

4929

**CERTIFICATION DESIGN LETTER
FOR AREA 8, PHASE III-NORTH**

**FERNALD CLOSURE PROJECT
FERNALD, OHIO**



JUNE 2003

**U.S. DEPARTMENT OF ENERGY
FERNALD AREA OFFICE**

**21110-RP-0003
REVISION A
DRAFT**

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LIST OF ACRONYMS AND ABBREVIATIONS

A8PIII-N	Area 8, Phase III-North
ASCOC	area-specific constituent of concern
ASL	analytical support level
BTV	benchmark toxicity value
CDL	Certification Design Letter
COC	constituent of concern
COEC	constituent of ecological concern
CRDL	Contract Required Detection Limit
CU	certification unit
DOE	U.S. Department of Energy
FCP	Fernald Closure Project
FRL	final remediation level
HPGe	high-purity germanium (detector)
mg/kg	milligrams per kilogram
NaI	sodium iodide
OU5	Operable Unit 5
pCi/g	picoCuries per gram
PSP	Project Specific Plan
ROD	Record of Decision
RSS	Radiation Scanning System
RTRAK	Radiation Tracking System
SED	Sitewide Environmental Database
SEP	Sitewide Excavation Plan
UCL	Upper Confidence Limit
V/FCN	Variance/Field Change Notice

EXECUTIVE SUMMARY

This Certification Design Letter (CDL) describes the certification approach for Area 8, Phase III-North (A8PIII-N). The following information is included:

- The boundaries and a description of the area to be certified under the guidance of this CDL
- Historical data from the area proposed for certification
- The area-specific constituent of concern (ASCOC) selection process and list of ASCOCs assigned to A8PIII-N
- Certification unit (CU) boundaries and proposed sampling strategy
- Analytical requirements and the statistical methodology
- The proposed schedule for the certification activities.

The scope of this CDL is limited to A8PIII-N, a 51.1-acre area located just north of the Pilot Plant drainage ditch entry into Paddys Run and south of the railroad trestle, along Paddys Run Road on the Fernald Closure Project property. The precertification real-time scanning indicated the presence elevated radium-226 in the northern portion of A8PIII-N. Physical sampling confirmed the presence of the hot spot. The hot spot was excavated and confirmed to be removed through additional real-time scanning. The limited historical data indicated a potential above-final remediation level (FRL) location within A8PIII-N but physical sampling indicated the location to be below the FRL. With the exception of the hot spot that was excavated, no additional contamination is expected in A8PIII-N since it is upwind of the Former Production Area and Paddys Run effectively isolates it from the surface water drainage that impacted other areas of the site. In addition, process knowledge and aerial photographs indicate no historical production-related uses for this land; much of it was leased to local farmers for cattle grazing. As a result, no further remedial actions are planned in A8PIII-N.

The certification design presented in this CDL follows the general approach outlined in Section 3.4 of the Sitewide Excavation Plan (DOE 1998). Precertification real-time scanning activities were started in September 2002 and were completed in June 2003. The selection of A8PIII-N ASCOCs was accomplished using constituent of concern lists in the Operable Unit 5 Record of Decision (DOE 1996), along with historical data and land-use knowledge. A total of ten CUs have been established to cover

- 1 A8PIII-N based on the precertification data and area topography. Certification sampling fieldwork is
- 2 scheduled to begin in August 2003 and the Certification Report will be issued November 2003.

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1.0 INTRODUCTION

This Certification Design Letter (CDL) describes the certification approach for demonstrating that soil in Area 8, Phase III-North (A8PIII-N) meets the final remediation levels (FRLs) for all area-specific constituents of concern (ASCOCs). The format of this CDL follows guidelines presented in the Sitewide Excavation Plan (SEP, DOE 1998). Accordingly, this CDL consists of six sections:

- 1.0 Introduction - Presentation of the purpose, objectives, and scope of this CDL
 - 2.0 Historical and Precertification Data - Presentation and discussion of historical soil data and recently collected precertification real-time data from A8PIII-N
 - 3.0 Area-Specific Constituents of Concern - Discussion of selection criteria and ASCOCs for A8PIII-N
 - 4.0 Certification Units - Presentation of design, sampling and analytical methodologies
 - 5.0 Schedule
- References

1.1 OBJECTIVES

The primary objectives of this document are to:

- Define the boundaries of the area to be certified under the guidance of this CDL
- Present historical data collected from within the area proposed for certification
- Define the ASCOC selection process and list the selected A8PIII-N ASCOCs
- Present the certification unit (CU) boundaries and proposed certification sampling strategy
- Summarize the analytical requirements and the statistical methodology that will be employed
- Present the proposed schedule for the certification activities.

1.2 SCOPE AND AREA DESCRIPTION

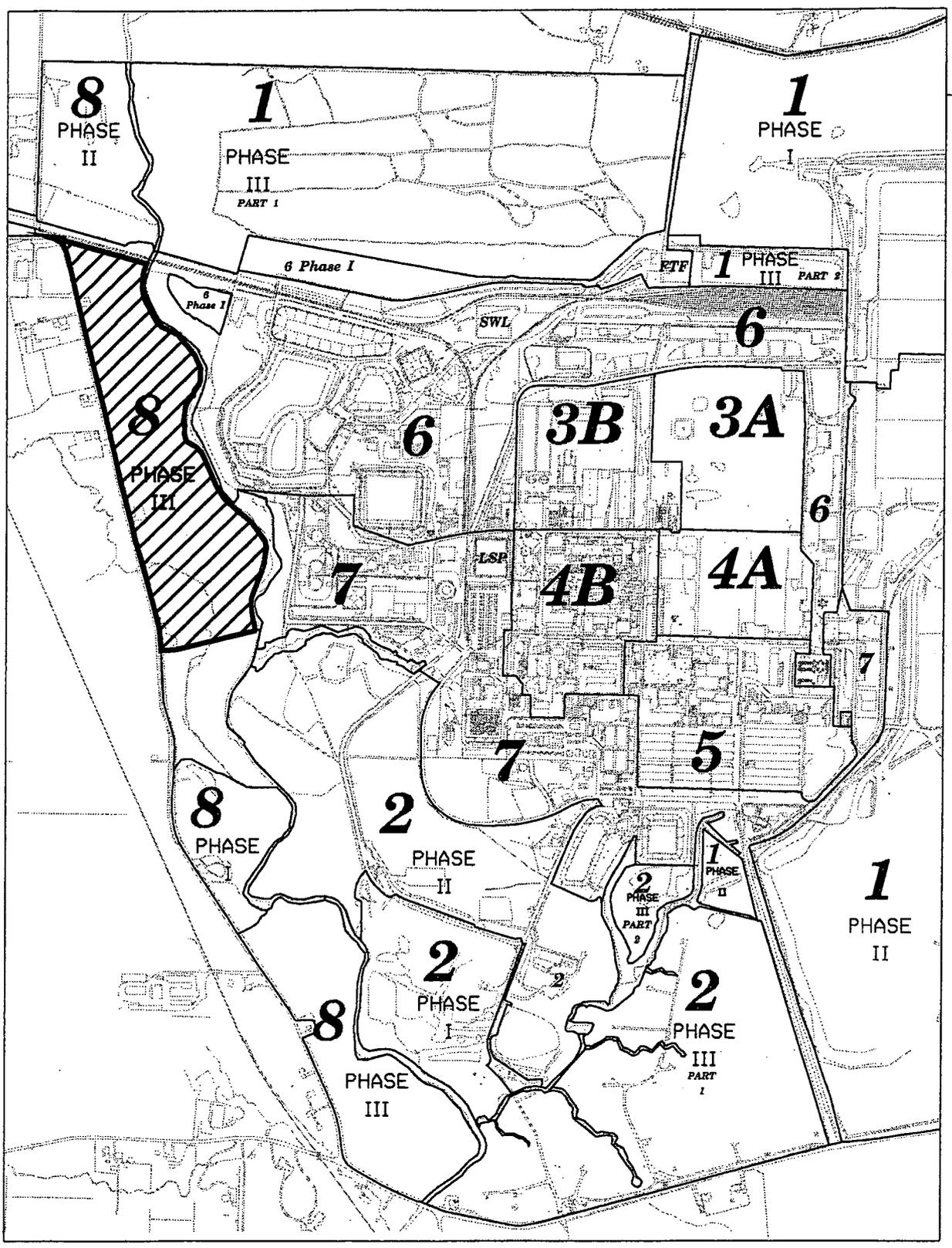
The scope of this CDL is limited to A8PIII-N, as shown on Figure 1-1. A8PIII-N is on the far western side of the Fernald Closure Project (FCP) site, west of Paddys Run and south of Area 8, Phase II. It is a 51.1-acre parcel of land and consists mostly of flat, open fields, separated by wooded ridges. The topography and surface features of A8PIII-N are shown on Figure 1-2. It is unlikely that A8PIII-N has

1 been impacted by former FCP production activities for several reasons. A8PIII-N is located to the west
2 (upwind) of the Former Production Area, and therefore should have minimal impacts from airborne
3 contamination. In addition, A8PIII-N does not receive drainage from any other part of the FCP site. Most
4 significantly, no known disposal or plant-related activities were associated with this region of the FCP, and
5 it was generally used by local farmers for cattle grazing.

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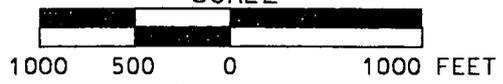


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AREA 8 PHASE III-NORTH

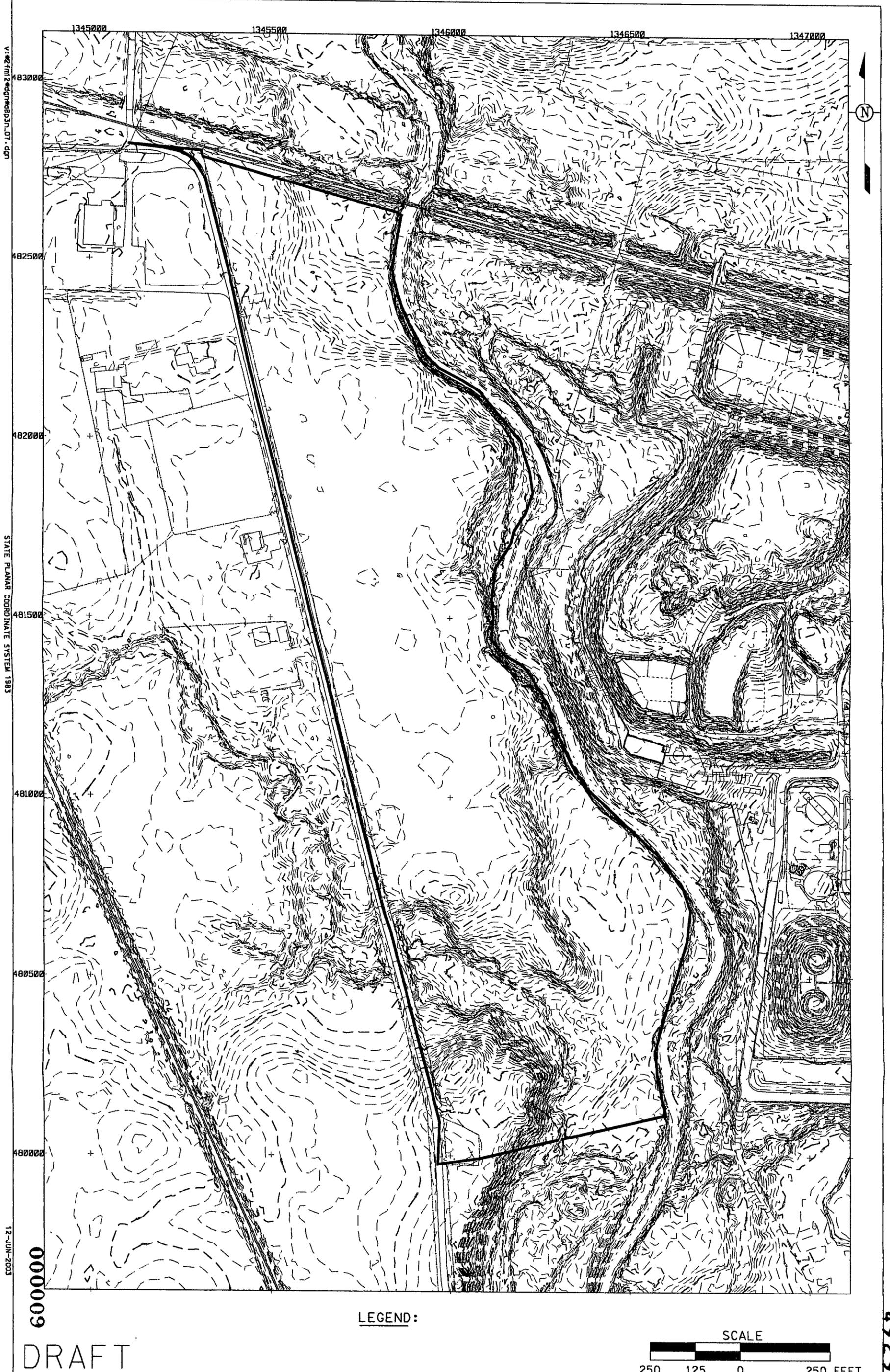
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FIGURE 1-1. AREA 8, PHASE III-NORTH LOCATION MAP

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250 125 0 250 FEET

FIGURE 1-2. A8PIII-NORTH TOPOGRAPHY AND SURFACE FEATURES

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2.0 HISTORICAL AND PRECERTIFICATION SOIL CONTAMINATION DATA

In accordance with the SEP, all soil demonstrating contamination above the associated FRLs or other applicable action levels must be evaluated for remedial actions prior to conducting precertification and certification activities.

2.1 HISTORICAL DATA

Before initiating the certification process, all historical soil data pertinent to A8PIIN-N were pulled from the Sitewide Environmental Database (SED). The historical sample locations are presented on Figure 2-1 and the data are presented in Appendix A of this CDL. The data review primarily focused on results compared to the FRL. A boring collected from the 0 to 2-inch interval in 1988, ZONE 3-277 (see Figure 2-1), indicated above-FRL results for thorium-228 at 13.6 pCi/g. The boring was re-sampled (A8PIIN-PC-1) in January 2003 under Variance/Field Change Notice (V/FCN) 21110-PSP-0003-1 at a depth of 0 to 6-inches, and result (1.02 pCi/g) was below the FRL. Therefore it was determined that thorium-228 was not an issue at this location.

Existing data from within A8PIIN-N were also reviewed against the benchmark toxicity values (BTVs) of each constituent of ecological concern (COEC). A8PIIN-N was not identified as an area for further BTV evaluation in Appendix C of the SEP. Historical data are consistent with this, as no above-BTV COECs were detected in the historical data set.

2.2 PRECERTIFICATION REAL-TIME SCAN AND PHYSICAL SAMPLING DATA

This CDL presents all precertification real-time scanning data collected in A8PIIN-N from September 2002 through May 2003. This includes all Phase 1 and Phase 2 real-time scan results. These mapped results are provided in Appendix B. In September 2002, precertification real-time scanning began in A8PIIN-N pursuant to the Project Specific Plan (PSP) for A8PIIN-N Precertification Real-Time Scan (DOE 2002). The real-time scan was conducted using the Radiation Tracking System (RTRAK), the Radiation Scanning System (RSS) and the high-purity germanium (HPGe) detectors. These precertification data are used to: 1) verify that no localized contamination (i.e., "hot spots") are present; 2) provide assurance that an area will likely pass certification; and 3) bias CU boundaries so pockets of elevated activity are isolated.

