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LETTER REPORT FOR AREA 1 PHASE II PRE-DESIGN INVESTIGATION SURVEY

FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
FERNALD, OHIO

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U.S. DEPARTMENT OF ENERGY
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LIST OF ACRONYMS AND ABBREVIATIONS

A1PII	Area 1 Phase II
ALARA	As Low As Reasonably Achievable
ASCOC	Area Specific Constituent Of Concern
ASL	Analytical Support Level
AWWT	Advanced Wastewater Treatment
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
DQO	Data Quality Objective
FAL	Field Activity Log
FEMP	Fernald Environmental Management Project
FRL	Final Remediation Level
GIS	Geographical Information System
GPS	Global Positioning System
HPGe	High Purity Germanium
NaI	Sodium Iodide
OSDF	On- Site Disposal Facility
ppm	parts per million
PWID	Project Waste Identification Document
RI/FS	Remedial Investigation/Feasibility Study
RSS	Radiation Scanning System
RTRAK	Radiation Tracking System
SCEP	Soils Characterization and Excavation Project
SCQ	Sitewide CERCLA Quality Assurance Project Plan
SEP	Sitewide Excavation Plan
SMMP	Soils and Miscellaneous Media Projects
STP	Sewage Treatment Plant
WAC	Waste Acceptance Criteria
WDSS	Waste Disposition Support Services

1.0 INTRODUCTION

1.1 DESCRIPTION

This Letter Report summarizes the data collection activities and results of the Project Specific Plan (PSP) Area 1 Phase II Pre-Design Investigation Survey. This project was performed to support the remedial design soil excavation for Area 1 Phase II (A1PII). The data collected under the PSP was used to determine soil areas requiring excavation due to total uranium and other primary radiological Constituent Of Concern (COC) contamination. The data collected under this PSP was also used to determine if there were any areas in which the Waste Acceptance Criteria (WAC) would be an issue.

The investigation consisted of a combination of scanning surveys and physical sampling. Scanning surveys were conducted with large-volume Sodium Iodide (NaI) Radiation Tracking System (RTRAK) system and HPGe detectors and covered to the extent possible, 100 percent of the area. The scan data was evaluated to assess general patterns of contamination for total uranium as well as to point out areas potentially exceeding the WAC and FRL for total uranium. This information was used to bias HPGe and physical sampling. The resulting area-wide radiological activity pattern was plotted using scanning results and the Geographic Information System (GIS). HPGe measurements were taken in areas with elevated uranium contamination and in areas inaccessible to the RTRAK. Physical samples were taken for laboratory analysis of total uranium to confirm HPGe results.

1.2 BACKGROUND

Area 1 Phase II encompasses a large portion of the East Field including the On-Site Disposal Facility (OSDF) footprint, the Sewage Treatment Plant (STP) and OSDF borrow area. A1PII is bounded on the north by A1PI, the east by the FEMP property line fence, the west by the former production area and Southern Entrance Road, and the south by Willey Road. The Trap Range, contaminated with lead shot, lies within the OSDF borrow area.

The soils beneath staged soil piles generated during excavation of A1PI and sediment basins existing in A1PI are excluded from this PSP.

1.3 PURPOSE AND GOALS

The purpose of this Area 1 Phase II Pre-design Investigation Survey Project Specific Plan was to collect data for the determination of surface soil areas within the boundaries of A1PII requiring excavation.

prior to remedial design activities and for the delineation of areas potentially exceeding WAC. The specific goals of this plan were to:

1) Determine general patterns of contamination.
2) Provide data to better define excavation areas potentially exceeding the FRL for total uranium.
3) Determine locations of material in areas to be excavated that are potentially above WAC.
3) Document how the utilization of RTRAK, HPGe, and physical sampling supports work to be performed in A1PII as outlined in the *RTRAK Applicability Study*, 20701-RP-0003, *Comparability of In-Situ Gamma Spectrometry and Laboratory Data*, 20701-RP-0001, and the *Sitewide Excavation Plan*, 2500-WP-0028 Rev. C Draft.

Physical sampling and analysis activities were consistent with the Sitewide Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Quality Assurance Project Plan (SCQ), and Data Quality Objectives (DQO) SL-047 (Appendix A).

1.4 SCOPE

The PSP for this project defined the data collection necessary for the determination of surface soil areas within the boundaries of A1PII requiring remedial excavation. Radiological scanning using NaI detectors, direct measurements with HPGe detectors, physical sampling, surface soil moisture and density measurements, and land surveying were used to characterize soil for total uranium. Additionally, soil samples were collected for total uranium analysis and analyzed at the FEMP on-site laboratory.

The investigation was performed in three phases. The first phase consisted of using the RTRAK NaI detector systems. Areal coverage was 100 percent to the extent possible. In addition historical data from previous RTRAK runs were used in the review. The data collected from this scan was reviewed to drive decisions in the second phase of the investigation. Total uranium concentration values of (66 ppm) and (800 ppm) were used as decision drivers for second phase investigation activities. The use of these RTRAK data trigger levels were set based on the review of historical data showing that at this level the actual soil concentrations do not exceed the FRL and WAC values at the 95% confidence level.

The second phase required the use of HPGe instrumentation to measure surface soils applying an acre grid pattern. This acre grid pattern is shown in Figure 1. In areas exceeding the 66 ppm decision level as measured by NaI detectors, representative HPGe measurements were performed using a pattern in

which a minimum of five (5) non-overlapping measurements were taken in each acre grid. HPGe measurements will determine if areas exceeding 66 ppm delineated in Phase I of this plan do in fact exceed the total uranium FRL of 82 ppm.

In areas where NaI measurements indicate that uranium contamination is below 66 ppm, representative measurements using HPGe detectors were taken to verify that surface soils are actually below 66 ppm. A minimum of one (1) HPGe measurement were be taken in each acre grid. Note that some areas were inaccessible as a result of OSDF construction activities.

The original plan included taking HPGe measurement in areas where the RTRAK NaI measurement result was above 800 ppm total uranium. No such areas were found.

The third phase consisted of physical sampling as a final confirmation of HPGe results. Physical samples were taken at a frequency of one (1) for every two (2) HPGe measurements in areas below the 66 ppm trigger level and one for every HPGe measurement in areas above the 66 ppm trigger. The sampling strategy was modified in some acres to ensure adequate coverage. Sampling occurred after HPGe measurements were made. These samples were analyzed at the onsite laboratory for total uranium.

1.5 METHODOLOGY

Sampling and analytical methods were consistent with the FEMP Sitewide CERCLA Quality Assurance Project Plan (SCQ) and project-specific data quality objectives (DQOs).

Field radiological scan surveys were completed using the Radiation Tracking System (RTRAK) or Radiation Scanning System (RSS) NaI detectors. Operation of the RTRAK was done accordance with procedure EQT-30, *Operation of Radiation Tracking Vehicle Sodium Iodide Detection System.*

HPGe detectors were used to characterize areas as defined in Section 1.4. Operation of HPGe detector systems was done in accordance with procedure EQT-23, *Operation of ADCAM Series Analyzers With Gamma Sensitive Detectors.*

Moisture/density measurements taken in conjunction with each HPGe measurement were performed in accordance with procedure EQT-32 *Troxler 3440 Series Surface Moisture/Density Gauge - Calibration, Operation, and Maintenance.*

System calibration activities for HPGe and NaI detectors/analyzers were performed in accordance with procedure EQT-22, *Characterization Of Gamma Sensitive Detectors.*

The A1PII physical soil sampling were conducted by manual hand-auger or core liner in accordance with SMPL-01, *Solids Sampling.*

2.0 FIELD INVESTIGATION AND RESULTS

2.1 NaI DETECTOR MEASUREMENTS (PHASE 1)

RTRAK Total uranium surveying consisted of covering as most of the A1PII area as possible. The following areas were inaccessible:

1. As a result of On-Site Disposal Cell (OSDF) construction activities most of the area north of the re-located North Access Road was inaccessible.
2. Some areas south of the STP were inaccessible as a result of OSDF support trailers located in the area.
3. The southern border of A1PII was inaccessible because the RTRAK could not be safely operated on parts of the hill leading to Willey Road because the slope was too great.
4. Parts of the eastern border of A1PII were inaccessible because the RTRAK could not be safely operated on parts of the hill leading to the eastern fence line because the slope was too great.

In areas that the RTRAK could not access, the number of HPGe readings was increased to provide additional coverage. The NaI detector acquisition time was set to four (4) seconds, and data was be collected at a speed of 1.0 mile per hour. The onboard Global Positioning System (GPS) was be used to store positioning information with each acquisition file.

