5-203.18 01097

CERTIFICATION DESIGN LETTER
AREA 1, PHASE II - SECTOR 1

FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
FERNALD, OHIO

NOVEMBER 1997

U.S. DEPARTMENT OF ENERGY
FERNALD AREA OFFICE

20710-RP-0005
REVISION A
DRAFT

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ACRONYMS AND ABBREVIATIONS

A1PI	Area 1, Phase II
A1PII	Area 1, Phase II
A1PII-S1	Area 1, Phase II Sector 1
A1PII-S2a	Area 1, Phase II, Sector 2a
ASCOC	Area Specific Constituent of Concern
CD	Conveyance Ditch
COC	Constituent of Concern
CU	Certification Unit
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
FEMP	Fernald Environmental Management Project
FRL	Final Remediation Level
GIS	Geographical Information System
HPGe	High Purity Germanium Detector
OU5	Operable Unit 5
OSDF	On- Site Disposal Facility
ppm	parts per million
PSP	Project Specific Plan
QA/QC	Quality Assurance/Quality Control
RI/FS	Remedial Investigation/Feasibility Study
RTRAK	Radiation Tracking System
ROD	Record of Decision
SCEP	Soils Characterization and Excavation Project
SED	Sitewide Environmental Database
SEP	Sitewide Excavation Plan
SCQ	Sitewide CERCLA Quality Assurance Project Plan
STP	Sewage Treatment Plan
STPI	Sewage Treatment Plant Incinerator
WAC	Waste Acceptance Criteria

EXECUTIVE SUMMARY

The intent of the Certification Design Letter (CDL) is to describe the certification approach to be used to certify Area 1, Phase II (A1PII). The following information is included:

- A definition of the boundaries of the areas to be certified under the guidance of this CDL.
- Presentation of historical data and newly acquired analytical data in the form of contaminant distribution maps, including real-time data maps.
- A discussion of the Area-Specific Constituent of Concern (ASCOC) selection process and list of ASCOCs assigned to the certification areas under the scope of this CDL.
- A presentation of the Certification Unit (CU) boundaries and proposed sampling strategy.
- The analytical requirements and the statistical methodology that will be employed.
- The proposed schedule for the certification activities.

The scope of this CDL includes three areas within A1PII: A1PII Sector 1 (A1PII-S1) Group A CUs, A1PII Sector 2a (A1PII-S2a) CUs, and the Conveyance Ditch. Based on historical data, none of the areas within the scope of this CDL require any remedial action. A review of existing analytical data, primarily from RI/FS programs, shows isolated contamination was found exceeding the FRLs, but no remedial action is required. This conclusion is supported with data collected from field instruments that measure the real-time activity of gamma photons and the laboratory analysis of additional physical samples.

Selection of ASCOCs to be considered in the certification process was accomplished starting with the COC lists in the OU2 and OU5 RODs using process knowledge regarding the site COCs and their release history, comparing CRDLs with FRLs, and considering the degradation rate and volatile nature of organic COCs. The certification design in this CDL follows the general approach outlined in Section 3.4 of the Sitewide Excavation Plan SEP. Remedial Investigation/Feasibility Study (RI/FS) data, pre-certification surveys, and physical samples have identified isolated locations where thorium-228, thorium-232, radium-226 and arsenic are above their FRLs. Total uranium, thorium- 228, thorium-232, radium-226, radium-228 (primary COCs), and arsenic will be considered ASCOCs in every CU. Lead will be considered an ASCOC only in CUs bordering the Trap Range, due to its demonstrated presence as a potential Resource Conservation and Recovery Act (RCRA) constituent in the Trap Range Area.

Field work is scheduled to begin January 5, 1998, and the Certification Report will be issued March 21, 1998.

1.0 INTRODUCTION

The intent of the Certification Design Letter (CDL) is to describe the certification approach to be used to certify Area 1, Phase II (A1PII). The format of this CDL follows the guidance as proposed in the draft Sitewide Excavation Plan (SEP) (DOE 1997a). Accordingly, this CDL consists of six sections:

1.0 Introduction - Presentation of the purpose, objectives, and scope of this CDL.

2.0 Pre-certification Data - Presentation and discussion of historical data and pre-certification scanning.

3.0 Area Specific Contaminant of Concerns (ASCOCs) - Discussion of selection criteria and ASCOCs.

4.0 Certification Unit (CU) - Presentation of design, sampling and analytical methodologies.

5.0 Schedule

6.0 References

1.1 OBJECTIVES

The primary objectives of this plan are to:

- Define the boundaries of the areas to be certified under the guidance of this CDL
- Present historical and newly acquired analytical data in the form of contaminant distribution maps of the areas proposed for certification.
- Define the ASCOC selection process and list of ASCOCs assigned to the certification areas under the scope of this CDL.
- Present the CU boundaries and proposed 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

The scope of this CDL includes three areas within A1PII. These areas include: A1PII Sector 1 (A1PII-S1) Group A CUs, A1PII Sector 2a (A1PII-S2a) CUs, and the Conveyance Ditch CU (Figure 1). The A1PII-S1 Group A CUs, consist of an approximately 80-acre area located southeast of the Former Production Area, south of the Sewage Treatment Plant (STP) and east of the South Entrance Road. This area also includes an area west of the South Entrance Road and the corridor between it. Based on

the A1PII design, a culvert and outfall channel are planned at this location and the soil from this area is being characterized for re-use. The RCRA area identified as the Trap Range (Figure 1) is not included as part of the A1PII-S1 Group A certification process. The Trap Range will be certified as part of A1PII-S1 Group B CUs, and is not within the scope of this CDL. Remediation and certification of the A1PII-S1 Group B CUs will be addressed in a separate CDL submitted at a later date.

The terrain in A1PII-S1 generally consists of rolling grassland, with a few trees along the South Entrance Road and along the eastern FEMP property boundary. A1PII-S1 contains no designated wetlands and lies outside of the 100-year flood plain of the Great Miami River. There are no waste units or past production facilities within or upwind of A1PII-S1, and significant contamination above FRLs established for soil COCs has not been detected. Following certification of A1PII-S1, the area will be developed as a borrow area for the On-site Disposal Facility (OSDF).

The second area selected for certification under the scope of this CDL is A1PII Sector 2a, which is divided into two separate areas of approximately 3 acres each, both are contiguous with the Area 1, Phase I certified area (Figure 1). These areas require certification to facilitate construction of Cell 3 of the OSDF and the OSDF Borrow Area Haul Road.

The final area within the scope of this CDL is the Conveyance Ditch (CD) area. As discussed in the A1PII Integrated Remedial Design Package (IRDP), the CD is designed to accommodate drainage during the remedation of AIPII Sector 3, as well as to accomodate future OSDF storm water control. As shown on Figure 1, the CD is a long corridor approximately 50 feet wide and 600 feet long (approximately two thirds of an acre). After the area has been characterized, the soil excavated from this area will be available for OSDF construction needs. Since the CD will receive drainage from uncertified areas in the future, the CD will be certified when it is no longer needed.

2.0 HISTORICAL AND PRE-CERTIFICATION DATA

Based on historical data, none of the areas within the scope of this CDL require any remedial action. A review of existing RI/FS data indicates that contamination exceeding the FRLs is limited and remediation is not anticipated. To confirm this hypothesis, real-time radiation surveys were conducted across nearly 100 percent of the areas to be certified and physical samples were collected to confirm or refute apparently anomalous RI/FS laboratory results and to comfirm the radiation survey data. This section presents and discusses historical and pre-certification data for the areas within the scope of this CDL.

2.1 HISTORICAL DATA

All historical data pertinent to the areas within the scope of the CDL were pulled from the Sitewide Environmental Database (SED), including data within a 100 ft. buffer surrounding the subject areas. Table 1 notes all the COCs with validated historical data that are above the established soil FRLs. The following table summarizes the findings:

Contaminant of Concern	Type	Number	Exceedance
3,3'-Dichlorobenzidine	organic / semivolatile	9 samples	9 with Contract Required Detection Limit (CRDL) >FRL
Arsenic	inorganic / metal	1 sample	12.5 mg/kg . FRL
Aroclor-1254	organic/PCB	8 samples	8 with CRDL > FRL,
Aroclor-1260	organic / PCB	9 samples	9 with CRDL > FRL
Dieldrin	organic / pesticide	8 samples	8 with CRDL > FRL
N-Nitroso-di-n-propylamine	organic / semivolatile	13 samples	13 with CRDL > FRL
Thorium-228	radionuclide	6 samples	Activity > FRL
Thorium-232	radionuclide	2 samples	Activity > FRL

As noted in the above table, the reported contract required detection limits (CRDLs) for the organic COCs Aroclor-1254, Aroclor-1260, Dieldrin, 3,3'-Dichlorobenzidine, and N-Nitroso-di-n-propylamine are above the final remediation levels (FRLs) established for soil in the OU5 ROD. Review of the data

packages show that these samples were analyzed in the same analytical batches in the December 1991 - January 1992 timeframe. The laboratory diluted, effectively raising the CRDL, all the samples within these batches because one sample unrelated to this project exhibited matrix interference. The laboratory failed to re-run the samples associated with this project without the dilution and simply reported the results at the elevated CRDL. It should be noted that the soil FRLs were established after receipt of the analytical report with the high CRDLs and samples were no longer available for reanalysis. While these data are inconclusive with respect to exceeding an FRL, process knowledge and disposal practices indicate these organic compounds are not likely to be found in the areas proposed for certification. Therefore, they will not be retained as ASCOCs for the areas included in this CDL.

Three inorganic COCs were detected above their respective FRLs. Arsenic was detected in one sample at 12.5 mg/kg, which slightly exceeds its FRL of 12 mg/kg. Thorium-228 was detected in six samples at activity levels that exceed its FRL (1.7 pCi/g), and thorium-232 was above its FRL (1.5 pCi/g) in two samples. The location these samples is shown on Figure 2.

The arsenic hit was located in the south-central portion of the east-field area and does not appear to have a direct relationship to nearby facilities and/or surface drainage patterns. The data package was reviewed and the detection could not be attributed to an analytical error.

Three of the thorium-228 hits were obtained from surface samples, one sample was from a depth of 2 to 2.5 ft, and two were obtained from a depth of 28 to 30 ft (Figure 2). The thorium-228 hits ranged from just over the FRL near the surface to 9.17 pCi/g at a depth of 28 ft. A higher activity level at depth is not consistent with depositional scenarios for thorium, as thorium is very immobile and not likely to be leached at the surface and redeposited at depth.

A sample obtained from a depth of 28 ft (the same location as the thorium-228 result of 9.17 pCi/g) yielded a value for thorium-232 of 6.98 pCi/g. (Note that the expected correlation of thorium-228 and thorium-232 should be one to one.) The remaining thorium-232 hit is 2.13 pCi/g, and its location corresponds to the 2-2.5 ft depth noted above for the thorium-228 result.

The elevated thorium-228 and thorium-232 analyses should be considered suspect for the following reasons:

- The samples were analyzed under the RI/FS program during the 1991-1992 time frame, when abnormally elevated results were received from the contract laboratory. This is possibly attributed to contaminated detectors or other analytical problems that were not recognized during the initial data validation.

- Data from the immediate area and similar depths were reviewed and there are no other samples found with elevated thorium contamination (Table 2). Figure 3 shows the locations of these samples.

- At location 11373 at the 2.0 - 2.5 foot interval the thorium 228 and thorium 232 results at are 1.75 pCi/g and 2.13 pCi, respectively. However, the 0 - 4 inch sample from the same location is below the FRL. Similarly, at location 2733 at the 28.0 - 28.5 foot interval the thorium 228 and thorium 232 results are 9.17 pCi/g and 6.98 pCi, respectively. However, the 0 - 6 inch sample from the same location is below the FRL. This contamination pattern in a non-impacted area makes no sense from a geochemical or production history perspective.

Based on these reasons, no remedial action is planned in these areas. However, both thorium-228 and thorium-232 will be retained as ASCOCs.

2.2 PRECERTIFICATION DATA

To supplement existing data, a surface radiation survey was conducted over most of A1PII. The radiation survey was carried out using a 4x4x16-inch sodium-iodide (NaI) detector mounted on a tractor (a.k.a. the RTRAK system). The RTRAK collects gamma spectra for quantification of uranium-238, thorium-232, and radium-226. Details on the use and capabilities of the RTRAK system are described in the "RTRAK Applicability Study" (DOE, 1997b) and its addendum (DOE, 1997c). Results from this survey for total uranium, thorium-232, and radium-226 are shown on Figures 4, 5, and 6, respectively. The trigger levels were set at 57 ppm for total uranium, 1.05 pCi/g for thorium-232, and 1.57 pCi/g for radium-226. Data reduction was accomplished using a 10 foot grid and averaging the measurement over a 30 foot radius at each node.

To verify the RTRAK survey results, the gamma activity in each acre within A1PII was measured with a high-purity germanium (HPGe) detector. One to 16 measurements were obtained per acre, with 16 measurements corresponding to acres that the RTRAK could not access. Table 3 summarizes all HPGe measurements and Figure 7 provides the acre-numbering system keyed to the samples in Table 3. Details on the precision and accuracy of the HPGe instrument are provided in the report "Comparability of In-Situ Gamma Spectrometry and Laboratory Data" (DOE 1997d) and its addendum (DOE 1997e).

To provide added assurance on total uranium values measured with the HPGe instrument, physical samples were also collected from A1PII-S1. One sample per acre was collected and analyzed for total uranium (Table 4). Some samples were also analyzed for isotopic thorium and radium for quality control; these data are also presented. Analytical results for soil samples are presented in Table 4.

Figures 8, 9, and 10 present the RTRAK survey, HPGe, and physical sample results for total uranium, thorium-232, and radium-226, respectively. Based on the review of RI/FS data (Tables 1 and 2, Figures 2 and 3), RTRAK survey results, HPGe measurements, and physical samples (Tables 3 and 4, Figures 8, 9, and 10), there is no evidence of widespread contamination within the certification areas included in this CDL. The detections above the thorium FRLs noted by the historical data are thought to be anomalous, and this hypothesis will be verified during certification sampling. Both the RTRAK and the HPGe results indicate some areas of elevated radium-226 activity above the FRL in the A1PII-S1 area.

Evaluation of the radium-226 data indicates that the elevated activity is caused by elevated radon derived from natural uranium in soil. Field records show the measurements were taken early in the morning, when the radon dissipates slowly due to lower temperature and higher moisture content of the surface soil. To confirm this hypothesis, two actions were taken. First eight physical samples were taken from locations in the vicinity of the elevated areas and analyzed for radium-226. The results were well below the 1.7 pCi/g FRL and are shown on Figure 10. Second, the RTRAK was re-run over these areas in the afternoon. The RTRAK measurements taken in the afternoon did not show elevated levels of radium-226. Both sets of data were used in the spatial averaging shown on Figure 10. Therefore, radium-226 is not believed to be a contaminant of concern in the area that would require remediation.

3.0 AREA SPECIFIC CONSTITUENTS OF CONCERN

In the OU5 ROD, there are 80 soil 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 CRDLs. When FRLs were established for these COCs in the OU5 ROD, the FRLs were initially screened against site data presented on spatial maps to establish a picture of potential remediation areas.

By reviewing existing (RI/FS) data presented on spatial distribution maps, 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 on site above their corresponding FRL, which eliminates them from further consideration. The 30 remaining sitewide COCs account for over 99% of the combined risk to a site receptor model, and they comprise the list from which all of the remediation-area-specific 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

The selection process for retaining ASCOCs for a remediation area is driven by applying a set of decision criteria. The criteria are:

- The ASCOC must be listed as a soil COC in either the OU2 or OU5 ROD.
- The ASCOC must be traced to site use, either through process knowledge or known release of the constituent to the environment.
- Analytical results must indicate the COC is present at a level above its FRL (not attributable to false positives or elevated CRDLs).
- Physical characteristics of the COC, such as degradation rate and volatility, indicate the COC is likely to persist in the soil between time of release and remediation.

3.2 ASCOC Selection Process for A1PII-S1 Group A CUs and the Conveyance Ditch CU

Total uranium, radium-226, and radium-228 are sitewide primary COCs and will be retained as ASCOCs for this reason, even though current data show none exceed the FRL in this area. Due to their classification as sitewide primary COCs, and some suspect detections in the area, both thorium-228 and thorium-232 will also be retained as ASCOCs during the certification process. Lead was not detected above the FRL in A1PII-S1 Group A CUs; however, there are detects above the FRL in the Trap Range which shares a common boundary (Figure 1). In order to ensure lead contamination does not extend beyond the designated boundary, lead will be retained as an ASCOC for certification only in CUs bordering the Trap Range.

As discussed in Section 2.1, the organic COC data are inclusive. However, based on process knowledge and disposal practices, the presence of these organic compounds is highly unlikely. Therefore, these analytes will not be retained as ASCOCs. The following table summarizes the ASCOCs for the A1PII-S1 Group A CUs and the Conveyance Ditch CU.

ASCOC LIST FOR A1PII-S1 GROUP A CUs & CONVEYANCE DITCH CU

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
Arsenic	12 mg/Kg	Detected above FRL in A1PII-S1 data
Thorium-228	1.7 pCi/g	Detected above FRL in A1PII-S1 data, and Primary ASCOC.
Thorium-232	1.5 pCi/g	Detected above FRL in A1PII-S1 data, and Primary ASCOC
Lead	400 mg/kg	Retained for CUs adjacent to the Trap Range

3.3 ASCOC Selection for A1PII-S2a

As stated in Section 1.2, the two small non-contiguous areas comprising A1PII-S2a (Figure 1) will be certified in conjunction with A1PII-S1 Group A CUs. Since the ASCOC selection process for A1PI includes these areas, and due to their congruity with A1PI, these two locations will be certified using the following A1PI ASCOC list.