During Phase 1 of precertification, the mobile sodium iodide (NaI) detectors (RTRAK and RSS) were used to scan as much of A8PIIN-N as possible. Data collected during the Phase 1 scan were displayed for total

1 gamma activity (as counts per second), total uranium, radium-226, and thorium-232. Overall, these results
2 are comparable to what was found in other parts of Area 8 where contamination was not a problem. In
3 January 2003, a HPGe scan indicated elevated radium-226 in the northern portion of A8PIII-N and
4 subsequently confirmed as a hot spot with physical sampling under V/FCN 21110-PSP-0003-2. In
5 March 2003, the hot spot was bound by both physical sampling and real-time scans (see Figure 2-2) and
6 later excavated in May 2003. The excavation area dimensions were approximately 10 feet by 30 feet to a
7 depth of 6 inches. HPGe scans confirmed removal of the hot spot (see Figure 2-3). All of the other mobile
8 NaI results did not exceed the three times (3x) FRL hot spot level. The results of the surface scan are
9 presented on data maps in Appendix B.

10
11 During Phase 2 of precertification, HPGe readings were obtained at the location of highest gamma activity
12 within each identified CU as added insurance that concentrations were not above the FRL. The results
13 again demonstrated that total uranium, thorium-232, and radium-226 were below their respective FRLs
14 with the exception of the radium-226 hot spot. The locations of these Phase 2 HPGe readings and their
15 results are presented on table and data maps in Appendix B.

16
17 Phase 1 and Phase 2 precertification was not performed on the steep ridges and vegetated areas that
18 prohibit the use of the real-time equipment. During Phase 1 of precertification, the mobile NaI detectors
19 (RTRAK and RSS) were used to scan as much of A8PIII-N as possible. Some areas of A8PIII-N were
20 inaccessible to RTRAK and RSS because of steep ridges and vegetated areas. In those cases, the HPGe
21 was used. A few locations were too steep to safely scan with any real-time equipment and therefore were
22 not scanned. The maps presented in Appendix B represent the completion of precertification real-time
23 scanning.

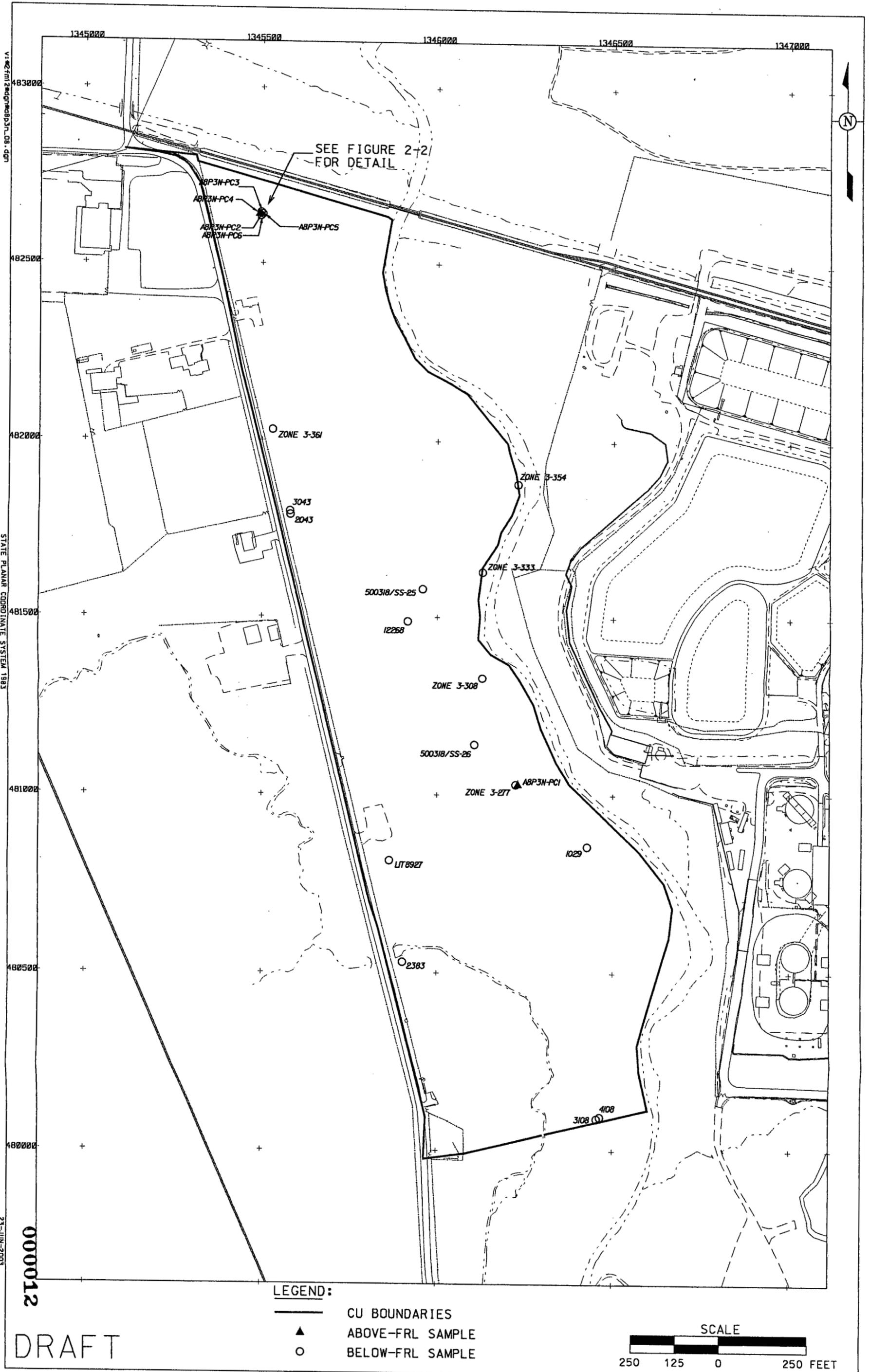


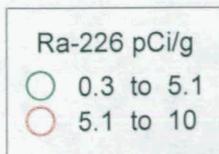
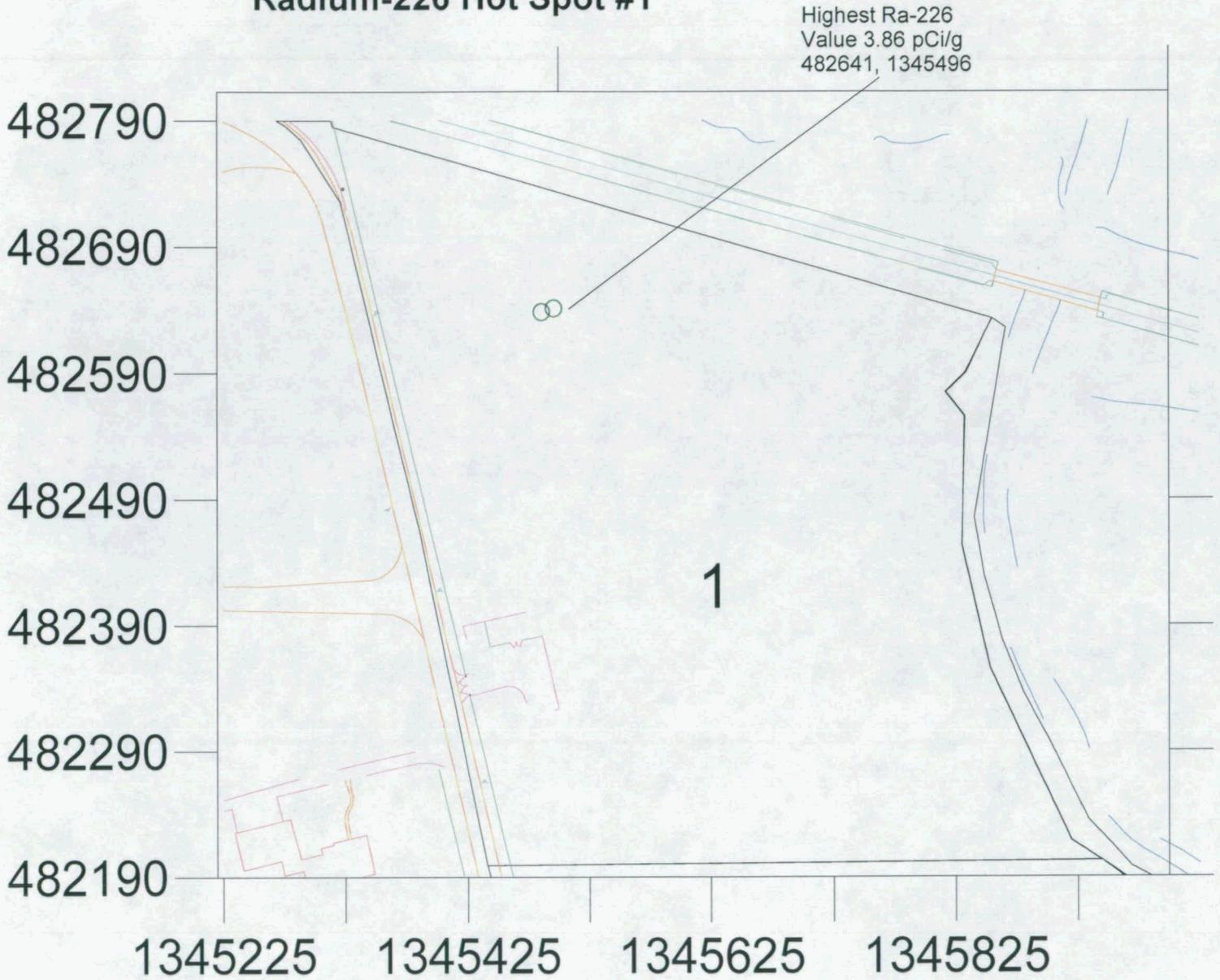
FIGURE 2-1. HISTORICAL SAMPLE POINTS FROM WITHIN A8PIII-NORTH

Figure 2-3. A8P3N, Radium Hot Spot Post Lift 1

Radon & Moisture Corrected Ra-226
Field of View to scale at 31cm Detector Height
HPGe DET#:30687
Measurement Date: 06/06/2003

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Radium-226 Hot Spot #1



RTIMP DWG Title: A8P3N_RA_HS_HPGE_31cm_lift1.srf
Project Name: A8P3 North PreCert
Project #: 21110-PSP-0003
Prepared By: D.Seiller
Date Prepared: 06/06/2003
Support Data: S31265_06-06-2003.xls

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3.0 AREA-SPECIFIC CONSTITUENTS OF CONCERN

In the OU5 ROD, there are 80 soil constituents of concern (COCs) with established FRLs. These COCs were retained for further investigation based on a screening process that considered the presence of the constituent in site soil and the potential risk to a receptor exposed to soil containing this contaminant. In spite of the conservative nature of this COC retention process, many of the COCs with established FRLs have a limited distribution in site soil or the presence of the COC is based on high contract required detection levels (CRDLs). When FRLs were established for these COCs in the Operable Unit 5 (OU5) Record of Decision (ROD, DOE 1996), the FRLs were initially screened against site data presented on spatial maps to establish a picture of potential remediation areas.

By reviewing existing Remedial Investigation/Feasibility Study data presented on spatial distribution maps (DOE 1995a and 1995b), it was possible to reduce the sitewide list of soil COCs from 80 listed in the OU5 ROD to 30. This reduction was possible because the majority of the COCs with FRLs listed in the OU5 ROD have no detections above their corresponding FRL, thus eliminating them from further consideration. The 30 remaining sitewide COCs account for over 99 percent of the combined risk to a site receptor model, and they comprise the list from which all of the remediation ASCOCs are drawn. When planning certification for a remediation area, additional selection criteria are used to derive a subset of these 30 COCs. This subset of COCs is passed along to the certification process.

3.1 SELECTION CRITERIA

All of the sitewide primary COCs (total uranium, radium-226, radium-228, thorium-232, and thorium-228) will be retained as ASCOCs for certification in all areas of the site. The selection process for retaining secondary ASCOCs for a remediation area is driven by applying a set of decision criteria. A soil contaminant will be retained as an A8PIII-N ASCOC if the following apply:

- It is listed as a soil COC in the OU5 ROD, and it is listed as an ASCOC in Table 2-7 of the SEP for the Remediation Area of interest
- Analytical results show that a contaminant is present above its FRL, and the above-FRL concentrations are not attributable to false positives or elevated CRDLs
- It can be traced to site use, either through process knowledge or known release of the constituent to the environment

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- 1 • Physical characteristics of the contaminant, such as degradation rate and volatility,
2 indicate it is likely to persist in the soil between time of release and remediation.

3

4 3.2 ASCOC SELECTION PROCESS FOR A8PIII-N

5 Total uranium, radium-226, radium-228, thorium-228 and thorium-232 are sitewide primary COCs, and
6 will be retained as ASCOCs for this reason. As discussed in Section 2.1, historical data show that no other
7 ASCOCs are present above the FRL in A8PIII-N, and meet the above criteria for being retained. Based on
8 this factor and the inability to identify any mechanism for secondary COC contamination of this part of the
9 site, only the sitewide primary COCs will be retained as the A8PIII-N ASCOCs. The selected A8PIII-N
10 ASCOCs are listed on Table 3-1 along with their applicable FRLs.

1
2
3

TABLE 3-1
ASCOC LIST FOR A8PIII-N CERTIFICATION UNITS

ASCOC	FRL	Reason Retained
Total Uranium	82 mg/kg	Retained as a primary ASCOC sitewide
Radium-226	1.7 pCi/g	Retained as a primary ASCOC sitewide
Radium-228	1.8 pCi/g	Retained as a primary ASCOC sitewide
Thorium-228	1.7 pCi/g	Retained as a primary ASCOC sitewide
Thorium-232	1.5 pCi/g	Retained as a primary ASCOC sitewide

4
5 mg/kg - milligrams per kilogram
6 pCi/g - picoCuries per gram

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4.0 CERTIFICATION APPROACH

4.1 CERTIFICATION DESIGN

The certification design for A8PIII-N follows the general approach outlined in Section 3.4 of the SEP. Because A8PIII-N is not considered to be an "impacted area," Approach E from the SEP will be used as a basis for certification design, as described in Section 4.5 of the SEP. Historical land uses, soil COC data, precertification data and topography are used to establish CU boundaries. Because there were no significant production-related land uses and very few soil COC data were collected in A8PIII-N, the precertification data and the topography of A8PIII-N were the main drivers for CU delineation. As shown in Figure 4-1, ten CUs have been established in A8PIII-N; three Group 1 CUs and seven Group 2 CUs. The three Group 1 CUs were established to surround the hot spot discussed in Section 2.2.

Certification sampling locations were selected in accordance with Section 3.4.2 of the SEP. Each CU was first divided into 16 approximately equal sub-CUs. Sample locations were then generated by randomly selecting an easting and northing coordinate within the boundaries of each sub-CU, then testing those locations against the minimum distance criterion for the CU. If the criterion was not met, an alternative random location was selected for that sub-CU, and all the locations were re-tested. This process continued until all 16 random locations met the minimum distance criterion. All sub-CUs and planned A8PIII-N certification sampling locations are shown in Figure 4-2. Locations may be moved if a subsurface obstacle such as a rock or tree root prevent collection, as long as requirements discussed in the A8PIII-N Certification Sampling PSP (DOE 2003) are followed. Twelve of the 16 certification locations per CU will be sampled and analyzed for all A8PIII-N ASCOCs. The other four locations per CU will remain identified in the field, and will be collected and analyzed if necessary based on other certification sample results.