Results from this survey for total uranium, thorium-232, and radium-226 are shown on Figures 2, 3, and 4, respectively. The trigger levels were set at 66 ppm for total uranium, 1.47 pCi/g for thorium-232, and 1.57 pCi/g for radium-226. Data reduction was accomplished by using a 10 foot grid and averaging the measurement over a 30 foot radius at each node.

The data is consistent with the expected values for total uranium and thorium-232. Evaluation of the data for radium-226 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. 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 Figures 4. Based on this data radium-226 is not believed to be a contaminant of concern in the area that would require remediation.

2.2 HPGe MEASUREMENTS (PHASE 2)

Where NaI system screening results indicated the soil exceeds a trigger level of 66 ppm for total uranium, the areas were gridded into one (1) acre plots. A minimum of five (5) non-overlapping HPGe measurements were taken in each one acre grid area. The HPGe detector system was set at an acquisition time of 900 seconds, with the detector height set at one (1) meter above ground surface.

The HPGe measurement numbering format comprised of a prefix designating the area name (A1PII), followed by an area number (1 through x), followed by letters designating the purpose ("INV" for Investigative), followed by the sample number within in the area (1 through x) as shown in Figure 1, followed by a letter designating the type of sample ("G" for Gamma), followed by a letter indicating the quality assurance designation as applicable ("D" for duplicate).

Example: A1PII-INV-2-1-G-D is the duplicate gamma reading for the first measurement taken in the second one acre area identified in the A1PII investigation survey.

Presented in Table 1 are the HPGe total uranium, thorium-232, radium-226 HPGe measurements taken in support of this project.

2.2.5 Surface Soil Moisture-Density Gauge Measurements

Surface moisture-density gauge measurements were taken to determine soil moisture content and soil density. Measurements were taken at each HPGe measurement point and at a minimum of 2 per acre of NaI scan area. All the data presented is moisture corrected.

2.3 PHYSICAL SOIL SAMPLING (PHASE 3)

Physical sampling was used to verify HPGe measurements. Physical samples were taken from the 0 - 6" soil interval at a frequency of one (1) for every two (2) HPGe measurements in areas below the 66 ppm trigger level. In areas greater than 66 ppm the sampling frequency was one to one for every HPGe measurement.

Samples were collected using a 1 to 2-inch diameter plastic or stainless steel liner only using a manual hand auger. All surface vegetation within a six-inch radius of the sampling point was removed using a stainless steel trowel or gloved hand, minimizing the removal of any soil.

All physical soil samples collected for laboratory analysis were assigned a unique sample identifier divided into up to 20 characters separated by hyphens.

The numbering format comprised of a unique prefix designating the area name ("A1PII"), followed by a letter designating the sample type ("INV" for Investigation), followed by an area number (1 through x), followed by the sample number within in the area (1 through x) corresponding to the acre numbers in Figure 1, followed by the depth of the sample for subsurface samples ("1" for one foot deep, "2" for two foot deep, or "3" for three feet deep, etc.), followed by a letter indicating the analytical suite ("R" for radiological), followed by a letter indicating quality assurance designation as applicable ("D" for duplicate).

Example: A1PII-INV-2-1-3-R-D is the sample number for the first radiological physical sample taken in the second area identified in the A1PII investigation at a depth of three feet and is a duplicate.

Figures 5, 6, and 7 present the RTRAK survey, HPGe, and physical sample results for total uranium, thorium-232, and radium-226, respectively. The trigger levels in this figure are 66 ppm for total uranium, 1.47 pCi/g for thorium-232, and 1.57 pCi/g for radium-226. A summary table of the physical samples is included as Table 2. Based on the review of the RTRAK survey results, HPGe measurements, and physical samples the contamination within area is relatively consistent between the different measurement techniques, in particular for total uranium and thorium-232.

3.0 REFERENCES

ADM-02, Field Projects Prerequisites

EQT-05, *Geodimeter 4000 Surveying System - Operation, Maintenance and Calibration*

EQT-06, Geoprobe® Model 5400 Operation and Maintenance Manual

EQT-22, *Characterization Of Gamma Sensitive Detectors.*

EQT-23, *Operation of ADCAM Series Analyzers With Gamma Sensitive Detectors.*

EQT-30, *Operation of Radiation Tracking Vehicle Sodium Iodide Detection System.*

EQT-32 *Troxler 3440 Series Surface Moisture/Density Gauge - Calibration, Operation, and Maintenance.*

SMPL-01, *Solids Sampling*

SMPL-21, *Collection of Field Quality Control Samples*

256-S-6039, The Calorimetric (Br PADAP) Determination of Uranium Using an Autoanalyzer

C97-013 and C97-305, Total Uranium by ICP-MS

Trimble® Pathfinder Pro-XL GPS Operation Manual

RTRAK Applicability Study, 20701-RP-003, Rev 0, July 1997.

Comparability of In-Situ Gamma Spectrometry and Laboratory Data, 20701-RP-0001, Rev 0, July 1997

Sitewide Excavation Plan, 2500-WP-0028 Rev.C Draft

Sitewide CERCLA Quality Assurance Plan (SCQ)

APPENDIX A

HPGe RESULTS

PHYSICAL SAMPLE RESULTS

TABLE 1 HPGe Results

Location	Northing	Easting	Parameter	Sample ID	Results (ppm)
A1P2-INV-1	476857.791	1351777.248	Uranium, Total	A1P2-INV-1-G	12.4
A1P2-INV-1-2	476862.001	1351846.584	Uranium, Total	A1P2-INV-1-2-G	8.4
A1P2-INV-1-3	476894.655	1351845.758	Uranium, Total	A1P2-INV-1-3-G	11.2
A1P2-INV-1-4	476934.145	1351841.969	Uranium, Total	A1P2-INV-1-4-G	10.8
A1P2-INV-1-5	476981.829	1351835.025	Uranium, Total	A1P2-INV-1-5-G	12.2
A1P2-INV-1-5	476981.829	1351835.025	Uranium, Total	A1P2-INV-1-5-G	12.4
A1P2-INV-1-6	477017.829	1351832.08	Uranium, Total	A1P2-INV-1-6-G	12.9
A1P2-INV-1-7	476844.02	1351825.489	Uranium, Total	A1P2-INV-1-7-G	13.1
A1P2-INV-1-8	476875.986	1351822.365	Uranium, Total	A1P2-INV-1-8-G	9
A1P2-INV-1-9	476912.497	1351817.414	Uranium, Total	A1P2-INV-1-9-G	8.5
A1P2-INV-1-9	476912.497	1351817.414	Uranium, Total	A1P2-INV-1-9-G	11.5
A1P2-INV-1-11	476995.01	1351804.518	Uranium, Total	A1P2-INV-1-11-G	13
A1P2-INV-1-12	477033.444	1351799.981	Uranium, Total	A1P2-INV-1-12-G	11.9
A1P2-INV-2	476938.598	1351529.296	Uranium, Total	A1P2-INV-2-G	9.3
A1P2-INV-3	476927.261	1351355.551	Uranium, Total	A1P2-INV-3-G	9.9
A1P2-INV-4	476842.57	1351185.447	Uranium, Total	A1P2-INV-4-G	11.5
A1P2-INV-5	476849.2	1350949.788	Uranium, Total	A1P2-INV-5-G	11
A1P2-INV-6	476828.706	1350645.206	Uranium, Total	A1P2-INV-6-G	14.6
A1P2-INV-7	476705.012	1350712.945	Uranium, Total	A1P2-INV-7-G	9.7
A1P2-INV-7-2	476785.77	1351045.92	Uranium, Total	A1P2-INV-7-2-G	7
A1P2-INV-7-3	476716.06	1350699.81	Uranium, Total	A1P2-INV-7-3-G	10.1
A1P2-INV-7-4	476806.42	1350584.56	Uranium, Total	A1P2-INV-7-4-G	12.2
A1P2-INV-8	477034.896	1350657.89	Uranium, Total	A1P2-INV-8-G	12.3
A1P2-INV-9	477048.504	1350858.01	Uranium, Total	A1P2-INV-9-G	12.7
A1P2-INV-10	477055.833	1351065.398	Uranium, Total	A1P2-INV-10-G	10.4
A1P2-INV-11	477064.286	1351283.131	Uranium, Total	A1P2-INV-11-G	12.5
A1P2-INV-12	477076.743	1351491.463	Uranium, Total	A1P2-INV-12-G	10
A1P2-INV-13	477082.73	1351772.31	Uranium, Total	A1P2-INV-13-G	9.8
A1P2-INV-13-2	477054.944	1351829.994	Uranium, Total	A1P2-INV-13-2-G	13.4
A1P2-INV-13-3	477089.574	1351828.295	Uranium, Total	A1P2-INV-13-3-G	11.6
A1P2-INV-13-4	477129.629	1351825.799	Uranium, Total	A1P2-INV-13-4-G	11.1
A1P2-INV-13-5	477167.316	1351821.617	Uranium, Total	A1P2-INV-13-5-G	10.1
A1P2-INV-13-6	477213.67	1351816.134	Uranium, Total	A1P2-INV-13-6-G	12.3
A1P2-INV-13-7	477068.687	1351793.82	Uranium, Total	A1P2-INV-13-7-G	12.2
A1P2-INV-13-8	477106.338	1351792.46	Uranium, Total	A1P2-INV-13-8-G	11.8
A1P2-INV-13-9	477142.385	1351788.667	Uranium, Total	A1P2-INV-13-9-G	9.2
A1P2-INV-13-10	477181.136	1351785.382	Uranium, Total	A1P2-INV-13-10-G	11.2
A1P2-INV-13-11	477234.004	1351779.321	Uranium, Total	A1P2-INV-13-11-G	12
A1P2-INV-13-12	477047.377	1351764.905	Uranium, Total	A1P2-INV-13-12-G	10.5
A1P2-INV-13-12	477047.377	1351764.905	Uranium, Total	A1P2-INV-13-12-G	13.7
A1P2-INV-13-13	477085.795	1351763.368	Uranium, Total	A1P2-INV-13-13-G	10.2
A1P2-INV-13-14	477121.394	1351761.044	Uranium, Total	A1P2-INV-13-14-G	13.5
A1P2-INV-13-15	477157.924	1351758.905	Uranium, Total	A1P2-INV-13-15-G	12.1
A1P2-INV-13-16	477205.187	1351755.005	Uranium, Total	A1P2-INV-13-16-G	11.3