ASCOC LIST FOR A1PII-S2a

Primary ASCOC	FRL	SECONDARY ASCOCs	FRL
Total Uranium	82 mg/Kg	Arsenic	12.0 mg/Kg
Thorium-232	1.5 pCi/g	Beryllium	1.5 mg/Kg
Thorium-228	1.7 pCi/g	Aroclor-1260	0.13 mg/Kg
Radium-226	1.7 pCi/g	Thorium-230	280 pCi/g
Radium-228	1.8 pCi/g	Cesium-137	1.4 pCi/g

4.0 CERTIFICATION APPROACH

4.1 CERTIFICATION DESIGN

The certification design for A1PII-S1 Group A CUs follows the general approach outlined in Section 3.4 of the SEP. RI/FS data, pre-certification surveys, and physical samples have identified isolated locations where thorium-228, thorium-232, radium-226, and arsenic are above their FRLs. Total uranium, thorium-228, thorium-232, radium-226, radium-228 (primary ASCOCs), and arsenic will be considered COCs in every CU. Lead will be considered an ASCOC only in CUs bordering the trap range, due to its presence as a potential RCRA constituent. Based on the data presented in Section 2.0, excavation is not required in A1PII-S1 and the CUs will be assigned as approximately 500 x 500-ft areas. As shown in Figure 11, AIPII-S1 Group A consists of 17 CUs, A1PII-S1-01 thru A1PII-S1-17.

The data in Section 2.0 shows minimal contamination in the A1PII-S2a area. This area will be divided into two independent CUs (A1PII-S2a-01 and A1PII-S2a-02), which are considerably smaller than the nominal 500 x 500 ft area used for areas exhibiting minimal impact. The Conveyance Ditch CU is a long, narrow corridor, that will be treated as a single CU in which the soil is being characterized for reuse. Also, the small area connecting A1PII-S1-01 and A1PII-S1-02 will be characterized for re-use also.

As shown in Figure 11, each CU under the scope of this CDL is divided into quadrants. As discussed in Section 3.4.2.1 of the SEP, soil sample locations will be randomly selected. The sample locations will meet the following criteria:

- Four points must be located in each quadrant of the CU.
- The distance between two sample points will be limited to a maximum distance determined by the CU size and shape.
- Upon approval of the CU design, the sampling points will be selected consistent with the provisions in the SEP.

For certification, sixteen discrete soil samples will be collected from random locations as discussed above. Each sample will be collected from the 0 to 6-inch soil interval at the designated, surveyed grid node. Three randomly selected samples from each quadrant of a CU (12 total) will be submitted for analysis for the appropriate ASCOCs the remaining four will be archived. CUs A1PII-S1-01, A1PII-S1-02, A1PII-S1-05, A1PII-S1-08 thru A1PII-S1-17, and A1PII-S3-CD-01 will be analyzed for the

A1PII-S1 Group A ASCOC list. For the area connecting A1PII-S1-01 and A1PII-S1-02, one sample will be taken through the road to characterize the area for re-use. Based on the boring profile, both fill material and native soil will be analyzed for the same ASCOC list as the A1PII-S1 Group A CUs. The following CUs will be analyzed for A1PII-S1 Group A list and lead: A1PII-S1-03, A1PII-S1-04, A1PII-S1-06 and A1PII-S1-07.

The two CUs A1PII-S2a-01 and A1PII-S2a-02 will be analyzed for A1PI ASCOC list as discussed in Section 3.3.

4.2 ANALYTICAL METHODOLOGY AND STATISTICAL ANALYSIS

Laboratory analysis of certification samples will be conducted using standard method tests in an on-site or off-site laboratory and 10 percent will be validated to ASL D. Samples failing this validation will be reanalyzed, or an archive sample may be substituted if there is insufficient material available from the initial sample. Once all data are validated, results will be entered into the SED and a statistical analysis will be performed to evaluate the pass/fail criteria for each CU. The statistical approach is discussed in Section 3.4.3 and Appendix G of the SEP.

Two criteria must be met for the CU to be certified. If the data distribution is normal or lognormal, the first criterion compares the 95 percent Upper Confidence Limit (UCL) of the mean of each primary COC to its FRL, and the 90 percent UCL on the mean of the secondary ASCOCs to their respective FRLs. If the data distribution is not normal or lognormal, the appropriate nonparametric approach discussed in Appendix G of the SEP (DOE 1997a) will be used to evaluate the second criterion. The second criterion is related to the hot spot criterion that is currently being formulated by OEPA, EPA and DOE. The certification under the scope of this CU will be subject to the agreed upon hot spot criteria. When the given UCL on the mean for each COC is less than its FRL and the hot spot criteria is met, the CU will be considered certified.

In the event a CU fails certification, one of three conditions will be responsible: 1) high variability in the data set, 2) localized contamination, or 3) widespread contamination. Details on the evaluation and responses to these possible outcomes are provided in Section 3.4.5 of the SEP. For A1PIIS1 Group A CUs, the only condition that has a reasonable potential of being encountered is Condition 2.

When all CUs within the scope of this CDL have passed certification, a Certification Report will be issued. The Certification Report will be submitted to the regulatory agencies to receive acknowledgment that the pertinent operable unit remedial actions were completed and the individual CUs are certified to be released for interim or final land use. Section 7.3 of the SEP provides additional details and describes the required content of the Certification Report. Upon acceptance of the report by the regulatory agency, the area will be re-graded and seeded for run-on and run-off control. Since the A1PII-S1 Group 1 and A1PII-S2a area receives no run-on from uncertified areas, no run-on controls are necessary during certification. Similarly, the CD area is being characterized for reuse and no such controls are needed.

5.0 SCHEDULE

The following draft schedule shows key activities for the completion of the work within the scope of this CDL. The primary drivers for this schedule are OSDF construction activities.

ACTIVITY	TARGET DATE
Submittal of Certification Design Letter	November 21, 1997
Start of Field Work	January 5, 1998
Complete Field Work	January 26, 1998
Complete Analytical	February 23, 1998
Complete Statistical Analysis	March 2, 1998
Submit Certification Report	March 21, 1998

6.0 REFERENCES

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CERTIFICATION DESIGN LETTER
TABLE 1 - HISTORICAL DATA ABOVE THE FRL

Parameter	Sample ID	Location	Date	Interval (ft)	Northing	Easting	Result	Qualifier	Units	FRL
3,3'-Dichlorobenzidine	020102	035	3/15/88	1-2.5	481629.417	1350480.97	850	UNV	ug/kg	0.55
3,3'-Dichlorobenzidine	099268	SMA-5	2/4/93	0 - 0.5	481858.57	1350499.58	810	U	ug/kg	0.55
3,3'-Dichlorobenzidine	101251	1745	12/16/91	0 - 0.5	478529.388	1350531.01	810	U	ug/kg	0.55
3,3'-Dichlorobenzidine	100600	1070	1/4/92	0 - 0.5	476969.464	1350635.86	840	U	ug/kg	0.55
3,3'-Dichlorobenzidine	100687	1746	12/16/91	0 - 0.5	478029.389	1351031.01	820	U	ug/kg	0.55
3,3'-Dichlorobenzidine	101244	1747	12/12/91	0 - 0.5	477629.385	1351031.01	810	U	ug/kg	0.55
3,3'-Dichlorobenzidine	100651	1748	12/9/91	0 - 0.5	477329.382	1351031.02	830	U	ug/kg	0.55
3,3'-Dichlorobenzidine	100701	1744	12/17/91	0 - 0.5	478529.4	1351531	850	U	ug/kg	0.55
3,3'-Dichlorobenzidine	100318	2733	1/24/92	0 - 0.5	477100.058	1351692.05	810	U	ug/kg	0.55
Aroclor-1254	020102	035	3/15/88	1 - 2.5	481629.417	1350480.97	200	U	ug/kg	0.13
Aroclor-1254	101251	1745	12/16/91	0 - 0.5	478529.388	1350531.01	200	U	ug/kg	0.13
Aroclor-1254	100600	1070	1/4/92	0 - 0.5	476969.464	1350635.86	200	U	ug/kg	0.13
Aroclor-1254	100687	1746	12/16/91	0 - 0.5	478029.389	1351031.01	200	U	ug/kg	0.13
Aroclor-1254	101244	1747	12/12/91	0 - 0.5	477629.385	1351031.01	200	U	ug/kg	0.13
Aroclor-1254	100651	1748	12/9/91	0 - 0.5	477329.382	1351031.02	200	U	ug/kg	0.13
Aroclor-1254	100701	1744	12/17/91	0 - 0.5	478529.4	1351531	210	U	ug/kg	0.13
Aroclor-1254	100318	2733	1/24/92	0 - 0.5	477100.058	1351692.05	200	U	ug/kg	0.13
Aroclor-1260	020102	035	3/15/88	1 - 2.5	481629.417	1350480.97	200	U	ug/kg	0.13
Aroclor-1260	099268	SMA-5	2/3/93	0 - 0.5	481858.57	1350499.58	990000	U	ug/kg	0.13
Aroclor-1260	101251	1745	12/16/91	0 - 0.5	478529.388	1350531.01	200	U	ug/kg	0.13
Aroclor-1260	100600	1070	1/4/92	0 - 0.5	476969.464	1350635.86	200	U	ug/kg	0.13
Aroclor-1260	100687	1746	12/16/91	0 - 0.5	478029.389	1351031.01	200	U	ug/kg	0.13
Aroclor-1260	101244	1747	12/12/91	0 - 0.5	477629.385	1351031.01	200	U	ug/kg	0.13
Aroclor-1260	100651	1748	12/9/91	0 - 0.5	477329.382	1351031.02	200	U	ug/kg	0.13
Aroclor-1260	100701	1744	12/17/91	0 - 0.5	478529.4	1351531	210	U	ug/kg	0.13
Aroclor-1260	100318	2733	1/24/92	0 - 0.5	477100.058	1351692.05	200	U	ug/kg	0.13
Arsenic	200086	11373	7/6/94	2 - 2.5	476875.594	1351355.03	12.5	J	mg/kg	12
Dieldrin	099268	SMA-5	2/4/93	0 - 0.5	481858.57	1350499.58	99000	U	ug/kg	0.015
Dieldrin	101251	1745	12/16/91	0 - 0.5	478529.388	1350531.01	20	U	ug/kg	0.015
Dieldrin	100600	1070	1/4/92	0 - 0.5	476969.464	1350635.86	20	U	ug/kg	0.015
Dieldrin	100687	1746	12/16/91	0 - 0.5	478029.389	1351031.01	20	U	ug/kg	0.015
Dieldrin	101244	1747	12/12/91	0 - 0.5	477629.385	1351031.01	20	U	ug/kg	0.015
Dieldrin	100651	1748	12/9/91	0 - 0.5	477329.382	1351031.02	20	U	ug/kg	0.015

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TABLE 1 - HISTORICAL DATA ABOVE THE FRL

Parameter	Sample ID	Location	Date	Interval (ft)	Northing	Easting	Result	Qualifier	Units	FRL
Dieldrin	100701	1744	12/17/91	0 - 0.5	478529.4	1351531	21	U	ug/kg	0.015
Dieldrin	100318	2733	1/24/92	0 - 0.5	477100.058	1351692.05	20	U	ug/kg	0.015
N-Nitroso-di-n-propylamine	121118	SS-15	6/30/93	0 - 0.5	482467.282	1349428.05	380	U	ug/kg	0.2
N-Nitroso-di-n-propylamine	121116	SS-14	6/30/93	0 - 0.5	482386.471	1350177.26	420	UJ	ug/kg	0.2
N-Nitroso-di-n-propylamine	099268	SMA-5	2/4/93	0 - 0.5	481858.57	1350499.58	400	UJ	ug/kg	0.2
N-Nitroso-di-n-propylamine	101251	1745	12/16/91	0 - 0.5	478529.388	1350531.01	400	U	ug/kg	0.2
N-Nitroso-di-n-propylamine	100600	1070	1/4/92	0 - 0.5	476969.464	1350635.86	420	U	ug/kg	0.2
N-Nitroso-di-n-propylamine	121015	SS-52	6/30/93	0 - 0.5	481267.506	1350647.12	410	U	ug/kg	0.2
N-Nitroso-di-n-propylamine	100687	1746	12/16/91	0 - 0.5	478029.389	1351031.01	410	U	ug/kg	0.2
N-Nitroso-di-n-propylamine	101244	1747	12/12/91	0 - 0.5	477629.385	1351031.01	410	U	ug/kg	0.2
N-Nitroso-di-n-propylamine	100651	1748	12/9/91	0 - 0.5	477329.382	1351031.02	420	U	ug/kg	0.2
N-Nitroso-di-n-propylamine	121053	500318/SS-53	6/29/91	0 - 0.5	481566.327	1351320.54	440	U	ug/kg	0.2
N-Nitroso-di-n-propylamine	100701	1744	12/17/91	0 - 0.5	478529.4	1351531	430	U	ug/kg	0.2
N-Nitroso-di-n-propylamine	100318	2733	1/24/92	0 - 0.5	477100.058	1351692.05	400	U	ug/kg	0.2
N-Nitroso-di-n-propylamine	121051	500318/SS-54	6/29/93	0 - 0.5	481218.59	1351843.76	380	U	ug/kg	0.2
Thorium-228	200086	11373	7/6/94	2 - 2.5	476875.594	1351355.03	1.752	J	pCi/g	1.7
Thorium-228	100600	1070	1/4/92	0 - 0.5	476969.464	1350635.86	2.49	J	pCi/g	1.7
Thorium-228	100333	2733	12/18/91	28 - 28.5	477100.058	1351692.05	9.17	J	pCi/g	1.7
Thorium-228	100360	1733	1/7/92	28 - 30	477109.828	1351687.51	1.77	-	pCi/g	1.7
Thorium-228	101244	1747	12/12/91	0 - 0.5	477629.385	1351031.01	2.06	J	pCi/g	1.7
Thorium-228	101251	1745	12/16/91	0 - 0.5	478529.388	1350531.01	1.81	-	pCi/g	1.7
Thorium-232	200086	11373	7/6/94	2 - 2.5	476875.594	1351355.03	2.12	-	pCi/g	1.5
Thorium-232	100333	2733	12/18/91	28 - 28.5	477100.058	1351692.05	6.98	-	pCi/g	1.5

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Table 2 - Thorium 228 232 Non-Detects

Parameter	Sample ID	Location ID	Interval (ft)	Northing	Easting	Results	Qualifier	Units
Thorium-228	005121	ZONE 3-28	0 - 0.16	479029.405	1351530.996	1.4	-	pCi/g
Thorium-228	005381	ZONE 3-45	0 - 0.16	479279.411	1351813.992	1.3	-	pCi/g
Thorium-228	005384	ZONE 3-29	0 - 0.16	479029.408	1351810.995	1.3	-	pCi/g
Thorium-228	005772	ZONE 3-22	0 - 0.16	478781.406	1351806.998	1.6	-	pCi/g
Thorium-228	005775	ZONE 3-21	0 - 0.16	478530.403	1351803.001	0.9	-	pCi/g
Thorium-228	005778	ZONE 3-20	0 - 0.16	478280.401	1351797.004	1.2	-	pCi/g
Thorium-228	005781	ZONE 3-19	0 - 0.16	478029.398	1351793.007	1.2	-	pCi/g
Thorium-228	005899	ZONE 3-43	0 - 0.5	479279.395	1350530.997	0.8	-	pCi/g
Thorium-228	008042	3070	10.5 - 12	476791.602	1350557.085	0.7	-	pCi/g
Thorium-228	008074	3070	115	476791.602	1350557.085	0.7	-	pCi/g
Thorium-228	100687	1746	0 - 0.5	478029.389	1351031.009	1.63	-	pCi/g
Thorium-228	126520	TRAP BOX SOUTH	0 - 4	479044.068	1350944.208	0.4	-	pCi/g
Thorium-228	200100	11374	2 - 2.5	478230.275	1350480.989	1.32	-	pCi/g
Thorium-228	200114	11375	2 - 2.5	478904.115	1351253.389	1.182	-	pCi/g
Thorium-228	005784	ZONE 3-3	0 - 0.16	476843.388	1351870.02	1.3	J	pCi/g
Thorium-228	005787	ZONE 3-10	0 - 0.16	477342.392	1351837.015	1	J	pCi/g
Thorium-228	005790	ZONE 3-9	0 - 0.16	477092.39	1351854.017	1	J	pCi/g
Thorium-228	005793	ZONE 3-11	0 - 0.16	477592.394	1351819.012	1	J	pCi/g
Thorium-228	005799	ZONE 3-12	0 - 0.16	477836.397	1351803.009	0.8	J	pCi/g
Thorium-228	100651	1748	0 - 0.5	477329.382	1351031.017	0.7	J	pCi/g
Thorium-228	100697	1746	7 - 8.5	478029.389	1351031.009	1.35	J	pCi/g
Thorium-228	100701	1744	0 - 1.5	478529.4	1351531.002	1.44	J	pCi/g
Thorium-228	100714	1744	12 - 12.5	478529.4	1351531.002	1.05	J	pCi/g
Thorium-228	200085	11373	0 - 0.16	476875.594	1351355.031	0.788	J	pCi/g
Thorium-228	200099	11374	0 - 0.16	478230.275	1350480.989	0.816	J	pCi/g
Thorium-228	200113	11375	0 - 0.16	478904.115	1351253.389	1.083	J	pCi/g
Thorium-228	005796	ZONE 3-11	0 - 0.16	477572.3675	1351803.922	1	J	pCi/g
Thorium-228	101243	1747	21 - 21.5	477629.38	1351031.01	1.44	J	pCi/g
Thorium-228	101282	1743	0 - 0.5	479129.4	1351530.99	1.45	J	pCi/g
Thorium-228	A1P2-INV-10-1-1R	A1P2-INV-10	0 - 0.5	477055.833	1351065.398	0.88	NV	pCi/g dry
Thorium-228	A1P2-INV-11-1-1R	A1P2-INV-11	0 - 0.5	477064.286	1351283.131	1	NV	pCi/g dry
Thorium-228	A1P2-INV-12-1-1R	A1P2-INV-12	0 - 0.5	477076.743	1351491.463	0.85	NV	pCi/g dry

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Table 2 - Thorium 228 232 Non-Detects