4.2 ANALYTICAL METHODOLOGY AND STATISTICAL ANALYSIS

Laboratory analysis of certification samples will be conducted using an approved analytical method, as discussed in Appendix H of the SEP. Analyses will be conducted to Analytical Support Level (ASL) E, where all requirements are the same as ASL D except the minimum detection level for the selected analytical method must be at least 10 percent of FRL. Each laboratory will prepare an ASL D data package for all analyses. A minimum 10 percent of the results from each laboratory will be validated to ASL D, with the remaining 90 percent of the data validated to ASL B. Because results are batched by CU, all results from a minimum of one of the ten CUs will be validated to ASL D. Samples rejected during the

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1 validation process will be re-analyzed, or an archive sample may be substituted if there is insufficient
2 material available from the initial sample. Once data are validated as required, results will be entered into
3 the SED and a statistical analysis will be performed to evaluate the pass/fail criteria for each CU. The
4 statistical approach is discussed in Section 3.4.3 and Appendix G of the SEP.

5
6 Two criteria must be met for the CU to pass certification. If the data distribution is normal or lognormal,
7 the first criterion compares the 95 percent Upper Confidence Limit (UCL) on the mean of each primary
8 COC to its FRL, or the 90 percent UCL on the mean of each secondary ASCOC. On an individual CU
9 basis, any ASCOC with the 95 percent UCL (for primary ASCOCs) or 90 percent UCL (for secondary
10 ASCOCs, though not applicable to A8PIII-N) above the FRL results in that CU failing certification. If the
11 data distribution is not normal or lognormal, the appropriate nonparametric approach discussed in
12 Appendix G of the SEP will be used to evaluate the second criterion. The second criterion is the hot spot
13 criterion, which states that all ASCOC results must not exceed 2xFRL. When the given UCL on the mean
14 for each COC is less than its FRL and the hot spot criterion is met, the CU will be considered certified.

15
16 In the event that a CU fails certification, the following scenarios will be evaluated: 1) high variability in
17 the data set, 2) localized contamination, and 3) widespread contamination. Details on the evaluation and
18 responses to these possible outcomes are provided in Section 3.4.5 of the SEP. When all CUs within the
19 scope of this CDL have passed certification, a Certification Report will be issued. The Certification Report
20 will be submitted to the regulatory agencies to receive acknowledgment that the pertinent operable unit
21 remedial actions were completed and the individual CUs are certified to be released for interim or final
22 land use. Section 7.4 of the SEP provides additional details and describes the required content of the
23 Certification Report.

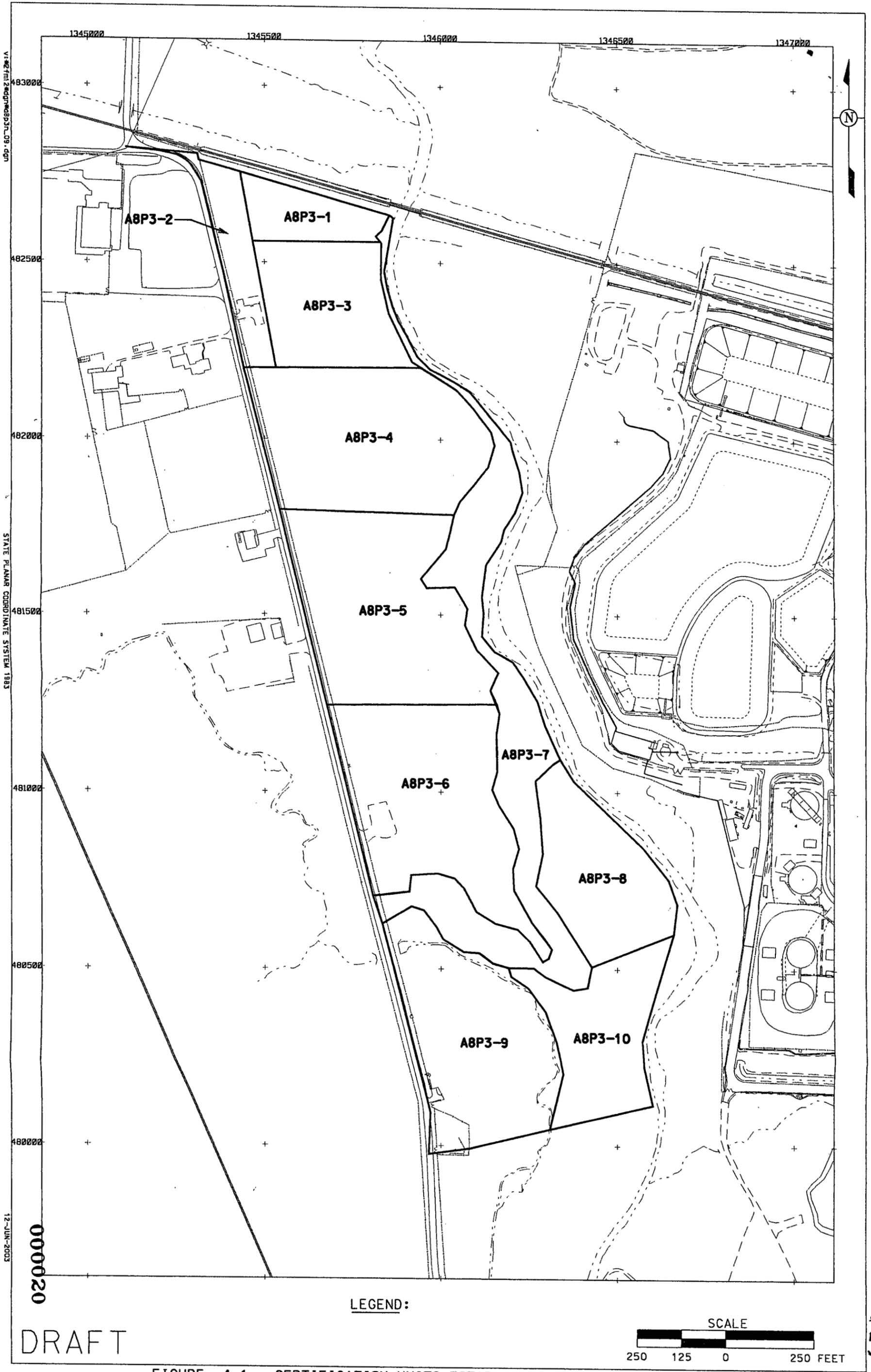
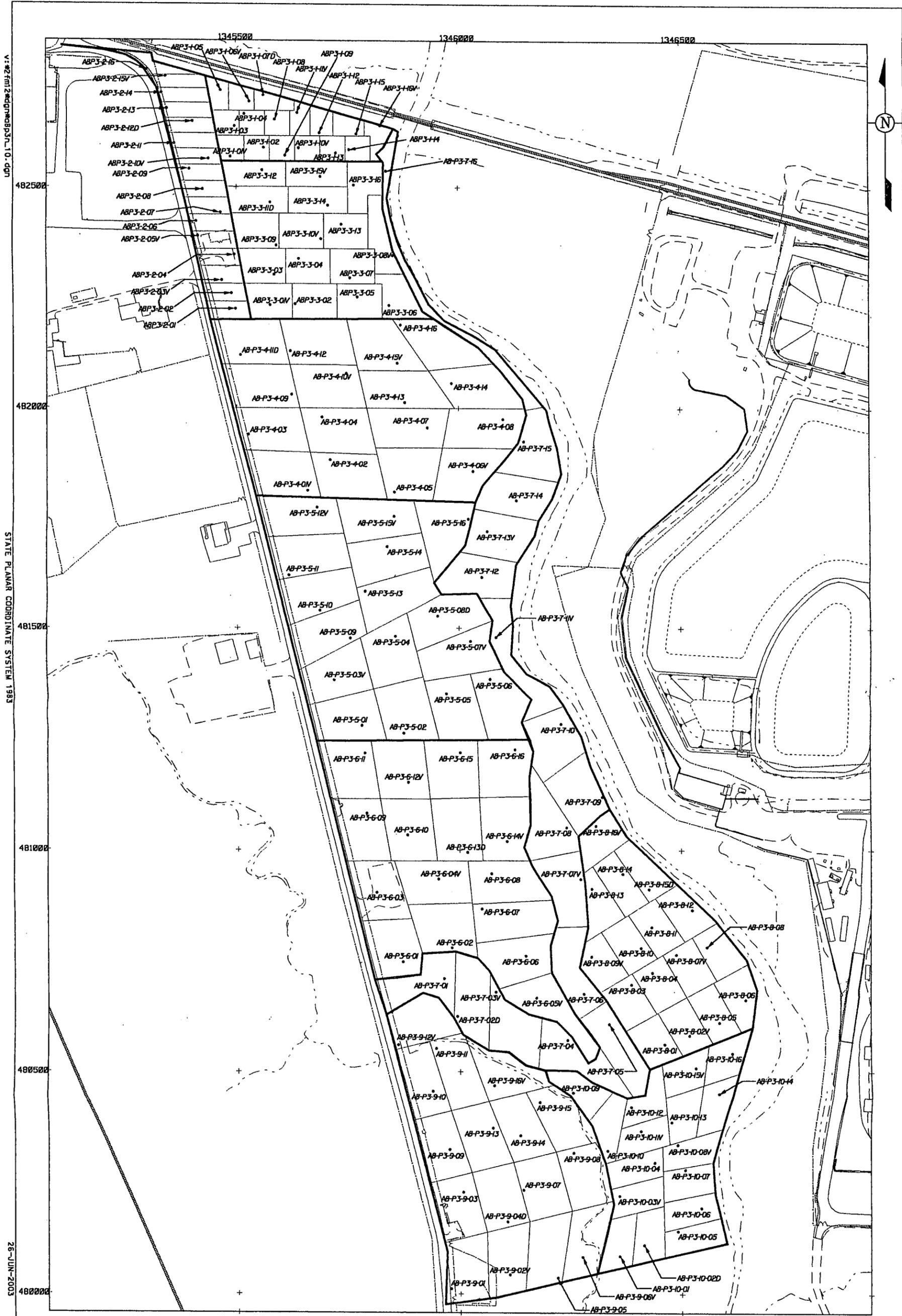


FIGURE 4-1. CERTIFICATION UNITS ESTABLISHED WITHIN A8PIII-NORTH

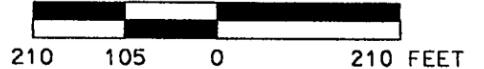


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CERTIFICATION SAMPLES
(V=ARCHIVE, D=DUPLICATE)

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FIGURE 4-2. ABPIII-NORTH CU AND SUB-CU BOUNDARIES AND CERTIFICATION SAMPLING LOCATIONS

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1 **5.0 SCHEDULE**

2
3 The following draft schedule shows key activities for the completion of the work within the scope of this
4 CDL pending DOE funding.
5

<u>ACTIVITY</u>	<u>TARGET DATE</u>
Submittal of Certification Design Letter	June 30, 2003
Start of Certification Sampling	August 18, 2003
Complete Field Work	September 2, 2003
Complete Analytical Work	October 2, 2003
Complete Data Validation and Statistical Analysis	October 16, 2003
Submit Certification Report	November 3, 2003 ^a

6 ^a Only the date for submittal of the Certification Report is a commitment to the U.S. Environmental
7 Protection Agency and Ohio Environmental Protection Agency. Other dates are internal target
8 completion dates.

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APPENDIX A

**HISTORICAL SOIL DATA COLLECTED
FROM AREA 8, PHASE III-NORTH**

**APPENDIX A
HISTORICAL SOIL DATA COLLECTED IN AREA 8, PHASE III-NORTH**

Sample ID	Location	Date	Top	Bottom	Northing	Easting	Parameter	Result	Qual	Units
412306	12268	04/29/1997	11	13.00	481488.52	1345917.46	Gross Alpha	3900	UNV	pCi/L
412311	12268	04/29/1997	23	25.00	481488.52	1345917.46	Gross Alpha	8.9	UNV	pCi/L
412306	12268	04/29/1997	11	13.00	481488.52	1345917.46	Gross Beta	2600	UNV	pCi/L
412311	12268	04/29/1997	23	25.00	481488.52	1345917.46	Gross Beta	3400	UNV	pCi/L
412301	12268	04/28/1997	1	3.00	481488.52	1345917.46	Gross Alpha	4500	UNV	pCi/L
412301	12268	04/28/1997	1	3.00	481488.52	1345917.46	Gross Beta	5800	UNV	pCi/L
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	1,1,1-Trichloroethane	13	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	1,1,1-Trichloroethane	12	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	1,1,2,2-Tetrachloroethane	13	UJ	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	1,1,2,2-Tetrachloroethane	12	UJ	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	1,1,2-Trichloroethane	13	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	1,1,2-Trichloroethane	12	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	1,1-Dichloroethane	13	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	1,1-Dichloroethane	12	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	1,1-Dichloroethene	13	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	1,1-Dichloroethene	12	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	1,2,4-Trichlorobenzene	420	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	1,2,4-Trichlorobenzene	380	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	1,2-Dichlorobenzene	420	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	1,2-Dichlorobenzene	380	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	1,2-Dichloroethane	13	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	1,2-Dichloroethane	12	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	1,2-Dichloroethene (Total)	13	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	1,2-Dichloroethene (Total)	12	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	1,2-Dichloropropane	13	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	1,2-Dichloropropane	12	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	1,3-Dichlorobenzene	420	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	1,3-Dichlorobenzene	380	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	1,4-Dichlorobenzene	420	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	1,4-Dichlorobenzene	380	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	2,4,5-Trichlorophenol	1100	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	2,4,5-Trichlorophenol	960	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	2,4,6-Trichlorophenol	420	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	2,4,6-Trichlorophenol	380	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	2,4-Dichlorophenol	420	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	2,4-Dichlorophenol	380	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	2,4-Dimethylphenol	420	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	2,4-Dimethylphenol	380	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	2,4-Dinitrophenol	1100	U	ug/kg

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**APPENDIX A
HISTORICAL SOIL DATA COLLECTED IN AREA 8, PHASE III-NORTH**

Sample ID	Location	Date	Top	Bottom	Northing	Easting	Parameter	Result	Qual	Units
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	2,4-Dinitrophenol	960	UJ	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	2,4-Dinitrotoluene	420	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	2,4-Dinitrotoluene	380	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	2,6-Dinitrotoluene	420	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	2,6-Dinitrotoluene	380	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	2-Chloronaphthalene	420	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	2-Chloronaphthalene	380	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	2-Chlorophenol	420	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	2-Chlorophenol	380	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	2-Methylnaphthalene	420	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	2-Methylnaphthalene	380	UJ	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	2-Nitroaniline	1100	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	2-Nitroaniline	960	UJ	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	2-Nitrophenol	420	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	2-Nitrophenol	380	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	3,3'-Dichlorobenzidine	420	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	3,3'-Dichlorobenzidine	380	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	3-Nitroaniline	1100	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	3-Nitroaniline	960	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	4,4'-DDD	4.2	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	4,4'-DDD	3.8	UJ	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	4,4'-DDE	4.2	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	4,4'-DDE	3.8	UJ	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	4,4'-DDT	4.2	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	4,4'-DDT	3.8	UJ	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	4,6-Dinitro-2-methylphenol	1100	UJ	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	4,6-Dinitro-2-methylphenol	960	UJ	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	4-Bromophenyl phenyl ether	420	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	4-Bromophenyl phenyl ether	380	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	4-Chloro-3-methylphenol	420	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	4-Chloro-3-methylphenol	380	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	4-Chlorophenylphenyl ether	420	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	4-Chlorophenylphenyl ether	380	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	4-Nitroaniline	1100	UJ	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	4-Nitroaniline	960	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	4-Nitrophenol	1100	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	4-Nitrophenol	960	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Acenaphthene	420	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Acenaphthene	380	U	ug/kg

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**APPENDIX A
HISTORICAL SOIL DATA COLLECTED IN AREA 8, PHASE III-NORTH**