TABLE 1 HPGe Results

Location	Northing	Easting	Parameter	Sample ID	Results (ppm)
A1P2-INV-13-17	477250.597	1351750.605	Uranium, Total	A1P2-INV-13-17-G	10.8
A1P2-INV-14	477290.735	1351772.31	Uranium, Total	A1P2-INV-14-G	12.4
A1P2-INV-14-2	477259.399	1351816.551	Uranium, Total	A1P2-INV-14-2-G	9.6
A1P2-INV-14-3	477303.995	1351815.161	Uranium, Total	A1P2-INV-14-3-G	14.2
A1P2-INV-14-4	477340.901	1351813.502	Uranium, Total	A1P2-INV-14-4-G	9.2
A1P2-INV-14-5	477383.635	1351810.829	Uranium, Total	A1P2-INV-14-5-G	10.7
A1P2-INV-14-6	477425.851	1351807.184	Uranium, Total	A1P2-INV-14-6-G	7.8
A1P2-INV-14-7	477271.412	1351776.096	Uranium, Total	A1P2-INV-14-7-G	9.8
A1P2-INV-14-8	477315.502	1351777.712	Uranium, Total	A1P2-INV-14-8-G	12.3
A1P2-INV-14-9	477358.977	1351775.692	Uranium, Total	A1P2-INV-14-9-G	10.8
A1P2-INV-14-10	477394.779	1351774.733	Uranium, Total	A1P2-INV-14-10-G	9.1
A1P2-INV-14-11	477430.566	1351771.298	Uranium, Total	A1P2-INV-14-11-G	9.9
A1P2-INV-14-12	477297.918	1351746.772	Uranium, Total	A1P2-INV-14-12-G	10.8
A1P2-INV-14-13	477331.784	1351744.05	Uranium, Total	A1P2-INV-14-13-G	15
A1P2-INV-14-14	477374.577	1351741.078	Uranium, Total	A1P2-INV-14-14-G	10.3
A1P2-INV-14-15	477413.126	1351738.019	Uranium, Total	A1P2-INV-14-15-G	7.3
A1P2-INV-14-16	477448.929	1351735.001	Uranium, Total	A1P2-INV-14-16-G	4.7
A1P2-INV-15	477291.69	1351536.483	Uranium, Total	A1P2-INV-15-G	12.6
A1P2-INV-16	477329.124	1351326.408	Uranium, Total	A1P2-INV-16-G	12
A1P2-INV-17	477320.536	1351117.234	Uranium, Total	A1P2-INV-17-G	11
A1P2-INV-18	477311.299	1350896.917	Uranium, Total	A1P2-INV-18-G	13.9
A1P2-INV-19	477292.221	1350708.619	Uranium, Total	A1P2-INV-19-G	9.1
A1P2-INV-20	477284.524	1350492.934	Uranium, Total	A1P2-INV-20-G	12.7
A1P2-INV-21	477489.063	1350468.915	Uranium, Total	A1P2-INV-21-G	14.2
A1P2-INV-22	477501.904	1350695.369	Uranium, Total	A1P2-INV-22-G	12.9
A1P2-INV-23	477490.651	1350882.652	Uranium, Total	A1P2-INV-23-G	12.7
A1P2-INV-24	477497.289	1351122.982	Uranium, Total	A1P2-INV-24-G	12.6
A1P2-INV-25	477517.579	1351331.148	Uranium, Total	A1P2-INV-25-G	12
A1P2-INV-26	477512.968	1351526.705	Uranium, Total	A1P2-INV-26-G	10.9
A1P2-INV-27	477697.382	1351552.022	Uranium, Total	A1P2-INV-27-G	14.1
A1P2-INV-28	477677.577	1351331.386	Uranium, Total	A1P2-INV-28-G	12.7
A1P2-INV-29	477672.572	1351157.092	Uranium, Total	A1P2-INV-29-G	13.7
A1P2-INV-30	477657.343	1350880.878	Uranium, Total	A1P2-INV-30-G	11.8
A1P2-INV-31	477654.116	1350669.858	Uranium, Total	A1P2-INV-31-G	13.9
A1P2-INV-32	477669.96	1350493.814	Uranium, Total	A1P2-INV-32-G	13.5
A1P2-INV-33	477674.317	1350315.977	Uranium, Total	A1P2-INV-33-G	15.4
A1P2-INV-33-2	477751.57	1350261.57	Uranium, Total	A1P2-INV-33-2-G	15.9
A1P2-INV-34	477860.998	1350279.91	Uranium, Total	A1P2-INV-34-G	16.6
A1P2-INV-35	477880.983	1350540.107	Uranium, Total	A1P2-INV-35-G	14.6
A1P2-INV-36	477885.139	1350667.188	Uranium, Total	A1P2-INV-36-G	16.3
A1P2-INV-37	477872.218	1350872.978	Uranium, Total	A1P2-INV-37-G	16.4
A1P2-INV-38	477918.741	1351151.547	Uranium, Total	A1P2-INV-38-G	11.9
A1P2-INV-39	477887.701	1351356.568	Uranium, Total	A1P2-INV-39-G	14.7
A1P2-INV-40	477892.252	1351574.243	Uranium, Total	A1P2-INV-40-G	11.9

