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APR 0 1 1998

DOE-0641-98

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77 West Jackson Boulevard
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Mr. Tom Schneider, Project Manager
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Dear Mr. Saric and Mr. Schneider:

REVISED CERTIFICATION DESIGN LETTER FOR AREA 8, PHASE I AND PROJECT SPECIFIC PLAN FOR AREA 8, PHASE I CERTIFICATION SAMPLING

Enclosed for your review and approval are the Revised Certification Design Letter (CDL) for Area 8, Phase I and Project Specific Plan (PSP) for Area 8, Phase I (A8PI) Certification Sampling. Revisions to these documents were made based on the March 11, 1998, meeting with the Ohio Environmental Protection Agency (OEPA). The CDL includes an evaluation of historical data and the recently collected pre-certification real-time data from A8PI, and provides details and logic for the certification design of A8PI. The PSP, based on the details in the CDL, serves as a field document and describes details of the certification sampling, analysis, and data validation. Certification sampling in A8PI is tentatively scheduled to begin the week of March 30, 1998.

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

Sincerely,

Johnny Reising

Johnny W. Reising
Fernald Remedial Action
Project Manager

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Enclosures: As Stated

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CERTIFICATION DESIGN LETTER FOR AREA 8, PHASE I

FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
FERNALD, OHIO

INFORMATION ONLY

MARCH 1998

U.S. DEPARTMENT OF ENERGY
FERNALD AREA OFFICE

21010-RP-0001
REVISION B
DRAFT

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ACRONYMS AND ABBREVIATIONS

A8PI	Area 8, Phase I
ASCOC	Area Specific Contaminants of Concern
ASL	analytical support level
BTV	benchmark toxicity value
CDL	Certification Design Letter
COC	Contaminant of Concern
cps	counts per second
CU	certification unit
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CRDL	Contract Required Detection Limit
DOE	U.S. Department of Energy
EPA	U.S. Environmental Protection Agency
FEMP	Fernald Environmental Management Project
FRL	final remediation level
HPGe	high purity germanium detector
MD	minimum distance
NaI	sodium iodide
OEPA	Ohio Environmental Protection Agency
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
SEP	Sitewide Excavation Plan
SCQ	Sitewide CERCLA Quality Assurance Project Plan
STP	Sewage Treatment Plan
SWU	Southern Waste Units
UCL	Upper Confidence Limit
WAC	waste acceptance criteria

EXECUTIVE SUMMARY

This Certification Design Letter (CDL) describes the certification approach for Area 8, Phase I (A8PI). 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 pre-certification real-time data
- A discussion of the area-specific contaminant of concern (ASCOC) selection process and list of ASCOCs assigned to A8PI
- 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 is limited to A8PI, a small (13-acre) plot of land west of Paddys Run. Based on historical data and pre-certification scan results, no portion of A8PI requires remedial action. While few historical soil samples were collected within A8PI, a data review shows that no soil contamination was found to exceed any final remediation levels (FRLs) within A8PI, and no remedial action is required. This conclusion is supported by the pre-certification data collected using real-time field instruments that measure the activity of gamma radiation.

The certification design in this CDL follows the general approach outlined in Section 3.4 of the draft Sitewide Excavation Plan (SEP) (DOE 1997a) and incorporates revisions based on Ohio and U.S. Environmental Protection Agency comments. As identified in Table 2-8 of the draft SEP, selection of Area 8 ASCOCs was accomplished using COC lists in the Operable Unit 5 (OU5) Record of Decision (ROD), process knowledge of the site COCs and release history, and by comparing contract required detection limits (CRDLs) with FRLs. Total uranium, thorium-228, thorium-232, radium-226, radium-228, the sitewide primary COCs, will be considered ASCOCs in every CU. Field work is scheduled to begin March 30, 1998 and the Certification Report will be issued June 30, 1998.

1.0 INTRODUCTION

This Certification Design Letter (CDL) describes the certification approach Area 8, Phase I (A8PI) soil as attaining the final remediation levels (FRLs) for all area-specific contaminants of concern (ASCOCs). 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 Historical and Pre-certification Data - Presentation and discussion of historical and pre-certification scanning data

3.0 Area-Specific Contaminants of Concern (ASCOCs) - Discussion of selection criteria and ASCOCs for A8PI

4.0 Certification Units (CUs) - Presentation of design, sampling and analytical methodologies

5.0 Schedule

6.0 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 and newly acquired real-time data in the form of data maps of the area proposed for certification
- Define the ASCOC selection process and list 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 is limited to A8PI, a 13-acre plot of land located west of Paddys Run (Figure 1). Due to this location, A8PI soil is not likely to have been impacted above the FRLs because it is upwind of the Former Production Area and because Paddys Run effectively isolates Area 8 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, and until recently it was leased to local farmers for cattle grazing.

A8PI contains several hills that slope steeply toward Paddys Run, along with several terraces including the Paddys Run flood plain (see Figure 2). A8PI is isolated from the drainage of other areas of the Fernald Environmental Management Project (FEMP). However, a stormwater culvert diverts stormwater from a small area off site, beneath Paddys Run Road, and into a drainage ditch in A8PI. The area is primarily open meadow, except for wooded areas along Paddys Run and the drainage ditches. As part of the Operable Unit 4 Dispute Resolution Agreement, funds have been approved to develop a native habitat area in A8PI, making it the first priority for Area 8 certification.

2.0 HISTORICAL AND PRE-CERTIFICATION DATA

In accordance with the draft SEP, prior to conducting pre-certification and certification activities, all soil demonstrated to contain contamination above the associated FRLs or other applicable action levels must be evaluated for remedial actions. The OU5 ROD also commits the FEMP to remove any man-made objects, including debris, building foundations, and drainage systems, before a remediation area can be certified. However, there are no such man-made objects within A8PI.

2.1 HISTORICAL DATA

All historical soil data pertinent to A8PI were pulled from the Sitewide Environmental Database, including data within a 100-foot buffer surrounding the area. A review of these data (see Table 1) showed that there were no COCs in this area with results above the FRL, although only three soil samples were collected (two from boring 2384, one from boring Zone 3-23) and analyzed only for radiological contamination. Because of such limited data, a larger data set was examined in order to evaluate typical COC concentrations in this portion of the FEMP. The buffer zone around A8PI was extended to 1,000 feet, and all historical soil sample results from within this area were examined. Note that samples from the Southern Waste Units (SWUs) were excluded from this evaluation because data on SWU material are not applicable to A8PI soil. Data within this 1000-foot buffer area include 18 soil samples analyzed for total uranium, 12 samples analyzed for thorium-228 and thorium-232, nine samples analyzed for radium-226 and radium-228, and at least two samples analyzed for all secondary COCs. The borings where these soil samples were collected are shown on Figure 3.

A review of these data shows that samples collected from within this 1000-foot buffer area are relatively free of contamination, as there were only three samples with results detected above the FRL. Two results exceeded the total uranium FRL of 82 mg/kg, and one result exceeded the beryllium FRL of 1.5 mg/kg. All above-FRL results, including results with the contract required detection limit (CRDL) above the FRL, are shown in Table 2. As shown on Figure 3, the total uranium concentrations of 92 mg/kg and 132 mg/kg were discovered at soil borings SS-35 and 2009 (a monitoring well drilling), respectively. These concentrations are not of immediate concern since the samples were collected nearly 500 feet north of A8PI, and they do not indicate a pattern of widespread total uranium contamination in this vicinity. Also, because total uranium is an ASCOC to be certified in A8PI, above-FRL levels of total uranium contamination within A8PI, if present, would be identified

and remediated. The beryllium concentration of 1.7 mg/kg was identified at boring SS-36, located almost 800 feet southeast of A8PI. This concentration is likely a result of run-off from the nearby flyash piles, as beryllium is a recognized component of flyash. This beryllium concentration is also not of concern for A8PI certification since flyash pile run-off is isolated from A8PI by Paddys Run. Therefore, beryllium will not be retained as an A8PI ASCOC. Finally, existing data collected from within A8PI and the 1000-foot buffer were also reviewed against the benchmark toxicity values (BTVs) of each constituent of ecological concern, and no BTV exceedences were identified. This finding is consistent with the Sitewide Ecological Risk Assessment, which determined that there was no risk to ecological receptors in the area west of Paddys Run.

2.2 PRE-CERTIFICATION DATA

Following the guidelines established in Section 3.3.3 of the draft SEP, pre-certification activities were carried out in A8PI to evaluate residual radiological contamination patterns. During Phase I of pre-certification, a surface radiation survey was conducted over most of A8PI. The radiation survey was carried out using a 4x4x16-inch sodium-iodide (NaI) detector mounted on a tractor [a.k.a. the Real Time Radiation Tracking System (RTRAK)]. Details on the use and capabilities of the RTRAK system are described in the RTRAK Applicability Study (DOE 1997b) and its addendum (DOE 1997c). Based on the results of the RTRAK scan and considering the other factors discussed on Section 4.0, CUs were then established.

The RTRAK was used to collect gross gamma activity readings (recorded in counts per second [cps]) over as much of A8PI as was accessible. The RTRAK could not access the wooded areas and the areas of steep terrain; therefore, supplemental high-purity germanium (HPGe) detector readings were collected in areas that were inaccessible to the RTRAK at a minimum rate of 16 per acre, to assure that any areas of potentially elevated activity were not missed. Areas of dense vegetative cover along the north and east perimeter of A8PI were also inaccessible to the HPGe. Overall, this scan of A8PI showed that gross gamma activity levels were relatively constant, but several areas of slightly higher activity levels were identified. Results of the RTRAK gross activity readings and supplemental HPGe reading locations are shown on Figure 4, while Table 3 lists the supplemental HPGe reading results collected in areas inaccessible to the RTRAK.

The next step of pre-certification scanning is to investigate the areas where the RTRAK scanning results indicated patterns of slightly higher activity levels. Therefore, HPGe measurements were obtained at the locations of highest activity within each CU during Phase II of A8PI pre-certification. The HPGe readings were used to discern the activities of the individual primary radiological ASCOCs. Figure 5 shows the locations and results of the HPGe readings collected for Phase II of the pre-certification. Results of these readings show primary radiological COC concentrations are well below the respective FRLs, therefore above-FRL contamination is unlikely to be present in A8PI, and as a result, the area is ready for certification activities to begin. Details on the precision and accuracy of the HPGe instrument are provided in the Comparability of In-Situ Gamma Spectrometry and Laboratory Data (DOE 1997d) and its addendum (DOE 1997e).

3.0 AREA SPECIFIC CONTAMINANTS 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 Remedial Investigation/Feasibility Study 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, 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 area-specific COCs 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. A soil contaminant will be retained as an A8PI ASCOC if:

- It is listed as a soil COC in the OU5 ROD
- It can be traced to site use, either through process knowledge or known release of the constituent to the environment
- Analytical results indicate the contaminant is present at a concentration above its FRL, and the concentrations greater than the FRL are not attributable to false positives or elevated CRDLs
- Physical characteristics of the contaminant, such as degradation rate and volatility, indicate it is likely to persist in the soil between time of release and remediation.
- The contaminant is one of the sitewide primary COCs (total uranium, radium-226, radium-228, thorium-232, and thorium-228).

3.2 ASCOC SELECTION PROCESS FOR A8PI

Total uranium, radium-226, radium-228, thorium-228 and thorium-232 are sitewide primary COCs and will be retained as ASCOCs for this reason. As discussed in Section 2.1, historical data from within A8PI and the surrounding 1000-foot buffer show very little above-FRL contamination, and none of immediate concern. Based on this and the inability to identify any mechanism for secondary COC contamination of A8PI, only the sitewide primary COCs will be retained as the A8PI ASCOCs.

4.0 CERTIFICATION APPROACH

4.1 CERTIFICATION DESIGN

The certification design for A8PI follows the general approach outlined in Section 3.4 of the draft SEP (DOE 1997a). As discussed in Section 3.0 of this document, total uranium, thorium-228, thorium-232, radium-226, radium-228 (the primary ASCOCs) will be retained as the only CU-specific ASCOCs, and in all CUs. Because A8PI is considered to be an "nonimpacted area" of the site, Approach E from the SEP will be used as a basis for certification design, as described in Section 4.5 of the draft SEP. Group 2 CUs, which can be as large as 250,000 square feet, have been located within A8PI as follows:

- CU 1 is located on the eastern portion of A8PI to cover the Paddys Run floodplain;
- CU 2 is located in the northwestern corner of A8PI and covers the northern portion of the upland area;
- CU 3 is located in the west-central portion of A8PI, and also in the upland area. This CU was also established to cover an area of somewhat higher gross gamma activity, as identified during the RTRAK scan (see Figure 4); and finally,
- CU 4 is located in the southern tip of A8PI, and is bounded to the north by a drainage ditch.