Sample ID	Location	Date	Top	Bottom	Northing	Easting	Parameter	Result	Qual	Units
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Acenaphthylene	420	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Acenaphthylene	380	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Acetone	13	UJ	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Acetone	12	UJ	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Aldrin	2.2	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Aldrin	2	UJ	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	alpha-BHC	2.2	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	alpha-BHC	2	UJ	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	alpha-Chlordane	2.2	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	alpha-Chlordane	2	UJ	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Aluminum	10500	-	mg/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Aluminum	11300	-	mg/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Anthracene	420	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Anthracene	380	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Antimony	2.8	UJ	mg/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Antimony	2.5	UJ	mg/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Aroclor-1016	42	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Aroclor-1016	38	UJ	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Aroclor-1221	85	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Aroclor-1221	77	UJ	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Aroclor-1232	42	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Aroclor-1232	38	UJ	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Aroclor-1242	42	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Aroclor-1242	38	UJ	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Aroclor-1248	42	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Aroclor-1248	38	UJ	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Aroclor-1254	42	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Aroclor-1254	38	UJ	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Aroclor-1260	42	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Aroclor-1260	38	UJ	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Arsenic	5	J	mg/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Arsenic	5.6	J	mg/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Barium	88.8	-	mg/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Barium	69.1	-	mg/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Benzene	13	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Benzene	12	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Benzo(a)anthracene	420	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Benzo(a)anthracene	380	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Benzo(a)pyrene	420	U	ug/kg

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**APPENDIX A
HISTORICAL SOIL DATA COLLECTED IN AREA 8, PHASE III-NORTH**

Sample ID	Location	Date	Top	Bottom	Northing	Easting	Parameter	Result	Qual	Units
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Benzo(a)pyrene	380	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Benzo(b)fluoranthene	420	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Benzo(b)fluoranthene	380	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Benzo(g,h,i)perylene	420	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Benzo(g,h,i)perylene	380	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Benzo(k)fluoranthene	420	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Benzo(k)fluoranthene	380	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Benzoic acid	1100	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Benzoic acid	960	UJ	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Benzyl alcohol	420	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Benzyl alcohol	380	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Beryllium	1.3	U	mg/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Beryllium	1.2	U	mg/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	beta-BHC	2.2	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	beta-BHC	2	UJ	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	bis(2-Chloroethoxy)methane	420	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	bis(2-Chloroethoxy)methane	380	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	bis(2-Chloroethyl)ether	420	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	bis(2-Chloroethyl)ether	380	UJ	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	bis(2-Chloroisopropyl) ether	420	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	bis(2-Chloroisopropyl) ether	380	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	bis(2-Ethylhexyl)phthalate	420	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	bis(2-Ethylhexyl)phthalate	380	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Bromodichloromethane	13	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Bromodichloromethane	12	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Bromoform	13	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Bromoform	12	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Bromomethane	13	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Bromomethane	12	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Butyl benzyl phthalate	420	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Butyl benzyl phthalate	380	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Cadmium	1.3	UJ	mg/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Cadmium	1.2	UJ	mg/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Calcium	1480	J	mg/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Calcium	5550	J	mg/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Carbon disulfide	13	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Carbon disulfide	12	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Carbon Tetrachloride	13	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Carbon Tetrachloride	12	U	ug/kg

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**APPENDIX A
HISTORICAL SOIL DATA COLLECTED IN AREA 8, PHASE III-NORTH**

Sample ID	Location	Date	Top	Bottom	Northing	Easting	Parameter	Result	Qual	Units
121303	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Cesium-137	0.4	J	pCi/g
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Chlorobenzene	13	UJ	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Chlorobenzene	12	UJ	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Chloroethane	13	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Chloroethane	12	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Chloroform	13	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Chloroform	12	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Chloromethane	13	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Chloromethane	12	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Chromium	13.2	-	mg/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Chromium	14.9	-	mg/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Chrysene	420	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Chrysene	380	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	cis-1,3-Dichloropropene	13	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	cis-1,3-Dichloropropene	12	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Cobalt	12	-	mg/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Cobalt	10.3	-	mg/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Copper	10.3	-	mg/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Copper	12.3	-	mg/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Cyanide	0.32	U	mg/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Cyanide	0.29	U	mg/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	delta-BHC	2.2	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	delta-BHC	2	UJ	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Dibenzo(a,h)anthracene	420	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Dibenzo(a,h)anthracene	380	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Dibenzofuran	420	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Dibenzofuran	380	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Dibromochloromethane	13	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Dibromochloromethane	12	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Dieldrin	4.2	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Dieldrin	3.8	UJ	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Diethyl phthalate	420	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Diethyl phthalate	380	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Dimethyl phthalate	420	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Dimethyl phthalate	380	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Di-n-butyl phthalate	420	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Di-n-butyl phthalate	380	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Di-n-octyl phthalate	420	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Di-n-octyl phthalate	380	U	ug/kg

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**APPENDIX A
HISTORICAL SOIL DATA COLLECTED IN AREA 8, PHASE III-NORTH**

Sample ID	Location	Date	Top	Bottom	Northing	Easting	Parameter	Result	Qual	Units
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Endosulfan II	4.2	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Endosulfan II	3.8	UJ	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Endosulfan sulfate	4.2	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Endosulfan sulfate	3.8	UJ	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Endosulfan-I	2.2	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Endosulfan-I	2	UJ	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Endrin	4.2	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Endrin	3.8	UJ	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Endrin aldehyde	4.2	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Endrin aldehyde	3.8	UJ	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Endrin ketone	4.2	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Endrin ketone	3.8	UJ	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Ethylbenzene	13	UJ	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Ethylbenzene	12	UJ	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Fluoranthene	420	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Fluoranthene	380	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Fluorene	420	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Fluorene	380	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	gamma-BHC (Lindane)	2.2	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	gamma-BHC (Lindane)	2	UJ	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	gamma-Chlordane	2.2	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	gamma-Chlordane	2	UJ	ug/kg
121303	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Gross Alpha	4.2	UNV	pCi/g
121302	500318/SS-25	07/09/1993	0	0.50	481580.51	1345960.34	Gross Alpha	11	UNV	pCi/g
121303	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Gross Beta	19.6	NV	pCi/g
121302	500318/SS-25	07/09/1993	0	0.50	481580.51	1345960.34	Gross Beta	25	UNV	pCi/g
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Heptachlor	2.2	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Heptachlor	2	UJ	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Heptachlor epoxide	2.2	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Heptachlor epoxide	2	UJ	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Hexachlorobenzene	420	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Hexachlorobenzene	380	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Hexachlorobutadiene	420	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Hexachlorobutadiene	380	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Hexachlorocyclopentadiene	420	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Hexachlorocyclopentadiene	380	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Hexachloroethane	420	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Hexachloroethane	380	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Indeno(1,2,3-cd)pyrene	420	U	ug/kg

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**APPENDIX A
HISTORICAL SOIL DATA COLLECTED IN AREA 8, PHASE III-NORTH**

Sample ID	Location	Date	Top	Bottom	Northing	Easting	Parameter	Result	Qual	Units
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Indeno(1,2,3-cd)pyrene	380	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Iron	16300	-	mg/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Iron	19800	-	mg/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Isophorone	420	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Isophorone	380	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Lead	28.2	J	mg/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Lead	23.2	J	mg/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Magnesium	1780	J	mg/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Magnesium	2180	J	mg/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Manganese	1440	J	mg/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Manganese	663	J	mg/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Mercury	0.06	U	mg/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Mercury	0.06	U	mg/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Methoxychlor	22	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Methoxychlor	20	UJ	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Methylene chloride	13	UJ	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Methylene chloride	12	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Molybdenum	4.3	UJ	mg/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Molybdenum	3.9	UJ	mg/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Naphthalene	420	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Naphthalene	380	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Nickel	12.8	-	mg/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Nickel	15.1	-	mg/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Nitrobenzene	420	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Nitrobenzene	380	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	N-Nitroso-di-n-propylamine	420	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	N-Nitroso-di-n-propylamine	380	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	N-Nitrosodiphenylamine	420	UJ	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	N-Nitrosodiphenylamine	380	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	o-Methylphenol	420	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	o-Methylphenol	380	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	p-Chloroaniline	420	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	p-Chloroaniline	380	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Pentachlorophenol	1100	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Pentachlorophenol	960	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Phenanthrene	420	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Phenanthrene	380	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Phenol	420	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Phenol	380	U	ug/kg

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**APPENDIX A
HISTORICAL SOIL DATA COLLECTED IN AREA 8, PHASE III-NORTH**

Sample ID	Location	Date	Top	Bottom	Northing	Easting	Parameter	Result	Qual	Units
121303	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Plutonium-238	0.2	UJ	pCi/g
121303	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Plutonium-239/240	0.2	UJ	pCi/g
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	p-Methylphenol	420	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	p-Methylphenol	380	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Potassium	1520	-	mg/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Potassium	1230	-	mg/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Pyrene	420	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Pyrene	380	U	ug/kg
121303	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Radium-226	0.3	-	pCi/g
121303	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Radium-228	0.8	-	pCi/g
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Selenium	0.53	J	mg/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Selenium	0.55	J	mg/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Silicon	159	-	mg/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Silicon	91	J	mg/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Silver	0.25	U	mg/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Silver	0.23	U	mg/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Sodium	34.8	U	mg/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Sodium	31.6	U	mg/kg
121303	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Strontium-90	0.5	UJ	pCi/g
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Styrene	13	UJ	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Styrene	12	UJ	ug/kg
121303	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Technetium-99	1	UJ	pCi/g
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Tetrachloroethene	13	UJ	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Tetrachloroethene	12	UJ	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Thallium	0.25	U	mg/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Thallium	0.23	U	mg/kg
121303	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Thorium-228	0.6	J	pCi/g
121303	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Thorium-230	0.8	J	pCi/g
121303	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Thorium-232	0.5	J	pCi/g
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Toluene	13	UJ	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Toluene	12	UJ	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Toxaphene	220	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Toxaphene	200	UJ	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	trans-1,3-Dichloropropene	13	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	trans-1,3-Dichloropropene	12	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Trichloroethene	13	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Trichloroethene	12	U	ug/kg
121303	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Uranium, Total	5.10	J	mg/kg
121303	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Uranium-234	1.2	J	pCi/g

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**APPENDIX A
HISTORICAL SOIL DATA COLLECTED IN AREA 8, PHASE III-NORTH**

Sample ID	Location	Date	Top	Bottom	Northing	Easting	Parameter	Result	Qual	Units
121303	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Uranium-238	1.7	J	pCi/g
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Vanadium	18.9	J	mg/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Vanadium	22.1	J	mg/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Vinyl Acetate	13	UJ	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Vinyl Acetate	12	UJ	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Vinyl chloride	13	U	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Vinyl chloride	12	U	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Xylenes, Total	13	UJ	ug/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Xylenes, Total	12	UJ	ug/kg
121251	500318/SS-26	07/09/1993	0	0.50	481142.469	1346108.578	Zinc	47.5	J	mg/kg
121301	500318/SS-25	07/09/1993	0	0.50	481580.501	1345960.334	Zinc	137	J	mg/kg
032748	4108	07/10/1990			480094.07	1346467.18	Thorium, Total	18	UNV	mg/kg
032748	4108	07/10/1990			480094.07	1346467.18	Uranium, Total	11	UNV	mg/kg
032743	4108	07/01/1990	100	101.50	480094.073	1346467.18	Cesium-137	0.2	UJ	pCi/g
032743	4108	07/01/1990	100	101.50	480094.073	1346467.18	Neptunium-237	0.6	U	pCi/g
032743	4108	07/01/1990	100	101.50	480094.073	1346467.18	Plutonium-238	0.6	U	pCi/g
032743	4108	07/01/1990	100	101.50	480094.073	1346467.18	Plutonium-239/240	0.6	U	pCi/g
032743	4108	07/01/1990	100	101.50	480094.073	1346467.18	Radium-226	1.54	J	pCi/g
032743	4108	07/01/1990	100	101.50	480094.073	1346467.18	Radium-228	1.33	J	pCi/g
032743	4108	07/01/1990	100	101.50	480094.073	1346467.18	Ruthenium-106	1	UJ	pCi/g
032743	4108	07/01/1990	100	101.50	480094.073	1346467.18	Strontium-90	5	U	pCi/g
032743	4108	07/01/1990	100	101.50	480094.073	1346467.18	Technetium-99	1	UJ	pCi/g
032743	4108	07/01/1990	100	101.50	480094.073	1346467.18	Thorium, Total	5.48	-	mg/kg
032743	4108	07/01/1990	100	101.50	480094.073	1346467.18	Thorium-228	1.11	-	pCi/g
032743	4108	07/01/1990	100	101.50	480094.073	1346467.18	Thorium-230	1.29	-	pCi/g
032743	4108	07/01/1990	100	101.50	480094.073	1346467.18	Thorium-232	0.607	-	pCi/g
032743	4108	07/01/1990	100	101.50	480094.073	1346467.18	Uranium, Total	4.83	-	mg/kg
032743	4108	07/01/1990	100	101.50	480094.073	1346467.18	Uranium-234	1.4	-	pCi/g
032743	4108	07/01/1990	100	101.50	480094.073	1346467.18	Uranium-235/236	0.6	U	pCi/g
032743	4108	07/01/1990	100	101.50	480094.073	1346467.18	Uranium-238	1.61	-	pCi/g
032547	2383	04/09/1990	50	51.50	480529.611	1345905.376	Cesium-137	0.2	UJ	pCi/g
032547	2383	04/09/1990	50	51.50	480529.611	1345905.376	Neptunium-237	0.6	U	pCi/g
032547	2383	04/09/1990	50	51.50	480529.611	1345905.376	Plutonium-238	0.6	UJ	pCi/g
032547	2383	04/09/1990	50	51.50	480529.611	1345905.376	Plutonium-239/240	0.6	UJ	pCi/g
032547	2383	04/09/1990	50	51.50	480529.611	1345905.376	Radium-226	0.438	J	pCi/g
032547	2383	04/09/1990	50	51.50	480529.611	1345905.376	Radium-228	0.552	J	pCi/g
032547	2383	04/09/1990	50	51.50	480529.611	1345905.376	Ruthenium-106	1	UJ	pCi/g
032547	2383	04/09/1990	50	51.50	480529.611	1345905.376	Strontium-90	0.5	U	pCi/g
032547	2383	04/09/1990	50	51.50	480529.611	1345905.376	Technetium-99	1	U	pCi/g

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**APPENDIX A
HISTORICAL SOIL DATA COLLECTED IN AREA 8, PHASE III-NORTH**