Parameter	Sample ID	Location ID	Interval (ft)	Northing	Easting	Results	Qualifier	Units
Thorium-228	A1P2-INV-15-1-1R	A1P2-INV-15	0 - 0.5	477291.69	1351536.483	1	NV	pCi/g dry
Thorium-228	A1P2-INV-16-1-1R	A1P2-INV-16	0 - 0.5	477329.124	1351326.408	0.99	NV	pCi/g dry
Thorium-228	A1P2-INV-17-1-1R	A1P2-INV-17	0 - 0.5	477320.536	1351117.234	1.1	NV	pCi/g dry
Thorium-228	A1P2-INV-2-1-1R	A1P2-INV-2	0 - 0.5	476938.598	1351529.296	0.97	NV	pCi/g dry
Thorium-228	A1P2-INV-3-1-1R	A1P2-INV-3	0 - 0.5	476927.261	1351355.551	0.94	NV	pCi/g dry
Thorium-228	A1P2-INV-4-1-1R	A1P2-INV-4	0 - 0.5	476842.57	1351185.447	1.1	NV	pCi/g dry
Thorium-228	A1P2MIS-12321-10-R	12321	0 - 0.5	479470.6	1351807	0.87	NV	pCi/g
Thorium-228	A1P2MIS-12321-13-R	12321	0 - 0.5	479470.6	1351807	0.71	NV	pCi/g
Thorium-228	008052	3070	25.5 - 27	476791.602	1350557.085	0.6	U	pCi/g
Thorium-228	007994	3068	50 - 51.5	478701.592	1349923.565	0.6	UJ	pCi/g
Thorium-228	008007	3068	115 - 116.5	478701.592	1349923.565	0.6	UJ	pCi/g
Thorium-228	100318	2733	0 - 0.5	477100.058	1351692.048	0.6	UJ	pCi/g
Thorium-232	005121	ZONE 3-28	0 - 0.16	479029.405	1351530.996	1.2	-	pCi/g
Thorium-232	100600	1070	0 - 0.16	476969.464	1350635.863	0.8	-	pCi/g
Thorium-232	100687	1746	0 - 0.5	478029.389	1351031.009	1.04	-	pCi/g
Thorium-232	100701	1744	0 - 0.5	478529.4	1351531.002	0.76	-	pCi/g
Thorium-232	101244	1747	0 - 0.5	477629.385	1351031.014	0.74	-	pCi/g
Thorium-232	101251	1745	0 - 0.5	478529.388	1350531.005	1.01	-	pCi/g
Thorium-232	200085	11373	0 - 0.16	476875.594	1351355.031	0.929	-	pCi/g
Thorium-232	200099	11374	0 - 0.16	478230.275	1350480.989	0.671	-	pCi/g
Thorium-232	200100	11374	2 - 2.5	478230.275	1350480.989	1.022	-	pCi/g
Thorium-232	200113	11375	0 - 0.16	478904.115	1351253.389	0.905	-	pCi/g
Thorium-232	200114	11375	2 - 2.5	478904.115	1351253.389	1.046	-	pCi/g
Thorium-232	101243	1747	21 - 21.5	477629.38	1351031.01	0.75	-	pCi/g
Thorium-232	005381	ZONE 3-45	0 - 0.16	479279.411	1351813.992	1.2	J	pCi/g
Thorium-232	005384	ZONE 3-29	0 - 0.16	479029.408	1351810.995	1.2	J	pCi/g
Thorium-232	005772	ZONE 3-22	0 - 0.16	478781.406	1351806.998	1.4	J	pCi/g
Thorium-232	005775	ZONE 3-21	0 - 0.16	478530.403	1351803.001	0.9	J	pCi/g
Thorium-232	005778	ZONE 3-20	0 - 0.16	478280.401	1351797.004	0.9	J	pCi/g
Thorium-232	005781	ZONE 3-19	0 - 0.16	478029.398	1351793.007	1	J	pCi/g
Thorium-232	005784	ZONE 3-3	0 - 0.16	476843.388	1351870.02	1	J	pCi/g
Thorium-232	005787	ZONE 3-10	0 - 0.16	477342.392	1351837.015	0.9	J	pCi/g

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Table 2 - Thorium 228 232 Non-Detects

Parameter	Sample ID	Location ID	Interval (ft)	Northing	Easting	Results	Qualifier	Units
Thorium-232	005790	ZONE 3-9	0 - 0.16	477092.39	1351854.017	0.9	J	pCi/g
Thorium-232	005793	ZONE 3-11	0 - 0.16	477592.394	1351819.012	0.9	J	pCi/g
Thorium-232	005799	ZONE 3-12	0 - 0.16	477836.397	1351803.009	0.9	J	pCi/g
Thorium-232	007764	3068	0 - 1.5	478701.592	1349923.565	1.1	J	pCi/g
Thorium-232	008042	3070	10.5 - 12	476791.602	1350557.085	0.7	J	pCi/g
Thorium-232	008052	3070	25.5 - 27	476791.602	1350557.085	0.7	J	pCi/g
Thorium-232	100651	1748	0 - 0.5	477329.382	1351031.017	1.1	J	pCi/g
Thorium-232	126520	TRAP BOX SOUTH	0 - 4	479044.068	1350944.208	0.5	J	pCi/g
Thorium-232	005796	ZONE 3-11	0 - 0.16	477572.3675	1351803.922	0.9	J	pCi/g
Thorium-232	101282	1743	0 - 0.5	479129.4	1351530.99	0.93	J	pCi/g
Thorium-232	A1P2-INV-10-1-1R	A1P2-INV-10	0 - 0.5	477055.833	1351065.398	1	NV	pCi/g dry
Thorium-232	A1P2-INV-11-1-1R	A1P2-INV-11	0 - 0.5	477064.286	1351283.131	1.1	NV	pCi/g dry
Thorium-232	A1P2-INV-12-1-1R	A1P2-INV-12	0 - 0.5	477076.743	1351491.463	0.75	NV	pCi/g dry
Thorium-232	A1P2-INV-15-1-1R	A1P2-INV-15	0 - 0.5	477291.69	1351536.483	1.1	NV	pCi/g dry
Thorium-232	A1P2-INV-16-1-1R	A1P2-INV-16	0 - 0.5	477329.124	1351326.408	1.1	NV	pCi/g dry
Thorium-232	A1P2-INV-17-1-1R	A1P2-INV-17	0 - 0.5	477320.536	1351117.234	1.1	NV	pCi/g dry
Thorium-232	A1P2-INV-2-1-1R	A1P2-INV-2	0 - 0.5	476938.598	1351529.296	1	NV	pCi/g dry
Thorium-232	A1P2-INV-3-1-1R	A1P2-INV-3	0 - 0.5	476927.261	1351355.551	0.99	NV	pCi/g dry
Thorium-232	A1P2-INV-4-1-1R	A1P2-INV-4	0 - 0.5	476842.57	1351185.447	1.2	NV	pCi/g dry
Thorium-232	A1P2MIS-12321-10-R	12321	0 - 0.5	479470.6	1351807	0.82	NV	pCi/g
Thorium-232	A1P2MIS-12321-13-R	12321	0 - 0.5	479470.6	1351807	0.81	NV	pCi/g
Thorium-232	005899	ZONE 3-43	0 - 0.5	479279.395	1350530.997	0.6	U	pCi/g
Thorium-232	008074	3070	115 - 116.5	476791.602	1350557.085	0.6	U	pCi/g
Thorium-232	100318	2733	0 - 0.5	477100.058	1351692.048	0.6	U	pCi/g
Thorium-232	100360	1733	28 - 30	477109.828	1351687.508	0.6	U	pCi/g
Thorium-232	100714	1744	12 - 12.5	478529.4	1351531.002	0.6	U	pCi/g
Thorium-232	007994	3068	50 - 51.5	478701.592	1349923.565	0.6	UJ	pCi/g
Thorium-232	008007	3068	115 - 116.5	478701.592	1349923.565	0.6	UJ	pCi/g
Thorium-232	100697	1746	7 - 8.5	478029.389	1351031.009	0.6	UJ	pCi/g

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Table 3 - HPGe Results

Location	Northing	Easting	Parameter	Sample ID	Results (pCi/g)
A1P2-INV-1	476857.791	1351777.248	Radium-226	A1P2-INV-1-G	1.2
A1P2-INV-1-2	476862.001	1351846.584	Radium-226	A1P2-INV-1-2-G	1
A1P2-INV-1-3	476894.655	1351845.758	Radium-226	A1P2-INV-1-3-G	1
A1P2-INV-1-4	476934.145	1351841.969	Radium-226	A1P2-INV-1-4-G	0.9
A1P2-INV-1-5	476981.829	1351835.025	Radium-226	A1P2-INV-1-5-G	0.9
A1P2-INV-1-5	476981.829	1351835.025	Radium-226	A1P2-INV-1-5-G	0.9
A1P2-INV-1-6	477017.829	1351832.08	Radium-226	A1P2-INV-1-6-G	0.9
A1P2-INV-1-7	476844.02	1351825.489	Radium-226	A1P2-INV-1-7-G	1
A1P2-INV-1-8	476875.986	1351822.365	Radium-226	A1P2-INV-1-8-G	2
A1P2-INV-1-9	476912.497	1351817.414	Radium-226	A1P2-INV-1-9-G	1.8
A1P2-INV-1-9	476912.497	1351817.414	Radium-226	A1P2-INV-1-9-G	1.9
A1P2-INV-1-11	476995.01	1351804.518	Radium-226	A1P2-INV-1-11-G	1.7
A1P2-INV-1-12	477033.444	1351799.981	Radium-226	A1P2-INV-1-12-G	1.8
A1P2-INV-2	476938.598	1351529.296	Radium-226	A1P2-INV-2-G	1.1
A1P2-INV-3	476927.261	1351355.551	Radium-226	A1P2-INV-3-G	1.2
A1P2-INV-4	476842.57	1351185.447	Radium-226	A1P2-INV-4-G	1.1
A1P2-INV-5	476849.2	1350949.788	Radium-226	A1P2-INV-5-G	1.2
A1P2-INV-6	476828.706	1350645.206	Radium-226	A1P2-INV-6-G	1.1
A1P2-INV-7	476705.012	1350712.945	Radium-226	A1P2-INV-7-G	1
A1P2-INV-7-2	476785.77	1351045.92	Radium-226	A1P2-INV-7-2-G	0.7
A1P2-INV-7-3	476716.06	1350699.81	Radium-226	A1P2-INV-7-3-G	0.9
A1P2-INV-7-4	476806.42	1350584.56	Radium-226	A1P2-INV-7-4-G	0.9
A1P2-INV-8	477034.896	1350657.89	Radium-226	A1P2-INV-8-G	1
A1P2-INV-9	477048.504	1350858.01	Radium-226	A1P2-INV-9-G	1.1
A1P2-INV-10	477055.833	1351065.398	Radium-226	A1P2-INV-10-G	1
A1P2-INV-11	477064.286	1351283.131	Radium-226	A1P2-INV-11-G	1.1
A1P2-INV-12	477076.743	1351491.463	Radium-226	A1P2-INV-12-G	1
A1P2-INV-13	477082.73	1351772.31	Radium-226	A1P2-INV-13-G	1
A1P2-INV-13-2	477054.944	1351829.994	Radium-226	A1P2-INV-13-2-G	0.9
A1P2-INV-13-3	477089.574	1351828.295	Radium-226	A1P2-INV-13-3-G	0.9
A1P2-INV-13-4	477129.629	1351825.799	Radium-226	A1P2-INV-13-4-G	0.9
A1P2-INV-13-5	477167.316	1351821.617	Radium-226	A1P2-INV-13-5-G	0.9
A1P2-INV-13-6	477213.67	1351816.134	Radium-226	A1P2-INV-13-6-G	0.9
A1P2-INV-13-7	477068.687	1351793.82	Radium-226	A1P2-INV-13-7-G	1.8
A1P2-INV-13-8	477106.338	1351792.46	Radium-226	A1P2-INV-13-8-G	1.8
A1P2-INV-13-9	477142.385	1351788.667	Radium-226	A1P2-INV-13-9-G	1.8
A1P2-INV-13-10	477181.136	1351785.382	Radium-226	A1P2-INV-13-10-G	1.6
A1P2-INV-13-11	477234.004	1351779.321	Radium-226	A1P2-INV-13-11-G	1.5
A1P2-INV-13-12	477047.377	1351764.905	Radium-226	A1P2-INV-13-12-G	0.9
A1P2-INV-13-12	477047.377	1351764.905	Radium-226	A1P2-INV-13-12-G	0.8
A1P2-INV-13-13	477085.795	1351763.368	Radium-226	A1P2-INV-13-13-G	0.9
A1P2-INV-13-14	477121.394	1351761.044	Radium-226	A1P2-INV-13-14-G	0.9
A1P2-INV-13-15	477157.924	1351758.905	Radium-226	A1P2-INV-13-15-G	0.9

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Location	Northing	Easting	Parameter	Sample ID	Results (pCi/g)
A1P2-INV-13-16	477205.187	1351755.005	Radium-226	A1P2-INV-13-16-G	0.9
A1P2-INV-13-17	477250.597	1351750.605	Radium-226	A1P2-INV-13-17-G	0.9
A1P2-INV-14	477290.735	1351772.31	Radium-226	A1P2-INV-14-G	1.1
A1P2-INV-14-2	477259.399	1351816.551	Radium-226	A1P2-INV-14-2-G	0.9
A1P2-INV-14-3	477303.995	1351815.161	Radium-226	A1P2-INV-14-3-G	0.9
A1P2-INV-14-4	477340.901	1351813.502	Radium-226	A1P2-INV-14-4-G	0.9
A1P2-INV-14-5	477383.635	1351810.829	Radium-226	A1P2-INV-14-5-G	0.9
A1P2-INV-14-6	477425.851	1351807.184	Radium-226	A1P2-INV-14-6-G	1
A1P2-INV-14-7	477271.412	1351776.096	Radium-226	A1P2-INV-14-7-G	1
A1P2-INV-14-8	477315.502	1351777.712	Radium-226	A1P2-INV-14-8-G	1
A1P2-INV-14-9	477358.977	1351775.692	Radium-226	A1P2-INV-14-9-G	1
A1P2-INV-14-10	477394.779	1351774.733	Radium-226	A1P2-INV-14-10-G	1
A1P2-INV-14-11	477430.566	1351771.298	Radium-226	A1P2-INV-14-11-G	1
A1P2-INV-14-12	477297.918	1351746.772	Radium-226	A1P2-INV-14-12-G	1
A1P2-INV-14-13	477331.784	1351744.05	Radium-226	A1P2-INV-14-13-G	0.9
A1P2-INV-14-14	477374.577	1351741.078	Radium-226	A1P2-INV-14-14-G	1
A1P2-INV-14-15	477413.126	1351738.019	Radium-226	A1P2-INV-14-15-G	1.1
A1P2-INV-14-16	477448.929	1351735.001	Radium-226	A1P2-INV-14-16-G	0.9
A1P2-INV-15	477291.69	1351536.483	Radium-226	A1P2-INV-15-G	1
A1P2-INV-16	477329.124	1351326.408	Radium-226	A1P2-INV-16-G	1.5
A1P2-INV-17	477320.536	1351117.234	Radium-226	A1P2-INV-17-G	1.5
A1P2-INV-18	477311.299	1350896.917	Radium-226	A1P2-INV-18-G	1.5
A1P2-INV-19	477292.221	1350708.619	Radium-226	A1P2-INV-19-G	1.6
A1P2-INV-20	477284.524	1350492.934	Radium-226	A1P2-INV-20-G	1.5
A1P2-INV-21	477489.063	1350468.915	Radium-226	A1P2-INV-21-G	1.4
A1P2-INV-22	477501.904	1350695.369	Radium-226	A1P2-INV-22-G	1.3
A1P2-INV-23	477490.651	1350882.652	Radium-226	A1P2-INV-23-G	1
A1P2-INV-24	477497.289	1351122.982	Radium-226	A1P2-INV-24-G	1
A1P2-INV-25	477517.579	1351331.148	Radium-226	A1P2-INV-25-G	1
A1P2-INV-26	477512.968	1351526.705	Radium-226	A1P2-INV-26-G	1
A1P2-INV-27	477697.382	1351552.022	Radium-226	A1P2-INV-27-G	1
A1P2-INV-28	477677.577	1351331.386	Radium-226	A1P2-INV-28-G	1
A1P2-INV-29	477672.572	1351157.092	Radium-226	A1P2-INV-29-G	2.2
A1P2-INV-30	477657.343	1350880.878	Radium-226	A1P2-INV-30-G	2
A1P2-INV-31	477654.116	1350669.858	Radium-226	A1P2-INV-31-G	2.2
A1P2-INV-32	477669.96	1350493.814	Radium-226	A1P2-INV-32-G	2.3
A1P2-INV-33	477674.317	1350315.977	Radium-226	A1P2-INV-33-G	2.1
A1P2-INV-33-2	477751.57	1350261.57	Radium-226	A1P2-INV-33-2-G	1
A1P2-INV-34	477860.998	1350279.91	Radium-226	A1P2-INV-34-G	1
A1P2-INV-35	477880.983	1350540.107	Radium-226	A1P2-INV-35-G	1.1
A1P2-INV-36	477885.139	1350667.188	Radium-226	A1P2-INV-36-G	1
A1P2-INV-37	477872.218	1350872.978	Radium-226	A1P2-INV-37-G	1
A1P2-INV-38	477918.741	1351151.547	Radium-226	A1P2-INV-38-G	1