Figure 6 shows the boundaries and sizes of all four CUs in A8PI.

Certification sampling location selection generally follows Section 3.4.2.1 of the draft SEP; however, some details have changed based on Agency comments. These changes will be reflected in the forthcoming revision to 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. Additional alternative sample locations are also generated in case the original random sample location fails the minimum distance criterion. The minimum distance criterion is defined as the minimum distance allowed between random sample locations in order to eliminate the chance of random sample points clustering within a small area. This clustering would tend to over emphasize a small area, and conversely, under represent a large area when making a certification decision. By not allowing sample locations to be too closely arranged, the sample locations are dispersed and give a more uniform coverage, thus reducing the possibility of large unsampled areas.

The equation used to determine the distance between random location pairs is as follows:

$$\text{distance} = \sqrt{\left(\text{easting}_1 - \text{easting}_0\right)^2 + \left(\text{northing}_1 - \text{northing}_0\right)^2}$$

The equation used to check the minimum distance (MD) criteria is as follows:

$$\text{MD} = \frac{\sqrt{\text{Area}_{sub-CU}}}{\sqrt{16}} \times \frac{1}{2} \text{ or } \frac{\sqrt{\text{Area}_{sub-CU}}}{8}$$

This equation was derived under the following assumptions:

- $\sqrt{\text{Area}_{sub-CU}}$ = the average length of a CU side
  since the area of a CU (in its simplest form, a square) is equal to height times width;

- $\sqrt{16}$ = **the average number of *sub-CUs* on a side of the CU**
  since the number of sub-CUs (in its simplest form, a 4 CU x 4 CU configuration) is equal to 4; and ½ were chosen to allow sample points to be only as close as ½ of the average sub-CU side length.

If the original random sample location did not meet the minimum distance criterion, then the first alternative location was selected and all the locations were re-tested. This process continued until all 16 random locations met the minimum distance criterion. The selected A8PI certification sampling locations are shown in Figure 7.

As discussed in the Area 8, Phase I Project Specific Plan (PSP) for Certification Sampling (submitted concurrently with this CDL), discrete soil samples will be collected from each of the 16 random sampling locations. Each sample will be collected from the 0 to 6-inch (surface) soil interval at the designated and surveyed sample point. Of the 16 certification samples, a total of 12 will be submitted for analysis. In order to determine which samples to analyze while still providing good areal coverage, each CU was divided into quadrants with each quadrant containing four sample locations. Three of the four samples from each quadrant were then randomly selected for analysis, resulting in a total of 12 samples analyzed per CU. The other four samples from each CU are to be archived and analyzed only if necessary.

4.2 ANALYTICAL METHODOLOGY AND STATISTICAL ANALYSIS

Laboratory analysis of certification samples will be conducted by alpha or gamma spectroscopy in an on-site or off-site laboratory. Analyses will be conducted to Analytical Support Level (ASL) D with a detection level of 4.0 mg/kg for total uranium (per Agency discussion, minimum detection limit to be at least 10 percent of FRL which will be included in the revised SCQ). A minimum of 10 percent of the results from each laboratory 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. If any sample fails this validation, all data from the laboratory with the rejected result will then be validated to determine the integrity of all data from that laboratory. Once data are validated as required, results will be entered into the sitewide environmental database and a statistical analysis will be performed to evaluate the pass/fail criteria for the each CU. The statistical approach is discussed in Section 3.4.3 and Appendix G of the draft SEP (DOE 1997a).

Two criteria must be met for the CU to be certified as passing. If the data distribution is normal or lognormal, the first criterion compares the 95 percent Upper Confidence Limit (UCL) on the mean of each primary COC to its FRL. On an individual CU basis, any ASCOC with the 95 percent UCL above the FRL results in that CU failing certification. If the data distribution is not normal or lognormal, the appropriate nonparametric approach discussed in Appendix G of the draft 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 the U.S. EPA, the Ohio EPA (OEPA), and the U.S. Department of Energy (DOE). The certification under the scope of this CU will be subject to the agreed upon hot-spot criterion. When the given UCL on the mean for each COC is less than its FRL, and the hot-spot criterion is met, the CU has met both criteria and will be considered certified.

There are three conditions that could result in a CU failing certification: 1) high variability in the data set, 2) localized contamination, and 3) widespread contamination. Details on the evaluation and responses to these possible outcomes are provided in Section 3.4.5 of the draft SEP (DOE 1997a). 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 draft SEP (DOE 1997a) provides additional details and describes the required content of the Certification Report.

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 agreements between DOE and EPA on the schedule for initiating work on the OU4 Dispute Resolution Habitat Area.

ACTIVITY	TARGET DATE
Submittal of Certification Design Letter	March 27, 1998
Start of Field Work	April 27, 1998
Complete Field Work	May 1, 1998
Complete Analytical Work	May 15, 1998
Complete Data Validation and Statistical Analysis	June 30, 1998
Submit Certification Report	August 31, 1998*

* Only the date for submittal of the Certification Report is a commitment to the OEPA and U.S. EPA. Other dates are internal target completion dates. DOE will accelerate this schedule, if possible, in order to submit the Certification Report before August 31, 1998.

6.0 REFERENCES

U. S. Department of Energy, 1997a, "Sitewide Excavation Plan," Draft, Fernald Environmental Management Project, DOE, Fernald Area Office, Cincinnati, Ohio.

U. S. Department of Energy, 1997b, "RTRAK Applicability Study," Draft, Fernald Environmental Management Project, DOE, Fernald Area Office, Cincinnati, Ohio.

U. S. Department of Energy, 1997c, "RTRAK Applicability Measurements in Locations of Elevated Radionuclide Concentrations," Addendum to July 1997 Draft on RTRAK Applicability Study, Fernald Environmental Management Project, DOE, Fernald Area Office, Cincinnati, Ohio.

U. S. Department of Energy, 1997d, "Comparability of In-Situ Gamma Spectrometry and Laboratory Data," Draft, Fernald Environmental Management Project, DOE, Fernald Area Office, Cincinnati, Ohio.

U. S. Department of Energy, 1997e, "Comparability of Total Uranium Data as Measured by In-Situ Gamma Spectrometry and Four Laboratory Methods," Addendum to July 1997 Draft on Comparability of In-Situ Gamma Spectrometry and Laboratory Data, Fernald Environmental Management Project, DOE, Fernald Area Office, Cincinnati, Ohio.

TABLE 1
HISTORICAL DATA COLLECTED FROM AREA 8, PHASE I

Parameter	Sample ID	Location	Sample Date	Interval (feet)	Northing ('83)	Easting ('83)	Result	Qualifier	Units	FRL
Cesium-137	32486	2384	2/19/90	12-13.5	479083.79	1346081.7	0.2	U	pCi/g	1.4
Cesium-137	32498	2384	2/20/90	30-31.5	479083.79	1346081.7	0.2	U	pCi/g	1.4
Cesium-137	5140	ZONE 3-23	11/14/87	0-0.167	479029.34	1346531	0.4	J	pCi/g	1.4
Neptunium-237	32486	2384	2/19/90	12-13.5	479083.79	1346081.7	0.6	U	pCi/g	3.2
Neptunium-237	32498	2384	2/20/90	30-31.5	479083.79	1346081.7	0.6	U	pCi/g	3.2
Neptunium-237	5140	ZONE 3-23	11/14/87	0-0.167	479029.34	1346531	0.6	UJ	pCi/g	3.2
Plutonium-238	32486	2384	2/19/90	12-13.5	479083.79	1346081.7	0.6	U	pCi/g	78
Plutonium-238	32498	2384	2/20/90	30	479083.79	1346081.7	0.6	U	pCi/g	78
Plutonium-238	5140	ZONE 3-23	11/14/87	0-0.167	479029.34	1346531	0.6	UJ	pCi/g	78
Plutonium-239/240	32486	2384	2/19/90	12-13.5	479083.79	1346081.7	0.6	U	pCi/g	77
Plutonium-239/240	32498	2384	2/20/90	30	479083.79	1346081.7	0.6	U	pCi/g	77
Plutonium-239/240	5140	ZONE 3-23	11/14/87	0-0.167	479029.34	1346531	0.6	U	pCi/g	77
Radium-226	32486	2384	2/19/90	12-13.5	479083.79	1346081.7	0.88	J	pCi/g	1.7
Radium-226	32498	2384	2/20/90	30	479083.79	1346081.7	0.74	J	pCi/g	1.7
Radium-226	5140	ZONE 3-23	11/14/87	0-0.167	479029.34	1346531	0.4	UJ	pCi/g	1.7
Radium-228	32486	2384	2/19/90	12-13.5	479083.79	1346081.7	0.65	J	pCi/g	1.8
Radium-228	32498	2384	2/20/90	30	479083.79	1346081.7	0.58	J	pCi/g	1.8
Radium-228	5140	ZONE 3-23	11/14/87	0-0.167	479029.34	1346531	0.7	J	pCi/g	1.8
Strontium-90	32486	2384	2/19/90	12-13.5	479083.79	1346081.7	1.01	J	pCi/g	14
Strontium-90	32498	2384	2/20/90	30	479083.79	1346081.7	0.93	J	pCi/g	14
Strontium-90	5140	ZONE 3-23	11/14/87	0-0.167	479029.34	1346531	1.3	-	pCi/g	14
Technetium-99	32486	2384	2/19/90	12-13.5	479083.79	1346081.7	1	U	pCi/g	30
Technetium-99	32498	2384	2/20/90	30	479083.79	1346081.7	1	U	pCi/g	30
Technetium-99	5140	ZONE 3-23	11/14/87	0-0.167	479029.34	1346531	1	U	pCi/g	30
Thorium-228	32486	2384	2/19/90	12	479083.79	1346081.7	0.631	-	pCi/g	1.7

TABLE 1
HISTORICAL DATA COLLECTED FROM A8PI
(continued)

Parameter	Sample ID	Location	Sample Date	Interval (feet)	Northing ('83)	Easting ('83)	Result	Qualifier	Units	FRL
Thorium-228	32498	2384	2/20/90	30	479083.79	1346081.7	0.6	U	pCi/g	1.7
Thorium-228	5140	ZONE 3-23	11/14/87	0-0.167	479029.34	1346531	0.9	-	pCi/g	1.7
Thorium-230	32486	2384	2/19/90	12	479083.79	1346081.7	0.962	-	pCi/g	280
Thorium-230	32498	2384	2/20/90	30	479083.79	1346081.7	0.933	-	pCi/g	280
Thorium-230	5140	ZONE 3-23	11/14/87	0-0.167	479029.34	1346531	1.4	-	pCi/g	280
Thorium-232	32486	2384	2/19/90	12	479083.79	1346081.7	0.621	-	pCi/g	1.5
Thorium-232	32498	2384	2/20/90	30	479083.79	1346081.7	0.652	-	pCi/g	1.5
Thorium-232	5140	ZONE 3-23	11/14/87	0-0.167	479029.34	1346531	0.7	-	pCi/g	1.5
Uranium, Total	32486	2384	2/19/90	12	479083.79	1346081.7	3.478312	-	mg/kg	50
Uranium, Total	32498	2384	2/20/90	30	479083.79	1346081.7	22.75711	-	mg/kg	50
Uranium, Total	5140	ZONE 3-23	11/14/87	0-0.167	479029.34	1346531	9.895197	J	mg/kg	50

TABLE 2
HISTORICAL DATA ABOVE FRL WITHIN 1000 FOOT BUFFER AROUND A8PI

Parameter	Sample ID	Location	Sample Date	Interval (feet)	Northing ('83)	Easting ('83)	Result	Qualifier	Units	FRL
Beryllium	121033	SS-36	7/7/93	0-0.5	478204.59	1347304.6	1.7	-	mg/kg	1.5
Uranium, Total	121050	500318/SS-35	7/8/93	0-0.5	479544.93	1346398.6	91.98	J	mg/kg	50
Uranium, Total	7084	2009	8/31/87	38.5-40	479570.06	1346538.8	132	-	mg/kg	50
N-Nitroso-di-n-propylamine	121033	SS-36	7/7/93	0-0.5	478204.59	1347304.6	400	U	ug/kg	200
N-Nitroso-di-n-propylamine	121045	500318/SS-35	7/8/93	0-0.5	479544.93	1346398.6	390	U	ug/kg	200