Sample ID	Location	Date	Top	Bottom	Northing	Easting	Parameter	Result	Qual	Units
032547	2383	04/09/1990	50	51.50	480529.611	1345905.376	Thorium, Total	0.8	U	mg/kg
032547	2383	04/09/1990	50	51.50	480529.611	1345905.376	Thorium-228	0.6	U	pCi/g
032547	2383	04/09/1990	50	51.50	480529.611	1345905.376	Thorium-230	0.731	-	pCi/g
032547	2383	04/09/1990	50	51.50	480529.611	1345905.376	Thorium-232	0.6	U	pCi/g
032547	2383	04/09/1990	50	51.50	480529.611	1345905.376	Uranium, Total	1.80	U	mg/kg
032547	2383	04/09/1990	50	51.50	480529.611	1345905.376	Uranium-234	0.6	U	pCi/g
032547	2383	04/09/1990	50	51.50	480529.611	1345905.376	Uranium-235/236	0.6	U	pCi/g
032547	2383	04/09/1990	50	51.50	480529.611	1345905.376	Uranium-238	0.6	U	pCi/g
032527	2383	03/21/1990	0	1.50	480529.611	1345905.376	Neptunium-237	0.6	U	pCi/g
032527	2383	03/21/1990	0	1.50	480529.611	1345905.376	Plutonium-238	0.6	UJ	pCi/g
032527	2383	03/21/1990	0	1.50	480529.611	1345905.376	Plutonium-239/240	0.6	UJ	pCi/g
032527	2383	03/21/1990	0	1.50	480529.611	1345905.376	Strontium-90	3.62	-	pCi/g
032527	2383	03/21/1990	0	1.50	480529.611	1345905.376	Technetium-99	1	U	pCi/g
032527	2383	03/21/1990	0	1.50	480529.611	1345905.376	Thorium, Total	6.59	-	mg/kg
032527	2383	03/21/1990	0	1.50	480529.611	1345905.376	Thorium-228	1.48	-	pCi/g
032527	2383	03/21/1990	0	1.50	480529.611	1345905.376	Thorium-230	1.22	-	pCi/g
032527	2383	03/21/1990	0	1.50	480529.611	1345905.376	Thorium-232	0.73	-	pCi/g
032527	2383	03/21/1990	0	1.50	480529.611	1345905.376	Uranium, Total	5.67	-	mg/kg
032527	2383	03/21/1990	0	1.50	480529.611	1345905.376	Uranium-234	0.934	-	pCi/g
032527	2383	03/21/1990	0	1.50	480529.611	1345905.376	Uranium-235/236	0.6	U	pCi/g
032527	2383	03/21/1990	0	1.50	480529.611	1345905.376	Uranium-238	1.89	-	pCi/g
010656	3108	02/06/1989	95	96.50	480089.403	1346458.11	Neptunium-237	0.6	UJ	pCi/g
010656	3108	02/06/1989	95	96.50	480089.403	1346458.11	Plutonium-238	0.6	U	pCi/g
010656	3108	02/06/1989	95	96.50	480089.403	1346458.11	Plutonium-239/240	0.6	U	pCi/g
010656	3108	02/06/1989	95	96.50	480089.403	1346458.11	Strontium-90	0.5	U	pCi/g
010656	3108	02/06/1989	95	96.50	480089.403	1346458.11	Technetium-99	1	U	pCi/g
010656	3108	02/06/1989	95	96.50	480089.403	1346458.11	Thorium-228	0.7	-	pCi/g
010656	3108	02/06/1989	95	96.50	480089.403	1346458.11	Thorium-230	1.1	-	pCi/g
010656	3108	02/06/1989	95	96.50	480089.403	1346458.11	Thorium-232	0.6	U	pCi/g
010656	3108	02/06/1989	95	96.50	480089.403	1346458.11	Uranium, Total	2.40	-	mg/kg
010656	3108	02/06/1989	95	96.50	480089.403	1346458.11	Uranium-234	0.8	-	pCi/g
010656	3108	02/06/1989	95	96.50	480089.403	1346458.11	Uranium-235/236	0.6	U	pCi/g
010656	3108	02/06/1989	95	96.50	480089.403	1346458.11	Uranium-238	0.8	-	pCi/g
005438	ZONE 3-308	09/22/1988	0	0.17	481329.361	1346130.986	Cesium-137	0.7	J	pCi/g
005447	ZONE 3-277	09/22/1988	0	0.17	481029.359	1346230.989	Cesium-137	0.7	J	pCi/g
005490	ZONE 3-354	09/22/1988	0	0.17	481879.367	1346230.979	Cesium-137	0.2	UJ	pCi/g
005493	ZONE 3-333	09/22/1988	0	0.17	481629.363	1346130.982	Cesium-137	0.2	UJ	pCi/g
005441	ZONE 3-308	09/22/1988	0	0.17	481329.379981788	1346131.04996205	Cesium-137	0.7	J	pCi/g
005438	ZONE 3-308	09/22/1988	0	0.17	481329.361	1346130.986	Neptunium-237	0.6	U	pCi/g

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**APPENDIX A
HISTORICAL SOIL DATA COLLECTED IN AREA 8, PHASE III-NORTH**

Sample ID	Location	Date	Top	Bottom	Northing	Easting	Parameter	Result	Qual	Units
005447	ZONE 3-277	09/22/1988	0	0.17	481029.359	1346230.989	Neptunium-237	0.6	U	pCi/g
005490	ZONE 3-354	09/22/1988	0	0.17	481879.367	1346230.979	Neptunium-237	0.6	U	pCi/g
005493	ZONE 3-333	09/22/1988	0	0.17	481629.363	1346130.982	Neptunium-237	0.6	U	pCi/g
005441	ZONE 3-308	09/22/1988	0	0.17	481329.379981788	1346131.04996205	Neptunium-237	0.6	U	pCi/g
005438	ZONE 3-308	09/22/1988	0	0.17	481329.361	1346130.986	Plutonium-238	0.6	UJ	pCi/g
005447	ZONE 3-277	09/22/1988	0	0.17	481029.359	1346230.989	Plutonium-238	0.6	UJ	pCi/g
005490	ZONE 3-354	09/22/1988	0	0.17	481879.367	1346230.979	Plutonium-238	0.6	UJ	pCi/g
005493	ZONE 3-333	09/22/1988	0	0.17	481629.363	1346130.982	Plutonium-238	0.6	UJ	pCi/g
005441	ZONE 3-308	09/22/1988	0	0.17	481329.379981788	1346131.04996205	Plutonium-238	0.6	UJ	pCi/g
005438	ZONE 3-308	09/22/1988	0	0.17	481329.361	1346130.986	Plutonium-239/240	0.6	UJ	pCi/g
005447	ZONE 3-277	09/22/1988	0	0.17	481029.359	1346230.989	Plutonium-239/240	0.6	UJ	pCi/g
005490	ZONE 3-354	09/22/1988	0	0.17	481879.367	1346230.979	Plutonium-239/240	0.6	UJ	pCi/g
005493	ZONE 3-333	09/22/1988	0	0.17	481629.363	1346130.982	Plutonium-239/240	0.6	UJ	pCi/g
005441	ZONE 3-308	09/22/1988	0	0.17	481329.379981788	1346131.04996205	Plutonium-239/240	0.6	UJ	pCi/g
005438	ZONE 3-308	09/22/1988	0	0.17	481329.361	1346130.986	Radium-226	1	J	pCi/g
005447	ZONE 3-277	09/22/1988	0	0.17	481029.359	1346230.989	Radium-226	1	J	pCi/g
005490	ZONE 3-354	09/22/1988	0	0.17	481879.367	1346230.979	Radium-226	0.426	J	pCi/g
005493	ZONE 3-333	09/22/1988	0	0.17	481629.363	1346130.982	Radium-226	0.7	J	pCi/g
005441	ZONE 3-308	09/22/1988	0	0.17	481329.379981788	1346131.04996205	Radium-226	1.1	J	pCi/g
005438	ZONE 3-308	09/22/1988	0	0.17	481329.361	1346130.986	Radium-228	1.2	J	pCi/g
005447	ZONE 3-277	09/22/1988	0	0.17	481029.359	1346230.989	Radium-228	0.9	J	pCi/g
005490	ZONE 3-354	09/22/1988	0	0.17	481879.367	1346230.979	Radium-228	0.5	UJ	pCi/g
005493	ZONE 3-333	09/22/1988	0	0.17	481629.363	1346130.982	Radium-228	0.6	J	pCi/g
005441	ZONE 3-308	09/22/1988	0	0.17	481329.379981788	1346131.04996205	Radium-228	1	J	pCi/g
005438	ZONE 3-308	09/22/1988	0	0.17	481329.361	1346130.986	Ruthenium-106	1	UJ	pCi/g
005447	ZONE 3-277	09/22/1988	0	0.17	481029.359	1346230.989	Ruthenium-106	1	UJ	pCi/g
005490	ZONE 3-354	09/22/1988	0	0.17	481879.367	1346230.979	Ruthenium-106	1	UJ	pCi/g
005493	ZONE 3-333	09/22/1988	0	0.17	481629.363	1346130.982	Ruthenium-106	1	UJ	pCi/g
005441	ZONE 3-308	09/22/1988	0	0.17	481329.379981788	1346131.04996205	Ruthenium-106	1	UJ	pCi/g
005438	ZONE 3-308	09/22/1988	0	0.17	481329.361	1346130.986	Strontium-90	0.5	U	pCi/g
005447	ZONE 3-277	09/22/1988	0	0.17	481029.359	1346230.989	Strontium-90	0.6	-	pCi/g
005490	ZONE 3-354	09/22/1988	0	0.17	481879.367	1346230.979	Strontium-90	0.5	U	pCi/g
005493	ZONE 3-333	09/22/1988	0	0.17	481629.363	1346130.982	Strontium-90	0.5	U	pCi/g
005441	ZONE 3-308	09/22/1988	0	0.17	481329.379981788	1346131.04996205	Strontium-90	0.5	U	pCi/g
005438	ZONE 3-308	09/22/1988	0	0.17	481329.361	1346130.986	Technetium-99	1	U	pCi/g
005447	ZONE 3-277	09/22/1988	0	0.17	481029.359	1346230.989	Technetium-99	1.1	U	pCi/g
005490	ZONE 3-354	09/22/1988	0	0.17	481879.367	1346230.979	Technetium-99	1	U	pCi/g
005493	ZONE 3-333	09/22/1988	0	0.17	481629.363	1346130.982	Technetium-99	1	U	pCi/g
005441	ZONE 3-308	09/22/1988	0	0.17	481329.379981788	1346131.04996205	Technetium-99	0.9	U	pCi/g

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**APPENDIX A
HISTORICAL SOIL DATA COLLECTED IN AREA 8, PHASE III-NORTH**

Sample ID	Location	Date	Top	Bottom	Northing	Easting	Parameter	Result	Qual	Units
005441	ZONE 3-308	09/22/1988	0	0.17	481329.379981788	1346131.04996205	Thorium, Total	6.38	NV	pCi/g
005438	ZONE 3-308	09/22/1988	0	0.17	481329.361	1346130.986	Thorium-228	1	-	pCi/g
005447	ZONE 3-277	09/22/1988	0	0.17	481029.359	1346230.989	Thorium-228	13.6	-	pCi/g
005490	ZONE 3-354	09/22/1988	0	0.17	481879.367	1346230.979	Thorium-228	0.6	U	pCi/g
005493	ZONE 3-333	09/22/1988	0	0.17	481629.363	1346130.982	Thorium-228	0.7	-	pCi/g
005441	ZONE 3-308	09/22/1988	0	0.17	481329.379981788	1346131.04996205	Thorium-228	0.8	-	pCi/g
005438	ZONE 3-308	09/22/1988	0	0.17	481329.361	1346130.986	Thorium-230	1.4	-	pCi/g
005447	ZONE 3-277	09/22/1988	0	0.17	481029.359	1346230.989	Thorium-230	2.5	-	pCi/g
005490	ZONE 3-354	09/22/1988	0	0.17	481879.367	1346230.979	Thorium-230	0.8	-	pCi/g
005493	ZONE 3-333	09/22/1988	0	0.17	481629.363	1346130.982	Thorium-230	1.4	-	pCi/g
005441	ZONE 3-308	09/22/1988	0	0.17	481329.379981788	1346131.04996205	Thorium-230	1.6	-	pCi/g
005438	ZONE 3-308	09/22/1988	0	0.17	481329.361	1346130.986	Thorium-232	0.8	-	pCi/g
005447	ZONE 3-277	09/22/1988	0	0.17	481029.359	1346230.989	Thorium-232	1.1	-	pCi/g
005490	ZONE 3-354	09/22/1988	0	0.17	481879.367	1346230.979	Thorium-232	0.6	U	pCi/g
005493	ZONE 3-333	09/22/1988	0	0.17	481629.363	1346130.982	Thorium-232	0.8	-	pCi/g
005441	ZONE 3-308	09/22/1988	0	0.17	481329.379981788	1346131.04996205	Thorium-232	0.7	-	pCi/g
005438	ZONE 3-308	09/22/1988	0	0.17	481329.361	1346130.986	Uranium, Total	13.49	-	mg/kg
005447	ZONE 3-277	09/22/1988	0	0.17	481029.359	1346230.989	Uranium, Total	13.19	-	mg/kg
005490	ZONE 3-354	09/22/1988	0	0.17	481879.367	1346230.979	Uranium, Total	1	J	mg/kg
005493	ZONE 3-333	09/22/1988	0	0.17	481629.363	1346130.982	Uranium, Total	2.70	-	mg/kg
005441	ZONE 3-308	09/22/1988	0	0.17	481329.379981788	1346131.04996205	Uranium, Total	14	J	mg/kg
005438	ZONE 3-308	09/22/1988	0	0.17	481329.361	1346130.986	Uranium-234	3.5	-	pCi/g
005447	ZONE 3-277	09/22/1988	0	0.17	481029.359	1346230.989	Uranium-234	3	-	pCi/g
005493	ZONE 3-333	09/22/1988	0	0.17	481629.363	1346130.982	Uranium-234	0.7	-	pCi/g
005441	ZONE 3-308	09/22/1988	0	0.17	481329.379981788	1346131.04996205	Uranium-234	3.3	-	pCi/g
005438	ZONE 3-308	09/22/1988	0	0.17	481329.361	1346130.986	Uranium-235/236	0.6	U	pCi/g
005447	ZONE 3-277	09/22/1988	0	0.17	481029.359	1346230.989	Uranium-235/236	0.6	U	pCi/g
005493	ZONE 3-333	09/22/1988	0	0.17	481629.363	1346130.982	Uranium-235/236	0.6	U	pCi/g
005441	ZONE 3-308	09/22/1988	0	0.17	481329.379981788	1346131.04996205	Uranium-235/236	0.6	U	pCi/g
005438	ZONE 3-308	09/22/1988	0	0.17	481329.361	1346130.986	Uranium-238	4.5	-	pCi/g
005447	ZONE 3-277	09/22/1988	0	0.17	481029.359	1346230.989	Uranium-238	4.4	-	pCi/g
005493	ZONE 3-333	09/22/1988	0	0.17	481629.363	1346130.982	Uranium-238	0.9	-	pCi/g
005441	ZONE 3-308	09/22/1988	0	0.17	481329.379981788	1346131.04996205	Uranium-238	4.2	-	pCi/g
007798	2043	12/16/1987	65	66.50	481790.16	1345582.95	Cesium-137	0.2	UJ	pCi/g
007798	2043	12/16/1987	65	66.50	481790.16	1345582.95	Neptunium-237	0.6	U	pCi/g
007798	2043	12/16/1987	65	66.50	481790.16	1345582.95	Plutonium-238	0.6	U	pCi/g
007798	2043	12/16/1987	65	66.50	481790.16	1345582.95	Plutonium-239/240	0.6	U	pCi/g
007798	2043	12/16/1987	65	66.50	481790.16	1345582.95	Radium-226	0.4	J	pCi/g
007798	2043	12/16/1987	65	66.50	481790.16	1345582.95	Radium-228	0.5	UJ	pCi/g

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**APPENDIX A
HISTORICAL SOIL DATA COLLECTED IN AREA 8, PHASE III-NORTH**