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Location	Northing	Easting	Parameter	Sample ID	Results (pCi/g)
A1P2-INV-39	477887.701	1351356.568	Radium-226	A1P2-INV-39-G	1
A1P2-INV-40	477892.252	1351574.243	Radium-226	A1P2-INV-40-G	1.1
A1P2-INV-41	478126.016	1351574.744	Radium-226	A1P2-INV-41-G	1.3
A1P2-INV-41	478126.016	1351574.744	Radium-226	A1P2-INV-41-G	1.2
A1P2-INV-42	478125.003	1351363.032	Radium-226	A1P2-INV-42-G	1.2
A1P2-INV-43	478117.397	1351161.298	Radium-226	A1P2-INV-43-G	1
A1P2-INV-44	478118.287	1350946.606	Radium-226	A1P2-INV-44-G	1.1
A1P2-INV-45	478126.071	1350729.546	Radium-226	A1P2-INV-45-G	0.9
A1P2-INV-46	478126.164	1350519.073	Radium-226	A1P2-INV-46-G	1
A1P2-INV-47	478126.321	1350310.369	Radium-226	A1P2-INV-47-G	1.1
A1P2-INV-48	478126.065	1350200.568	Radium-226	A1P2-INV-48-G	1
A1P2-INV-49	478335.161	1350101.803	Radium-226	A1P2-INV-49-G	1
A1P2-INV-50	478335.491	1350310.214	Radium-226	A1P2-INV-50-G	1.1
A1P2-INV-51	478335.459	1350519.13	Radium-226	A1P2-INV-51-G	1.1
A1P2-INV-52	478335.868	1350729.541	Radium-226	A1P2-INV-52-G	1
A1P2-INV-53	478335.891	1350937.658	Radium-226	A1P2-INV-53-G	1
A1P2-INV-54	478335.105	1351146.613	Radium-226	A1P2-INV-54-G	1
A1P2-INV-55	478335.066	1351355.269	Radium-226	A1P2-INV-55-G	1.1
A1P2-INV-56	478335.626	1351564.4	Radium-226	A1P2-INV-56-G	1.2
A1P2-INV-57	478335.163	1351699.12	Radium-226	A1P2-INV-57-G	1
A1P2-INV-57-2	478254.725	1351780.969	Radium-226	A1P2-INV-57-2-G	0.9
A1P2-INV-57-3	478294.255	1351783.225	Radium-226	A1P2-INV-57-3-G	1.2
A1P2-INV-58	478544.636	1351698.732	Radium-226	A1P2-INV-58-G	1.1
A1P2-INV-59	478544.146	1351564.59	Radium-226	A1P2-INV-59-G	1.1
A1P2-INV-60	478544.837	1351355.76	Radium-226	A1P2-INV-60-G	1.1
A1P2-INV-61	478544.715	1351146.107	Radium-226	A1P2-INV-61-G	1
A1P2-INV-62	478544.054	1350937.473	Radium-226	A1P2-INV-62-G	1
A1P2-INV-63	478544.29	1350729.666	Radium-226	A1P2-INV-63-G	1.1
A1P2-INV-64	478544.637	1350519.372	Radium-226	A1P2-INV-64-G	1.1
A1P2-INV-65	478544.53	1350310.914	Radium-226	A1P2-INV-65-G	1.2
A1P2-INV-66	478547.58	1350105.01	Radium-226	A1P2-INV-66-G	0.9
A1P2-INV-67	478632.709	1350081.094	Radium-226	A1P2-INV-67-G	1.1
A1P2-INV-68	478753.125	1350310.828	Radium-226	A1P2-INV-68-G	1
A1P2-INV-69	478752.484	1350519.547	Radium-226	A1P2-INV-69-G	1.1
A1P2-INV-70	478752.188	1350720.026	Radium-226	A1P2-INV-70-G	1
A1P2-INV-71	478752.467	1350937.041	Radium-226	A1P2-INV-71-G	1.1
A1P2-INV-72	478752.166	1351146.698	Radium-226	A1P2-INV-72-G	1.1
A1P2-INV-73	478752.147	1351355.494	Radium-226	A1P2-INV-73-G	1.4
A1P2-INV-74	478752.54	1351564.545	Radium-226	A1P2-INV-74-G	1.2
A1P2-INV-75	478751.92	1351699.057	Radium-226	A1P2-INV-75-G	1.1
A1P2-INV-76	478961.563	1351699.476	Radium-226	A1P2-INV-76-G	1.2
A1P2-INV-77	478961.195	1351564.309	Radium-226	A1P2-INV-77-G	1.4
A1P2-INV-78	478961.543	1351355.679	Radium-226	A1P2-INV-78-G	1.4

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Location	Northing	Easting	Parameter	Sample ID	Results (pCi/g)
A1P2-INV-79	478961.85	1351146.783	Radium-226	A1P2-INV-79-G	1.4
A1P2-INV-80	478961.038	1350937.187	Radium-226	A1P2-INV-80-G	1.2
A1P2-INV-81	478960.925	1350732.619	Radium-226	A1P2-INV-81-G	1.1
A1P2-INV-82	478961.392	1350519.063	Radium-226	A1P2-INV-82-G	1.1
A1P2-INV-83	479170.207	1350729.574	Radium-226	A1P2-INV-83-G	1
A1P2-INV-84	479170.486	1350937.885	Radium-226	A1P2-INV-84-G	0.9
A1P2-INV-85	479170.588	1351146.975	Radium-226	A1P2-INV-85-G	1
A1P2-INV-86	479170.341	1351355.519	Radium-226	A1P2-INV-86-G	1
A1P2-INV-87	479170.254	1351563.332	Radium-226	A1P2-INV-87-G	1
A1P2-INV-88	479170.776	1351716.309	Radium-226	A1P2-INV-88-G	1.1
A1P2-INV-92	479379.075	1351146.076	Radium-226	A1P2-INV-92-G	1.1
A1P2-INV-93	479379.269	1350938.509	Radium-226	A1P2-INV-93-G	1
A1P2-INV-94	479587.417	1350938.588	Radium-226	A1P2-INV-94-G	1.1
A1P2-INV-94-2	479536.014	1350989.625	Radium-226	A1P2-INV-94-2-G	1.1
A1P2-INV-94-3	479534.675	1350903.69	Radium-226	A1P2-INV-94-3-G	1
A1P2-INV-94-4	479638.598	1350905.352	Radium-226	A1P2-INV-94-4-G	1.1
A1P2-INV-94-5	479638.29	1350988.193	Radium-226	A1P2-INV-94-5-G	1.1
A1P2-INV-95	479587.921	1351146.806	Radium-226	A1P2-INV-95-G	0.9
A1P2-INV-95-2	479537.818	1351199.496	Radium-226	A1P2-INV-95-2-G	1
A1P2-INV-95-3	479533.824	1351092.146	Radium-226	A1P2-INV-95-3-G	1
A1P2-INV-95-4	479638.73	1351092.875	Radium-226	A1P2-INV-95-4-G	1
A1P2-INV-95-5	479640.567	1351197.316	Radium-226	A1P2-INV-95-5-G	1
A1P2-INV-102	479796.669	1351146.901	Radium-226	A1P2-INV-102-G	0.9
A1P2-INV-102-2	479745.15	1351200.726	Radium-226	A1P2-INV-102-2-G	1
A1P2-INV-102-3	479744.516	1351093.366	Radium-226	A1P2-INV-102-3-G	1
A1P2-INV-102-4	479850.216	1351094.039	Radium-226	A1P2-INV-102-4-G	1
A1P2-INV-102-5	479848.754	1351197.293	Radium-226	A1P2-INV-102-5-G	1
A1P2-INV-103	479796.077	1350937.379	Radium-226	A1P2-INV-103-G	1.3
A1P2-INV-103-2	479741.435	1350906.394	Radium-226	A1P2-INV-103-2-G	1.7
A1P2-INV-103-3	479744.029	1350990.063	Radium-226	A1P2-INV-103-3-G	1.7
A1P2-INV-103-4	479841.142	1350912.502	Radium-226	A1P2-INV-103-4-G	1.9
A1P2-INV-103-5	479849.541	1350979.992	Radium-226	A1P2-INV-103-5-G	1.9
A1P2-INV-104	480004.36	1350937.821	Radium-226	A1P2-INV-104-G	1.2
A1P2-INV-104-2	479965.341	1350983.733	Radium-226	A1P2-INV-104-2-G	2.1
A1P2-INV-104-3	480059.575	1350911.26	Radium-226	A1P2-INV-104-3-G	2
A1P2-INV-104-4	479943.451	1350908.921	Radium-226	A1P2-INV-104-4-G	2.1
A1P2-INV-104-5	480066.098	1350987.514	Radium-226	A1P2-INV-104-5-G	2.2
A1P2-INV-105	480004.27	1351146.148	Radium-226	A1P2-INV-105-G	1.3
A1P2-INV-105-2	480054.371	1351086.908	Radium-226	A1P2-INV-105-2-G	1.3
A1P2-INV-105-3	479946.057	1351081.543	Radium-226	A1P2-INV-105-3-G	1.2
A1P2-INV-105-4	480052.716	1351196.516	Radium-226	A1P2-INV-105-4-G	1.3
A1P2-INV-105-5	479952.569	1351203.087	Radium-226	A1P2-INV-105-5-G	1.2
A1P2-INV-128	480836.216	1351440.228	Radium-226	A1P2-INV-128-G	1.1

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Location	Northing	Easting	Parameter	Sample ID	Results (pCi/g)
A1P2-INV-128-3	480771.437	1351393.798	Radium-226	A1P2-INV-128-3-G	1.1
A1P2-INV-133	477458.157	1351806.325	Radium-226	A1P2-INV-133-G	0.9
A1P2-INV-133-2	477494.138	1351800.021	Radium-226	A1P2-INV-133-2-G	1
A1P2-INV-133-3	477528.379	1351802.311	Radium-226	A1P2-INV-133-3-G	0.9
A1P2-INV-133-4	477565.848	1351801.22	Radium-226	A1P2-INV-133-4-G	0.9
A1P2-INV-133-5	477611.309	1351798.05	Radium-226	A1P2-INV-133-5-G	0.9
A1P2-INV-133-6	477651.717	1351795.624	Radium-226	A1P2-INV-133-6-G	0.8
A1P2-INV-133-7	477481.472	1351773.225	Radium-226	A1P2-INV-133-7-G	0.9
A1P2-INV-133-8	477513.058	1351771.777	Radium-226	A1P2-INV-133-8-G	1.7
A1P2-INV-133-10	477583.328	1351772.14	Radium-226	A1P2-INV-133-10-	G 0.8
A1P2-INV-133-11	477631.474	1351771.79	Radium-226	A1P2-INV-133-11-	G 0.8
A1P2-INV-133-12	477668.781	1351770.552	Radium-226	A1P2-INV-133-12-	G 0.9
A1P2-INV-133-13	477476.865	1351749.874	Radium-226	A1P2-INV-133-13-	G 0.9
A1P2-INV-133-14	477508.177	1351749.178	Radium-226	A1P2-INV-133-14-	G 1.0
A1P2-INV-133-15	477541.121	1351748.824	Radium-226	A1P2-INV-133-15-	G 1.0
A1P2-INV-133-16	477580.086	1351748.656	Radium-226	A1P2-INV-133-16-	G 1.0
A1P2-INV-133-17	477618.099	1351739.238	Radium-226	A1P2-INV-133-17-	G 1.0
A1P2-INV-134	477686.884	1351794.985	Radium-226	A1P2-INV-134-G	1
A1P2-INV-134-2	477722.889	1351794.456	Radium-226	A1P2-INV-134-2-G	1
A1P2-INV-134-3	477765.003	1351790.54	Radium-226	A1P2-INV-134-3-G	1
A1P2-INV-134-4	477796.399	1351788.156	Radium-226	A1P2-INV-134-4-G	1
A1P2-INV-134-5	477830.327	1351786.268	Radium-226	A1P2-INV-134-5-G	1
A1P2-INV-134-6	477702.733	1351768.838	Radium-226	A1P2-INV-134-6-G	0.9
A1P2-INV-134-7	477745.701	1351770.256	Radium-226	A1P2-INV-134-7-G	0.9
A1P2-INV-134-8	477780.021	1351769.506	Radium-226	A1P2-INV-134-8-G	0.9
A1P2-INV-134-9	477811.469	1351768.686	Radium-226	A1P2-INV-134-9-G	0.8
A1P2-INV-134-10	477844.195	1351769.567	Radium-226	A1P2-INV-134-10-	G 0.9
A1P2-INV-135	477864.092	1351788.023	Radium-226	A1P2-INV-135-G	1
A1P2-INV-135-2	477908.143	1351784.73	Radium-226	A1P2-INV-135-2-G	1.1
A1P2-INV-135-3	477943.545	1351781.725	Radium-226	A1P2-INV-135-3	1
A1P2-INV-135-4	477983.598	1351780.465	Radium-226	A1P2-INV-135-4-G	1
A1P2-INV-135-5	478020.888	1351778.46	Radium-226	A1P2-INV-135-5-G	0.9
A1P2-INV-135-6	477884.958	1351761.739	Radium-226	A1P2-INV-135-6-G	0.9
A1P2-INV-135-7	477927.352	1351764.339	Radium-226	A1P2-INV-135-7-G	0.8
A1P2-INV-135-7	477927.352	1351764.339	Radium-226	A1P2-INV-135-7-G	1
A1P2-INV-135-8	477966.486	1351763.306	Radium-226	A1P2-INV-135-8-G	0.9
A1P2-INV-135-9	478003.395	1351762.421	Radium-226	A1P2-INV-135-9-G	1
A1P2-INV-135-10	478043.493	1351760.661	Radium-226	A1P2-INV-135-10-	G 0.9
A1P2-INV-136	478062.844	1351775.307	Radium-226	A1P2-INV-136-G	0.9
A1P2-INV-136-2	478105.127	1351776.276	Radium-226	A1P2-INV-136-2-G	0.9
A1P2-INV-136-3	478143.626	1351777.493	Radium-226	A1P2-INV-136-3-G	0.9
A1P2-INV-136-4	478182.029	1351779.746	Radium-226	A1P2-INV-136-4-G	0.9
A1P2-INV-136-5	478214.901	1351780.541	Radium-226	A1P2-INV-136-5-G	1

CERTIFICATION DESIGN LETTER
Table 3 - HPGe Results

Location	Northing	Easting	Parameter	Sample ID	Results (pCi/g)
A1P2-INV-136-6	478079.49	1351755.396	Radium-226	A1P2-INV-136-6-G	0.8
A1P2-INV-136-8	478164.426	1351756.384	Radium-226	A1P2-INV-136-8-G	1
A1P2-INV-136-9	478195.033	1351756.563	Radium-226	A1P2-INV-136-9-G	1.1
A1P2-INV-136-10	478231.964	1351758.339	Radium-226	A1P2-INV-136-10	1.1
A1P2-INV-137	478263.171	1349814.048	Radium-226	A1P2-INV-137-G	1
A1P2-INV-137	478263.171	1349814.048	Radium-226	A1P2-INV-137-G	1
A1P2-INV-138	478392.042	1349782.583	Radium-226	A1P2-INV-138-G	0.9
A1P2-INV-139	478547.248	1349756.538	Radium-226	A1P2-INV-139-G	1
A1P2-INV-140	478721.19	1349779.232	Radium-226	A1P2-INV-140-G	1.1

Certification Design Letter
Table 4 - Physical Sample Results

SAMPLE ID	Easting	Northing	PARAMETER	DATE	RESULT	UNITS	FACTS ID	RELEASE
A1PII-INV-1-1-1R-D	1351777	476858	Uranium, Total	17-Oct-97	7.3	ug/g dry	200309514	1000015150
A1PII-INV-2-1-1R	1351529	476939	Cesium-137	24-Oct-97	0.25	pCi/g dry	200310434	1000015199
A1PII-INV-2-1-1R	1351529	476939	Radium-226	24-Oct-97	1.2	pCi/g dry	200310434	1000015199
A1PII-INV-2-1-1R	1351529	476939	Radium-228	24-Oct-97	1	pCi/g dry	200310434	1000015199
A1PII-INV-2-1-1R	1351529	476939	Thorium-228	24-Oct-97	0.97	pCi/g dry	200310434	1000015199
A1PII-INV-2-1-1R	1351529	476939	Thorium-232	24-Oct-97	1	pCi/g dry	200310434	1000015199
A1PII-INV-2-1-1R	1351529	476939	Uranium, Total	13-Oct-97	5.46	ppm dry	200310434	1000015199
A1PII-INV-2-1-1R	1351529	476939	Uranium-235	24-Oct-97	0.16	pCi/g dry	200310434	1000015199
A1PII-INV-2-1-1R	1351529	476939	Uranium-238	24-Oct-97	3.1	pCi/g dry	200310434	1000015199
A1PII-INV-2-1-1R-D	1351529	476939	Uranium, Total	10-Oct-97	5.99	ppm dry	200310438	1000015199
A1PII-INV-3-1-1R	1351356	476927	Cesium-137	23-Oct-97	0.42	pCi/g dry	200309515	1000015150
A1PII-INV-3-1-1R	1351356	476927	Radium-226	23-Oct-97	1.3	pCi/g dry	200309515	1000015150
A1PII-INV-3-1-1R	1351356	476927	Radium-228	23-Oct-97	0.99	pCi/g dry	200309515	1000015150
A1PII-INV-3-1-1R	1351356	476927	Thorium-228	23-Oct-97	0.94	pCi/g dry	200309515	1000015150
A1PII-INV-3-1-1R	1351356	476927	Thorium-232	23-Oct-97	0.99	pCi/g dry	200309515	1000015150
A1PII-INV-3-1-1R	1351356	476927	Uranium, Total	30-Sep-97	5.46	ppm dry	200309515	1000015150
A1PII-INV-3-1-1R	1351356	476927	Uranium-235	23-Oct-97	0.14	pCi/g dry	200309515	1000015150
A1PII-INV-3-1-1R	1351356	476927	Uranium-238	23-Oct-97	2.8	pCi/g dry	200309515	1000015150
A1PII-INV-4-1-1R	1351185	476843	Cesium-137	23-Oct-97	0.38	pCi/g dry	200310395	1000015199
A1PII-INV-4-1-1R	1351185	476843	Radium-226	23-Oct-97	1	pCi/g dry	200310395	1000015199
A1PII-INV-4-1-1R	1351185	476843	Radium-228	23-Oct-97	1.2	pCi/g dry	200310395	1000015199
A1PII-INV-4-1-1R	1351185	476843	Thorium-228	23-Oct-97	1.1	pCi/g dry	200310395	1000015199
A1PII-INV-4-1-1R	1351185	476843	Thorium-232	23-Oct-97	1.2	pCi/g dry	200310395	1000015199
A1PII-INV-4-1-1R	1351185	476843	Uranium, Total	8-Oct-97	5.33	ppm dry	200310395	1000015199
A1PII-INV-4-1-1R	1351185	476843	Uranium-235	23-Oct-97	0.21	pCi/g dry	200310395	1000015199
A1PII-INV-4-1-1R	1351185	476843	Uranium-238	23-Oct-97	3	pCi/g dry	200310395	1000015199
A1PII-INV-5-1-1R	1350950	476849	Uranium, Total	30-Sep-97	5.8	ppm dry	200309516	1000015150
A1PII-INV-6-1-1R	1350645	476829	Uranium, Total	8-Oct-97	6.54	ppm dry	200310396	1000015199
A1PII-INV-7-1-1R	1350713	476705	Uranium, Total	30-Sep-97	4.96	ppm dry	200309517	1000015150
A1PII-INV-8-1-1R	1350658	477035	Uranium, Total	8-Oct-97	5.59	ppm dry	200310397	1000015199
A1PII-INV-9-1-1R	1350858	477049	Uranium, Total	30-Sep-97	4.39	ppm dry	200309518	1000015150
A1PII-INV-10-1-1R	1351065	477056	Cesium-137	23-Oct-97	0.32	pCi/g dry	200310398	1000015199
A1PII-INV-10-1-1R	1351065	477056	Radium-226	23-Oct-97	0.97	pCi/g dry	200310398	1000015199