TABLE 1 HPGe Results

Location	Northing	Easting	Parameter	Sample ID	Results (ppm)
A1P2-INV-41	478126.016	1351574.744	Uranium, Total	A1P2-INV-41-G	13.2
A1P2-INV-41	478126.016	1351574.744	Uranium, Total	A1P2-INV-41-G	13.4
A1P2-INV-42	478125.003	1351363.032	Uranium, Total	A1P2-INV-42-G	14.3
A1P2-INV-43	478117.397	1351161.298	Uranium, Total	A1P2-INV-43-G	19.7
A1P2-INV-44	478118.287	1350946.606	Uranium, Total	A1P2-INV-44-G	13.8
A1P2-INV-45	478126.071	1350729.546	Uranium, Total	A1P2-INV-45-G	15.6
A1P2-INV-46	478126.164	1350519.073	Uranium, Total	A1P2-INV-46-G	13.7
A1P2-INV-47	478126.321	1350310.369	Uranium, Total	A1P2-INV-47-G	17.1
A1P2-INV-48	478126.065	1350200.568	Uranium, Total	A1P2-INV-48-G	18.4
A1P2-INV-49	478335.161	1350101.803	Uranium, Total	A1P2-INV-49-G	21.1
A1P2-INV-50	478335.491	1350310.214	Uranium, Total	A1P2-INV-50-G	21.4
A1P2-INV-51	478335.459	1350519.13	Uranium, Total	A1P2-INV-51-G	19.4
A1P2-INV-52	478335.868	1350729.541	Uranium, Total	A1P2-INV-52-G	24.4
A1P2-INV-53	478335.891	1350937.658	Uranium, Total	A1P2-INV-53-G	14.4
A1P2-INV-54	478335.105	1351146.613	Uranium, Total	A1P2-INV-54-G	16.6
A1P2-INV-55	478335.066	1351355.269	Uranium, Total	A1P2-INV-55-G	12.4
A1P2-INV-56	478335.626	1351564.4	Uranium, Total	A1P2-INV-56-G	13.1
A1P2-INV-57	478335.163	1351699.12	Uranium, Total	A1P2-INV-57-G	14.6
A1P2-INV-57-2	478254.725	1351780.969	Uranium, Total	A1P2-INV-57-2-G	15.2
A1P2-INV-57-3	478294.255	1351783.225	Uranium, Total	A1P2-INV-57-3-G	11.4
A1P2-INV-58	478544.636	1351698.732	Uranium, Total	A1P2-INV-58-G	16.4
A1P2-INV-59	478544.146	1351564.59	Uranium, Total	A1P2-INV-59-G	13.3
A1P2-INV-60	478544.837	1351355.76	Uranium, Total	A1P2-INV-60-G	13.6
A1P2-INV-61	478544.715	1351146.107	Uranium, Total	A1P2-INV-61-G	18.6
A1P2-INV-62	478544.054	1350937.473	Uranium, Total	A1P2-INV-62-G	17.8
A1P2-INV-63	478544.29	1350729.666	Uranium, Total	A1P2-INV-63-G	21.4
A1P2-INV-64	478544.637	1350519.372	Uranium, Total	A1P2-INV-64-G	24.3
A1P2-INV-65	478544.53	1350310.914	Uranium, Total	A1P2-INV-65-G	28.8
A1P2-INV-66	478547.58	1350105.01	Uranium, Total	A1P2-INV-66-G	18.4
A1P2-INV-67	478632.709	1350081.094	Uranium, Total	A1P2-INV-67-G	21.3
A1P2-INV-68	478753.125	1350310.828	Uranium, Total	A1P2-INV-68-G	14.7
A1P2-INV-69	478752.484	1350519.547	Uranium, Total	A1P2-INV-69-G	25
A1P2-INV-70	478752.188	1350720.026	Uranium, Total	A1P2-INV-70-G	30.4
A1P2-INV-71	478752.467	1350937.041	Uranium, Total	A1P2-INV-71-G	21.1
A1P2-INV-72	478752.166	1351146.698	Uranium, Total	A1P2-INV-72-G	28
A1P2-INV-73	478752.147	1351355.494	Uranium, Total	A1P2-INV-73-G	13.4
A1P2-INV-74	478752.54	1351564.545	Uranium, Total	A1P2-INV-74-G	14.3
A1P2-INV-75	478751.92	1351699.057	Uranium, Total	A1P2-INV-75-G	12.8
A1P2-INV-76	478961.563	1351699.476	Uranium, Total	A1P2-INV-76-G	12
A1P2-INV-77	478961.195	1351564.309	Uranium, Total	A1P2-INV-77-G	13.4
A1P2-INV-78	478961.543	1351355.679	Uranium, Total	A1P2-INV-78-G	13.4
A1P2-INV-79	478961.85	1351146.783	Uranium, Total	A1P2-INV-79-G	22.6
A1P2-INV-80	478961.038	1350937.187	Uranium, Total	A1P2-INV-80-G	17.1
A1P2-INV-81	478960.925	1350732.619	Uranium, Total	A1P2-INV-81-G	30.6

TABLE 1 HPGe Results

Location	Northing	Easting	Parameter	Sample ID	Results (ppm)
A1P2-INV-82	478961.392	1350519.063	Uranium, Total	A1P2-INV-82-G	8
A1P2-INV-83	479170.207	1350729.574	Uranium, Total	A1P2-INV-83-G	11
A1P2-INV-84	479170.486	1350937.885	Uranium, Total	A1P2-INV-84-G	13.2
A1P2-INV-85	479170.588	1351146.975	Uranium, Total	A1P2-INV-85-G	24.8
A1P2-INV-86	479170.341	1351355.519	Uranium, Total	A1P2-INV-86-G	15.5
A1P2-INV-87	479170.254	1351563.332	Uranium, Total	A1P2-INV-87-G	7
A1P2-INV-88	479170.776	1351716.309	Uranium, Total	A1P2-INV-88-G	12.8
A1P2-INV-89	479379.064	1351699.374	Uranium, Total	A1P2-INV-89-G	8.8
A1P2-INV-90	479379.033	1351564.107	Uranium, Total	A1P2-INV-90-G	9.8
A1P2-INV-91	479379.079	1351355.098	Uranium, Total	A1P2-INV-91-G	13.3
A1P2-INV-92	479379.075	1351146.076	Uranium, Total	A1P2-INV-92-G	31.3
A1P2-INV-93	479379.269	1350938.509	Uranium, Total	A1P2-INV-93-G	19.4
A1P2-INV-94	479587.417	1350938.588	Uranium, Total	A1P2-INV-94-G	36.8
A1P2-INV-94-2	479536.014	1350989.625	Uranium, Total	A1P2-INV-94-2-G	35.1
A1P2-INV-94-3	479534.675	1350903.69	Uranium, Total	A1P2-INV-94-3-G	36.5
A1P2-INV-94-4	479638.598	1350905.352	Uranium, Total	A1P2-INV-94-4-G	51.5
A1P2-INV-94-5	479638.29	1350988.193	Uranium, Total	A1P2-INV-94-5-G	29.8
A1P2-INV-95	479587.921	1351146.806	Uranium, Total	A1P2-INV-95-G	17.9
A1P2-INV-95-2	479537.818	1351199.496	Uranium, Total	A1P2-INV-95-2-G	40.7
A1P2-INV-95-3	479533.824	1351092.146	Uranium, Total	A1P2-INV-95-3-G	28.5
A1P2-INV-95-4	479638.73	1351092.875	Uranium, Total	A1P2-INV-95-4-G	21.8
A1P2-INV-95-5	479640.567	1351197.316	Uranium, Total	A1P2-INV-95-5-G	27.1
A1P2-INV-96	479587.292	1351355.576	Uranium, Total	A1P2-INV-96-G	29.9
A1P2-INV-97	479588.003	1351564.215	Uranium, Total	A1P2-INV-97-G	7.4
A1P2-INV-98	479587.254	1351699.047	Uranium, Total	A1P2-INV-98-G	11.6
A1P2-INV-99	479797.947	1351709.831	Uranium, Total	A1P2-INV-99-G	30.5
A1P2-INV-99-2	479736.86	1351777.34	Uranium, Total	A1P2-INV-99-2-G	11.7
A1P2-INV-99-3	479740.23	1351691.21	Uranium, Total	A1P2-INV-99-3-G	19.9
A1P2-INV-99-4	479833.07	1351773.98	Uranium, Total	A1P2-INV-99-4-G	33.1
A1P2-INV-99-5	479839.45	1351690.84	Uranium, Total	A1P2-INV-99-5-G	34.7
A1P2-INV-100	479812.847	1351553.081	Uranium, Total	A1P2-INV-100-G	11.6
A1P2-INV-101	479796.107	1351355.406	Uranium, Total	A1P2-INV-101-G	23.3
A1P2-INV-102	479796.669	1351146.901	Uranium, Total	A1P2-INV-102-G	32.8
A1P2-INV-102-2	479745.15	1351200.726	Uranium, Total	A1P2-INV-102-2-G	28.8
A1P2-INV-102-3	479744.516	1351093.366	Uranium, Total	A1P2-INV-102-3-G	37.2
A1P2-INV-102-4	479850.216	1351094.039	Uranium, Total	A1P2-INV-102-4-G	40.8
A1P2-INV-102-5	479848.754	1351197.293	Uranium, Total	A1P2-INV-102-5-G	38.3
A1P2-INV-103	479796.077	1350937.379	Uranium, Total	A1P2-INV-103-G	40.3
A1P2-INV-103-2	479741.435	1350906.394	Uranium, Total	A1P2-INV-103-2-G	34.9
A1P2-INV-103-3	479744.029	1350990.063	Uranium, Total	A1P2-INV-103-3-G	32.2
A1P2-INV-103-4	479841.142	1350912.502	Uranium, Total	A1P2-INV-103-4-G	46.3
A1P2-INV-103-5	479849.541	1350979.992	Uranium, Total	A1P2-INV-103-5-G	36.8
A1P2-INV-104	480004.36	1350937.821	Uranium, Total	A1P2-INV-104-G	46
A1P2-INV-104-2	479965.341	1350983.733	Uranium, Total	A1P2-INV-104-2-G	44.8