Table 3
Phase I Pre-certification HPGe Readings in A8PI

Location	Easting	Northing	Parameter	Sample ID	Result	Units
A8P1-PCERT-1-1	1346382.35	479005.91	Uranium, Total	A8P1-PCERT-1-1G	14.48	ppm
A8P1-PCERT-1-10	1346147.18	479121.46	Uranium, Total	A8P1-PCERT-1-10G	14.37	ppm
A8P1-PCERT-1-11	1346117.91	479110.70	Uranium, Total	A8P1-PCERT-1-11G	18.87	ppm
A8P1-PCERT-1-12	1346131.68	479144.89	Uranium, Total	A8P1-PCERT-1-12G	14.23	ppm
A8P1-PCERT-1-12	1346131.68	479144.89	Uranium, Total	A8P1-PCERT-1-12G	14.75	ppm
A8P1-PCERT-1-12	1346131.68	479144.89	Uranium, Total	A8P1-PCERT-1-12G	17.72	ppm
A8P1-PCERT-1-14	1346157.49	479148.28	Uranium, Total	A8P1-PCERT-1-14G	14.99	ppm
A8P1-PCERT-1-15	1346165.88	479178.93	Uranium, Total	A8P1-PCERT-1-15G	14.95	ppm
A8P1-PCERT-1-16	1346196.26	479170.17	Uranium, Total	A8P1-PCERT-1-16G	13.80	ppm
A8P1-PCERT-1-17	1346188.69	479144.31	Uranium, Total	A8P1-PCERT-1-17G	15.48	ppm
A8P1-PCERT-1-17	1346188.69	479144.31	Uranium, Total	A8P1-PCERT-1-17GD	16.11	ppm
A8P1-PCERT-1-18	1346220.64	479082.27	Uranium, Total	A8P1-PCERT-1-18G	14.77	ppm
A8P1-PCERT-1-2	1346375.49	479039.80	Uranium, Total	A8P1-PCERT-1-2G	14.84	ppm
A8P1-PCERT-1-3	1346381.00	479064.57	Uranium, Total	A8P1-PCERT-1-3G	13.80	ppm
A8P1-PCERT-1-4	1346365.49	479095.89	Uranium, Total	A8P1-PCERT-1-4G	13.79	ppm
A8P1-PCERT-1-5	1346351.00	479073.00	Uranium, Total	A8P1-PCERT-1-5G	15.87	ppm
A8P1-PCERT-1-6	1346222.87	479132.11	Uranium, Total	A8P1-PCERT-1-6G	15.16	ppm
A8P1-PCERT-1-7	1346227.56	479109.85	Uranium, Total	A8P1-PCERT-1-7G	15.31	ppm
A8P1-PCERT-1-9	1346174.61	479124.45	Uranium, Total	A8P1-PCERT-1-9G	17.24	ppm
A8P1-PCERT-11-1	1346443.09	478398.82	Uranium, Total	A8P1-PCERT-11-1G	7.63	ppm
A8P1-PCERT-11-2	1346513.57	478355.96	Uranium, Total	A8P1-PCERT-11-2G	10.44	ppm
A8P1-PCERT-11-3	1346463.62	478450.09	Uranium, Total	A8P1-PCERT-11-3G	11.51	ppm
A8P1-PCERT-11-4	1346463.40	478475.73	Uranium, Total	A8P1-PCERT-11-4G	16.75	ppm
A8P1-PCERT-11-4	1346463.40	478475.73	Uranium, Total	A8P1-PCERT-11-4G	15.93	ppm
A8P1-PCERT-11-4	1346463.40	478475.73	Uranium, Total	A8P1-PCERT-11-4GD	15.95	ppm
A8P1-PCERT-11-5	1346453.96	478508.71	Uranium, Total	A8P1-PCERT-11-5G	14.90	ppm
A8P1-PCERT-11-6	1346433.67	478533.10	Uranium, Total	A8P1-PCERT-11-6G	12.36	ppm
A8P1-PCERT-11-7	1346466.73	478604.69	Uranium, Total	A8P1-PCERT-11-7G	11.68	ppm
A8P1-PCERT-11-8	1346441.89	478604.81	Uranium, Total	A8P1-PCERT-11-8G	10.74	ppm
A8P1-PCERT-11-9	1346445.05	478630.45	Uranium, Total	A8P1-PCERT-11-9G	11.66	ppm
A8P1-PCERT-12-1	1346435.11	478373.95	Uranium, Total	A8P1-PCERT-12-1G	13.99	ppm
A8P1-PCERT-12-2	1346569.77	478204.66	Uranium, Total	A8P1-PCERT-12-2G	12.07	ppm
A8P1-PCERT-12-3	1346542.59	478233.38	Uranium, Total	A8P1-PCERT-12-3G	11.56	ppm
A8P1-PCERT-12-4	1346509.38	478242.76	Uranium, Total	A8P1-PCERT-12-4G	11.60	ppm
A8P1-PCERT-12-5	1346520.83	478263.90	Uranium, Total	A8P1-PCERT-12-5G	12.83	ppm
A8P1-PCERT-12-6	1346490.47	478270.71	Uranium, Total	A8P1-PCERT-12-6G	13.68	ppm
A8P1-PCERT-12-7	1346496.05	478296.00	Uranium, Total	A8P1-PCERT-12-7G	11.45	ppm
A8P1-PCERT-12-8	1346482.38	478325.39	Uranium, Total	A8P1-PCERT-12-8G	12.12	ppm
A8P1-PCERT-12-9	1346481.07	478360.02	Uranium, Total	A8P1-PCERT-12-9G	5.50	ppm
A8P1-PCERT-13-1	1346341.93	478351.46	Uranium, Total	A8P1-PCERT-13-1-G	9.17	ppm
A8P1-PCERT-13-10	1346499.96	478188.16	Uranium, Total	A8P1-PCERT-13-10-G	13.37	ppm
A8P1-PCERT-13-11	1346521.14	478167.05	Uranium, Total	A8P1-PCERT-13-11-G	13.40	ppm
A8P1-PCERT-13-12	1346545.27	478147.71	Uranium, Total	A8P1-PCERT-13-12-G	13.98	ppm
A8P1-PCERT-13-13	1346559.92	478124.21	Uranium, Total	A8P1-PCERT-13-13-G	12.40	ppm
A8P1-PCERT-13-14	1346582.47	478105.31	Uranium, Total	A8P1-PCERT-13-14-G	9.97	ppm
A8P1-PCERT-13-2	1346364.40	478347.24	Uranium, Total	A8P1-PCERT-13-2-G	9.86	ppm
A8P1-PCERT-13-3	1346381.61	478338.38	Uranium, Total	A8P1-PCERT-13-3-G	10.17	ppm
A8P1-PCERT-13-4	1346398.73	478320.51	Uranium, Total	A8P1-PCERT-13-4-G	12.98	ppm
A8P1-PCERT-13-5	1346417.17	478311.81	Uranium, Total	A8P1-PCERT-13-5-G	11.70	ppm
A8P1-PCERT-13-6	1346427.57	478287.98	Uranium, Total	A8P1-PCERT-13-6-G	15.81	ppm
A8P1-PCERT-13-7	1346446.35	478265.91	Uranium, Total	A8P1-PCERT-13-7-G	15.70	ppm
A8P1-PCERT-13-8	1346454.92	478241.98	Uranium, Total	A8P1-PCERT-13-8-G	14.14	ppm
A8P1-PCERT-13-9	1346473.32	478207.73	Uranium, Total	A8P1-PCERT-13-9-G	13.77	ppm
A8P1-PCERT-2-1	1346166.77	479056.55	Uranium, Total	A8P1-PCERT-2-1G	13.03	ppm
A8P1-PCERT-2-2	1346190.67	479066.59	Uranium, Total	A8P1-PCERT-2-2G	12.12	ppm

Table 3
Phase I Pre-certification HPGe Readings in A8PI

Location	Easting	Northing	Parameter	Sample ID	Result	Units
A8P1-PCERT-2-3	1346175.45	479095.11	Uranium, Total	A8P1-PCERT-2-3G	13.63	ppm
A8P1-PCERT-2-4	1346154.67	479044.98	Uranium, Total	A8P1-PCERT-2-4G	14.86	ppm
A8P1-PCERT-2-5	1346153.43	479075.73	Uranium, Total	A8P1-PCERT-2-5G	13.48	ppm
A8P1-PCERT-2-5	1346153.43	479075.73	Uranium, Total	A8P1-PCERT-2-5G	13.26	ppm
A8P1-PCERT-2-6	1346126.61	479043.45	Uranium, Total	A8P1-PCERT-2-6G	15.09	ppm
A8P1-PCERT-2-7	1346109.82	479071.87	Uranium, Total	A8P1-PCERT-2-7G	13.62	ppm
A8P1-PCERT-2-8	1346182.92	478938.78	Uranium, Total	A8P1-PCERT-2-8G	14.92	ppm
A8P1-PCERT-3-1	1346406.23	478808.71	Uranium, Total	A8P1-PCERT-3-1G	10.82	ppm
A8P1-PCERT-3-10	1346118.13	478819.09	Uranium, Total	A8P1-PCERT-3-10G	9.50	ppm
A8P1-PCERT-3-10	1346118.13	478819.09	Uranium, Total	A8P1-PCERT-3-10GD	9.10	ppm
A8P1-PCERT-3-11	1346143.79	478836.18	Uranium, Total	A8P1-PCERT-3-11G	9.94	ppm
A8P1-PCERT-3-12	1346143.96	478873.31	Uranium, Total	A8P1-PCERT-3-12G	10.51	ppm
A8P1-PCERT-3-13	1346141.98	478908.72	Uranium, Total	A8P1-PCERT-3-13G	12.38	ppm
A8P1-PCERT-3-14	1346164.28	478925.48	Uranium, Total	A8P1-PCERT-3-14G	14.77	ppm
A8P1-PCERT-3-15	1346165.45	478893.20	Uranium, Total	A8P1-PCERT-3-15G	14.12	ppm
A8P1-PCERT-3-16	1346168.46	478856.47	Uranium, Total	A8P1-PCERT-3-16G	11.32	ppm
A8P1-PCERT-3-17	1346170.73	478826.61	Uranium, Total	A8P1-PCERT-3-17G	12.13	ppm
A8P1-PCERT-3-2	1346382.75	478807.24	Uranium, Total	A8P1-PCERT-3-2G	11.26	ppm
A8P1-PCERT-3-3	1346379.34	478835.10	Uranium, Total	A8P1-PCERT-3-3G	12.07	ppm
A8P1-PCERT-3-4	1346403.09	478832.34	Uranium, Total	A8P1-PCERT-3-4G	13.71	ppm
A8P1-PCERT-3-5	1346407.24	478856.08	Uranium, Total	A8P1-PCERT-3-5G	12.36	ppm
A8P1-PCERT-3-6	1346380.47	478857.94	Uranium, Total	A8P1-PCERT-3-6G	12.10	ppm
A8P1-PCERT-3-7	1346117.33	478926.22	Uranium, Total	A8P1-PCERT-3-7G	11.51	ppm
A8P1-PCERT-3-8	1346119.78	478889.83	Uranium, Total	A8P1-PCERT-3-8G	9.14	ppm
A8P1-PCERT-3-9	1346120.36	478854.10	Uranium, Total	A8P1-PCERT-3-9G	12.64	ppm
A8P1-PCERT-4-1	1346410.43	478724.36	Uranium, Total	A8P1-PCERT-4-1G	9.54	ppm
A8P1-PCERT-4-10	1346131.92	478769.94	Uranium, Total	A8P1-PCERT-4-10G	9.98	ppm
A8P1-PCERT-4-11	1346122.27	478743.00	Uranium, Total	A8P1-PCERT-4-11G	12.51	ppm
A8P1-PCERT-4-12	1346108.40	478757.29	Uranium, Total	A8P1-PCERT-4-12G	11.20	ppm
A8P1-PCERT-4-2	1346388.97	478724.48	Uranium, Total	A8P1-PCERT-4-2G	12.20	ppm
A8P1-PCERT-4-3	1346401.94	478748.96	Uranium, Total	A8P1-PCERT-4-3G	11.47	ppm
A8P1-PCERT-4-4	1346381.11	478755.25	Uranium, Total	A8P1-PCERT-4-4G	7.40	ppm
A8P1-PCERT-4-5	1346402.63	478767.77	Uranium, Total	A8P1-PCERT-4-5G	15.01	ppm
A8P1-PCERT-4-6	1346403.59	478785.73	Uranium, Total	A8P1-PCERT-4-6G	11.32	ppm
A8P1-PCERT-4-7	1346377.77	478780.62	Uranium, Total	A8P1-PCERT-4-7G	9.06	ppm
A8P1-PCERT-4-8	1346102.78	478779.22	Uranium, Total	A8P1-PCERT-4-8G	12.23	ppm
A8P1-PCERT-4-9	1346120.20	478795.36	Uranium, Total	A8P1-PCERT-4-9G	12.16	ppm
A8P1-PCERT-5-1	1346410.20	478632.18	Uranium, Total	A8P1-PCERT-5-1G	11.80	ppm
A8P1-PCERT-5-2	1346400.76	478661.66	Uranium, Total	A8P1-PCERT-5-2G	9.25	ppm
A8P1-PCERT-5-3	1346383.40	478683.43	Uranium, Total	A8P1-PCERT-5-3G	11.55	ppm
A8P1-PCERT-5-4	1346404.29	478696.96	Uranium, Total	A8P1-PCERT-5-4G	10.63	ppm
A8P1-PCERT-5-5	1346376.42	478705.13	Uranium, Total	A8P1-PCERT-5-5G	7.17	ppm
A8P1-PCERT-5-5	1346376.42	478705.13	Uranium, Total	A8P1-PCERT-5-5GD	11.55	ppm
A8P1-PCERT-6-1	1346288.57	478566.90	Uranium, Total	A8P1-PCERT-6-1G	20.11	ppm
A8P1-PCERT-6-2	1346311.38	478570.35	Uranium, Total	A8P1-PCERT-6-2G	18.46	ppm
A8P1-PCERT-6-3	1346334.93	478570.34	Uranium, Total	A8P1-PCERT-6-3G	21.85	ppm
A8P1-PCERT-6-3	1346334.93	478570.34	Uranium, Total	A8P1-PCERT-6-3GD	24.28	ppm
A8P1-PCERT-6-4	1346369.85	478568.75	Uranium, Total	A8P1-PCERT-6-4G	16.60	ppm
A8P1-PCERT-6-5	1346396.70	478555.60	Uranium, Total	A8P1-PCERT-6-5G	14.58	ppm
A8P1-PCERT-7-1	1346408.01	479017.23	Uranium, Total	A8P1-PCERT-7-1G	15.92	ppm
A8P1-PCERT-7-2	1346431.91	479023.58	Uranium, Total	A8P1-PCERT-7-2G	11.75	ppm
A8P1-PCERT-7-2	1346431.91	479023.58	Uranium, Total	A8P1-PCERT-7-2GD	15.14	ppm
A8P1-PCERT-7-3	1346407.45	479042.93	Uranium, Total	A8P1-PCERT-7-3G	19.25	ppm
A8P1-PCERT-7-4	1346407.58	479072.87	Uranium, Total	A8P1-PCERT-7-4G	17.18	ppm
A8P1-PCERT-7-5	1346434.99	479054.67	Uranium, Total	A8P1-PCERT-7-5G	14.15	ppm

