5 - 15.0 ft	Total U
SP5-9-1-R	0.28	14.82 ft	4.1 - 4.6 ft	Total U, Tc-99
SP5-9-1-S	0.28 + 0.5ft		4.6 - 5.1 ft	SVOC's
SP5-9-2-R	0.36		5.3 - 5.8 ft	Total U, Tc-99
SP5-9-2-S	0.36 + 0.5ft		5.8 - 6.3 ft	SVOC's
SP5-9-3-R	0.94		13.9 - 14.4 ft	Total U, Tc-99
SP5-9-3-S	0.94 + 0.5ft		14.4 - 14.9 ft	SVOC's
SP5-10-1-R	0.02	15.0 ft	0.3 - -0.8 ft	Total U, Tc-99
SP5-10-2-R	0.15		2.2 - 2.7 ft	Total U, Tc-99
SP5-10-3-R	0.79		11.8 - 12.3 ft	Total U, Tc-99
SP5-11-1-R	0.03	14.2 ft	0.4 - 0.9 ft	Total U, Tc-99
SP5-11-2-R	0.46		6.5 - 7.0 ft	Total U, Tc-99
SP5-11-3-R	0.62		8.8 - 9.3 ft	Total U, Tc-99
SP5-12-1-R	0.14	13.6 ft	1.9 - 2.4 ft	Total U, Tc-99
SP5-12-2-R	0.25		3.4 - 3.9 ft	Total U, Tc-99
SP5-12-3-R	0.56		7.6 - 8.1 ft	Total U, Tc-99
SP5-13-1-R	0.17	5.07 ft	0.7 - 1.2 ft	Total U, Tc-99

Sample Identifier	Relative Fraction for Sample Depths	Soil Pile Depth at Sample Location	Discrete Sample Interval Depth From Surface (ft)	Target Analytes
SP5-13-2-R	0.31		1.6 - 2.1 ft	Total U, Tc-99
SP5-13-3-R	0.69		3.5 - 4.0 ft	Total U, Tc-99
SP5-14-1-R	0.24	14.87 ft	3.6 - 4.1 ft	Total U, Tc-99
SP5-14-2-R	0.54		8.0 - 8.5 ft	Total U, Tc-99
SP5-14-3-R	0.65		9.7 - 10.2 ft	Total U, Tc-99
SP5-15-1-R	0.36	3.5 ft	0.3 -0.8 ft	Total U, Tc-99
SP5-15-2-R	0.59		2.0 - 2.5 ft	Total U, Tc-99
SP5-15-3-R	0.87		3.0 - 3.5 ft	Total U, Tc-99
SP5-16-1-R	0.22	13.35 ft	2.9 - 3.4 ft	Total U, Tc-99
SP5-16-2-R	0.37		4.9 - 5.4 ft	Total U, Tc-99
SP5-16-3-R	0.59		7.9 - 8.4 ft	Total U, Tc-99
SP5-17B-1-R	0.16	6.7 ft	1.1 - 1.6 ft	Total U, Tc-99
SP3-17B-1-S	0.16 + 0.5ft		1.6 - 2.1 ft	SVOC's
SP5-17C-2-R	0.42	13 ft.*	5.5 - 6.0 ft	Total U, Tc-99
SP5-17C-2-S	0.42 + 0.5 ft		6.0 - 6.5 ft	SVOC's
SP5-17C-3-R	0.72		9.4 - 9.9 ft	Total U, Tc-99
SP5-17C-3-S	0.72 + 0.5 ft		9.9 - 10.4 ft	SVOC's
SP5-18A-1-R	0.15	13.1 ft	2.0 - 2.5 ft	Total U, Tc-99
SP5-18A-2-R	0.37		4.8 - 5.3 ft	Total U, Tc-99
SP5-18A-3-R	0.64		8.4 - 8.9 ft	Total U, Tc-99
SP5-21-B1-R	Sample selection based on intervals ≥100 ccpm beta/gamma field reading		5.6 - 6.1 ft	Total U
SP5-21-B2-R			5.1 - 5.6 ft	Total U
SP5-21-B3-R			4.6 - 5.1 ft	Total U

* Note: Depth estimated from point 16 elevation.

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