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TABLE 1 HPGe Results

Location	Northing	Easting	Parameter	Sample ID	Results (ppm)
A1P2-INV-104-3	480059.575	1350911.26	Uranium, Total	A1P2-INV-104-3-G	69.4
A1P2-INV-104-4	479943.451	1350908.921	Uranium, Total	A1P2-INV-104-4-G	47.6
A1P2-INV-104-5	480066.098	1350987.514	Uranium, Total	A1P2-INV-104-5-G	64.9
A1P2-INV-105	480004.27	1351146.148	Uranium, Total	A1P2-INV-105-G	45
A1P2-INV-105-2	480054.371	1351086.908	Uranium, Total	A1P2-INV-105-2-G	82.5
A1P2-INV-105-3	479946.057	1351081.543	Uranium, Total	A1P2-INV-105-3-G	38.2
A1P2-INV-105-4	480052.716	1351196.516	Uranium, Total	A1P2-INV-105-4-G	64.6
A1P2-INV-105-5	479952.569	1351203.087	Uranium, Total	A1P2-INV-105-5-G	39.2
A1P2-INV-106-9	479959.5943	1351388.236	Uranium, Total	A1P2-INV-106-9-G	22.9
A1P2-INV-106-20	479922.2372	1351407.431	Uranium, Total	A1P2-INV-106-20-G	28.7
A1P2-INV-106-21	479957.5391	1351430.186	Uranium, Total	A1P2-INV-106-21-G	34.2
A1P2-INV-109-2	480255.409	1351769.202	Uranium, Total	A1P2-INV-109-2-G	33.2
A1P2-INV-109-3	480253.657	1351695.331	Uranium, Total	A1P2-INV-109-3-G	95.4
A1P2-INV-110-2	480258.132	1351510.744	Uranium, Total	A1P2-INV-110-2-G	37.3
A1P2-INV-110-3	480253.46	1351604.977	Uranium, Total	A1P2-INV-110-3-G	36
A1P2-INV-111-28	480252.2854	1351360.525	Uranium, Total	A1P2-INV-111-28-G	74
A1P2-INV-111-32	480216.9835	1351337.77	Uranium, Total	A1P2-INV-111-32-G	47
A1P2-INV-111-40	480250	1351319	Uranium, Total	A1P2-INV-111-40-G	72.4
A1P2-INV-111-41	480220	1351287	Uranium, Total	A1P2-INV-111-41-G	63
A1P2-INV-111-42	480180	1351319	Uranium, Total	A1P2-INV-111-42-G	45.6
A1P2-INV-111-43	480181	1351280	Uranium, Total	A1P2-INV-111-43-G	113.3
A1P2-INV-112	480212.348	1351146.579	Uranium, Total	A1P2-INV-112-G	64.3
A1P2-INV-112-2	480254.679	1351087.745	Uranium, Total	A1P2-INV-112-2-G	69.3
A1P2-INV-112-3	480157.899	1351090.203	Uranium, Total	A1P2-INV-112-3-G	65.9
A1P2-INV-112-4	480162.32	1351184.983	Uranium, Total	A1P2-INV-112-4-G	63
A1P2-INV-112-5	480257.597	1351193.295	Uranium, Total	A1P2-INV-112-5-G	68.1
A1P2-INV-113	480212.484	1350958.333	Uranium, Total	A1P2-INV-113-G	71.7
A1P2-INV-113-2	480159.335	1350945.07	Uranium, Total	A1P2-INV-113-2-G	65.7
A1P2-INV-113-3	480162.826	1351006.153	Uranium, Total	A1P2-INV-113-3-G	66.4
A1P2-INV-113-4	480263.467	1351004.081	Uranium, Total	A1P2-INV-113-4-G	55.1
A1P2-INV-114	480420.545	1351054.985	Uranium, Total	A1P2-INV-114-G	55.4
A1P2-INV-115	480420.247	1351146.533	Uranium, Total	A1P2-INV-115-G	60.9
A1P2-INV-115	480420.247	1351146.533	Uranium, Total	A1P2-INV-115-G	63.9
A1P2-INV-115	480420.247	1351146.533	Uranium, Total	A1P2-INV-115-G	60.3
A1P2-INV-115-2	480468.58	1351185.968	Uranium, Total	A1P2-INV-115-2-G	55
A1P2-INV-115-3	480369.534	1351096.317	Uranium, Total	A1P2-INV-115-3-G	66.3
A1P2-INV-115-4	480462.312	1351117.284	Uranium, Total	A1P2-INV-115-4-G	55.3
A1P2-INV-115-5	480350.407	1351198.603	Uranium, Total	A1P2-INV-115-5-G	65.9
A1P2-INV-116	480420.03	1351355.284	Uranium, Total	A1P2-INV-116-G	63.3
A1P2-INV-116	480420.03	1351355.284	Uranium, Total	A1P2-INV-116-G	59.9
A1P2-INV-116	480420.03	1351355.284	Uranium, Total	A1P2-INV-116-G	56.6
A1P2-INV-116-2	480468.376	1351299.865	Uranium, Total	A1P2-INV-116-2-G	60.4
A1P2-INV-116-3	480361.719	1351299.474	Uranium, Total	A1P2-INV-116-3-G	58.3
A1P2-INV-116-4	480469.469	1351404.257	Uranium, Total	A1P2-INV-116-4-G	63.3

TABLE 1 HPGe Results

Location	Northing	Easting	Parameter	Sample ID	Results (ppm)
A1P2-INV-116-5	480367.183	1351406.325	Uranium, Total	A1P2-INV-116-5-G	59.4
A1P2-INV-117	480420.639	1351562.327	Uranium, Total	A1P2-INV-117-G	80.5
A1P2-INV-117	480420.639	1351562.327	Uranium, Total	A1P2-INV-117-G	80.1
A1P2-INV-117-2	480476.643	1351613.798	Uranium, Total	A1P2-INV-117-2-G	91.6
A1P2-INV-117-3	480370.386	1351621.836	Uranium, Total	A1P2-INV-117-3-G	60.4
A1P2-INV-117-4	480475.796	1351506.118	Uranium, Total	A1P2-INV-117-4-G	63.7
A1P2-INV-117-5	480377.439	1351511.382	Uranium, Total	A1P2-INV-117-5-G	57.6
A1P2-INV-118	480420.186	1351699.575	Uranium, Total	A1P2-INV-118-G	47.5
A1P2-INV-118-2	480473.822	1351784.219	Uranium, Total	A1P2-INV-118-2-G	68.6
A1P2-INV-118-3	480487.415	1351704.606	Uranium, Total	A1P2-INV-118-3-G	73.5
A1P2-INV-118-4	480379.622	1351755.69	Uranium, Total	A1P2-INV-118-4-G	53.2
A1P2-INV-118-5	480369.956	1351688.945	Uranium, Total	A1P2-INV-118-5-G	92.2
A1P2-INV-119	480628.686	1351699.344	Uranium, Total	A1P2-INV-119-G	61.7
A1P2-INV-119-2	480663.585	1351785.28	Uranium, Total	A1P2-INV-119-2-G	11.1
A1P2-INV-119-3	480667.417	1351714.22	Uranium, Total	A1P2-INV-119-3-G	55.1
A1P2-INV-119-4	480569.696	1351711.045	Uranium, Total	A1P2-INV-119-4-G	71.9
A1P2-INV-119-5	480586.656	1351784.019	Uranium, Total	A1P2-INV-119-5-G	71.6
A1P2-INV-120	480628.367	1351563.267	Uranium, Total	A1P2-INV-120-G	46.9
A1P2-INV-120	480628.367	1351563.267	Uranium, Total	A1P2-INV-120-G	59.4
A1P2-INV-120-3	480566.509	1351497.927	Uranium, Total	A1P2-INV-120-3-G	59.9
A1P2-INV-120-4	480689.152	1351628.794	Uranium, Total	A1P2-INV-120-4-G	56.2
A1P2-INV-121	480628.36	1351355.457	Uranium, Total	A1P2-INV-121-G	59.1
A1P2-INV-121-2	480679.013	1351401.353	Uranium, Total	A1P2-INV-121-2-G	56.6
A1P2-INV-121-4	480557.013	1351378.749	Uranium, Total	A1P2-INV-121-4-G	52.8
A1P2-INV-121-5	480677.331	1351340.454	Uranium, Total	A1P2-INV-121-5-G	58
A1P2-INV-122	480628.255	1351208.733	Uranium, Total	A1P2-INV-122-G	60.7
A1P2-INV-122-2	480572.39	1351212.681	Uranium, Total	A1P2-INV-122-2-G	67.8
A1P2-INV-122-3	480648.569	1351251.092	Uranium, Total	A1P2-INV-122-3-G	59
A1P2-INV-128	480836.216	1351440.228	Uranium, Total	A1P2-INV-128-G	38.6
A1P2-INV-128-3	480771.437	1351393.798	Uranium, Total	A1P2-INV-128-3-G	52.2
A1P2-INV-129	480836.145	1351563.759	Uranium, Total	A1P2-INV-129-G	13.7
A1P2-INV-129-2	480767.485	1351495.638	Uranium, Total	A1P2-INV-129-2-G	17.7
A1P2-INV-129-3	480879.39	1351520.628	Uranium, Total	A1P2-INV-129-3-G	19.3
A1P2-INV-129-4	480781.983	1351624.653	Uranium, Total	A1P2-INV-129-4-G	23.4
A1P2-INV-129-5	480870.747	1351610.577	Uranium, Total	A1P2-INV-129-5-G	37.8
A1P2-INV-130-2	480784.293	1351707.189	Uranium, Total	A1P2-INV-130-2-G	48.4
A1P2-INV-130-3	480837.971	1351711.162	Uranium, Total	A1P2-INV-130-3-G	46
A1P2-INV-130-4	480835.613	1351775.758	Uranium, Total	A1P2-INV-130-4-G	30.5
A1P2-INV-130-5	480778.264	1351782.208	Uranium, Total	A1P2-INV-130-5-G	11.7
A1P2-INV-133	477458.157	1351806.325	Uranium, Total	A1P2-INV-133-G	7.8
A1P2-INV-133-2	477494.138	1351800.021	Uranium, Total	A1P2-INV-133-2-G	5.7
A1P2-INV-133-3	477528.379	1351802.311	Uranium, Total	A1P2-INV-133-3-G	6.6
A1P2-INV-133-4	477565.848	1351801.22	Uranium, Total	A1P2-INV-133-4-G	10.6
A1P2-INV-133-5	477611.309	1351798.05	Uranium, Total	A1P2-INV-133-5-G	9.3