Table 3
Phase I Pre-certification HPGe Readings in A8PI

Location	Easting	Northing	Parameter	Sample ID	Result	Units
A8P1-PCERT-1-1	1346382.35	479005.91	Thorium-232	A8P1-PCERT-1-1G	0.58	pCi/g
A8P1-PCERT-1-10	1346147.18	479121.46	Thorium-232	A8P1-PCERT-1-10G	0.60	pCi/g
A8P1-PCERT-1-11	1346117.91	479110.70	Thorium-232	A8P1-PCERT-1-11G	0.50	pCi/g
A8P1-PCERT-1-12	1346131.68	479144.89	Thorium-232	A8P1-PCERT-1-12G	0.57	pCi/g
A8P1-PCERT-1-12	1346131.68	479144.89	Thorium-232	A8P1-PCERT-1-12G	0.60	pCi/g
A8P1-PCERT-1-12	1346131.68	479144.89	Thorium-232	A8P1-PCERT-1-12G	0.57	pCi/g
A8P1-PCERT-1-14	1346157.49	479148.28	Thorium-232	A8P1-PCERT-1-14G	0.53	pCi/g
A8P1-PCERT-1-15	1346165.88	479178.93	Thorium-232	A8P1-PCERT-1-15G	0.54	pCi/g
A8P1-PCERT-1-16	1346196.26	479170.17	Thorium-232	A8P1-PCERT-1-16G	0.50	pCi/g
A8P1-PCERT-1-17	1346188.69	479144.31	Thorium-232	A8P1-PCERT-1-17G	0.45	pCi/g
A8P1-PCERT-1-17	1346188.69	479144.31	Thorium-232	A8P1-PCERT-1-17GD	0.46	pCi/g
A8P1-PCERT-1-18	1346220.64	479082.27	Thorium-232	A8P1-PCERT-1-18G	0.47	pCi/g
A8P1-PCERT-1-2	1346375.49	479039.80	Thorium-232	A8P1-PCERT-1-2G	0.56	pCi/g
A8P1-PCERT-1-3	1346381.00	479064.57	Thorium-232	A8P1-PCERT-1-3G	0.49	pCi/g
A8P1-PCERT-1-4	1346365.49	479095.89	Thorium-232	A8P1-PCERT-1-4G	0.47	pCi/g
A8P1-PCERT-1-5	1346351.00	479073.00	Thorium-232	A8P1-PCERT-1-5G	0.56	pCi/g
A8P1-PCERT-1-6	1346222.87	479132.11	Thorium-232	A8P1-PCERT-1-6G	0.48	pCi/g
A8P1-PCERT-1-7	1346227.56	479109.85	Thorium-232	A8P1-PCERT-1-7G	0.45	pCi/g
A8P1-PCERT-1-9	1346174.61	479124.45	Thorium-232	A8P1-PCERT-1-9G	0.49	pCi/g
A8P1-PCERT-11-1	1346443.09	478398.82	Thorium-232	A8P1-PCERT-11-1G	0.49	pCi/g
A8P1-PCERT-11-2	1346513.57	478355.96	Thorium-232	A8P1-PCERT-11-2G	0.55	pCi/g
A8P1-PCERT-11-3	1346463.62	478450.09	Thorium-232	A8P1-PCERT-11-3G	0.54	pCi/g
A8P1-PCERT-11-4	1346463.40	478475.73	Thorium-232	A8P1-PCERT-11-4G	0.49	pCi/g
A8P1-PCERT-11-4	1346463.40	478475.73	Thorium-232	A8P1-PCERT-11-4G	0.53	pCi/g
A8P1-PCERT-11-4	1346463.40	478475.73	Thorium-232	A8P1-PCERT-11-4GD	0.52	pCi/g
A8P1-PCERT-11-5	1346453.96	478508.71	Thorium-232	A8P1-PCERT-11-5G	0.53	pCi/g
A8P1-PCERT-11-6	1346433.67	478533.10	Thorium-232	A8P1-PCERT-11-6G	0.51	pCi/g
A8P1-PCERT-11-7	1346466.73	478604.69	Thorium-232	A8P1-PCERT-11-7G	0.42	pCi/g
A8P1-PCERT-11-8	1346441.89	478604.81	Thorium-232	A8P1-PCERT-11-8G	0.50	pCi/g
A8P1-PCERT-11-9	1346445.05	478630.45	Thorium-232	A8P1-PCERT-11-9G	0.46	pCi/g
A8P1-PCERT-12-1	1346435.11	478373.95	Thorium-232	A8P1-PCERT-12-1G	0.58	pCi/g
A8P1-PCERT-12-2	1346569.77	478204.66	Thorium-232	A8P1-PCERT-12-2G	0.58	pCi/g
A8P1-PCERT-12-3	1346542.59	478233.38	Thorium-232	A8P1-PCERT-12-3G	0.53	pCi/g
A8P1-PCERT-12-4	1346509.38	478242.76	Thorium-232	A8P1-PCERT-12-4G	0.58	pCi/g
A8P1-PCERT-12-5	1346520.83	478263.90	Thorium-232	A8P1-PCERT-12-5G	0.59	pCi/g
A8P1-PCERT-12-6	1346490.47	478270.71	Thorium-232	A8P1-PCERT-12-6G	0.61	pCi/g
A8P1-PCERT-12-7	1346496.05	478296.00	Thorium-232	A8P1-PCERT-12-7G	0.56	pCi/g
A8P1-PCERT-12-8	1346482.38	478325.39	Thorium-232	A8P1-PCERT-12-8G	0.56	pCi/g
A8P1-PCERT-12-9	1346481.07	478360.02	Thorium-232	A8P1-PCERT-12-9G	0.47	pCi/g
A8P1-PCERT-13-1	1346341.93	478351.46	Thorium-232	A8P1-PCERT-13-1-G	0.57	pCi/g
A8P1-PCERT-13-10	1346499.96	478188.16	Thorium-232	A8P1-PCERT-13-10-G	0.55	pCi/g
A8P1-PCERT-13-11	1346521.14	478167.05	Thorium-232	A8P1-PCERT-13-11-G	0.58	pCi/g
A8P1-PCERT-13-12	1346545.27	478147.71	Thorium-232	A8P1-PCERT-13-12-G	0.48	pCi/g
A8P1-PCERT-13-13	1346559.92	478124.21	Thorium-232	A8P1-PCERT-13-13-G	0.54	pCi/g
A8P1-PCERT-13-14	1346582.47	478105.31	Thorium-232	A8P1-PCERT-13-14-G	0.47	pCi/g
A8P1-PCERT-13-2	1346364.40	478347.24	Thorium-232	A8P1-PCERT-13-2-G	0.63	pCi/g
A8P1-PCERT-13-3	1346381.61	478338.38	Thorium-232	A8P1-PCERT-13-3-G	0.60	pCi/g
A8P1-PCERT-13-4	1346398.73	478320.51	Thorium-232	A8P1-PCERT-13-4-G	0.50	pCi/g
A8P1-PCERT-13-5	1346417.17	478311.81	Thorium-232	A8P1-PCERT-13-5-G	0.59	pCi/g
A8P1-PCERT-13-6	1346427.57	478287.98	Thorium-232	A8P1-PCERT-13-6-G	0.53	pCi/g
A8P1-PCERT-13-7	1346446.35	478265.91	Thorium-232	A8P1-PCERT-13-7-G	0.55	pCi/g
A8P1-PCERT-13-8	1346454.92	478241.98	Thorium-232	A8P1-PCERT-13-8-G	0.55	pCi/g
A8P1-PCERT-13-9	1346473.32	478207.73	Thorium-232	A8P1-PCERT-13-9-G	0.59	pCi/g
A8P1-PCERT-2-1	1346166.77	479056.55	Thorium-232	A8P1-PCERT-2-1G	0.61	pCi/g
A8P1-PCERT-2-2	1346190.67	479066.59	Thorium-232	A8P1-PCERT-2-2G	0.49	pCi/g