Sample ID	Location	Date	Top	Bottom	Northing	Easting	Parameter	Result	Qual	Units
007798	2043	12/16/1987	65	66.50	481790.16	1345582.95	Ruthenium-106	1	UJ	pCi/g
007798	2043	12/16/1987	65	66.50	481790.16	1345582.95	Strontium-90	0.5	UJ	pCi/g
007798	2043	12/16/1987	65	66.50	481790.16	1345582.95	Thorium-228	0.6	U	pCi/g
007798	2043	12/16/1987	65	66.50	481790.16	1345582.95	Thorium-230	0.6	-	pCi/g
007798	2043	12/16/1987	65	66.50	481790.16	1345582.95	Thorium-232	0.6	U	pCi/g
007798	2043	12/16/1987	65	66.50	481790.16	1345582.95	Uranium, Total	2.07	UNV	pCi/g
007798	2043	12/16/1987	65	66.50	481790.16	1345582.95	Uranium-234	0.6	U	pCi/g
007798	2043	12/16/1987	65	66.50	481790.16	1345582.95	Uranium-235/236	0.6	U	pCi/g
007798	2043	12/16/1987	65	66.50	481790.16	1345582.95	Uranium-238	0.6	U	pCi/g
007796	2043	12/14/1987	10.5	12.00	481790.16	1345582.95	Cesium-137	0.3	UJ	pCi/g
007796	2043	12/14/1987	10.5	12.00	481790.16	1345582.95	Neptunium-237	0.6	U	pCi/g
007796	2043	12/14/1987	10.5	12.00	481790.16	1345582.95	Plutonium-238	0.6	U	pCi/g
007796	2043	12/14/1987	10.5	12.00	481790.16	1345582.95	Plutonium-239/240	0.6	U	pCi/g
007796	2043	12/14/1987	10.5	12.00	481790.16	1345582.95	Radium-226	0.7	J	pCi/g
007796	2043	12/14/1987	10.5	12.00	481790.16	1345582.95	Radium-228	0.5	UJ	pCi/g
007796	2043	12/14/1987	10.5	12.00	481790.16	1345582.95	Ruthenium-106	1	UJ	pCi/g
007796	2043	12/14/1987	10.5	12.00	481790.16	1345582.95	Strontium-90	0.5	UJ	pCi/g
007796	2043	12/14/1987	10.5	12.00	481790.16	1345582.95	Thorium-228	0.7	-	pCi/g
007796	2043	12/14/1987	10.5	12.00	481790.16	1345582.95	Thorium-230	1.1	-	pCi/g
007796	2043	12/14/1987	10.5	12.00	481790.16	1345582.95	Thorium-232	0.6	U	pCi/g
007796	2043	12/14/1987	10.5	12.00	481790.16	1345582.95	Uranium, Total	2.07	NV	pCi/g
007796	2043	12/14/1987	10.5	12.00	481790.16	1345582.95	Uranium-234	0.6	U	pCi/g
007796	2043	12/14/1987	10.5	12.00	481790.16	1345582.95	Uranium-235/236	0.6	U	pCi/g
007796	2043	12/14/1987	10.5	12.00	481790.16	1345582.95	Uranium-238	0.6	-	pCi/g
007790	3043	12/08/1987	108	109.50	481800.26	1345581.33	Uranium, Total	106	-	mg/kg
007790	3043	12/08/1987	108	109.50	481800.26	1345581.33	Uranium, Total	116	-	mg/kg
007782	3043	12/07/1987	65	66.50	481800.268	1345581.332	Neptunium-237	0.6	UJ	pCi/g
007782	3043	12/07/1987	65	66.50	481800.268	1345581.332	Plutonium-238	0.6	UJ	pCi/g
007782	3043	12/07/1987	65	66.50	481800.268	1345581.332	Plutonium-239/240	0.6	UJ	pCi/g
007782	3043	12/07/1987	65	66.50	481800.268	1345581.332	Strontium-90	0.5	UJ	pCi/g
007782	3043	12/07/1987	65	66.50	481800.268	1345581.332	Thorium-228	0.6	U	pCi/g
007782	3043	12/07/1987	65	66.50	481800.268	1345581.332	Thorium-230	0.6	U	pCi/g
007782	3043	12/07/1987	65	66.50	481800.268	1345581.332	Thorium-232	0.6	U	pCi/g
007782	3043	12/07/1987	65	66.50	481800.268	1345581.332	Uranium, Total	1.80	U	mg/kg
007782	3043	12/07/1987	65	66.50	481800.268	1345581.332	Uranium-234	0.6	U	pCi/g
007782	3043	12/07/1987	65	66.50	481800.268	1345581.332	Uranium-235/236	0.6	U	pCi/g
007782	3043	12/07/1987	65	66.50	481800.268	1345581.332	Uranium-238	0.6	U	pCi/g
007621	3043	12/04/1987	10.5	12.00	481800.268	1345581.332	Cesium-137	0.2	UJ	pCi/g
007621	3043	12/04/1987	10.5	12.00	481800.268	1345581.332	Neptunium-237	0.6	UJ	pCi/g

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**APPENDIX A
HISTORICAL SOIL DATA COLLECTED IN AREA 8, PHASE III-NORTH**

Sample ID	Location	Date	Top	Bottom	Northing	Easting	Parameter	Result	Qual	Units
007621	3043	12/04/1987	10.5	12.00	481800.268	1345581.332	Plutonium-238	0.6	UJ	pCi/g
007621	3043	12/04/1987	10.5	12.00	481800.268	1345581.332	Plutonium-239/240	0.6	UJ	pCi/g
007621	3043	12/04/1987	10.5	12.00	481800.268	1345581.332	Radium-226	0.7	J	pCi/g
007621	3043	12/04/1987	10.5	12.00	481800.268	1345581.332	Radium-228	0.5	UJ	pCi/g
007621	3043	12/04/1987	10.5	12.00	481800.268	1345581.332	Ruthenium-106	1	UJ	pCi/g
007621	3043	12/04/1987	10.5	12.00	481800.268	1345581.332	Strontium-90	0.5	UJ	pCi/g
007621	3043	12/04/1987	10.5	12.00	481800.268	1345581.332	Thorium-228	0.7	J	pCi/g
007621	3043	12/04/1987	10.5	12.00	481800.268	1345581.332	Thorium-230	0.9	J	pCi/g
007621	3043	12/04/1987	10.5	12.00	481800.268	1345581.332	Thorium-232	0.6	UJ	pCi/g
007621	3043	12/04/1987	10.5	12.00	481800.268	1345581.332	Uranium, Total	2.40	J	mg/kg
007621	3043	12/04/1987	10.5	12.00	481800.268	1345581.332	Uranium-234	0.7	J	pCi/g
007621	3043	12/04/1987	10.5	12.00	481800.268	1345581.332	Uranium-235/236	0.6	U	pCi/g
007621	3043	12/04/1987	10.5	12.00	481800.268	1345581.332	Uranium-238	0.8	J	pCi/g
005143	ZONE 3-361	11/14/1987	0	0.17	482029.36	1345530.979	Cesium-137	0.7	J	pCi/g
005143	ZONE 3-361	11/14/1987	0	0.17	482029.36	1345530.979	Neptunium-237	0.6	UJ	pCi/g
005143	ZONE 3-361	11/14/1987	0	0.17	482029.36	1345530.979	Plutonium-238	0.6	UJ	pCi/g
005143	ZONE 3-361	11/14/1987	0	0.17	482029.36	1345530.979	Plutonium-239/240	0.6	U	pCi/g
005143	ZONE 3-361	11/14/1987	0	0.17	482029.36	1345530.979	Radium-226	0.9	J	pCi/g
005143	ZONE 3-361	11/14/1987	0	0.17	482029.36	1345530.979	Radium-228	1	UJ	pCi/g
005143	ZONE 3-361	11/14/1987	0	0.17	482029.36	1345530.979	Ruthenium-106	1	UJ	pCi/g
005143	ZONE 3-361	11/14/1987	0	0.17	482029.36	1345530.979	Strontium-90	1.5	-	pCi/g
005143	ZONE 3-361	11/14/1987	0	0.17	482029.36	1345530.979	Technetium-99	1	U	pCi/g
005143	ZONE 3-361	11/14/1987	0	0.17	482029.36	1345530.979	Thorium-228	1.2	-	pCi/g
005143	ZONE 3-361	11/14/1987	0	0.17	482029.36	1345530.979	Thorium-230	1.4	-	pCi/g
005143	ZONE 3-361	11/14/1987	0	0.17	482029.36	1345530.979	Thorium-232	1	-	pCi/g
005143	ZONE 3-361	11/14/1987	0	0.17	482029.36	1345530.979	Uranium, Total	10.79	J	mg/kg
005143	ZONE 3-361	11/14/1987	0	0.17	482029.36	1345530.979	Uranium-234	2.6	J	pCi/g
005143	ZONE 3-361	11/14/1987	0	0.17	482029.36	1345530.979	Uranium-235/236	0.6	UJ	pCi/g
005143	ZONE 3-361	11/14/1987	0	0.17	482029.36	1345530.979	Uranium-238	3.6	J	pCi/g
007407	1029	10/27/1987	13.5	15.00	480855.476	1346429.43	Cesium-137	0.2	UJ	pCi/g
007407	1029	10/27/1987	13.5	15.00	480855.476	1346429.43	Neptunium-237	0.6	UJ	pCi/g
007407	1029	10/27/1987	13.5	15.00	480855.476	1346429.43	Plutonium-238	0.6	U	pCi/g
007407	1029	10/27/1987	13.5	15.00	480855.476	1346429.43	Plutonium-239/240	0.6	U	pCi/g
007407	1029	10/27/1987	13.5	15.00	480855.476	1346429.43	Radium-226	0.6	J	pCi/g
007407	1029	10/27/1987	13.5	15.00	480855.476	1346429.43	Radium-228	0.5	UJ	pCi/g
007407	1029	10/27/1987	13.5	15.00	480855.476	1346429.43	Ruthenium-106	1	UJ	pCi/g
007407	1029	10/27/1987	13.5	15.00	480855.476	1346429.43	Strontium-90	0.5	U	pCi/g
007407	1029	10/27/1987	13.5	15.00	480855.476	1346429.43	Technetium-99	1	U	pCi/g
007407	1029	10/27/1987	13.5	15.00	480855.476	1346429.43	Thorium-228	0.6	UJ	pCi/g

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**APPENDIX A
HISTORICAL SOIL DATA COLLECTED IN AREA 8, PHASE III-NORTH**

Sample ID	Location	Date	Top	Bottom	Northing	Easting	Parameter	Result	Qual	Units
007407	1029	10/27/1987	13.5	15.00	480855.476	1346429.43	Thorium-230	1	J	pCi/g
007407	1029	10/27/1987	13.5	15.00	480855.476	1346429.43	Thorium-232	0.6	UJ	pCi/g
007407	1029	10/27/1987	13.5	15.00	480855.476	1346429.43	Uranium, Total	1.80	-	mg/kg
007407	1029	10/27/1987	13.5	15.00	480855.476	1346429.43	Uranium-234	0.6	U	pCi/g
007407	1029	10/27/1987	13.5	15.00	480855.476	1346429.43	Uranium-235/236	0.6	U	pCi/g
007407	1029	10/27/1987	13.5	15.00	480855.476	1346429.43	Uranium-238	0.6	-	pCi/g
SS2235	LIT8927	04/24/1986	0	0.17	480814.353	1345866.993	Uranium, Total	19.43	NV	mg/kg
SS2235	LIT8927	04/24/1986	0	0.17	480814.353	1345866.993	Uranium-234	4.17	NV	pCi/g
SS2235	LIT8927	04/24/1986	0	0.17	480814.353	1345866.993	Uranium-235	0.31	NV	pCi/g
SS2235	LIT8927	04/24/1986	0	0.17	480814.353	1345866.993	Uranium-238	6.48	NV	pCi/g
A8P3N-PC1-1-R	A8P3N-PC1	01/29/2003	0	0.5	481029.359	1346231	Radium-228	1.03	NV	pCi/g
A8P3N-PC1-1-R	A8P3N-PC1	01/29/2003	0	0.5	481029.359	1346231	Thorium-228	1.02	NV	pCi/g
A8P3N-PC1-1-R	A8P3N-PC1	01/29/2003	0	0.5	481029.359	1346231	Thorium-232	1.03	NV	pCi/g
A8P3N-PC1-1-R	A8P3N-PC1	01/29/2003	0	0.5	481029.359	1346231	Uranium, Total	15.6	NV	mg/kg
A8P3N-PC2^1-AB	A8P3N-PC2	03/17/2003	0	0.5	482638	1345495	Gross Alpha	25	NV	pCi/g
A8P3N-PC2^1-AB	A8P3N-PC2	03/17/2003	0	0.5	482638	1345495	Gross Beta	14	NV	pCi/g
A8P3N-PC2^1-R	A8P3N-PC2	03/17/2003	0	0.5	482638	1345495	Radium-226	8.89	-	pCi/g
A8P3N-PC2^2-R	A8P3N-PC2	03/17/2003	0.5	1	482638	1345495	Radium-226	1.4	-	pCi/g
A8P3N-PC2^7-R	A8P3N-PC2	03/17/2003	3	3.5	482638	1345495	Radium-226	0.872	-	pCi/g
A8P3N-PC3^1-R	A8P3N-PC3	03/17/2003	0	0.5	482643	1345495	Radium-226	1.41	-	pCi/g
A8P3N-PC3^7-R	A8P3N-PC3	03/17/2003	3	3.5	482643	1345495	Radium-226	1.09	-	pCi/g
A8P3N-PC4^1-R	A8P3N-PC4	03/17/2003	0	0.5	482638	1345490	Radium-226	2.27	-	pCi/g
A8P3N-PC4^7-R	A8P3N-PC4	03/17/2003	3	3.5	482638	1345490	Radium-226	0.898	-	pCi/g
A8P3N-PC5^1-R	A8P3N-PC5	03/17/2003	0	0.5	482638	1345500	Radium-226	1.08	-	pCi/g
A8P3N-PC5^7-R	A8P3N-PC5	03/17/2003	3	3.5	482638	1345500	Radium-226	0.957	-	pCi/g
A8P3N-PC6^1-R	A8P3N-PC6	03/17/2003	0	0.5	482633	1345495	Radium-226	0.991	-	pCi/g
A8P3N-PC6^7-R	A8P3N-PC6	03/17/2003	3	3.5	482633	1345495	Radium-226	0.678	-	pCi/g