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TABLE 1 HPGe Results 2048

Location	Northing	Easting	Parameter	Sample ID	Results (ppm)
A1P2-INV-133-6	477651.717	1351795.624	Uranium, Total	A1P2-INV-133-6-G	10.4
A1P2-INV-133-7	477481.472	1351773.225	Uranium, Total	A1P2-INV-133-7-G	8.3
A1P2-INV-133-8	477513.058	1351771.777	Uranium, Total	A1P2-INV-133-8-G	6
A1P2-INV-133-10	477583.328	1351772.14	Uranium, Total	A1P2-INV-133-10-G	12.9
A1P2-INV-133-11	477631.474	1351771.79	Uranium, Total	A1P2-INV-133-11-G	9.6
A1P2-INV-133-12	477668.781	1351770.552	Uranium, Total	A1P2-INV-133-12-G	9.7
A1P2-INV-133-13	477476.865	1351749.874	Uranium, Total	A1P2-INV-133-13-G	6.7
A1P2-INV-133-14	477508.177	1351749.178	Uranium, Total	A1P2-INV-133-14-G	7.8
A1P2-INV-133-15	477541.121	1351748.824	Uranium, Total	A1P2-INV-133-15-G	7.2
A1P2-INV-133-16	477580.086	1351748.656	Uranium, Total	A1P2-INV-133-16-G	6.6
A1P2-INV-133-17	477618.099	1351739.238	Uranium, Total	A1P2-INV-133-17-G	5.5
A1P2-INV-134	477686.884	1351794.985	Uranium, Total	A1P2-INV-134-G	9.5
A1P2-INV-134-2	477722.889	1351794.456	Uranium, Total	A1P2-INV-134-2-G	12.2
A1P2-INV-134-3	477765.003	1351790.54	Uranium, Total	A1P2-INV-134-3-G	11.6
A1P2-INV-134-4	477796.399	1351788.156	Uranium, Total	A1P2-INV-134-4-G	13
A1P2-INV-134-5	477830.327	1351786.268	Uranium, Total	A1P2-INV-134-5-G	10.5
A1P2-INV-134-6	477702.733	1351768.838	Uranium, Total	A1P2-INV-134-6-G	9.7
A1P2-INV-134-7	477745.701	1351770.256	Uranium, Total	A1P2-INV-134-7-G	10.6
A1P2-INV-134-8	477780.021	1351769.506	Uranium, Total	A1P2-INV-134-8-G	14.3
A1P2-INV-134-9	477811.469	1351768.686	Uranium, Total	A1P2-INV-134-9-G	10.9
A1P2-INV-134-10	477844.195	1351769.567	Uranium, Total	A1P2-INV-134-10-G	13.3
A1P2-INV-135	477864.092	1351788.023	Uranium, Total	A1P2-INV-135-G	12.3
A1P2-INV-135-2	477908.143	1351784.73	Uranium, Total	A1P2-INV-135-2-G	15.1
A1P2-INV-135-3	477943.545	1351781.725	Uranium, Total	A1P2-INV-135-3	15.8
A1P2-INV-135-4	477983.598	1351780.465	Uranium, Total	A1P2-INV-135-4-G	13.2
A1P2-INV-135-5	478020.888	1351778.46	Uranium, Total	A1P2-INV-135-5-G	10.8
A1P2-INV-135-6	477884.958	1351761.739	Uranium, Total	A1P2-INV-135-6-G	12.1
A1P2-INV-135-7	477927.352	1351764.339	Uranium, Total	A1P2-INV-135-7-G	12
A1P2-INV-135-7	477927.352	1351764.339	Uranium, Total	A1P2-INV-135-7-G	14.1
A1P2-INV-135-8	477966.486	1351763.306	Uranium, Total	A1P2-INV-135-8-G	15.6
A1P2-INV-135-9	478003.395	1351762.421	Uranium, Total	A1P2-INV-135-9-G	12.6
A1P2-INV-135-10	478043.493	1351760.661	Uranium, Total	A1P2-INV-135-10-G	15
A1P2-INV-136	478062.844	1351775.307	Uranium, Total	A1P2-INV-136-G	12.1
A1P2-INV-136-2	478105.127	1351776.276	Uranium, Total	A1P2-INV-136-2-G	9.8
A1P2-INV-136-3	478143.626	1351777.493	Uranium, Total	A1P2-INV-136-3-G	15.2
A1P2-INV-136-4	478182.029	1351779.746	Uranium, Total	A1P2-INV-136-4-G	13.6
A1P2-INV-136-5	478214.901	1351780.541	Uranium, Total	A1P2-INV-136-5-G	14.8
A1P2-INV-136-6	478079.49	1351755.396	Uranium, Total	A1P2-INV-136-6-G	15.2
A1P2-INV-136-8	478164.426	1351756.384	Uranium, Total	A1P2-INV-136-8-G	16.3
A1P2-INV-136-9	478195.033	1351756.563	Uranium, Total	A1P2-INV-136-9-G	12.8
A1P2-INV-136-10	478231.964	1351758.339	Uranium, Total	A1P2-INV-136-10	11.7
A1P2-INV-137	478263.171	1349814.048	Uranium, Total	A1P2-INV-137-G	17.7
A1P2-INV-137	478263.171	1349814.048	Uranium, Total	A1P2-INV-137-G	19.8
A1P2-INV-138	478392.042	1349782.583	Uranium, Total	A1P2-INV-138-G	23.4