Certification Design Letter
Table 4 - Physical Sample Results

SAMPLE ID	Easting	Northing	PARAMETER	DATE	RESULT	UNITS	FACTS ID	RELEASE
A1PII-INV-10-1-1R	1351065	477056	Radium-228	23-Oct-97	1	pCi/g dry	200310398	1000015199
A1PII-INV-10-1-1R	1351065	477056	Thorium-228	23-Oct-97	0.88	pCi/g dry	200310398	1000015199
A1PII-INV-10-1-1R	1351065	477056	Thorium-232	23-Oct-97	1	pCi/g dry	200310398	1000015199
A1PII-INV-10-1-1R	1351065	477056	Uranium, Total	8-Oct-97	5.11	ppm dry	200310398	1000015199
A1PII-INV-10-1-1R	1351065	477056	Uranium-235	23-Oct-97	0.19	pCi/g dry	200310398	1000015199
A1PII-INV-10-1-1R	1351065	477056	Uranium-238	23-Oct-97	3.1	pCi/g dry	200310398	1000015199
A1PII-INV-11-1-1R	1351283	477064	Cesium-137	24-Oct-97	0.49	pCi/g dry	200309519	1000015150
A1PII-INV-11-1-1R	1351283	477064	Radium-226	24-Oct-97	1.1	pCi/g dry	200309519	1000015150
A1PII-INV-11-1-1R	1351283	477064	Radium-228	24-Oct-97	1.1	pCi/g dry	200309519	1000015150
A1PII-INV-11-1-1R	1351283	477064	Thorium-228	24-Oct-97	1	pCi/g dry	200309519	1000015150
A1PII-INV-11-1-1R	1351283	477064	Thorium-232	24-Oct-97	1.1	pCi/g dry	200309519	1000015150
A1PII-INV-11-1-1R	1351283	477064	Uranium, Total	30-Sep-97	6.21	ppm dry	200309519	1000015150
A1PII-INV-11-1-1R	1351283	477064	Uranium-235	24-Oct-97	0.14	pCi/g dry	200309519	1000015150
A1PII-INV-11-1-1R	1351283	477064	Uranium-238	24-Oct-97	2.8	pCi/g dry	200309519	1000015150
A1PII-INV-12-1-1R	1351491	477077	Cesium-137	23-Oct-97	0.37	pCi/g dry	200310399	1000015199
A1PII-INV-12-1-1R	1351491	477077	Radium-226	23-Oct-97	1	pCi/g dry	200310399	1000015199
A1PII-INV-12-1-1R	1351491	477077	Radium-228	23-Oct-97	0.75	pCi/g dry	200310399	1000015199
A1PII-INV-12-1-1R	1351491	477077	Thorium-228	23-Oct-97	0.85	pCi/g dry	200310399	1000015199
A1PII-INV-12-1-1R	1351491	477077	Thorium-232	23-Oct-97	0.75	pCi/g dry	200310399	1000015199
A1PII-INV-12-1-1R	1351491	477077	Uranium, Total	8-Oct-97	5.53	ppm dry	200310399	1000015199
A1PII-INV-12-1-1R	1351491	477077	Uranium-235	23-Oct-97	0.15	pCi/g dry	200310399	1000015199
A1PII-INV-12-1-1R	1351491	477077	Uranium-238	23-Oct-97	3.5	pCi/g dry	200310399	1000015199
A1PII-INV-13-1-1R	1351772	477083	Uranium, Total	8-Oct-97	8.01	ppm dry	200310400	1000015199
A1PII-INV-14-1-1R	1351772	477291	Uranium, Total	8-Oct-97	5.85	ppm dry	200310401	1000015199
A1PII-INV-15-1-1R	1351536	477292	Cesium-137	23-Oct-97	0.32	pCi/g dry	200309867	1000015160
A1PII-INV-15-1-1R	1351536	477292	Radium-226	23-Oct-97	1.1	pCi/g dry	200309867	1000015160
A1PII-INV-15-1-1R	1351536	477292	Radium-228	23-Oct-97	1.1	pCi/g dry	200309867	1000015160
A1PII-INV-15-1-1R	1351536	477292	Thorium-228	23-Oct-97	1	pCi/g dry	200309867	1000015160
A1PII-INV-15-1-1R	1351536	477292	Thorium-232	23-Oct-97	1.1	pCi/g dry	200309867	1000015160
A1PII-INV-15-1-1R	1351536	477292	Uranium, Total	1-Oct-97	6.22	ppm dry	200309867	1000015160
A1PII-INV-15-1-1R	1351536	477292	Uranium-235	23-Oct-97	0.2	pCi/g dry	200309867	1000015160
A1PII-INV-15-1-1R	1351536	477292	Uranium-238	23-Oct-97	3.7	pCi/g dry	200309867	1000015160
A1PII-INV-16-1-1R	1351326	477329	Cesium-137	24-Oct-97	0.49	pCi/g dry	200310406	1000015199
A1PII-INV-16-1-1R	1351326	477329	Radium-226	24-Oct-97	1.1	pCi/g dry	200310406	1000015199

Table 4 - Physical Sample Results

SAMPLE ID	Easting	Northing	PARAMETER	DATE	RESULT	UNITS	FACTS ID	RELEASE
A1PII-INV-16-1-1R	1351326	477329	Radium-228	24-Oct-97	1.1	pCi/g dry	200310406	1000015199
A1PII-INV-16-1-1R	1351326	477329	Thorium-228	24-Oct-97	0.99	pCi/g dry	200310406	1000015199
A1PII-INV-16-1-1R	1351326	477329	Thorium-232	24-Oct-97	1.1	pCi/g dry	200310406	1000015199
A1PII-INV-16-1-1R	1351326	477329	Uranium, Total	8-Oct-97	6.59	ppm dry	200310406	1000015199
A1PII-INV-16-1-1R	1351326	477329	Uranium-235	24-Oct-97	0.24	pCi/g dry	200310406	1000015199
A1PII-INV-16-1-1R	1351326	477329	Uranium-238	24-Oct-97	3.8	pCi/g dry	200310406	1000015199
A1PII-INV-17-1-1R	1351117	477321	Cesium-137	23-Oct-97	0.42	pCi/g dry	200309522	1000015150
A1PII-INV-17-1-1R	1351117	477321	Radium-226	23-Oct-97	1.3	pCi/g dry	200309522	1000015150
A1PII-INV-17-1-1R	1351117	477321	Radium-228	23-Oct-97	1.1	pCi/g dry	200309522	1000015150
A1PII-INV-17-1-1R	1351117	477321	Thorium-228	23-Oct-97	1.1	pCi/g dry	200309522	1000015150
A1PII-INV-17-1-1R	1351117	477321	Thorium-232	23-Oct-97	1.1	pCi/g dry	200309522	1000015150
A1PII-INV-17-1-1R	1351117	477321	Uranium, Total	30-Sep-97	7.65	ppm dry	200309522	1000015150
A1PII-INV-17-1-1R	1351117	477321	Uranium-235	23-Oct-97	0.25	pCi/g dry	200309522	1000015150
A1PII-INV-17-1-1R	1351117	477321	Uranium-238	23-Oct-97	2	pCi/g dry	200309522	1000015150
A1PII-INV-18-1-1R	1350897	477311	Uranium, Total	8-Oct-97	6.88	ppm dry	200310407	1000015199
A1PII-INV-19-1-1R	1350709	477292	Uranium, Total	30-Sep-97	5.62	ppm dry	200309523	1000015150
A1PII-INV-20-1-1R	1350493	477285	Uranium, Total	8-Oct-97	5.95	ppm dry	200310408	1000015199
A1PII-INV-21-1-1R	1350469	477489	Uranium, Total	30-Sep-97	6.08	ppm dry	200309524	1000015150
A1PII-INV-22-1-1R	1350695	477502	Uranium, Total	8-Oct-97	6.17	ppm dry	200310409	1000015199
A1PII-INV-23-1-1R	1350883	477491	Uranium, Total	30-Sep-97	5.93	ppm dry	200309525	1000015150
A1PII-INV-24-1-1R	1351123	477497	Uranium, Total	8-Oct-97	5.61	ppm dry	200310410	1000015199
A1PII-INV-25-1-1R-D	1351331	477518	Uranium, Total	17-Oct-97	7.8	ug/g dry	200309527	1000015150
A1PII-INV-26-1-1R	1351527	477513	Uranium, Total	10-Oct-97	4.91	ppm dry	200310435	1000015199
A1PII-INV-26-1-1R-D	1351527	477513	Uranium, Total	10-Oct-97	5.01	ppm dry	200310439	1000015199
A1PII-INV-27-1-1R	1351552	477697	Uranium, Total	30-Sep-97	5.7	ppm dry	200309528	1000015150
A1PII-INV-28-1-1R	1351331	477678	Uranium, Total	8-Oct-97	6.62	ppm dry	200310411	1000015199
A1PII-INV-29-1-1R	1351157	477673	Uranium, Total	30-Sep-97	15.3	ppm dry	200309529	1000015150
A1PII-INV-30-1-1R	1350881	477657	Uranium, Total	8-Oct-97	8.29	ppm dry	200310412	1000015199
A1PII-INV-31-1-1R	1350670	477654	Uranium, Total	30-Sep-97	9.26	ppm dry	200309530	1000015150
A1PII-INV-32-1-1R	1350494	477670	Uranium, Total	8-Oct-97	7.29	ppm dry	200310413	1000015199
A1PII-INV-33-1-1R	1350316	477674	Uranium, Total	30-Sep-97	8.77	ppm dry	200309531	1000015150
A1PII-INV-34-1-1R	1350280	477861	Uranium, Total	10-Oct-97	10.5	ppm dry	200310414	1000015199
A1PII-INV-35-1-1R	1350540	477881	Uranium, Total	30-Sep-97	9.14	ppm dry	200309532	1000015150
A1PII-INV-36-1-1R	1350667	477885	Uranium, Total	10-Oct-97	10.7	ppm dry	200310436	1000015199

Table 4 - Physical Sample Results

SAMPLE ID	Easting	Northing	PARAMETER	DATE	RESULT	UNITS	FACTS ID	RELEASE
A1PII-INV-36-1-1R-D	1350667	477885	Uranium, Total	13-Oct-97	10	ppm dry	200310440	1000015199
A1PII-INV-37-1-1R	1350873	477872	Uranium, Total	30-Sep-97	8.68	ppm dry	200309533	1000015150
A1PII-INV-38-1-1R	1351152	477919	Uranium, Total	10-Oct-97	7.17	ppm dry	200310415	1000015199
A1PII-INV-39-1-1R	1351357	477888	Uranium, Total	30-Sep-97	10.1	ppm dry	200309534	1000015150
A1PII-INV-40-1-1R	1351574	477892	Uranium, Total	10-Oct-97	3.91	ppm dry	200310416	1000015199
A1PII-INV-41-1-1R	1351575	478126	Uranium, Total	30-Sep-97	7.22	ppm dry	200309535	1000015150
A1PII-INV-42-1-1R	1351363	478125	Uranium, Total	10-Oct-97	11	ppm dry	200310417	1000015199
A1PII-INV-43-1-1R	1351161	478117	Uranium, Total	30-Sep-97	16	ppm dry	200309536	1000015150
A1PII-INV-44-1-1R	1350947	478118	Uranium, Total	10-Oct-97	9.77	ppm dry	200310418	1000015199
A1PII-INV-45-1-1R	1350730	478126	Uranium, Total	1-Oct-97	10.4	ppm dry	200309863	1000015160
A1PII-INV-46-1-1R	1350519	478126	Uranium, Total	10-Oct-97	10.2	ppm dry	200310419	1000015199
A1PII-INV-47-1-1R-D	1350310	478126	Uranium, Total	3-Oct-97	9.77	ppm dry	200309861	1000015160
A1PII-INV-48-1-1R	1350201	478126	Uranium, Total	10-Oct-97	12.5	ppm dry	200310420	1000015199
A1PII-INV-49-1-1R	1350102	478335	Uranium, Total	1-Oct-97	14.9	ppm dry	200309864	1000015160
A1PII-INV-50-1-1R	1350310	478335	Uranium, Total	10-Oct-97	17.1	ppm dry	200310421	1000015199
A1PII-INV-51-1-1R	1350519	478335	Uranium, Total	1-Oct-97	16.3	ppm dry	200309865	1000015160
A1PII-INV-52-1-1R	1350730	478336	Uranium, Total	10-Oct-97	24.5	ppm dry	200310437	1000015199
A1PII-INV-52-1-1R-D	1350730	478336	Uranium, Total	13-Oct-97	22.3	ppm dry	200310441	1000015199
A1PII-INV-53-1-1R	1350938	478336	Uranium, Total	1-Oct-97	12.7	ppm dry	200309868	1000015160
A1PII-INV-54-1-1R	1351147	478335	Uranium, Total	10-Oct-97	10.2	ppm dry	200310422	1000015199
A1PII-INV-55-1-1R	1351355	478335	Uranium, Total	1-Oct-97	8.53	ppm dry	200309866	1000015160
A1PII-INV-56-1-1R	1351564	478336	Uranium, Total	8-Oct-97	8.23	ppm dry	200310446	1000015200
A1PII-INV-56-1-1R-D	1351564	478336	Uranium, Total	8-Oct-97	8.2	ppm dry	200310447	1000015200
A1PII-INV-57-1-1R	1351699	478335	Uranium, Total	1-Oct-97	7.23	ppm dry	200309869	1000015160
A1PII-INV-58-1-1R	1351699	478545	Uranium, Total	10-Oct-97	14.6	ppm dry	200310423	1000015199
A1PII-INV-59-1-1R	1351565	478544	Uranium, Total	1-Oct-97	11	ppm dry	200309870	1000015160
A1PII-INV-60-1-1R	1351356	478545	Uranium, Total	10-Oct-97	9.26	ppm dry	200310424	1000015199
A1PII-INV-61-1-1R	1351146	478545	Uranium, Total	1-Oct-97	11.6	ppm dry	200309871	1000015160
A1PII-INV-62-1-1R	1350937	478544	Uranium, Total	10-Oct-97	16.8	ppm dry	200310425	1000015199
A1PII-INV-63-1-1R-D	1350730	478544	Uranium, Total	3-Oct-97	17.1	ppm dry	200309862	1000015160
A1PII-INV-64-1-1R	1350519	478545	Uranium, Total	8-Oct-97	15.2	ppm dry	200310383	1000015199
A1PII-INV-65-1-1R	1350311	478545	Uranium, Total	1-Oct-97	20.9	ppm dry	200309872	1000015160
A1PII-INV-66-1-1R	1350105	478548	Uranium, Total	8-Oct-97	13.9	ppm dry	200310382	1000015199
A1PII-INV-67-1-1R	1350081	478633	Uranium, Total	1-Oct-97	14.5	ppm dry	200309873	1000015160