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APPENDIX B

REAL-TIME DATA MAPS AND TABLES

**APPENDIX B
HPGe RESULTS AT DETECTOR HEIGHT OF 31 CM**

Location	Date	Northing	Easting	Detector Height	Ra-226 pCi/g	Th-232 pCi/g	Total U ppm
A8P3N-P2-04-4-G	4/24/2003	480554.6	1346298.3	31cm	0.954	0.831	0.214
A8P3N-P2-05-3-G	4/24/2003	480536.9	1346313.2	31cm	0.913	0.841	0.179
A8P3N-P2-03-4-G	4/24/2003	481376.2	1346019.3	31cm	0.897	0.865	0.156
A8P3N-P2-03-5-G	4/24/2003	481315.4	1346146.3	31cm	1.048	0.878	22
A8P3N-P2-05-4-G	4/24/2003	481577.3	1346018.4	31cm	0.979	1.06	0.137
A8P3N-P2-02-3-G	4/24/2003	482026.9	1346047.1	31cm	0.733	0.979	0.11
A8P3N-P2-02-3-D-G	4/24/2003	482026.9	1346047.1	31cm	0.858	0.857	14.9
A8P3N-P2-2-05-1-G	11/7/2002	480999.8	1346153.7	31cm	1.15	1.08	0
A8P3N-P2-2-04-1-G	11/7/2002	481175.8	1346116.5	31cm	1.3	1.01	26
A8P3N-P2-2-03-1-G	11/7/2002	481374.4	1345975.8	31cm	1.35	0.969	0
A8P3N-P2-2-05-2-G	11/7/2002	481579.5	1345971.3	31cm	1.22	0.924	20.1
A8P3N-P2-2-03-2-G	11/7/2002	481714.7	1345960	31cm	1.26	0.811	20.4
A8P3N-P2-2-03-2-D-G	11/7/2002	481714.7	1345960	31cm	1.28	0.928	0.135
A8P3N-P2-2-03-3-G	11/7/2002	481784.8	1345985.5	31cm	1.31	0.878	7.83E-02
A8P3N-P2-2-02-1-G	11/7/2002	481942.4	1346030.1	31cm	1.44	0.905	14.1
A8P3N-P2-2-02-2-G	11/7/2002	481992.5	1345667.9	31cm	1.49	1.07	0
A8P3N-P2-2-4-2-G	11/21/2002	480839.8	1345900	31cm	1.1	0.929	0
A8P3N-P2-2-4-3-G	11/21/2002	480737.3	1346193.2	31cm	1.05	0.912	25.4
A8P3N-P2-2-6-1-G	11/21/2002	480796.1	1346458.2	31cm	1.11	0.877	0
A8P3N-P2-2-1-1-G	11/21/2002	482635.8	1345488.2	31cm	1.05	0.704	8.19
A8P3N-P2-2-1-2-G	11/21/2002	482638.3	1345494.7	31cm	4.81	0.767	19.6
A8P3N-P2-2-1-2-G-D	11/21/2002	482638.3	1345494.7	31cm	4.79	0.725	19
A8P3N-P2-CU7-1-G	5/22/2003	480220	1346210	31cm	0.823	1.02	9.83E-02
A8P3N-P2-CU7-2-G	5/22/2003	480242	1346192	31cm	0.807	0.878	19.3
A8P3N-P2-CU7-3-G	5/22/2003	480273	1346165	31cm	0.724	0.764	0.135
A8P3N-P2-CU7-3-D-G	5/22/2003	480273	1346165	31cm	0.701	0.798	16.1
A8P3N-P2-CU7-4-G	5/22/2003	480292	1345989	31cm	0.86	0.976	12.4
A8P3N-P2-CU7-5-G	5/22/2003	480444	1346026	31cm	0.832	0.901	19
A8P3N-P2-CU6-2-G	5/22/2003	480705	1346573	31cm	0.748	0.858	0.114
A8P3N-P2-CU6-3-G	5/22/2003	480667	1346515	31cm	0.757	0.794	0
A8P3N-P2-CU6-4-G	5/22/2003	480675	1346391	31cm	0.732	0.817	0
A8P3N-P2-CU6-5-G	5/22/2003	480812	1346342	31cm	0.833	0.853	16.6
A8P3N-P2-CU8-3-G	5/22/2003	480565	1346603	31cm	0.772	0.837	0
A8P3N-P2-08-1	5/14/2003	480288	1346503	31cm	1.2	0.765	0
A8P3N-P2-08-2	5/14/2003	480140	1346422	31cm	1.14	0.583	17.4
A8P3N-P2-CU7-6-G	5/28/2003	480427	1346257	31cm	0.767	0.569	0

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APPENDIX B
HPGe RESULTS AT DETECTOR HEIGHT OF 31 CM

Location	Date	Northing	Easting	Detector Height	Ra-226 pCi/g	Th-232 pCi/g	Total U ppm
A8P3N-P2-CU7-7-G	5/28/2003	480391	1346259	31cm	0.726	0.787	18.2
A8P3N-P2-CU5-5-G	5/28/2003	480461	1346404	31cm	0.779	0.659	15
A8P3N-P2-CU5-6-G	5/28/2003	480627	1346299	31cm	0.847	0.914	16
A8P3N-P2-CU5-7-D-G	5/28/2003	481079	1346179	31cm	0.942	0.81	7.65E-02
A8P3N-P2-CU5-7-G	5/28/2003	481079	1346179	31cm	0.909	0.913	19.4

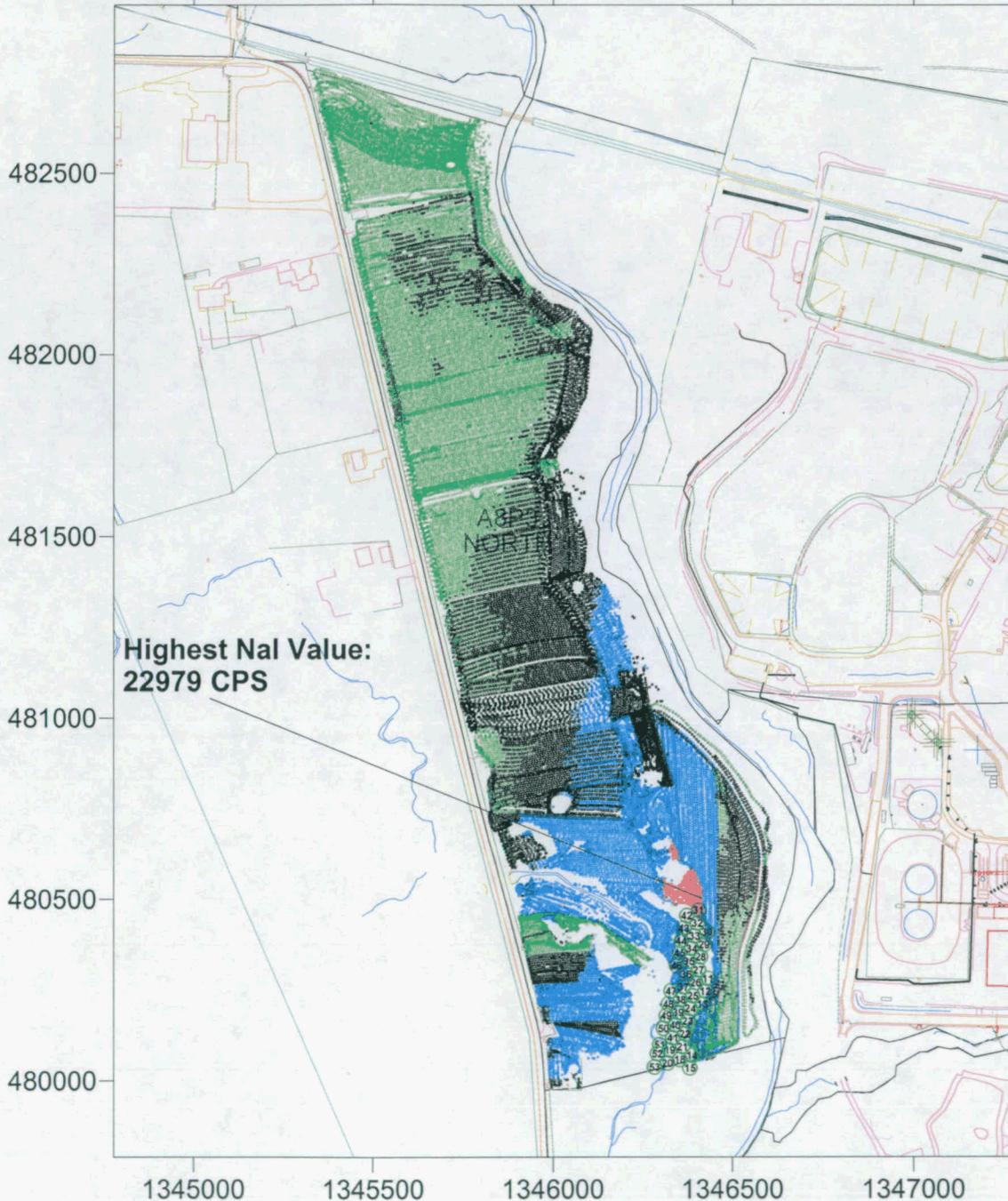
000042

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A8P3 North, Phase I Scan

4929
N

Total Gross Counts per Second
Field of View to Scale
HPGe DET#: 30687, 30904
Nal Batch #: GATOR- 146; RSS1- 752,754,769-770;
RSS2-446,465,474,477,480,483; RSS3- 51,77,90;
RTRK- 877-880,901-908,961
Measurements Dates: 09/19/02 - 05/14/03



Nal TCPS	
0 to 3000	Green
3000 to 5000	Light Green
5000 to 15000	Blue
15000 to 18000	Red
18000 to 99999	Dark Red

HPGe shown for coverage only.

000043

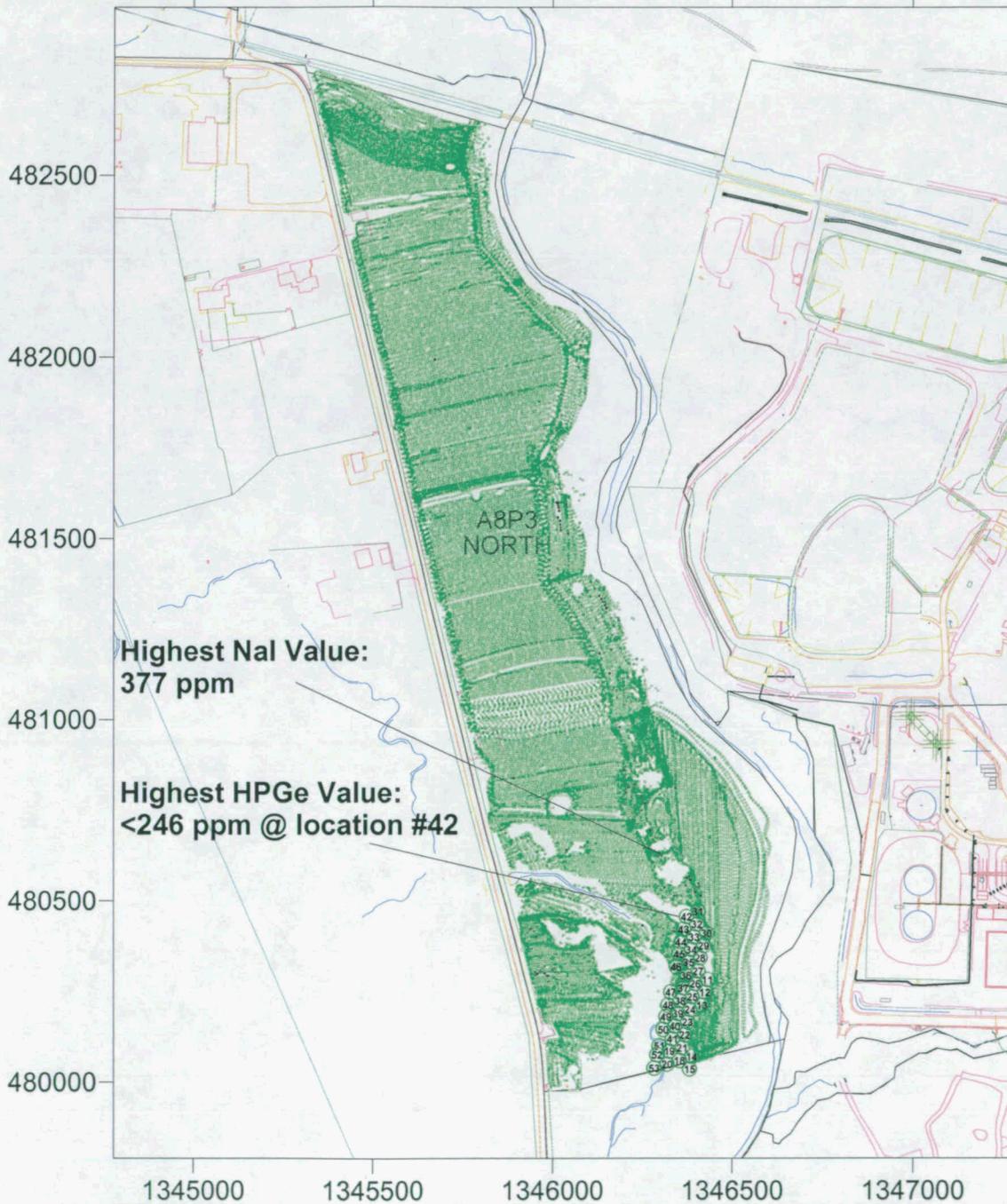
RTIMP DWG Title: A8P3N_P1_TC.srf
Project Name: A8P3N PreCert
Project #: 21110-PSP-0003
Prepared By: Brian McDaniel/11058
Date Prepared: 06/17/03
Support Data: A8P3N_P1_Nal.xls
A8P3N_P1_Nal_V2.0.xls
A8P3N_P1_HPGe_100cm.xls

A8P3 North, Phase I Scan

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N

Moisture Corrected Total Uranium
 Field of View to Scale
 HPGe DET#: 30687, 30904
 NaI Batch #: GATOR- 146; RSS1- 752,754,769-770;
 RSS2-446,465,474,477,480,483; RSS3- 51,77,90;
 RTRK- 877-880,901-908,961
 Measurements Dates: 09/19/02 - 05/14/03



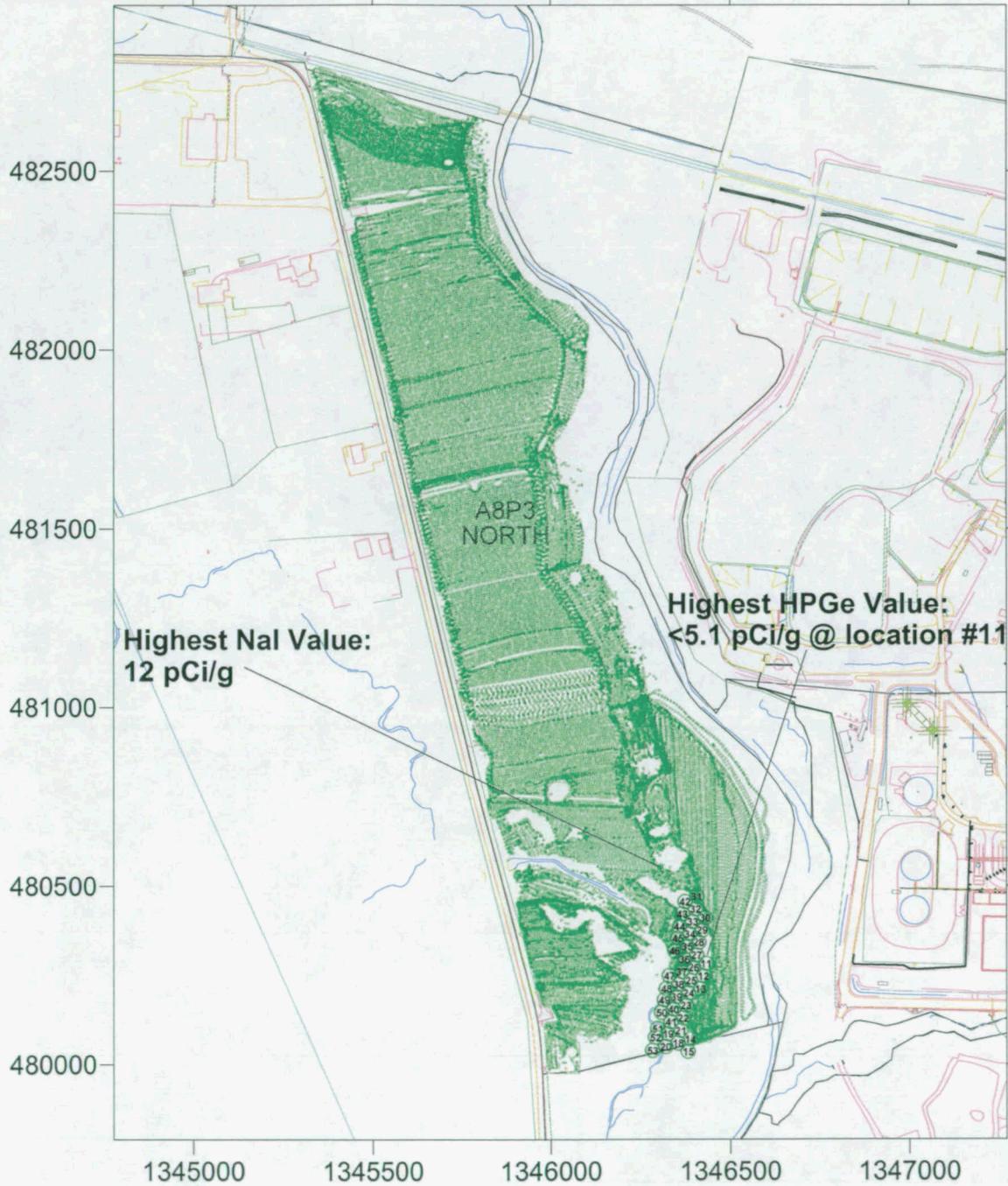
NaI Total U (ppm)	HPGe @ 100cm Total U (ppm)
 -319 to 246	 0 to 246
 246 to 721	 246 to 400
 721 to 9999	 400 to 9999