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TABLE 1 HPGe Results

Location	Northing	Easting	Parameter	Sample ID	Results (ppm)
A1P2-INV-139	478547.248	1349756.538	Uranium, Total	A1P2-INV-139-G	21.2
A1P2-INV-140	478721.19	1349779.232	Uranium, Total	A1P2-INV-140-G	22.5
A1P2-INV-1	476857.791	1351777.248	Thorium-232	A1P2-INV-1-G	0.9
A1P2-INV-1-2	476862.001	1351846.584	Thorium-232	A1P2-INV-1-2-G	0.9
A1P2-INV-1-3	476894.655	1351845.758	Thorium-232	A1P2-INV-1-3-G	0.9
A1P2-INV-1-4	476934.145	1351841.969	Thorium-232	A1P2-INV-1-4-G	0.8
A1P2-INV-1-5	476981.829	1351835.025	Thorium-232	A1P2-INV-1-5-G	0.9
A1P2-INV-1-5	476981.829	1351835.025	Thorium-232	A1P2-INV-1-5-G	0.9
A1P2-INV-1-6	477017.829	1351832.08	Thorium-232	A1P2-INV-1-6-G	0.9
A1P2-INV-1-7	476844.02	1351825.489	Thorium-232	A1P2-INV-1-7-G	0.9
A1P2-INV-1-8	476875.986	1351822.365	Thorium-232	A1P2-INV-1-8-G	1
A1P2-INV-1-9	476912.497	1351817.414	Thorium-232	A1P2-INV-1-9-G	0.8
A1P2-INV-1-9	476912.497	1351817.414	Thorium-232	A1P2-INV-1-9-G	0.8
A1P2-INV-1-11	476995.01	1351804.518	Thorium-232	A1P2-INV-1-11-G	0.9
A1P2-INV-1-12	477033.444	1351799.981	Thorium-232	A1P2-INV-1-12-G	0.9
A1P2-INV-2	476938.598	1351529.296	Thorium-232	A1P2-INV-2-G	0.8
A1P2-INV-3	476927.261	1351355.551	Thorium-232	A1P2-INV-3-G	0.9
A1P2-INV-4	476842.57	1351185.447	Thorium-232	A1P2-INV-4-G	0.9
A1P2-INV-5	476849.2	1350949.788	Thorium-232	A1P2-INV-5-G	0.9
A1P2-INV-6	476828.706	1350645.206	Thorium-232	A1P2-INV-6-G	0.9
A1P2-INV-7	476705.012	1350712.945	Thorium-232	A1P2-INV-7-G	0.8
A1P2-INV-7-2	476785.77	1351045.92	Thorium-232	A1P2-INV-7-2-G	0.6
A1P2-INV-7-3	476716.06	1350699.81	Thorium-232	A1P2-INV-7-3-G	0.7
A1P2-INV-7-4	476806.42	1350584.56	Thorium-232	A1P2-INV-7-4-G	0.8
A1P2-INV-8	477034.896	1350657.89	Thorium-232	A1P2-INV-8-G	0.9
A1P2-INV-9	477048.504	1350858.01	Thorium-232	A1P2-INV-9-G	0.9
A1P2-INV-10	477055.833	1351065.398	Thorium-232	A1P2-INV-10-G	0.9
A1P2-INV-11	477064.286	1351283.131	Thorium-232	A1P2-INV-11-G	0.9
A1P2-INV-12	477076.743	1351491.463	Thorium-232	A1P2-INV-12-G	0.9
A1P2-INV-13	477082.73	1351772.31	Thorium-232	A1P2-INV-13-G	0.9
A1P2-INV-13-2	477054.944	1351829.994	Thorium-232	A1P2-INV-13-2-G	0.9
A1P2-INV-13-3	477089.574	1351828.295	Thorium-232	A1P2-INV-13-3-G	0.9
A1P2-INV-13-4	477129.629	1351825.799	Thorium-232	A1P2-INV-13-4-G	0.9
A1P2-INV-13-5	477167.316	1351821.617	Thorium-232	A1P2-INV-13-5-G	0.9
A1P2-INV-13-6	477213.67	1351816.134	Thorium-232	A1P2-INV-13-6-G	0.9
A1P2-INV-13-7	477068.687	1351793.82	Thorium-232	A1P2-INV-13-7-G	0.9
A1P2-INV-13-8	477106.338	1351792.46	Thorium-232	A1P2-INV-13-8-G	1
A1P2-INV-13-9	477142.385	1351788.667	Thorium-232	A1P2-INV-13-9-G	1
A1P2-INV-13-10	477181.136	1351785.382	Thorium-232	A1P2-INV-13-10-G	1
A1P2-INV-13-11	477234.004	1351779.321	Thorium-232	A1P2-INV-13-11-G	0.9
A1P2-INV-13-12	477047.377	1351764.905	Thorium-232	A1P2-INV-13-12-G	0.8
A1P2-INV-13-12	477047.377	1351764.905	Thorium-232	A1P2-INV-13-12-G	0.8
A1P2-INV-13-13	477085.795	1351763.368	Thorium-232	A1P2-INV-13-13-G	1
A1P2-INV-13-14	477121.394	1351761.044	Thorium-232	A1P2-INV-13-14-G	0.9

TABLE 1 HPGe Results

Location	Northing	Easting	Parameter	Sample ID	Results (ppm)
A1P2-INV-13-15	477157.924	1351758.905	Thorium-232	A1P2-INV-13-15-G	0.9
A1P2-INV-13-16	477205.187	1351755.005	Thorium-232	A1P2-INV-13-16-G	0.8
A1P2-INV-13-17	477250.597	1351750.605	Thorium-232	A1P2-INV-13-17-G	0.8
A1P2-INV-14	477290.735	1351772.31	Thorium-232	A1P2-INV-14-G	1
A1P2-INV-14-2	477259.399	1351816.551	Thorium-232	A1P2-INV-14-2-G	0.8
A1P2-INV-14-3	477303.995	1351815.161	Thorium-232	A1P2-INV-14-3-G	0.9
A1P2-INV-14-4	477340.901	1351813.502	Thorium-232	A1P2-INV-14-4-G	0.8
A1P2-INV-14-5	477383.635	1351810.829	Thorium-232	A1P2-INV-14-5-G	0.8
A1P2-INV-14-6	477425.851	1351807.184	Thorium-232	A1P2-INV-14-6-G	0.9
A1P2-INV-14-7	477271.412	1351776.096	Thorium-232	A1P2-INV-14-7-G	0.9
A1P2-INV-14-8	477315.502	1351777.712	Thorium-232	A1P2-INV-14-8-G	0.9
A1P2-INV-14-9	477358.977	1351775.692	Thorium-232	A1P2-INV-14-9-G	1
A1P2-INV-14-10	477394.779	1351774.733	Thorium-232	A1P2-INV-14-10-G	1
A1P2-INV-14-11	477430.566	1351771.298	Thorium-232	A1P2-INV-14-11-G	0.9
A1P2-INV-14-12	477297.918	1351746.772	Thorium-232	A1P2-INV-14-12-G	0.9
A1P2-INV-14-13	477331.784	1351744.05	Thorium-232	A1P2-INV-14-13-G	0.9
A1P2-INV-14-14	477374.577	1351741.078	Thorium-232	A1P2-INV-14-14-G	0.8
A1P2-INV-14-15	477413.126	1351738.019	Thorium-232	A1P2-INV-14-15-G	0.7
A1P2-INV-14-16	477448.929	1351735.001	Thorium-232	A1P2-INV-14-16-G	0.7
A1P2-INV-15	477291.69	1351536.483	Thorium-232	A1P2-INV-15-G	0.9
A1P2-INV-16	477329.124	1351326.408	Thorium-232	A1P2-INV-16-G	0.8
A1P2-INV-17	477320.536	1351117.234	Thorium-232	A1P2-INV-17-G	0.9
A1P2-INV-18	477311.299	1350896.917	Thorium-232	A1P2-INV-18-G	1
A1P2-INV-19	477292.221	1350708.619	Thorium-232	A1P2-INV-19-G	0.9
A1P2-INV-20	477284.524	1350492.934	Thorium-232	A1P2-INV-20-G	0.8
A1P2-INV-21	477489.063	1350468.915	Thorium-232	A1P2-INV-21-G	1
A1P2-INV-22	477501.904	1350695.369	Thorium-232	A1P2-INV-22-G	0.9
A1P2-INV-23	477490.651	1350882.652	Thorium-232	A1P2-INV-23-G	1
A1P2-INV-24	477497.289	1351122.982	Thorium-232	A1P2-INV-24-G	1
A1P2-INV-25	477517.579	1351331.148	Thorium-232	A1P2-INV-25-G	0.9
A1P2-INV-26	477512.968	1351526.705	Thorium-232	A1P2-INV-26-G	0.9
A1P2-INV-27	477697.382	1351552.022	Thorium-232	A1P2-INV-27-G	0.9
A1P2-INV-28	477677.577	1351331.386	Thorium-232	A1P2-INV-28-G	0.9
A1P2-INV-29	477672.572	1351157.092	Thorium-232	A1P2-INV-29-G	1
A1P2-INV-30	477657.343	1350880.878	Thorium-232	A1P2-INV-30-G	0.9
A1P2-INV-31	477654.116	1350669.858	Thorium-232	A1P2-INV-31-G	1
A1P2-INV-32	477669.96	1350493.814	Thorium-232	A1P2-INV-32-G	1
A1P2-INV-33	477674.317	1350315.977	Thorium-232	A1P2-INV-33-G	1
A1P2-INV-33-2	477751.57	1350261.57	Thorium-232	A1P2-INV-33-2-G	0.8
A1P2-INV-34	477860.998	1350279.91	Thorium-232	A1P2-INV-34-G	1
A1P2-INV-35	477880.983	1350540.107	Thorium-232	A1P2-INV-35-G	1
A1P2-INV-36	477885.139	1350667.188	Thorium-232	A1P2-INV-36-G	0.9
A1P2-INV-37	477872.218	1350872.978	Thorium-232	A1P2-INV-37-G	0.9
A1P2-INV-38	477918.741	1351151.547	Thorium-232	A1P2-INV-38-G	0.9