Table 4 - Physical Sample Results

SAMPLE ID	Easting	Northing	PARAMETER	DATE	RESULT	UNITS	FACTS ID	RELEASE
A1PII-INV-68-1-1R	1350311	478753	Uranium, Total	8-Oct-97	14.8	ppm dry	200310384	1000015199
A1PII-INV-69-1-1R	1350520	478752	Uranium, Total	1-Oct-97	22.5	ppm dry	200309884	1000015164
A1PII-INV-70-1-1R	1350720	478752	Uranium, Total	8-Oct-97	30.8	ppm dry	200310386	1000015199
A1PII-INV-71-1-1R	1350937	478752	Uranium, Total	1-Oct-97	12	ppm dry	200309880	1000015160
A1PII-INV-72-1-1R	1351147	478752	Uranium, Total	8-Oct-97	20.6	ppm dry	200310387	1000015199
A1PII-INV-73-1-1R	1351355	478752	Uranium, Total	1-Oct-97	7.51	ppm dry	200309878	1000015160
A1PII-INV-74-1-1R	1351565	478753	Uranium, Total	8-Oct-97	7.74	ppm dry	200310388	1000015199
A1PII-INV-75-1-1R	1351699	478752	Uranium, Total	1-Oct-97	13.3	ppm dry	200309879	1000015160
A1PII-INV-76-1-1R	1351699	478962	Uranium, Total	8-Oct-97	7.01	ppm dry	200310389	1000015199
A1PII-INV-77-1-1R	1351564	478961	Uranium, Total	1-Oct-97	7.55	ppm dry	200309877	1000015160
A1PII-INV-78-1-1R	1351356	478962	Uranium, Total	8-Oct-97	10.4	ppm dry	200310390	1000015199
A1PII-INV-79-1-1R	1351147	478962	Uranium, Total	1-Oct-97	19.4	ppm dry	200309875	1000015160
A1PII-INV-80-1-1R	1350937	478961	Uranium, Total	10-Oct-97	17	ppm dry	200310430	1000015199
A1PII-INV-80-1-1R-D	1350937	478961	Uranium, Total	13-Oct-97	17.5	ppm dry	200310433	1000015199
A1PII-INV-81-1-1R	1350733	478961	Uranium, Total	1-Oct-97	29.1	ppm dry	200309874	1000015160
A1PII-INV-82-1-1R	1350519	478961	Uranium, Total	8-Oct-97	2.78	ppm dry	200310385	1000015199
A1PII-INV-83-1-1R	1350730	479170	Uranium, Total	1-Oct-97	7.68	ppm dry	200309881	1000015160
A1PII-INV-85-1-1R	1351147	479171	Uranium, Total	24-Oct-97	19.5	ppm dry	200313095	1000015360
A1PII-INV-87-1-1R	1351563	479170	Uranium, Total	1-Oct-97	5.93	ppm dry	200309876	1000015160
A1PII-INV-89-1-1R-D	1351699	479379	Uranium, Total	3-Oct-97	3.03	ppm dry	200309907	1000015164
A1PII-INV-91-1-1R	1351355	479379	Uranium, Total	3-Oct-97	10.3	ppm dry	200309886	1000015164
A1PII-INV-93-1-1R	1350939	479379	Uranium, Total	3-Oct-97	12.5	ppm dry	200309887	1000015164
A1PII-INV-94-1-1R	1350939	479587	Uranium, Total	21-Oct-97	30	ppm dry	200312135	1000015315
A1PII-INV-94-2-1R	1350990	479536	Uranium, Total	21-Oct-97	21.6	ppm dry	200312132	1000015315
A1PII-INV-94-2-1R-D	1350990	479536	Uranium, Total	21-Oct-97	22	ppm dry	200312144	1000015315
A1PII-INV-94-3-1R	1350904	479535	Uranium, Total	21-Oct-97	18.5	ppm dry	200312133	1000015315
A1PII-INV-94-4-1R	1350905	479639	Uranium, Total	21-Oct-97	35.3	ppm dry	200312134	1000015315
A1PII-INV-94-5-1R	1350939	479587	Uranium, Total	21-Oct-97	20.4	ppm dry	200312136	1000015315
A1PII-INV-95-1-1R	1351147	479588	Uranium, Total	3-Oct-97	7.21	ppm dry	200309888	1000015164
A1PII-INV-95-2-1R	1351199	479538	Uranium, Total	21-Oct-97	28.6	ppm dry	200312138	1000015315
A1PII-INV-95-3-1R	1351092	479534	Uranium, Total	21-Oct-97	16.4	ppm dry	200312137	1000015315
A1PII-INV-95-4-1R	1351093	479639	Uranium, Total	21-Oct-97	11.3	ppm dry	200312140	1000015315
A1PII-INV-95-5-1R	1351197	479641	Uranium, Total	21-Oct-97	16.6	ppm dry	200312139	1000015315
A1PII-INV-102-1-1R	1351147	479797	Uranium, Total	21-Oct-97	20.8	ppm dry	200312147	1000015315

Table 4 - Physical Sample Results

SAMPLE ID	Easting	Northing	PARAMETER	DATE	RESULT	UNITS	FACTS ID	RELEASE
A1PII-INV-102-2-1R	1351201	479745	Uranium, Total	21-Oct-97	11.8	ppm dry	200312148	1000015315
A1PII-INV-102-3-1R	1351093	479745	Uranium, Total	21-Oct-97	15.7	ppm dry	200312151	1000015315
A1PII-INV-102-4-1R	1351094	479850	Uranium, Total	21-Oct-97	34.5	ppm dry	200312150	1000015315
A1PII-INV-102-5-1R	1351197	479849	Uranium, Total	21-Oct-97	28.1	ppm dry	200312149	1000015315
A1PII-INV-103-1-1R	1350937	479796	Uranium, Total	3-Oct-97	31.7	ppm dry	200309892	1000015164
A1PII-INV-103-2-1R	1350906	479741	Uranium, Total	21-Oct-97	33.9	ppm dry	200312145	1000015315
A1PII-INV-103-3-1R	1350937	479796	Uranium, Total	21-Oct-97	21.5	ppm dry	200312141	1000015315
A1PII-INV-103-4-1R	1350913	479841	Uranium, Total	21-Oct-97	41.7	ppm dry	200312146	1000015315
A1PII-INV-103-5-1R	1350937	479796	Uranium, Total	21-Oct-97	27	ppm dry	200312142	1000015315
A1PII-INV-103-5-1R-D	1350937	479796	Uranium, Total	21-Oct-97	26	ppm dry	200312143	1000015315
A1PII-INV-104-1-1R	1350938	480004	Uranium, Total	22-Oct-97	27.6	ppm dry	200312159	1000015315
A1PII-INV-104-2-1R	1350938	480004	Uranium, Total	22-Oct-97	30.7	ppm dry	200312156	1000015315
A1PII-INV-104-2-1R-D	1350938	480004	Uranium, Total	22-Oct-97	34.9	ppm dry	200312157	1000015315
A1PII-INV-104-3-1R	1350911	480060	Uranium, Total	22-Oct-97	72.2	ppm dry	200312161	1000015315
A1PII-INV-104-4-1R	1350909	479943	Uranium, Total	22-Oct-97	47.1	ppm dry	200312158	1000015315
A1PII-INV-104-5-1R	1350988	480066	Uranium, Total	22-Oct-97	52.3	ppm dry	200312160	1000015315
A1PII-INV-105-1-1R	1351146	480004	Uranium, Total	3-Oct-97	35.1	ppm dry	200309893	1000015164
A1PII-INV-105-2-1R	1351087	480054	Uranium, Total	22-Oct-97	66.2	ppm dry	200312155	1000015315
A1PII-INV-105-3-1R	1351082	479946	Uranium, Total	21-Oct-97	30.6	ppm dry	200312152	1000015315
A1PII-INV-105-4-1R	1351197	480053	Uranium, Total	22-Oct-97	78.2	ppm dry	200312154	1000015315
A1PII-INV-105-5-1R	1351203	479953	Uranium, Total	22-Oct-97	21.7	ppm dry	200312153	1000015315
A1PII-INV-112-1-1R	1351147	480212	Uranium, Total	22-Oct-97	68.3	ppm dry	200312162	1000015315
A1PII-INV-112-1-1R-D	1351147	480212	Uranium, Total	22-Oct-97	70.1	ppm dry	200312163	1000015315
A1PII-INV-112-2-1R	1351088	480255	Uranium, Total	22-Oct-97	47.6	ppm dry	200312166	1000015315
A1PII-INV-112-3-1R	1351090	480158	Uranium, Total	22-Oct-97	65	ppm dry	200312165	1000015315
A1PII-INV-112-4-1R	1351185	480162	Uranium, Total	22-Oct-97	33.7	ppm dry	200312164	1000015315
A1PII-INV-112-5-1R	1351193	480258	Uranium, Total	22-Oct-97	102	ppm dry	200312167	1000015315
A1PII-INV-113-1-1R	1350958	480212	Uranium, Total	3-Oct-97	67.6	ppm dry	200309897	1000015164
A1PII-INV-113-2-1R	1350945	480159	Uranium, Total	22-Oct-97	54.2	ppm dry	200312172	1000015315
A1PII-INV-113-3-1R	1351006	480163	Uranium, Total	22-Oct-97	74.8	ppm dry	200312173	1000015315
A1PII-INV-113-4-1R	1350958	480212	Uranium, Total	22-Oct-97	18.7	ppm dry	200312174	1000015315
A1PII-INV-115-1-1R	1351147	480420	Uranium, Total	3-Oct-97	29.4	ppm dry	200309898	1000015164
A1PII-INV-115-2-1R	1351147	480420	Uranium, Total	22-Oct-97	36.3	ppm dry	200312247	1000015036
A1PII-INV-115-3-1R	1351096	480370	Uranium, Total	22-Oct-97	53.8	ppm dry	200312248	1000015036

Table 4 - Physical Sample Results

SAMPLE ID	Easting	Northing	PARAMETER	DATE	RESULT	UNITS	FACTS ID	RELEASE
A1PII-INV-115-4-1R	1351117	480462	Uranium, Total	22-Oct-97	47	ppm dry	200312249	1000015036
A1PII-INV-115-5-1R	1351199	480350	Uranium, Total	22-Oct-97	55.5	ppm dry	200312250	1000015036
A1PII-INV-127-1-1R	1351131	480818	Uranium, Total	24-Oct-97	47.8	ppm dry	200312988	1000015350
A1PII-INV-128-1-1R	1351440	480836	Uranium, Total	24-Oct-97	37.3	ppm dry	200312279	1000015036
A1PII-INV-128-2-1R	1351442	480789	Uranium, Total	24-Oct-97	41.9	ppm dry	200312280	1000015036
A1PII-INV-128-3-1R	1351394	480771	Uranium, Total	24-Oct-97	67.2	ppm dry	200312281	1000015036
A1PII-INV-129-1-1R	1351564	480836	Uranium, Total	3-Oct-97	2.11	ppm dry	200309905	1000015164
A1PII-INV-129-2-1R	1351496	480767	Uranium, Total	24-Oct-97	9.97	ppm dry	200312274	1000015036
A1PII-INV-129-3-1R	1351521	480879	Uranium, Total	24-Oct-97	15.9	ppm dry	200312275	1000015036
A1PII-INV-129-4-1R	1351625	480782	Uranium, Total	24-Oct-97	8.38	ppm dry	200312276	1000015036
A1PII-INV-129-4-1R-D	1351625	480782	Uranium, Total	24-Oct-97	7.83	ppm dry	200312277	1000015036
A1PII-INV-129-5-1R	1351611	480871	Uranium, Total	24-Oct-97	51.8	ppm dry	200312278	1000015036
A1PII-INV-132-1-1R	1351503	481135	Uranium, Total	24-Oct-97	50.2	ppm dry	200312990	1000015350
A1PII-INV-133-1-1R	1351806	477458	Uranium, Total	8-Oct-97	3.75	ppm dry	200310402	1000015199
A1PII-INV-134-1-1R	1351795	477687	Uranium, Total	8-Oct-97	5.43	ppm dry	200310403	1000015199
A1PII-INV-135-1-1R	1351788	477864	Uranium, Total	8-Oct-97	8.11	ppm dry	200310404	1000015199
A1PII-INV-136-1-1R	1351775	478063	Uranium, Total	8-Oct-97	11.4	ppm dry	200310405	1000015199
A1PII-INV-137-1-1R	1349814	478263	Uranium, Total	8-Oct-97	11	ppm dry	200310391	1000015199
A1PII-INV-138-1-1R	1349783	478392	Uranium, Total	8-Oct-97	12.8	ppm dry	200310392	1000015199
A1PII-INV-139-1-1R	1349757	478547	Uranium, Total	8-Oct-97	17.6	ppm dry	200310393	1000015199
A1PII-INV-140-1-1R	1349779	478721	Uranium, Total	8-Oct-97	19.1	ppm dry	200310394	1000015199
A1PII-INV-141-1-1R	1351348	481024	Uranium, Total	24-Oct-97	42.8	ppm dry	200312989	1000015350
A1PII-INV-142-1-1R	1351166	481015	Uranium, Total	24-Oct-97	56.9	ppm dry	200312996	1000015350
A1PII-INV-147-1-1R	1351100	481285	Uranium, Total	24-Oct-97	22.9	ppm dry	200312992	1000015350
A1PII-INV-148-1-1R	1351252	481310	Uranium, Total	24-Oct-97	3.1	ppm dry	200312991	1000015350
A1PII-INV-150-1-1R	1350940	481468	Uranium, Total	24-Oct-97	41.2	ppm dry	200313079	1000015360
A1PII-INV-150-1-1R-D	1350940	481468	Uranium, Total	24-Oct-97	43.1	ppm dry	200313080	1000015360
A1PII-INV-151-1-1R	1350628	481459	Uranium, Total	24-Oct-97	55.8	ppm dry	200313086	1000015360
A1PII-INV-152-1-1R	1350626	481667	Uranium, Total	24-Oct-97	27.3	ppm dry	200313084	1000015360
A1PII-INV-153-1-1R	1350942	481731	Uranium, Total	24-Oct-97	30.9	ppm dry	200313081	1000015360
A1PII-INV-154-1-1R	1351241	481697	Uranium, Total	24-Oct-97	16.3	ppm dry	200313085	1000015360
A1PII-INV-155-1-1R	1351070	481858	Uranium, Total	24-Oct-97	13.4	ppm dry	200313083	1000015360
A1PII-INV-156-1-1R	1350949	481878	Uranium, Total	24-Oct-97	23.3	ppm dry	200313082	1000015360