Table 3
Phase I Pre-certification HPGe Readings in A8PI

Location	Easting	Northing	Parameter	Sample ID	Result	Units
A8P1-PCERT-2-3	1346175.45	479095.11	Thorium-232	A8P1-PCERT-2-3G	0.32	pCi/g
A8P1-PCERT-2-4	1346154.67	479044.98	Thorium-232	A8P1-PCERT-2-4G	0.61	pCi/g
A8P1-PCERT-2-5	1346153.43	479075.73	Thorium-232	A8P1-PCERT-2-5G	0.39	pCi/g
A8P1-PCERT-2-5	1346153.43	479075.73	Thorium-232	A8P1-PCERT-2-5G	0.42	pCi/g
A8P1-PCERT-2-6	1346126.61	479043.45	Thorium-232	A8P1-PCERT-2-6G	0.59	pCi/g
A8P1-PCERT-2-7	1346109.82	479071.87	Thorium-232	A8P1-PCERT-2-7G	0.53	pCi/g
A8P1-PCERT-2-8	1346182.92	478938.78	Thorium-232	A8P1-PCERT-2-8G	0.68	pCi/g
A8P1-PCERT-3-1	1346406.23	478808.71	Thorium-232	A8P1-PCERT-3-1G	0.42	pCi/g
A8P1-PCERT-3-10	1346118.13	478819.09	Thorium-232	A8P1-PCERT-3-10G	0.57	pCi/g
A8P1-PCERT-3-10	1346118.13	478819.09	Thorium-232	A8P1-PCERT-3-10GD	0.59	pCi/g
A8P1-PCERT-3-11	1346143.79	478836.18	Thorium-232	A8P1-PCERT-3-11G	0.49	pCi/g
A8P1-PCERT-3-12	1346143.96	478873.31	Thorium-232	A8P1-PCERT-3-12G	0.59	pCi/g
A8P1-PCERT-3-13	1346141.98	478908.72	Thorium-232	A8P1-PCERT-3-13G	0.60	pCi/g
A8P1-PCERT-3-14	1346164.28	478925.48	Thorium-232	A8P1-PCERT-3-14G	0.68	pCi/g
A8P1-PCERT-3-15	1346165.45	478893.20	Thorium-232	A8P1-PCERT-3-15G	0.64	pCi/g
A8P1-PCERT-3-16	1346168.46	478856.47	Thorium-232	A8P1-PCERT-3-16G	0.56	pCi/g
A8P1-PCERT-3-17	1346170.73	478826.61	Thorium-232	A8P1-PCERT-3-17G	0.53	pCi/g
A8P1-PCERT-3-2	1346382.75	478807.24	Thorium-232	A8P1-PCERT-3-2G	0.50	pCi/g
A8P1-PCERT-3-3	1346379.34	478835.10	Thorium-232	A8P1-PCERT-3-3G	0.50	pCi/g
A8P1-PCERT-3-4	1346403.09	478832.34	Thorium-232	A8P1-PCERT-3-4G	0.44	pCi/g
A8P1-PCERT-3-5	1346407.24	478856.08	Thorium-232	A8P1-PCERT-3-5G	0.47	pCi/g
A8P1-PCERT-3-6	1346380.47	478857.94	Thorium-232	A8P1-PCERT-3-6G	0.45	pCi/g
A8P1-PCERT-3-7	1346117.33	478926.22	Thorium-232	A8P1-PCERT-3-7G	0.63	pCi/g
A8P1-PCERT-3-8	1346119.78	478889.83	Thorium-232	A8P1-PCERT-3-8G	0.53	pCi/g
A8P1-PCERT-3-9	1346120.36	478854.10	Thorium-232	A8P1-PCERT-3-9G	0.60	pCi/g
A8P1-PCERT-4-1	1346410.43	478724.36	Thorium-232	A8P1-PCERT-4-1G	0.37	pCi/g
A8P1-PCERT-4-10	1346131.92	478769.94	Thorium-232	A8P1-PCERT-4-10G	0.63	pCi/g
A8P1-PCERT-4-11	1346122.27	478743.00	Thorium-232	A8P1-PCERT-4-11G	0.56	pCi/g
A8P1-PCERT-4-12	1346108.40	478757.29	Thorium-232	A8P1-PCERT-4-12G	0.57	pCi/g
A8P1-PCERT-4-2	1346388.97	478724.48	Thorium-232	A8P1-PCERT-4-2G	0.42	pCi/g
A8P1-PCERT-4-3	1346401.94	478748.96	Thorium-232	A8P1-PCERT-4-3G	0.47	pCi/g
A8P1-PCERT-4-4	1346381.11	478755.25	Thorium-232	A8P1-PCERT-4-4G	0.41	pCi/g
A8P1-PCERT-4-5	1346402.63	478767.77	Thorium-232	A8P1-PCERT-4-5G	0.51	pCi/g
A8P1-PCERT-4-6	1346403.59	478785.73	Thorium-232	A8P1-PCERT-4-6G	0.48	pCi/g
A8P1-PCERT-4-7	1346377.77	478780.62	Thorium-232	A8P1-PCERT-4-7G	0.51	pCi/g
A8P1-PCERT-4-8	1346102.78	478779.22	Thorium-232	A8P1-PCERT-4-8G	0.67	pCi/g
A8P1-PCERT-4-9	1346120.20	478795.36	Thorium-232	A8P1-PCERT-4-9G	0.60	pCi/g
A8P1-PCERT-5-1	1346410.20	478632.18	Thorium-232	A8P1-PCERT-5-1G	0.47	pCi/g
A8P1-PCERT-5-2	1346400.76	478661.66	Thorium-232	A8P1-PCERT-5-2G	0.47	pCi/g
A8P1-PCERT-5-3	1346383.40	478683.43	Thorium-232	A8P1-PCERT-5-3G	0.40	pCi/g
A8P1-PCERT-5-4	1346404.29	478696.96	Thorium-232	A8P1-PCERT-5-4G	0.43	pCi/g
A8P1-PCERT-5-5	1346376.42	478705.13	Thorium-232	A8P1-PCERT-5-5G	0.43	pCi/g
A8P1-PCERT-5-5	1346376.42	478705.13	Thorium-232	A8P1-PCERT-5-5GD	0.43	pCi/g
A8P1-PCERT-6-1	1346288.57	478566.90	Thorium-232	A8P1-PCERT-6-1G	0.59	pCi/g
A8P1-PCERT-6-2	1346311.38	478570.35	Thorium-232	A8P1-PCERT-6-2G	0.57	pCi/g
A8P1-PCERT-6-3	1346334.93	478570.34	Thorium-232	A8P1-PCERT-6-3G	0.50	pCi/g
A8P1-PCERT-6-3	1346334.93	478570.34	Thorium-232	A8P1-PCERT-6-3GD	0.51	pCi/g
A8P1-PCERT-6-4	1346369.85	478568.75	Thorium-232	A8P1-PCERT-6-4G	0.58	pCi/g
A8P1-PCERT-6-5	1346396.70	478555.60	Thorium-232	A8P1-PCERT-6-5G	0.58	pCi/g
A8P1-PCERT-7-1	1346408.01	479017.23	Thorium-232	A8P1-PCERT-7-1G	0.54	pCi/g
A8P1-PCERT-7-2	1346431.91	479023.58	Thorium-232	A8P1-PCERT-7-2G	0.58	pCi/g
A8P1-PCERT-7-2	1346431.91	479023.58	Thorium-232	A8P1-PCERT-7-2GD	0.59	pCi/g
A8P1-PCERT-7-3	1346407.45	479042.93	Thorium-232	A8P1-PCERT-7-3G	0.51	pCi/g
A8P1-PCERT-7-4	1346407.58	479072.87	Thorium-232	A8P1-PCERT-7-4G	0.50	pCi/g
A8P1-PCERT-7-5	1346434.99	479054.67	Thorium-232	A8P1-PCERT-7-5G	0.54	pCi/g

Table 3
Phase I Pre-certification HPGe Readings in A8PI

Location	Easting	Northing	Parameter	Sample ID	Result	Units
A8P1-PCERT-1-1	1346382.35	479005.91	Radium-226	A8P1-PCERT-1-1G	0.70	pCi/g
A8P1-PCERT-1-10	1346147.18	479121.46	Radium-226	A8P1-PCERT-1-10G	0.70	pCi/g
A8P1-PCERT-1-11	1346117.91	479110.70	Radium-226	A8P1-PCERT-1-11G	0.64	pCi/g
A8P1-PCERT-1-12	1346131.68	479144.89	Radium-226	A8P1-PCERT-1-12G	0.74	pCi/g
A8P1-PCERT-1-12	1346131.68	479144.89	Radium-226	A8P1-PCERT-1-12G	0.98	pCi/g
A8P1-PCERT-1-12	1346131.68	479144.89	Radium-226	A8P1-PCERT-1-12G	0.76	pCi/g
A8P1-PCERT-1-14	1346157.49	479148.28	Radium-226	A8P1-PCERT-1-14G	0.72	pCi/g
A8P1-PCERT-1-15	1346165.88	479178.93	Radium-226	A8P1-PCERT-1-15G	0.69	pCi/g
A8P1-PCERT-1-16	1346196.26	479170.17	Radium-226	A8P1-PCERT-1-16G	0.70	pCi/g
A8P1-PCERT-1-17	1346188.69	479144.31	Radium-226	A8P1-PCERT-1-17G	0.62	pCi/g
A8P1-PCERT-1-17	1346188.69	479144.31	Radium-226	A8P1-PCERT-1-17GD	0.61	pCi/g
A8P1-PCERT-1-18	1346220.64	479082.27	Radium-226	A8P1-PCERT-1-18G	0.87	pCi/g
A8P1-PCERT-1-2	1346375.49	479039.80	Radium-226	A8P1-PCERT-1-2G	0.73	pCi/g
A8P1-PCERT-1-3	1346381.00	479064.57	Radium-226	A8P1-PCERT-1-3G	0.64	pCi/g
A8P1-PCERT-1-4	1346365.49	479095.89	Radium-226	A8P1-PCERT-1-4G	0.68	pCi/g
A8P1-PCERT-1-5	1346351.00	479073.00	Radium-226	A8P1-PCERT-1-5G	0.85	pCi/g
A8P1-PCERT-1-6	1346222.87	479132.11	Radium-226	A8P1-PCERT-1-6G	0.63	pCi/g
A8P1-PCERT-1-7	1346227.56	479109.85	Radium-226	A8P1-PCERT-1-7G	0.79	pCi/g
A8P1-PCERT-1-9	1346174.61	479124.45	Radium-226	A8P1-PCERT-1-9G	0.62	pCi/g
A8P1-PCERT-11-1	1346443.09	478398.82	Radium-226	A8P1-PCERT-11-1G	0.64	pCi/g
A8P1-PCERT-11-2	1346513.57	478355.96	Radium-226	A8P1-PCERT-11-2G	0.69	pCi/g
A8P1-PCERT-11-3	1346463.62	478450.09	Radium-226	A8P1-PCERT-11-3G	0.62	pCi/g
A8P1-PCERT-11-4	1346463.40	478475.73	Radium-226	A8P1-PCERT-11-4G	0.55	pCi/g
A8P1-PCERT-11-4	1346463.40	478475.73	Radium-226	A8P1-PCERT-11-4G	0.59	pCi/g
A8P1-PCERT-11-4	1346463.40	478475.73	Radium-226	A8P1-PCERT-11-4GD	0.60	pCi/g
A8P1-PCERT-11-5	1346453.96	478508.71	Radium-226	A8P1-PCERT-11-5G	0.56	pCi/g
A8P1-PCERT-11-6	1346433.67	478533.10	Radium-226	A8P1-PCERT-11-6G	0.58	pCi/g
A8P1-PCERT-11-7	1346466.73	478604.69	Radium-226	A8P1-PCERT-11-7G	0.53	pCi/g
A8P1-PCERT-11-8	1346441.89	478604.81	Radium-226	A8P1-PCERT-11-8G	0.55	pCi/g
A8P1-PCERT-11-9	1346445.05	478630.45	Radium-226	A8P1-PCERT-11-9G	0.52	pCi/g
A8P1-PCERT-12-1	1346435.11	478373.95	Radium-226	A8P1-PCERT-12-1G	0.67	pCi/g
A8P1-PCERT-12-2	1346569.77	478204.66	Radium-226	A8P1-PCERT-12-2G	0.72	pCi/g
A8P1-PCERT-12-3	1346542.59	478233.38	Radium-226	A8P1-PCERT-12-3G	0.73	pCi/g
A8P1-PCERT-12-4	1346509.38	478242.76	Radium-226	A8P1-PCERT-12-4G	0.70	pCi/g
A8P1-PCERT-12-5	1346520.83	478263.90	Radium-226	A8P1-PCERT-12-5G	0.77	pCi/g
A8P1-PCERT-12-6	1346490.47	478270.71	Radium-226	A8P1-PCERT-12-6G	0.76	pCi/g
A8P1-PCERT-12-7	1346496.05	478296.00	Radium-226	A8P1-PCERT-12-7G	0.78	pCi/g
A8P1-PCERT-12-8	1346482.38	478325.39	Radium-226	A8P1-PCERT-12-8G	0.68	pCi/g
A8P1-PCERT-12-9	1346481.07	478360.02	Radium-226	A8P1-PCERT-12-9G	0.71	pCi/g
A8P1-PCERT-13-1	1346341.93	478351.46	Radium-226	A8P1-PCERT-13-1-G	0.69	pCi/g
A8P1-PCERT-13-10	1346499.96	478188.16	Radium-226	A8P1-PCERT-13-10-G	0.60	pCi/g
A8P1-PCERT-13-11	1346521.14	478167.05	Radium-226	A8P1-PCERT-13-11-G	0.68	pCi/g
A8P1-PCERT-13-12	1346545.27	478147.71	Radium-226	A8P1-PCERT-13-12-G	0.68	pCi/g
A8P1-PCERT-13-13	1346559.92	478124.21	Radium-226	A8P1-PCERT-13-13-G	0.68	pCi/g
A8P1-PCERT-13-14	1346582.47	478105.31	Radium-226	A8P1-PCERT-13-14-G	0.66	pCi/g
A8P1-PCERT-13-2	1346364.40	478347.24	Radium-226	A8P1-PCERT-13-2-G	0.77	pCi/g
A8P1-PCERT-13-3	1346381.61	478338.38	Radium-226	A8P1-PCERT-13-3-G	0.73	pCi/g
A8P1-PCERT-13-4	1346398.73	478320.51	Radium-226	A8P1-PCERT-13-4-G	0.59	pCi/g
A8P1-PCERT-13-5	1346417.17	478311.81	Radium-226	A8P1-PCERT-13-5-G	0.63	pCi/g
A8P1-PCERT-13-6	1346427.57	478287.98	Radium-226	A8P1-PCERT-13-6-G	0.62	pCi/g
A8P1-PCERT-13-7	1346446.35	478265.91	Radium-226	A8P1-PCERT-13-7-G	0.63	pCi/g
A8P1-PCERT-13-8	1346454.92	478241.98	Radium-226	A8P1-PCERT-13-8-G	0.59	pCi/g
A8P1-PCERT-13-9	1346473.32	478207.73	Radium-226	A8P1-PCERT-13-9-G	0.67	pCi/g
A8P1-PCERT-2-1	1346166.77	479056.55	Radium-226	A8P1-PCERT-2-1G	0.70	pCi/g
A8P1-PCERT-2-2	1346190.67	479066.59	Radium-226	A8P1-PCERT-2-2G	0.97	pCi/g