RTIMP DWG Title: A8P3N_P1_TU.srf
 Project Name: A8P3N PreCert
 Project #: 21110-PSP-0003
 Prepared By: Brian McDaniel/11058
 Date Prepared: 06/13/03
 Support Data: A8P3N_P1_Nal.xls
 A8P3N_P1_Nal_V2.0.xls
 A8P3N_P1_HPGe_100cm.xls

000044

A8P3 North, Phase I Scan 4929 N

Moisture Corrected Radium-226
 Field of View to Scale
 HPGe DET#: 30687, 30904
 NaI Batch #: GATOR- 146; RSS1- 752,754,769-770;
 RSS2-446,465,474,477,480,483; RSS3- 51,77,90;
 RTRK- 877-880,901-908,961
 Measurements Dates: 09/19/02 - 05/14/03



NaI Ra-226 (pCi/g)		HPGe @ 100cm Ra-226 (pCi/g)	
□	-4 to 12	○	0 to 5.1
□	12 to 9999	○	5.1 to 9999

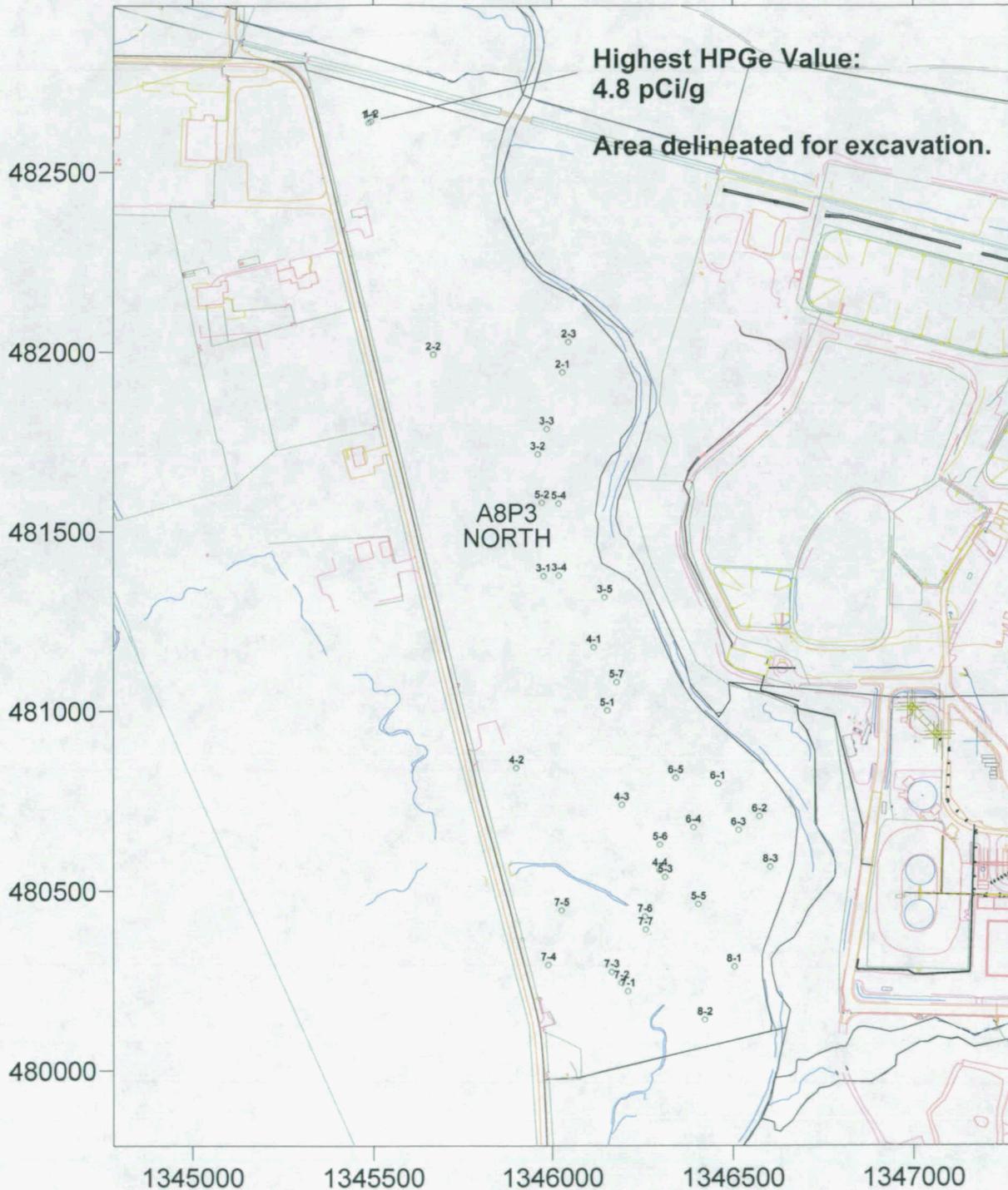
RTIMP DWG Title: A8P3N_P1_RA.srf
 Project Name: A8P3N PreCert
 Project #: 21110-PSP-0003
 Prepared By: Brian McDaniel/11058
 Date Prepared: 06/17/03
 Support Data: A8P3N_P1_NaI.xls
 A8P3N_P1_NaI_V2.0.xls
 A8P3N_P1_HPGe_100cm.xls 000046

A8P3 North, Phase 2 Scan

4929



Moisture Corrected Radium-226
Field of View to Scale
HPGe DET#: 30687, 30904, 31204, 31265
Measurement Dates: 11/07/02 - 05/28/03



HPGe @ 31cm
Ra-226 (pCi/g)

- 0 to 5.1
- 5.1 to 9999

RTIMP DWG Title: A8P3N_P2_RA.srf
Project Name: A8P3N PreCert
Project #: 21110-PSP-0003
Prepared By: Brian McDaniel/11058
Date Prepared: 05/29/03
Support Data: A8P3N_P2_HPGe_31cm.xls

000047

A8P3 North, Phase 2 Scan

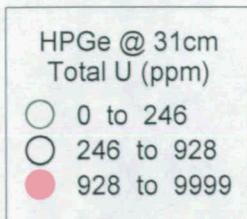
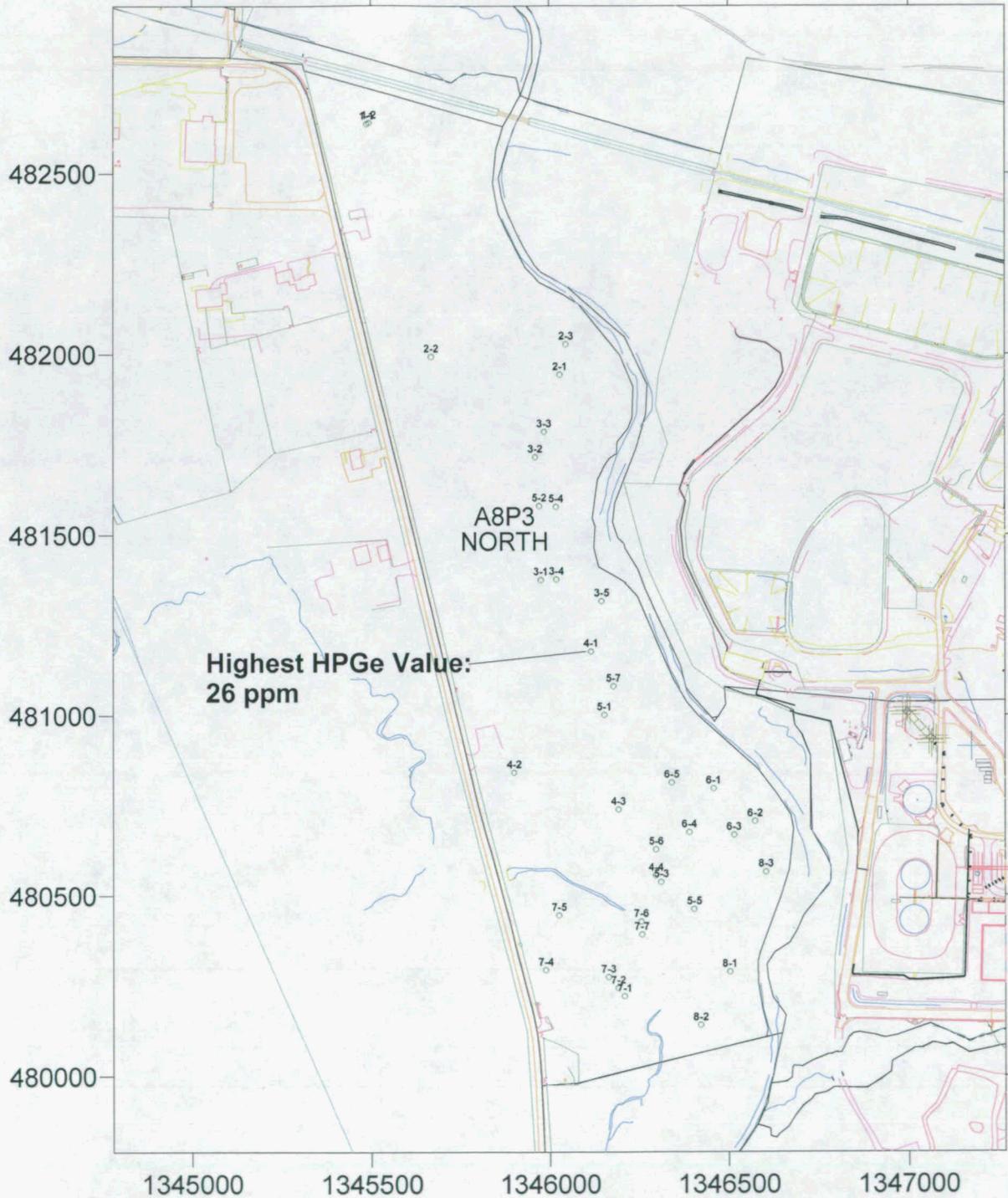
4929 N

Moisture Corrected Total Uranium

Field of View to Scale

HPGe DET#: 30687, 30904, 31204, 31265

Measurement Dates: 11/07/02 - 05/28/03



RTIMP DWG Title: A8P3N_P2_TU.srf
Project Name: A8P3N PreCert
Project #: 21110-PSP-0003
Prepared By: Brian McDaniel/11058
Date Prepared: 05/29/03
Support Data: A8P3N_P2_HPGe_31cm.xls

000048

A8P3 North, Phase 2 Scan

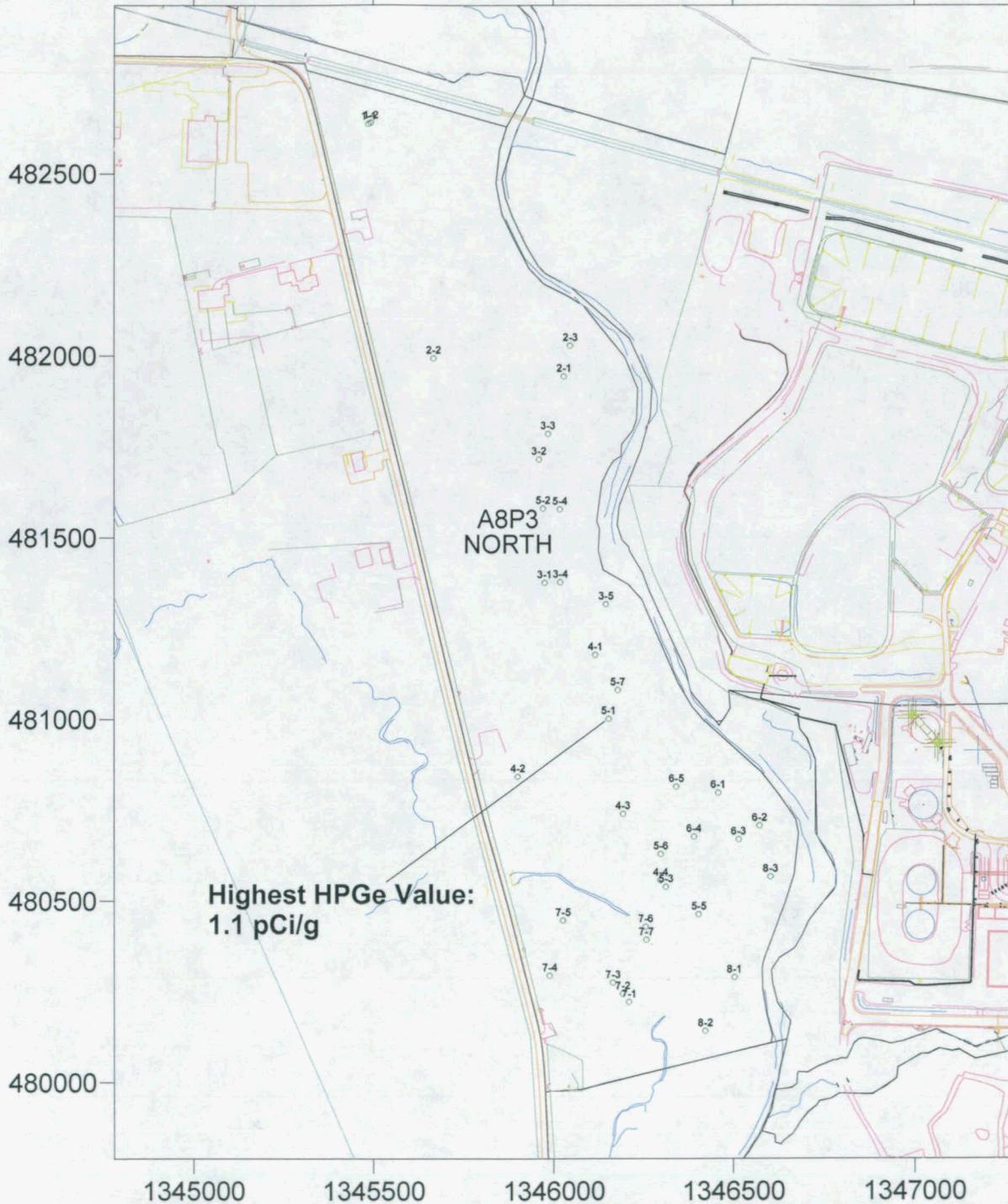
4929 N

Moisture Corrected Thorium-232

Field of View to Scale

HPGe DET#: 30687, 30904, 31204, 31265

Measurement Dates: 11/07/02 - 05/28/03



HPGe @ 31cm
Th-232 (pCi/g)

- 0 to 4.5
- 4.5 to 9999

RTIMP DWG Title: A8P3N_P2_TH.srf
Project Name: A8P3N PreCert
Project #: 21110-PSP-0003
Prepared By: Brian McDaniel/11058
Date Prepared: 05/29/03
Support Data: A8P3N_P2_HPGe_31cm.xls

000049