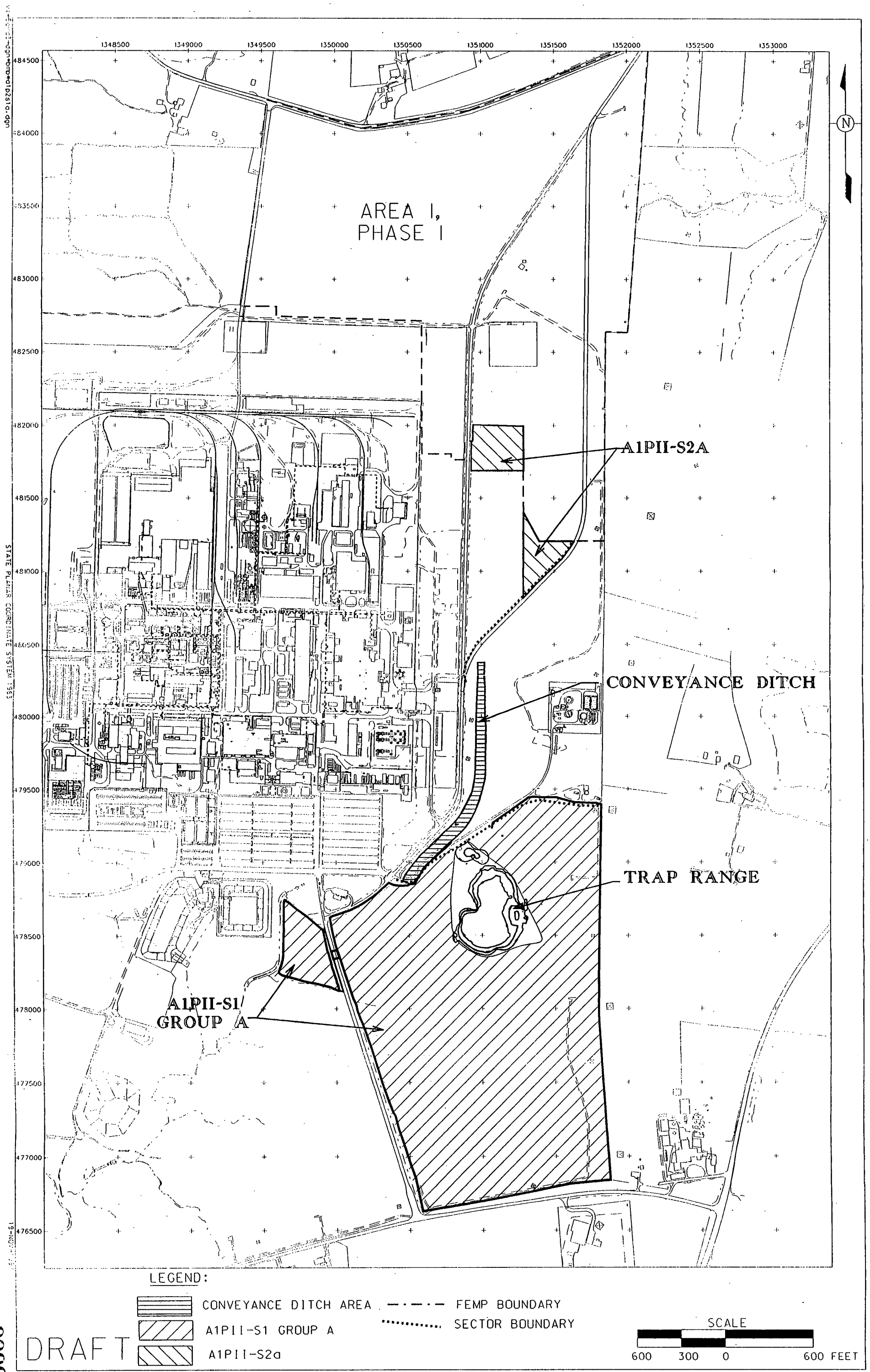

FIGURE 1. LOCATION MAP OF AREA 1, PHASE II SECTOR I, AND OTHER AREAS TO BE CERTIFIED

000037

1097

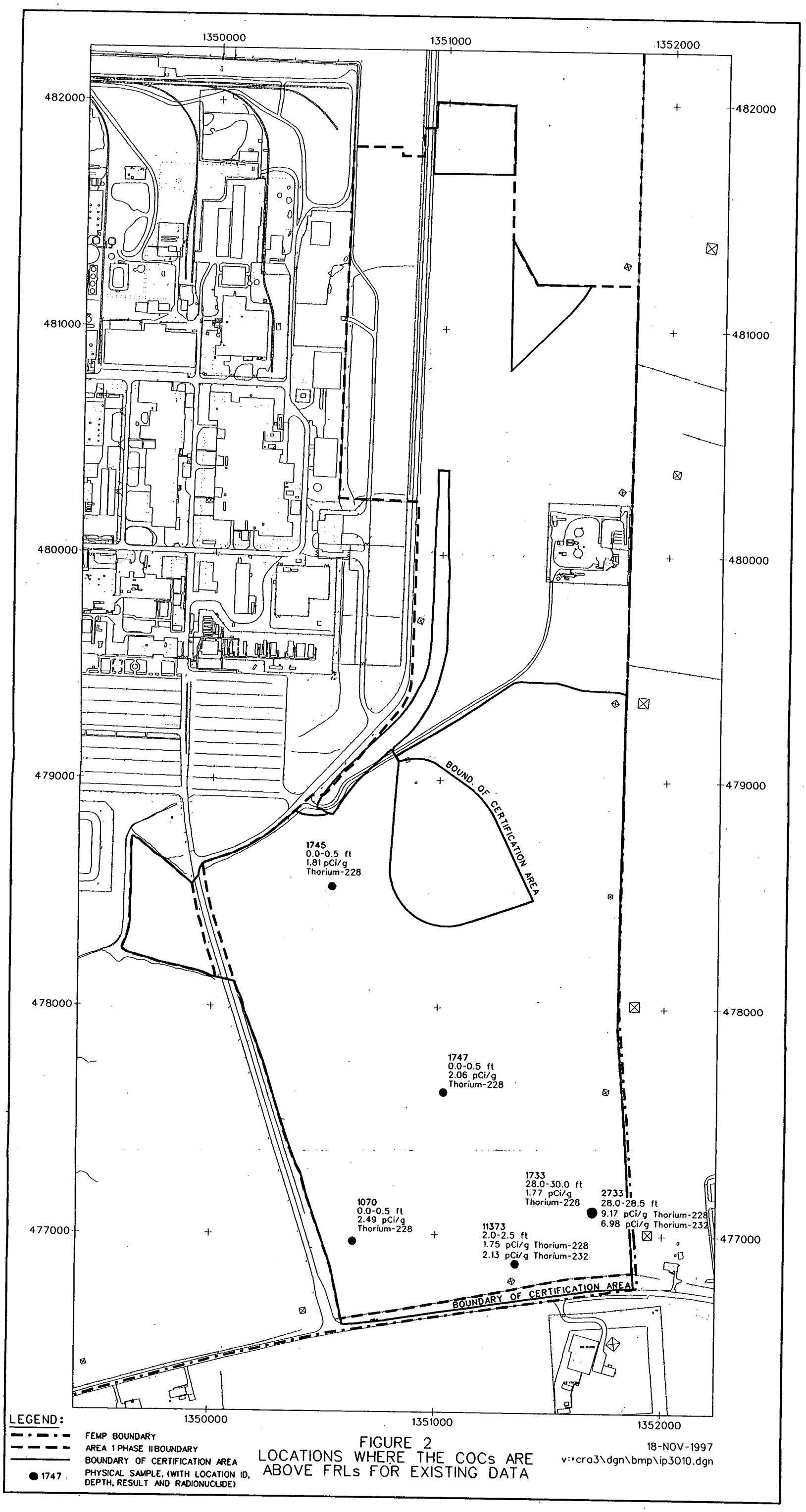

FIGURE 2
LOCATIONS WHERE THE COCs ARE ABOVE FRLs FOR EXISTING DATA

18-NOV-1997
v:\cra3\dgn\bmp\ip3010.dgn

000038

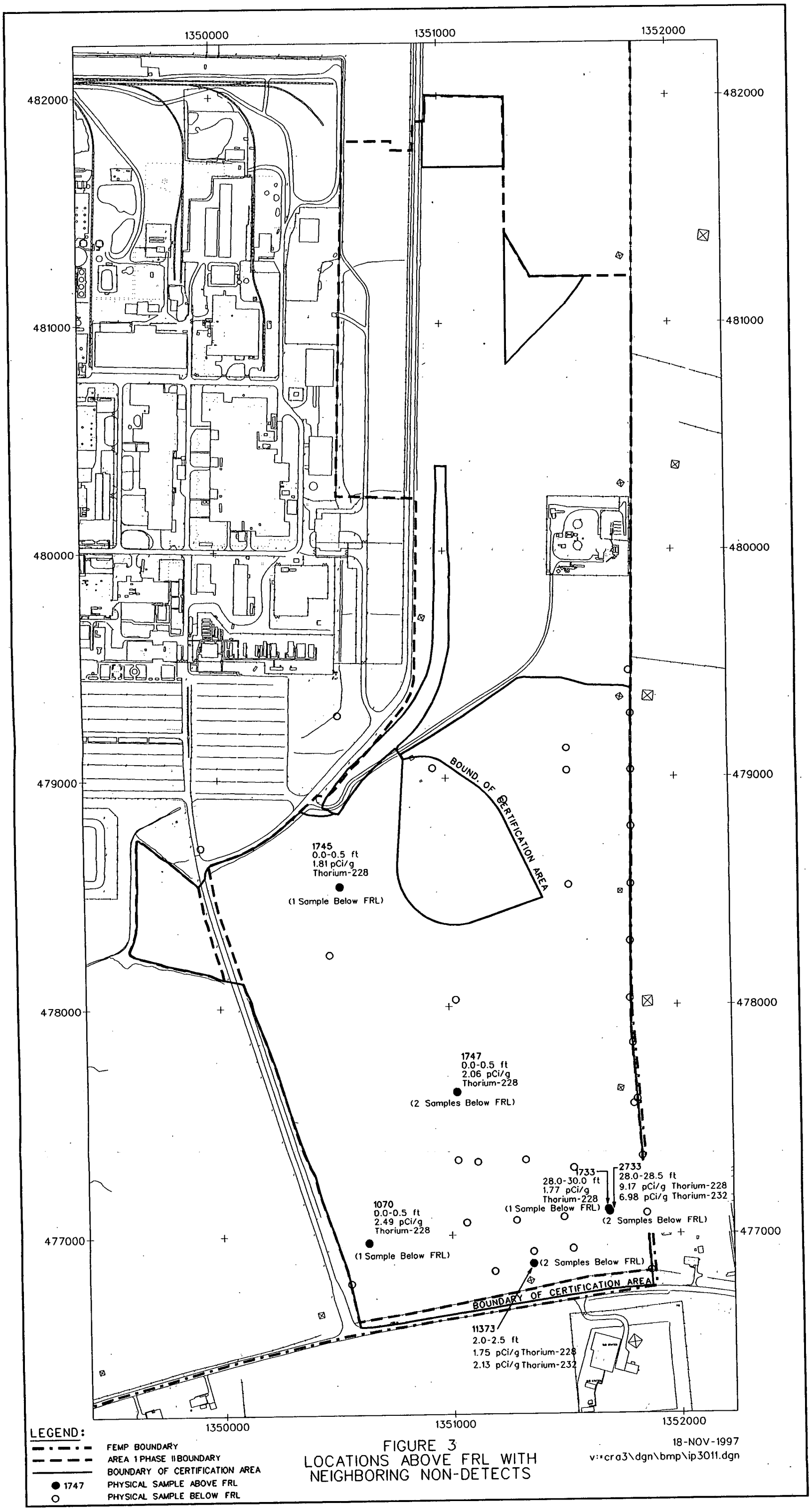

FIGURE 3
LOCATIONS ABOVE FRL WITH NEIGHBORING NON-DETECTS

18-NOV-1997
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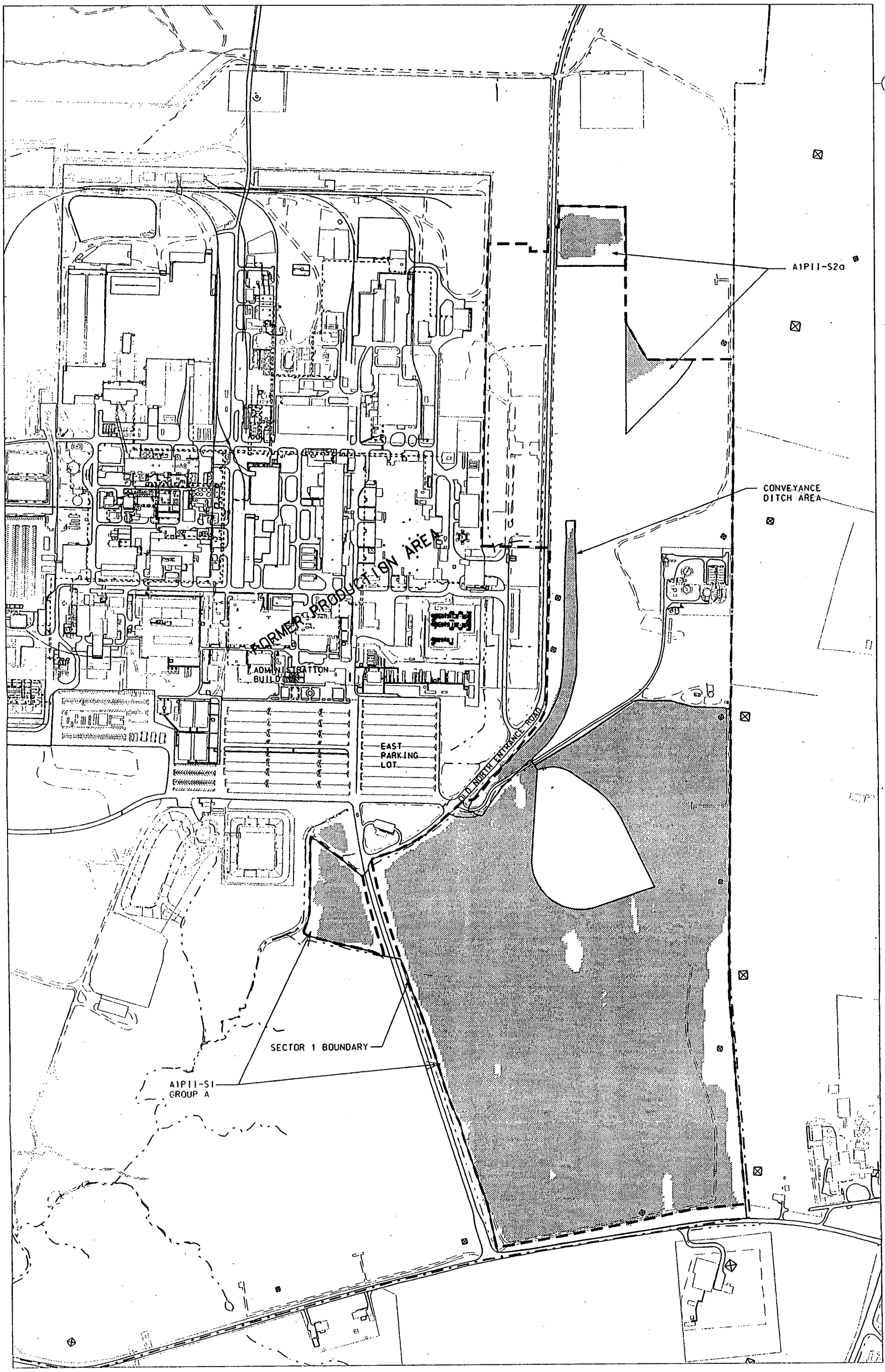
000039