Table 3
Phase I Pre-certification HPGe Readings in A8PI

Location	Easting	Northing	Parameter	Sample ID	Result	Units
A8P1-PCERT-2-3	1346175.45	479095.11	Radium-226	A8P1-PCERT-2-3G	0.85	pCi/g
A8P1-PCERT-2-4	1346154.67	479044.98	Radium-226	A8P1-PCERT-2-4G	0.69	pCi/g
A8P1-PCERT-2-5	1346153.43	479075.73	Radium-226	A8P1-PCERT-2-5G	0.80	pCi/g
A8P1-PCERT-2-5	1346153.43	479075.73	Radium-226	A8P1-PCERT-2-5G	0.50	pCi/g
A8P1-PCERT-2-6	1346126.61	479043.45	Radium-226	A8P1-PCERT-2-6G	0.74	pCi/g
A8P1-PCERT-2-7	1346109.82	479071.87	Radium-226	A8P1-PCERT-2-7G	0.67	pCi/g
A8P1-PCERT-2-8	1346182.92	478938.78	Radium-226	A8P1-PCERT-2-8G	0.80	pCi/g
A8P1-PCERT-3-1	1346406.23	478808.71	Radium-226	A8P1-PCERT-3-1G	0.49	pCi/g
A8P1-PCERT-3-10	1346118.13	478819.09	Radium-226	A8P1-PCERT-3-10G	0.68	pCi/g
A8P1-PCERT-3-10	1346118.13	478819.09	Radium-226	A8P1-PCERT-3-10GD	0.69	pCi/g
A8P1-PCERT-3-11	1346143.79	478836.18	Radium-226	A8P1-PCERT-3-11G	0.79	pCi/g
A8P1-PCERT-3-12	1346143.96	478873.31	Radium-226	A8P1-PCERT-3-12G	0.83	pCi/g
A8P1-PCERT-3-13	1346141.98	478908.72	Radium-226	A8P1-PCERT-3-13G	0.73	pCi/g
A8P1-PCERT-3-14	1346164.28	478925.48	Radium-226	A8P1-PCERT-3-14G	0.84	pCi/g
A8P1-PCERT-3-15	1346165.45	478893.20	Radium-226	A8P1-PCERT-3-15G	0.77	pCi/g
A8P1-PCERT-3-16	1346168.46	478856.47	Radium-226	A8P1-PCERT-3-16G	0.70	pCi/g
A8P1-PCERT-3-17	1346170.73	478826.61	Radium-226	A8P1-PCERT-3-17G	0.73	pCi/g
A8P1-PCERT-3-2	1346382.75	478807.24	Radium-226	A8P1-PCERT-3-2G	0.58	pCi/g
A8P1-PCERT-3-3	1346379.34	478835.10	Radium-226	A8P1-PCERT-3-3G	0.59	pCi/g
A8P1-PCERT-3-4	1346403.09	478832.34	Radium-226	A8P1-PCERT-3-4G	0.55	pCi/g
A8P1-PCERT-3-5	1346407.24	478856.08	Radium-226	A8P1-PCERT-3-5G	0.63	pCi/g
A8P1-PCERT-3-6	1346380.47	478857.94	Radium-226	A8P1-PCERT-3-6G	0.54	pCi/g
A8P1-PCERT-3-7	1346117.33	478926.22	Radium-226	A8P1-PCERT-3-7G	0.73	pCi/g
A8P1-PCERT-3-8	1346119.78	478889.83	Radium-226	A8P1-PCERT-3-8G	0.67	pCi/g
A8P1-PCERT-3-9	1346120.36	478854.10	Radium-226	A8P1-PCERT-3-9G	0.67	pCi/g
A8P1-PCERT-4-1	1346410.43	478724.36	Radium-226	A8P1-PCERT-4-1G	0.50	pCi/g
A8P1-PCERT-4-10	1346131.92	478769.94	Radium-226	A8P1-PCERT-4-10G	0.83	pCi/g
A8P1-PCERT-4-11	1346122.27	478743.00	Radium-226	A8P1-PCERT-4-11G	0.91	pCi/g
A8P1-PCERT-4-12	1346108.40	478757.29	Radium-226	A8P1-PCERT-4-12G	0.89	pCi/g
A8P1-PCERT-4-2	1346388.97	478724.48	Radium-226	A8P1-PCERT-4-2G	0.49	pCi/g
A8P1-PCERT-4-3	1346401.94	478748.96	Radium-226	A8P1-PCERT-4-3G	0.55	pCi/g
A8P1-PCERT-4-4	1346381.11	478755.25	Radium-226	A8P1-PCERT-4-4G	0.53	pCi/g
A8P1-PCERT-4-5	1346402.63	478767.77	Radium-226	A8P1-PCERT-4-5G	0.58	pCi/g
A8P1-PCERT-4-6	1346403.59	478785.73	Radium-226	A8P1-PCERT-4-6G	0.51	pCi/g
A8P1-PCERT-4-7	1346377.77	478780.62	Radium-226	A8P1-PCERT-4-7G	0.58	pCi/g
A8P1-PCERT-4-8	1346102.78	478779.22	Radium-226	A8P1-PCERT-4-8G	1.04	pCi/g
A8P1-PCERT-4-9	1346120.20	478795.36	Radium-226	A8P1-PCERT-4-9G	0.87	pCi/g
A8P1-PCERT-5-1	1346410.20	478632.18	Radium-226	A8P1-PCERT-5-1G	0.58	pCi/g
A8P1-PCERT-5-2	1346400.76	478661.66	Radium-226	A8P1-PCERT-5-2G	0.54	pCi/g
A8P1-PCERT-5-3	1346383.40	478683.43	Radium-226	A8P1-PCERT-5-3G	0.56	pCi/g
A8P1-PCERT-5-4	1346404.29	478696.96	Radium-226	A8P1-PCERT-5-4G	0.51	pCi/g
A8P1-PCERT-5-5	1346376.42	478705.13	Radium-226	A8P1-PCERT-5-5G	0.50	pCi/g
A8P1-PCERT-5-5	1346376.42	478705.13	Radium-226	A8P1-PCERT-5-5GD	0.52	pCi/g
A8P1-PCERT-6-1	1346288.57	478566.90	Radium-226	A8P1-PCERT-6-1G	0.88	pCi/g
A8P1-PCERT-6-2	1346311.38	478570.35	Radium-226	A8P1-PCERT-6-2G	0.81	pCi/g
A8P1-PCERT-6-3	1346334.93	478570.34	Radium-226	A8P1-PCERT-6-3G	0.68	pCi/g
A8P1-PCERT-6-3	1346334.93	478570.34	Radium-226	A8P1-PCERT-6-3GD	0.70	pCi/g
A8P1-PCERT-6-4	1346369.85	478568.75	Radium-226	A8P1-PCERT-6-4G	0.76	pCi/g
A8P1-PCERT-6-5	1346396.70	478555.60	Radium-226	A8P1-PCERT-6-5G	0.77	pCi/g
A8P1-PCERT-7-1	1346408.01	479017.23	Radium-226	A8P1-PCERT-7-1G	0.65	pCi/g
A8P1-PCERT-7-2	1346431.91	479023.58	Radium-226	A8P1-PCERT-7-2G	0.59	pCi/g
A8P1-PCERT-7-2	1346431.91	479023.58	Radium-226	A8P1-PCERT-7-2GD	0.67	pCi/g
A8P1-PCERT-7-3	1346407.45	479042.93	Radium-226	A8P1-PCERT-7-3G	0.59	pCi/g
A8P1-PCERT-7-4	1346407.58	479072.87	Radium-226	A8P1-PCERT-7-4G	0.57	pCi/g
A8P1-PCERT-7-5	1346434.99	479054.67	Radium-226	A8P1-PCERT-7-5G	0.62	pCi/g

TABLE 4
ASCOC LIST FOR ALL A8PI CUs

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

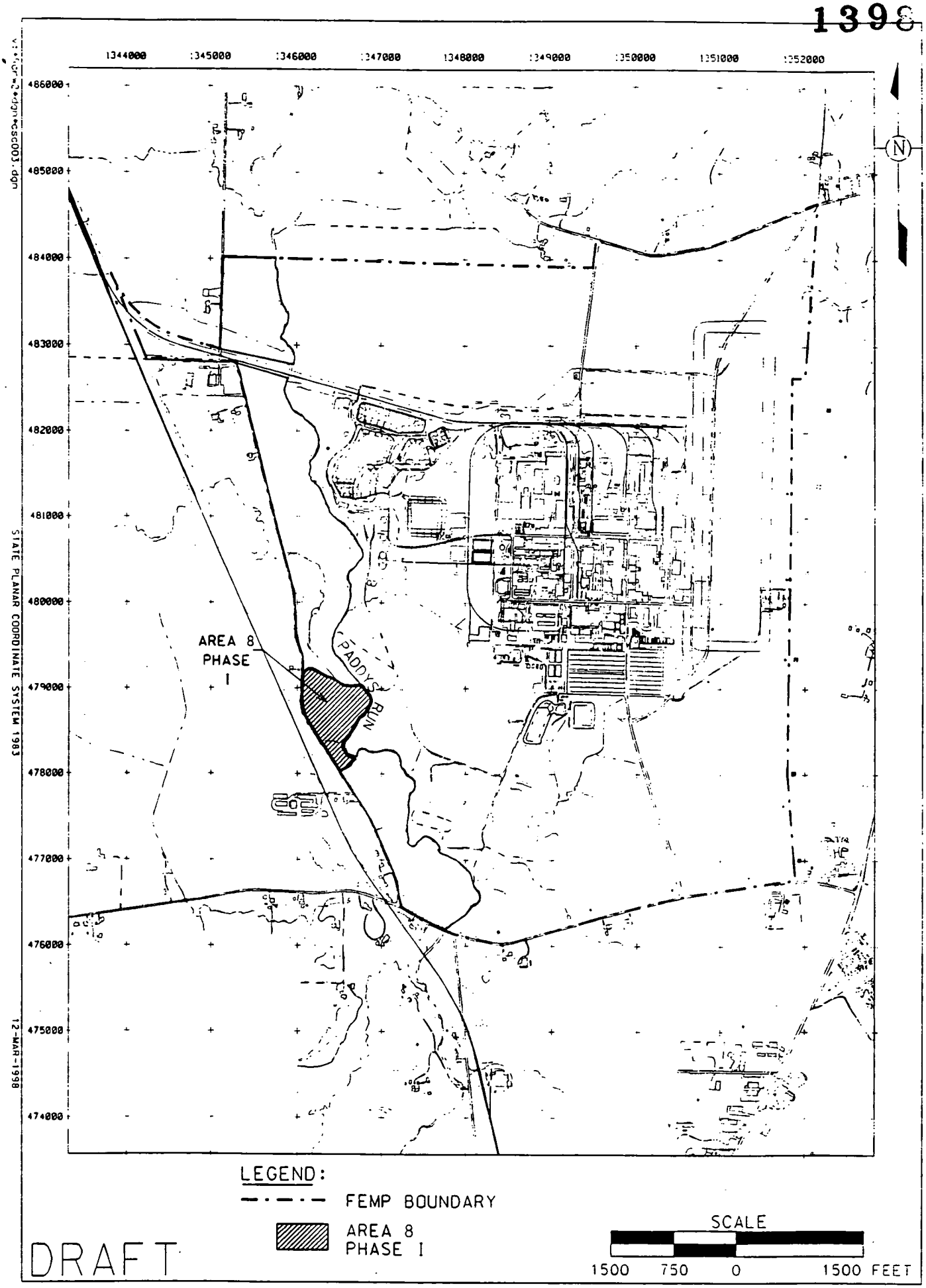


FIGURE 1. AREA 8, PHASE I LOCATION MAP

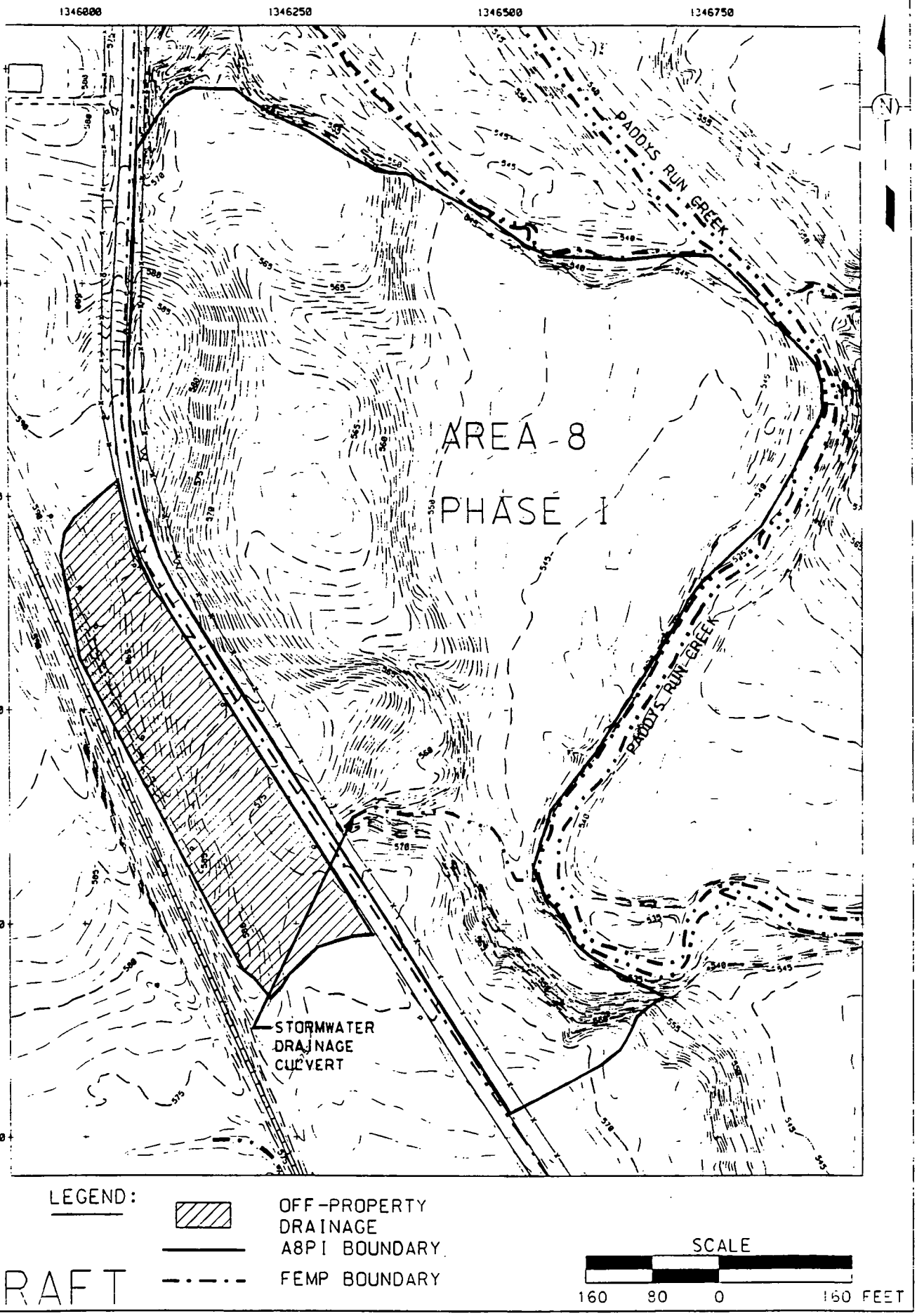


FIGURE 2. REMEDIATION AREA 8, PHASE I DRAINAGE AREA

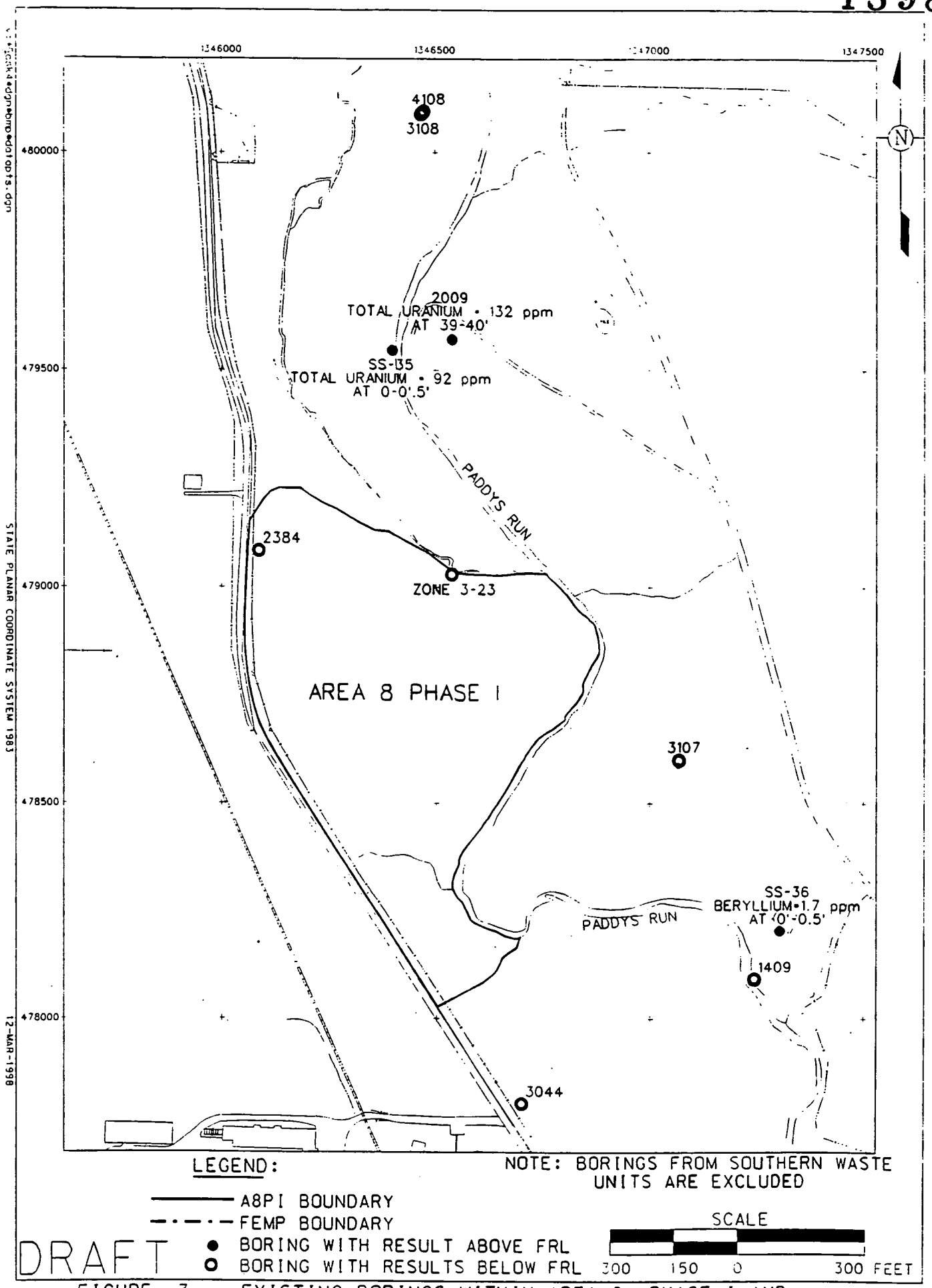


FIGURE 3. EXISTING BORINGS WITHIN AREA 8, PHASE I AND SURROUNDING 1000 FT. BUFFER

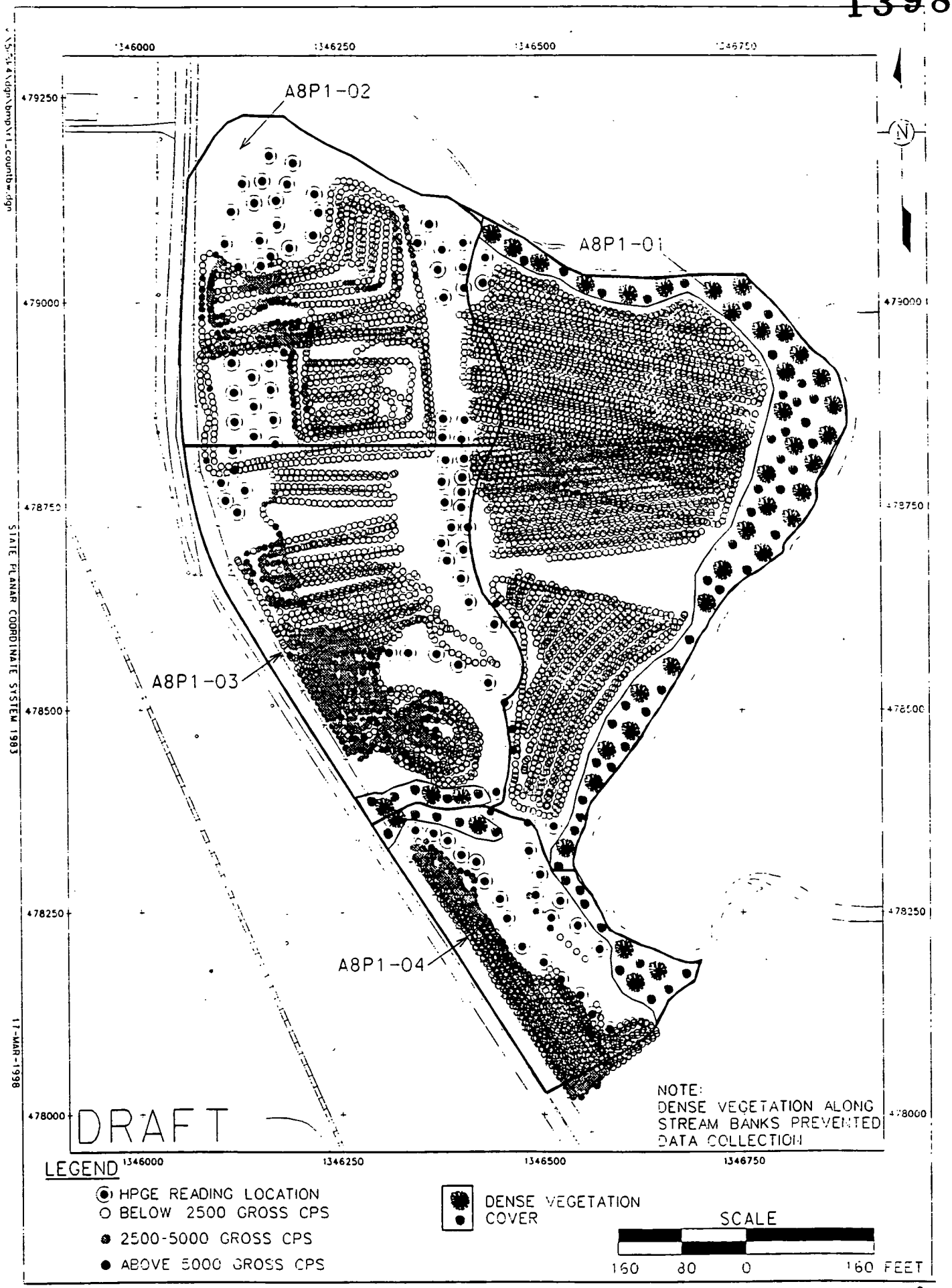