1092



LEGEND:
- LESS THAN 1.47 PCI/g
- GREATER THAN 1.47 PCI/G
- FEMP BOUNDARY
- AREA 1 PHASE II BOUNDARY

SCALE
500 250 0 500 FEET

DRAFT

FIGURE 5. RTRAK SPATIAL AVERAGES, THORIUM-232 ACTIVITY

STATE PLANE COORDINATE SYSTEM 1983

19-NOV-1997

040000

1097

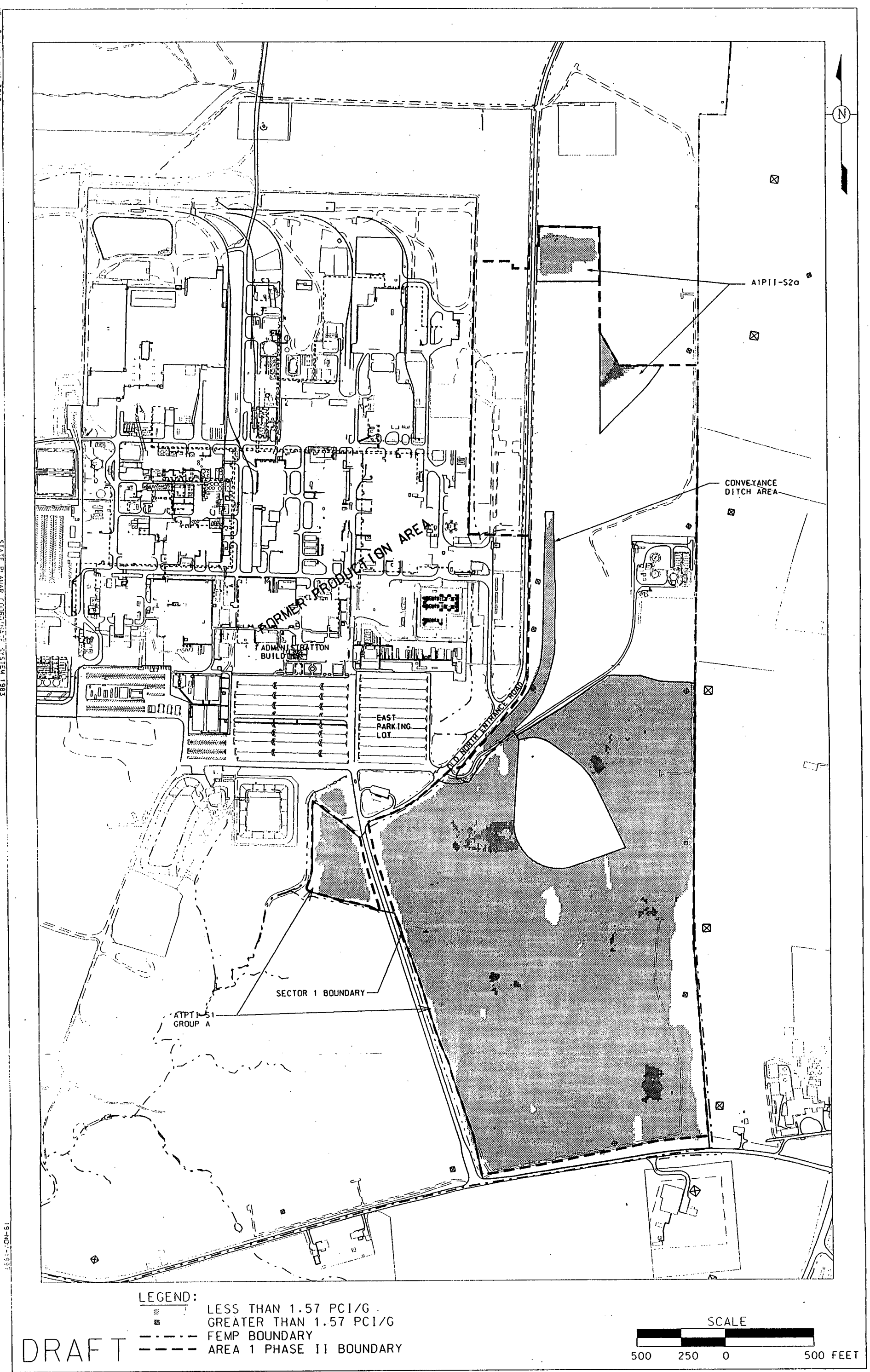


FIGURE 6. RTRAK SPATIAL AVERAGES, RADIUM-226 ACTIVITY

STATE PLANAR COORDINATE SYSTEM 1983

000041

1097

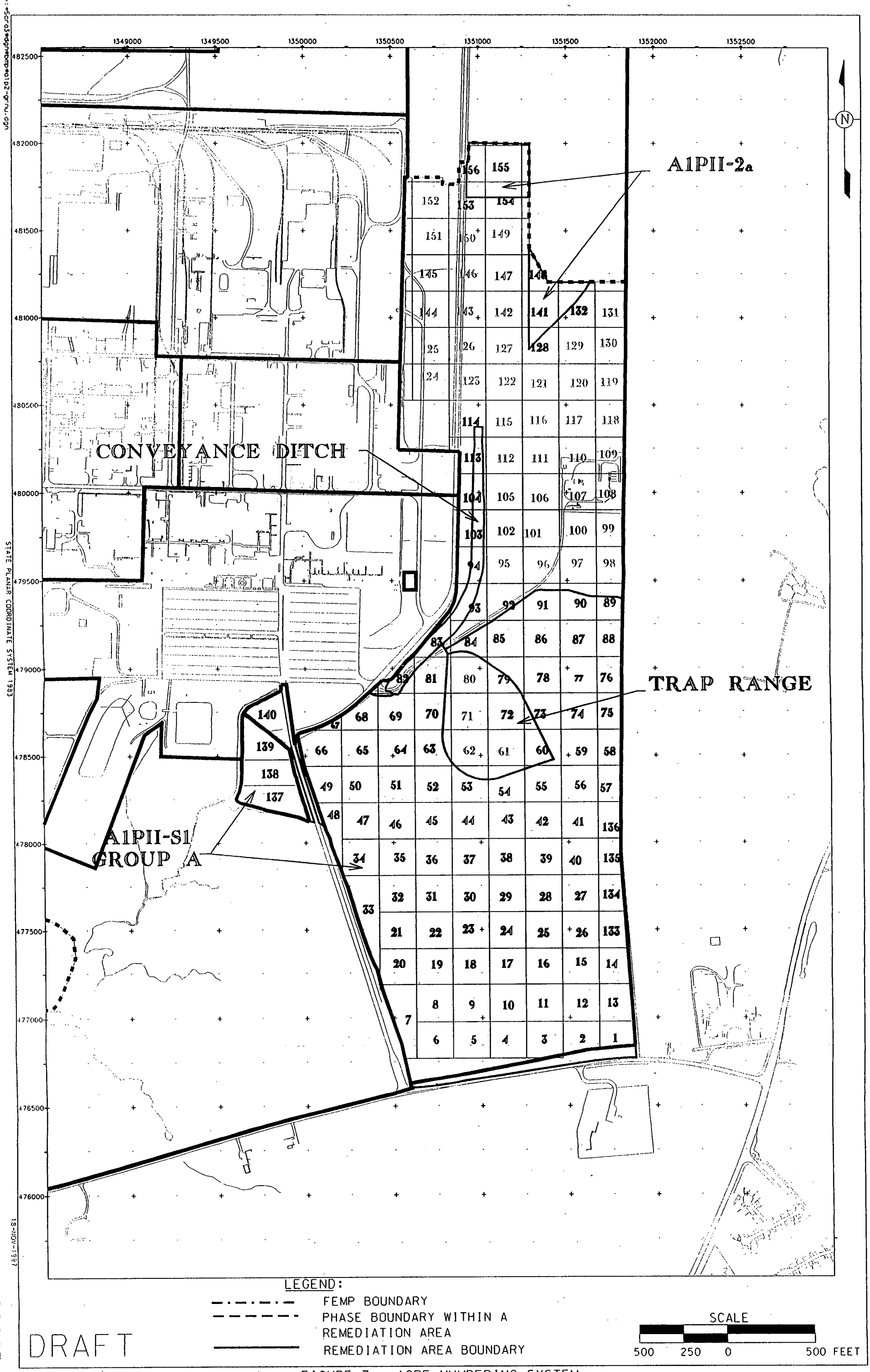
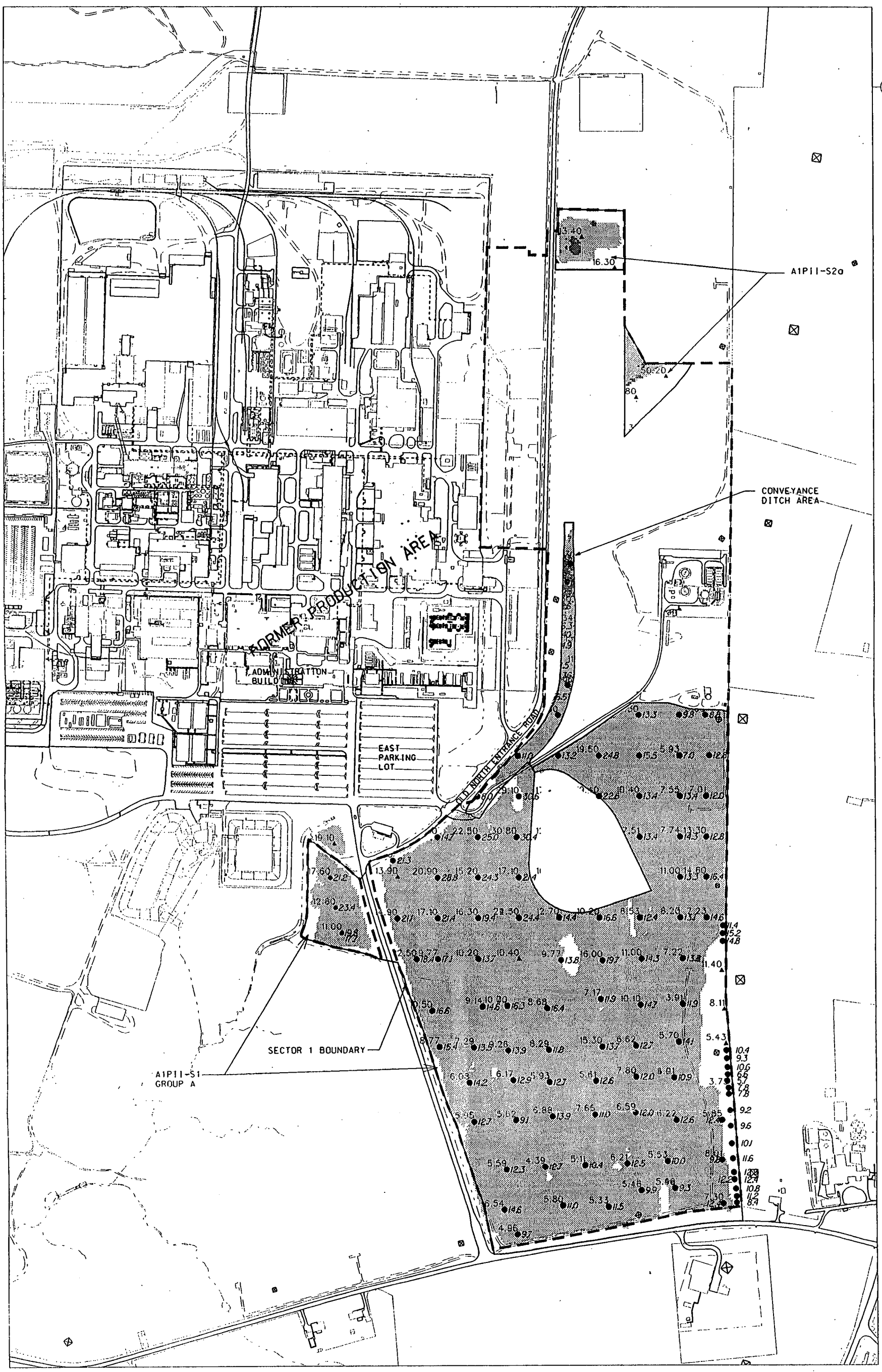


FIGURE 7. ACRE NUMBERING SYSTEM



LEGEND:

- LESS THAN 66 PPM
- GREATER THAN 66 PPM
- FEMP BOUNDARY
- AREA 1 PHASE II BOUNDARY
- 13.2 HPGE LOCATION WITH RESULT
- 4.96 PHYSICAL SAMPLE DATA

SCALE: 500 250 0 500 FEET

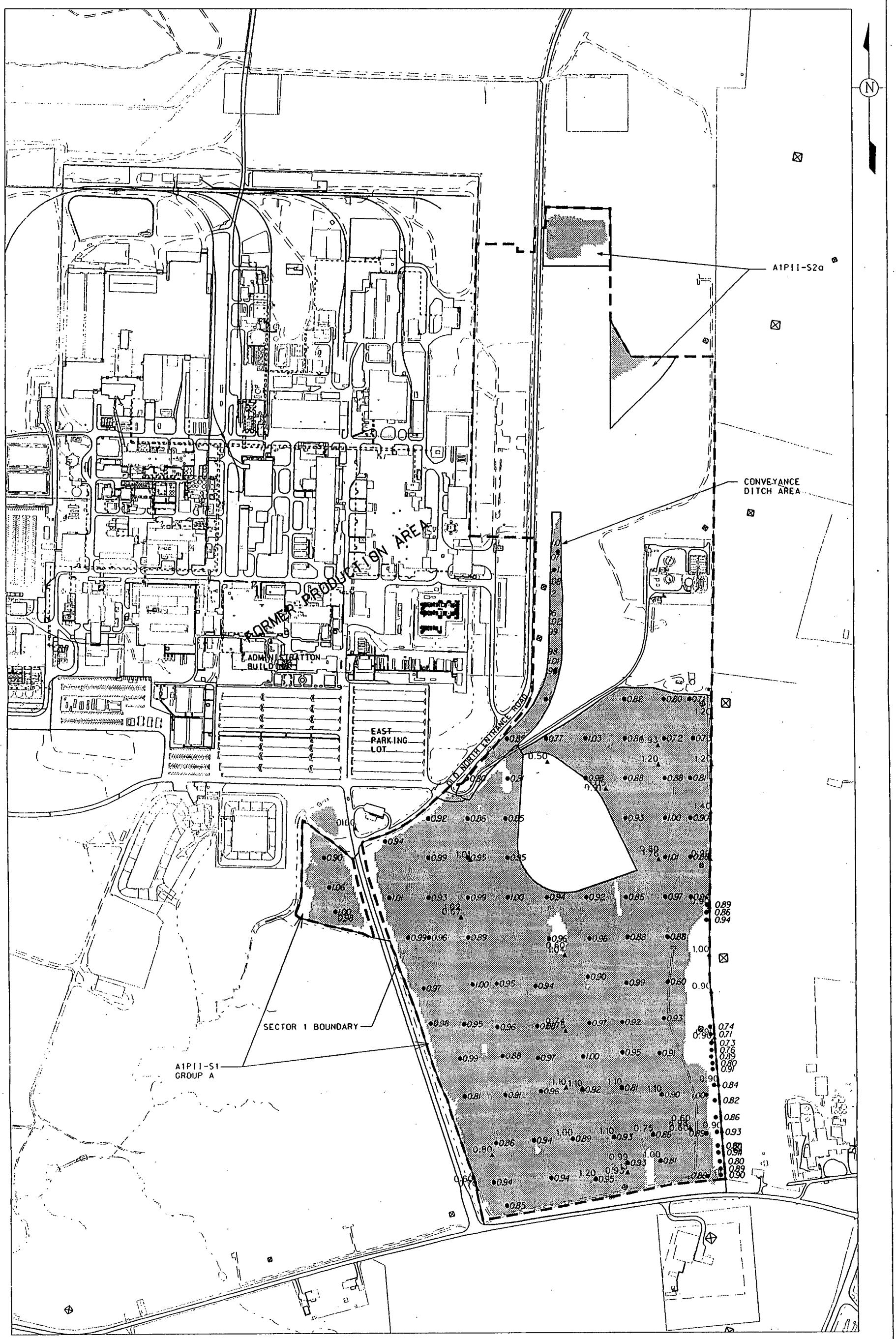
DRAFT

FIGURE 8. RTRAK SPATIAL AVERAGES, HPGe RESULTS, AND PHYSICAL SAMPLES FOR TOTAL URANIUM

STATE PLANE COORDINATE SYSTEM 1983

000043

1097



LEGEND:

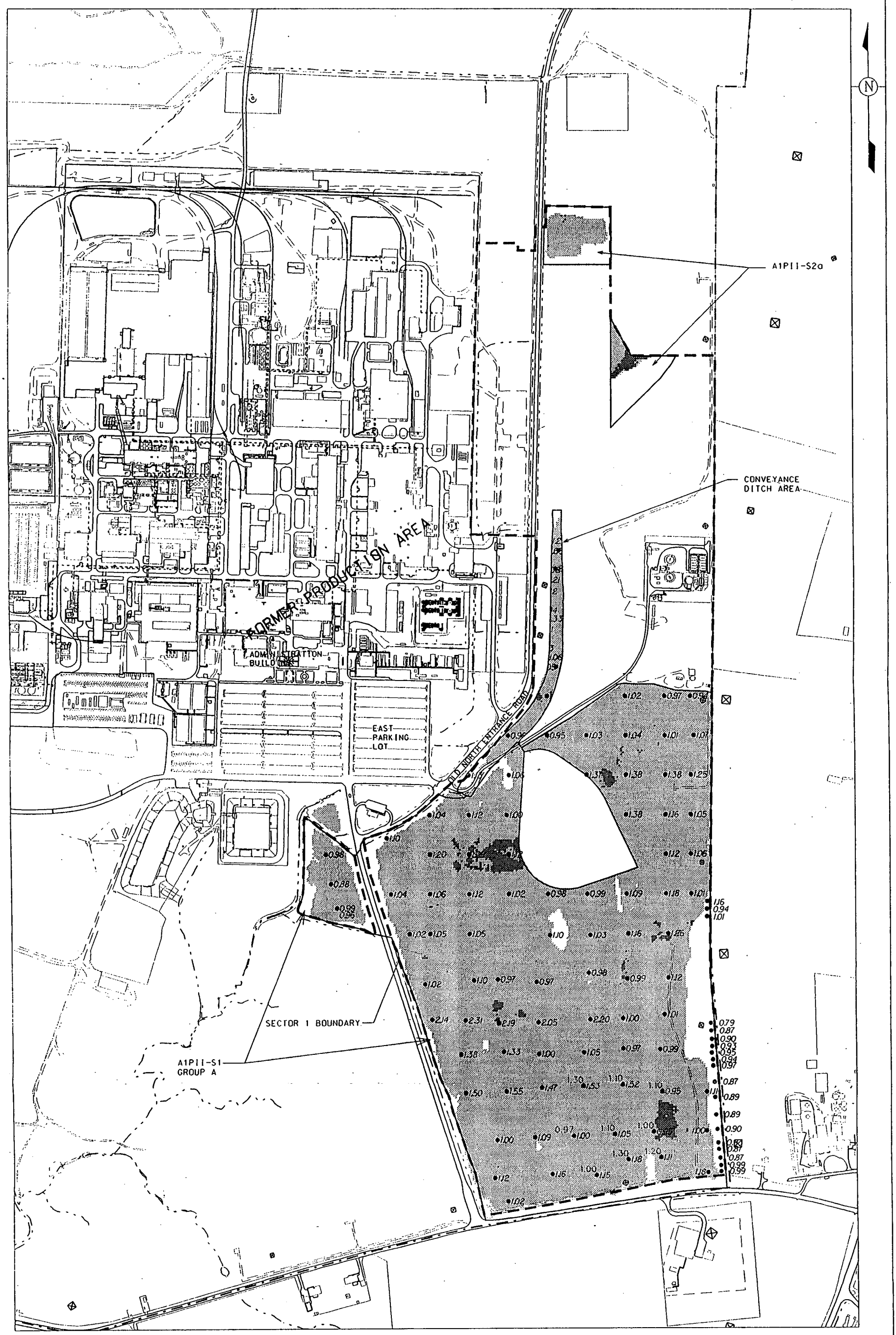
- LESS THAN 1.47 PCI/G
- GREATER THAN 1.47 PCI/G
- FEMP BOUNDARY
- AREA 1 PHASE II BOUNDARY
- ● 0.86 HPGE LOCATION WITH RESULT
- 1.24 ▲ PHYSICAL SAMPLE DATA

SCALE: 500 250 0 500 FEET

DRAFT

FIGURE 9. RTRAK SPATIAL AVERAGES, HPGe RESULTS, AND PHYSICAL SAMPLES FOR THORIUM-232

STATE PLANAR COORDINATE SYSTEM 1983



LEGEND:

- LESS THAN 1.57 PCI/G
- GREATER THAN 1.57 PCI/G
- FEMP BOUNDARY
- AREA 1 PHASE II BOUNDARY
- ● 1.15 HPGE LOCATION WITH RESULT
- 1.30 ▲ PHYSICAL SAMPLE DATA

SCALE: 500 250 0 500 FEET

DRAFT

FIGURE 10. RTRAK SPATIAL AVERAGES, HPGe RESULTS, AND PHYSICAL SAMPLES FOR RADIUM-226

STATE PLANAR COORDINATE SYSTEM 1983

19-NOV-1997

000045

1097

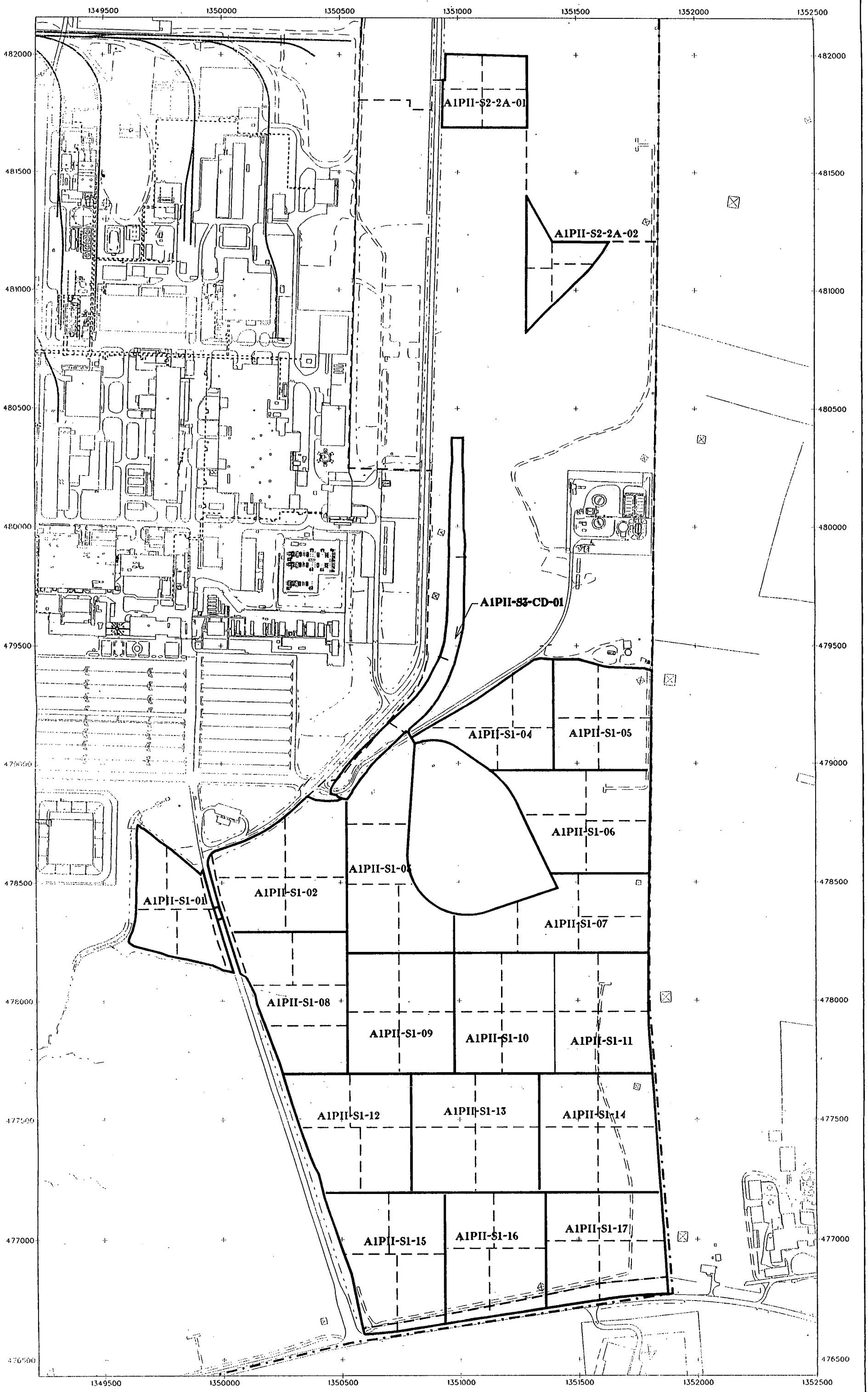


FIGURE 11. AREA 1. PHASE II CERTIFICATION UNIT BOUNDARIES

000046

1097