FIGURE 4. AREA 8, PHASE 1 - RTRAK GROSS COUNTS AND SUPPLEMENTAL HPGE READING LOCATIONS

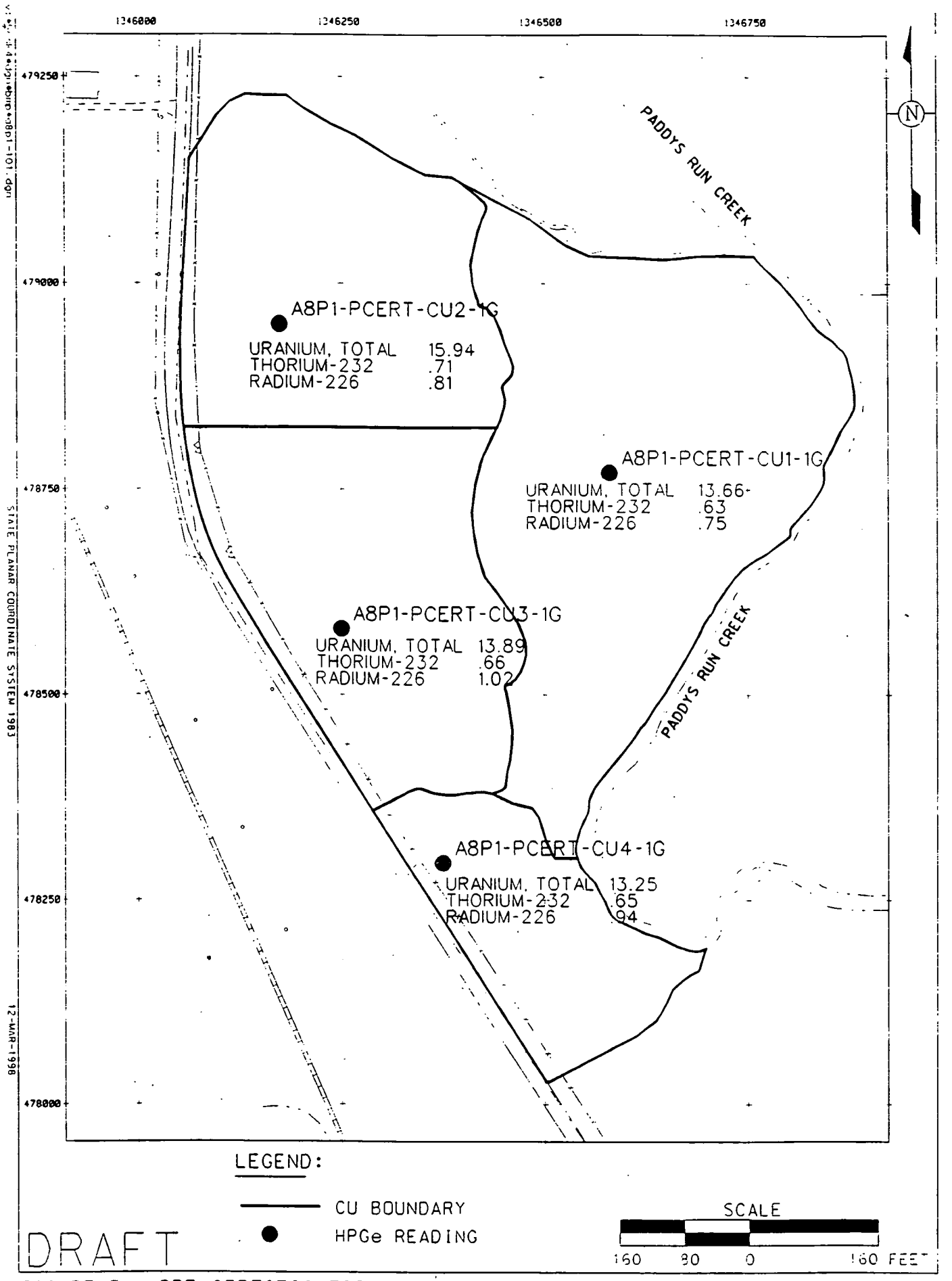


FIGURE 5. PRE-CERTIFICATION PHASE II HPGE READING LOCATIONS AND RESULTS

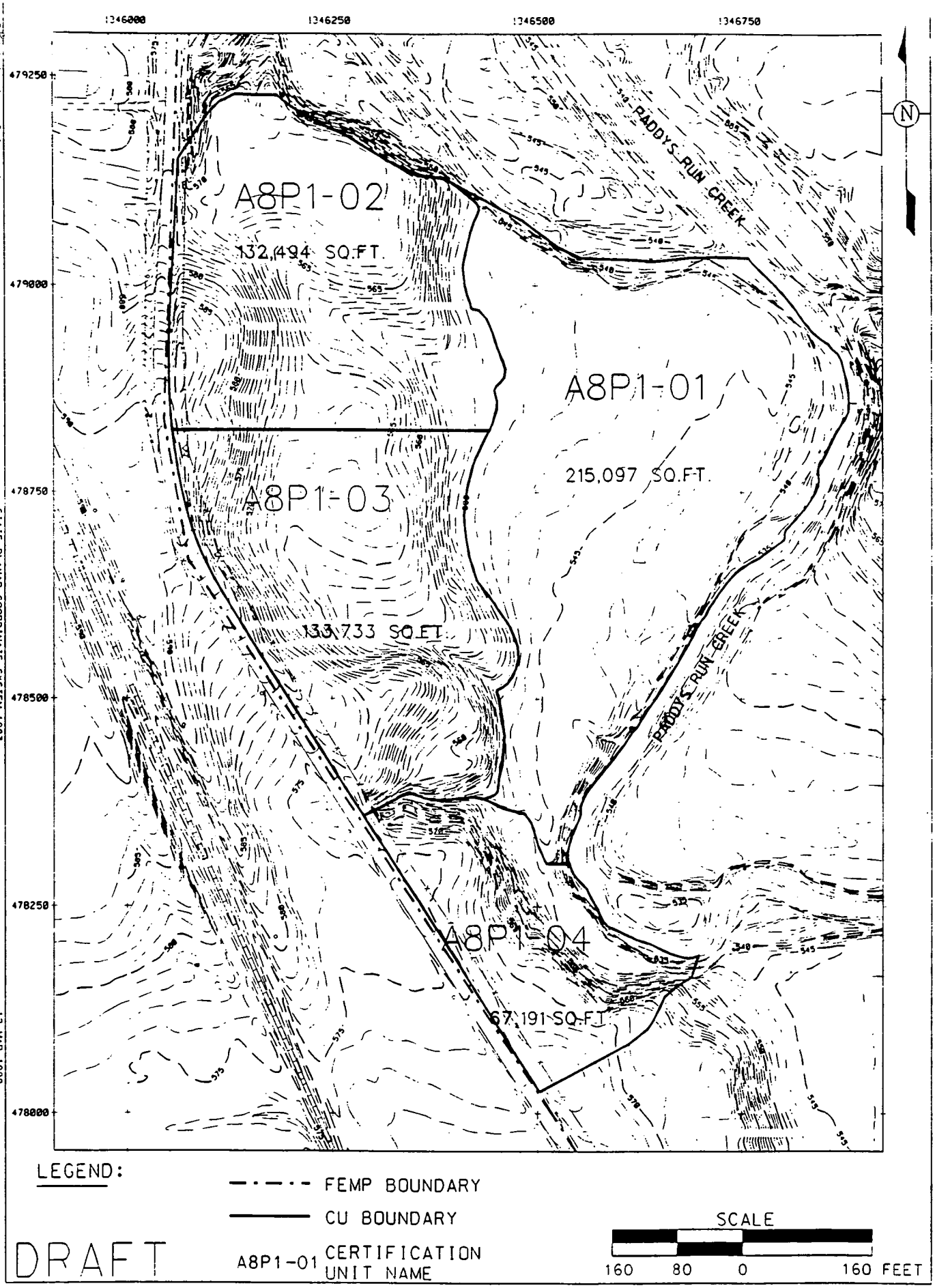
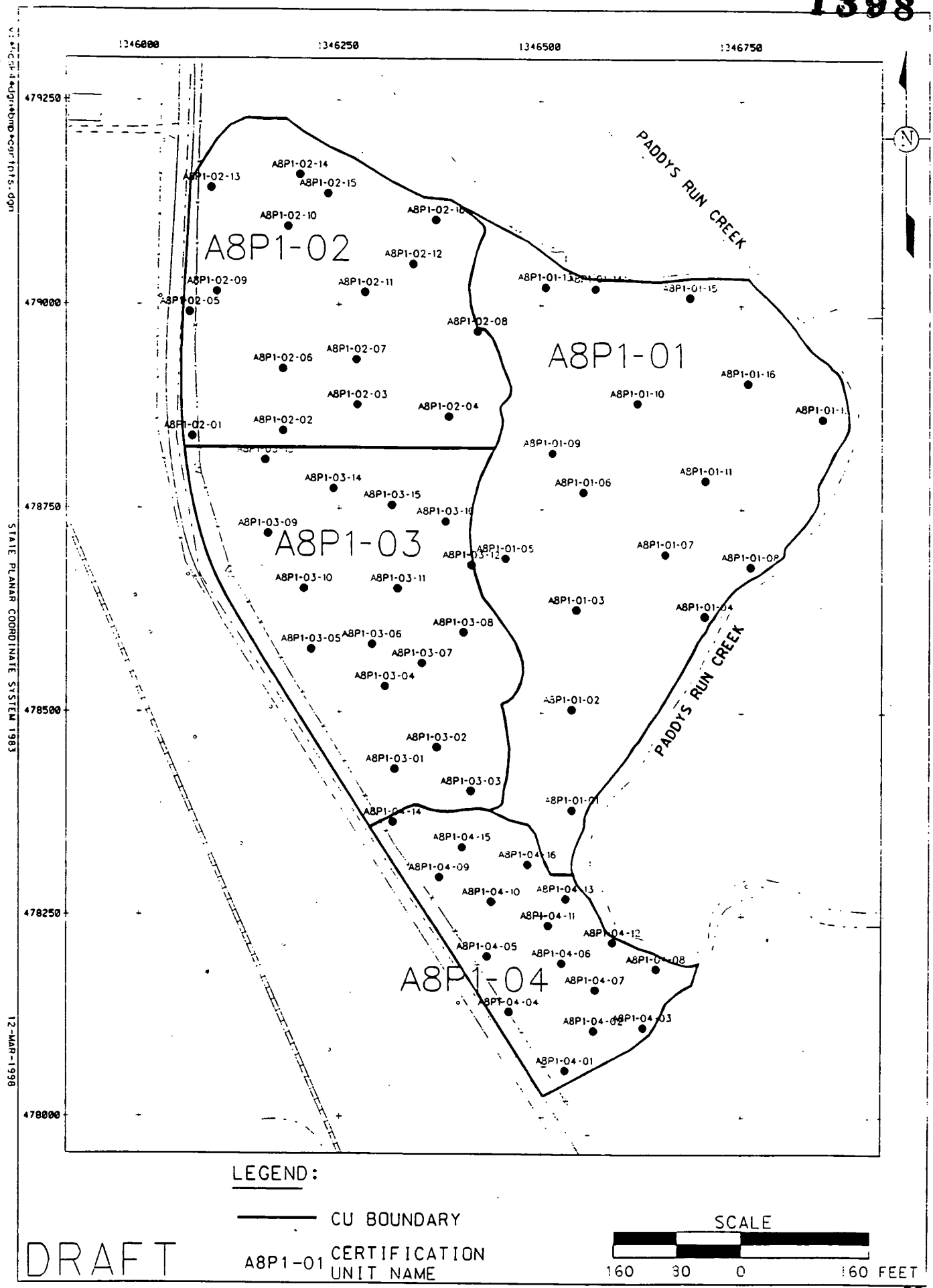


FIGURE 6. AREA 8, PHASE 1 CERTIFICATION UNITS



LEGEND:

CU BOUNDARY

A8P1-01 CERTIFICATION UNIT NAME

SCALE

160 80 0 160 FEET

DRAFT

FIGURE 7. AREA 8, PHASE 1 CERTIFICATION SAMPLING LOCATIONS