TABLE 1 HPGe Results

Location	Northing	Easting	Parameter	Sample ID	Results (ppm)
A1P2-INV-39	477887.701	1351356.568	Thorium-232	A1P2-INV-39-G	1
A1P2-INV-40	477892.252	1351574.243	Thorium-232	A1P2-INV-40-G	0.6
A1P2-INV-41	478126.016	1351574.744	Thorium-232	A1P2-INV-41-G	0.9
A1P2-INV-41	478126.016	1351574.744	Thorium-232	A1P2-INV-41-G	0.9
A1P2-INV-42	478125.003	1351363.032	Thorium-232	A1P2-INV-42-G	0.9
A1P2-INV-43	478117.397	1351161.298	Thorium-232	A1P2-INV-43-G	1
A1P2-INV-44	478118.287	1350946.606	Thorium-232	A1P2-INV-44-G	1
A1P2-INV-45	478126.071	1350729.546	Thorium-232	A1P2-INV-45-G	0.8
A1P2-INV-46	478126.164	1350519.073	Thorium-232	A1P2-INV-46-G	0.9
A1P2-INV-47	478126.321	1350310.369	Thorium-232	A1P2-INV-47-G	1
A1P2-INV-48	478126.065	1350200.568	Thorium-232	A1P2-INV-48-G	1
A1P2-INV-49	478335.161	1350101.803	Thorium-232	A1P2-INV-49-G	1
A1P2-INV-50	478335.491	1350310.214	Thorium-232	A1P2-INV-50-G	0.9
A1P2-INV-51	478335.459	1350519.13	Thorium-232	A1P2-INV-51-G	1
A1P2-INV-52	478335.868	1350729.541	Thorium-232	A1P2-INV-52-G	1
A1P2-INV-53	478335.891	1350937.658	Thorium-232	A1P2-INV-53-G	0.9
A1P2-INV-54	478335.105	1351146.613	Thorium-232	A1P2-INV-54-G	0.9
A1P2-INV-55	478335.066	1351355.269	Thorium-232	A1P2-INV-55-G	0.9
A1P2-INV-56	478335.626	1351564.4	Thorium-232	A1P2-INV-56-G	1
A1P2-INV-57	478335.163	1351699.12	Thorium-232	A1P2-INV-57-G	0.9
A1P2-INV-57-2	478254.725	1351780.969	Thorium-232	A1P2-INV-57-2-G	0.9
A1P2-INV-57-3	478294.255	1351783.225	Thorium-232	A1P2-INV-57-3-G	0.9
A1P2-INV-58	478544.636	1351698.732	Thorium-232	A1P2-INV-58-G	0.9
A1P2-INV-59	478544.146	1351564.59	Thorium-232	A1P2-INV-59-G	1
A1P2-INV-60	478544.837	1351355.76	Thorium-232	A1P2-INV-60-G	1
A1P2-INV-61	478544.715	1351146.107	Thorium-232	A1P2-INV-61-G	1
A1P2-INV-62	478544.054	1350937.473	Thorium-232	A1P2-INV-62-G	0.9
A1P2-INV-63	478544.29	1350729.666	Thorium-232	A1P2-INV-63-G	0.9
A1P2-INV-64	478544.637	1350519.372	Thorium-232	A1P2-INV-64-G	0.9
A1P2-INV-65	478544.53	1350310.914	Thorium-232	A1P2-INV-65-G	1
A1P2-INV-66	478547.58	1350105.01	Thorium-232	A1P2-INV-66-G	0.8
A1P2-INV-67	478632.709	1350081.094	Thorium-232	A1P2-INV-67-G	0.9
A1P2-INV-68	478753.125	1350310.828	Thorium-232	A1P2-INV-68-G	0.9
A1P2-INV-69	478752.484	1350519.547	Thorium-232	A1P2-INV-69-G	0.9
A1P2-INV-70	478752.188	1350720.026	Thorium-232	A1P2-INV-70-G	0.8
A1P2-INV-71	478752.467	1350937.041	Thorium-232	A1P2-INV-71-G	0.9
A1P2-INV-72	478752.166	1351146.698	Thorium-232	A1P2-INV-72-G	1
A1P2-INV-73	478752.147	1351355.494	Thorium-232	A1P2-INV-73-G	0.9
A1P2-INV-74	478752.54	1351564.545	Thorium-232	A1P2-INV-74-G	1
A1P2-INV-75	478751.92	1351699.057	Thorium-232	A1P2-INV-75-G	0.9
A1P2-INV-76	478961.563	1351699.476	Thorium-232	A1P2-INV-76-G	0.8
A1P2-INV-77	478961.195	1351564.309	Thorium-232	A1P2-INV-77-G	0.9
A1P2-INV-78	478961.543	1351355.679	Thorium-232	A1P2-INV-78-G	0.9
A1P2-INV-79	478961.85	1351146.783	Thorium-232	A1P2-INV-79-G	1

TABLE 1 HPGe Results

Location	Northing	Easting	Parameter	Sample ID	Results (ppm)
A1P2-INV-80	478961.038	1350937.187	Thorium-232	A1P2-INV-80-G	0.9
A1P2-INV-81	478960.925	1350732.619	Thorium-232	A1P2-INV-81-G	0.8
A1P2-INV-82	478961.392	1350519.063	Thorium-232	A1P2-INV-82-G	0.8
A1P2-INV-83	479170.207	1350729.574	Thorium-232	A1P2-INV-83-G	0.9
A1P2-INV-84	479170.486	1350937.885	Thorium-232	A1P2-INV-84-G	0.8
A1P2-INV-85	479170.588	1351146.975	Thorium-232	A1P2-INV-85-G	1
A1P2-INV-86	479170.341	1351355.519	Thorium-232	A1P2-INV-86-G	0.8
A1P2-INV-87	479170.254	1351563.332	Thorium-232	A1P2-INV-87-G	0.7
A1P2-INV-88	479170.776	1351716.309	Thorium-232	A1P2-INV-88-G	0.7
A1P2-INV-89	479379.064	1351699.374	Thorium-232	A1P2-INV-89-G	0.7
A1P2-INV-90	479379.033	1351564.107	Thorium-232	A1P2-INV-90-G	0.8
A1P2-INV-91	479379.079	1351355.098	Thorium-232	A1P2-INV-91-G	0.8
A1P2-INV-92	479379.075	1351146.076	Thorium-232	A1P2-INV-92-G	1
A1P2-INV-93	479379.269	1350938.509	Thorium-232	A1P2-INV-93-G	0.9
A1P2-INV-94	479587.417	1350938.588	Thorium-232	A1P2-INV-94-G	1
A1P2-INV-94-2	479536.014	1350989.625	Thorium-232	A1P2-INV-94-2-G	1
A1P2-INV-94-3	479534.675	1350903.69	Thorium-232	A1P2-INV-94-3-G	0.9
A1P2-INV-94-4	479638.598	1350905.352	Thorium-232	A1P2-INV-94-4-G	1
A1P2-INV-94-5	479638.29	1350988.193	Thorium-232	A1P2-INV-94-5-G	0.9
A1P2-INV-95	479587.921	1351146.806	Thorium-232	A1P2-INV-95-G	0.8
A1P2-INV-95-2	479537.818	1351199.496	Thorium-232	A1P2-INV-95-2-G	1
A1P2-INV-95-3	479533.824	1351092.146	Thorium-232	A1P2-INV-95-3-G	1
A1P2-INV-95-4	479638.73	1351092.875	Thorium-232	A1P2-INV-95-4-G	0.9
A1P2-INV-95-5	479640.567	1351197.316	Thorium-232	A1P2-INV-95-5-G	0.9
A1P2-INV-96	479587.292	1351355.576	Thorium-232	A1P2-INV-96-G	0.9
A1P2-INV-97	479588.003	1351564.215	Thorium-232	A1P2-INV-97-G	0.7
A1P2-INV-98	479587.254	1351699.047	Thorium-232	A1P2-INV-98-G	0.8
A1P2-INV-99	479797.947	1351709.831	Thorium-232	A1P2-INV-99-G	0.9
A1P2-INV-99-2	479736.86	1351777.34	Thorium-232	A1P2-INV-99-2-G	0.9
A1P2-INV-99-3	479740.23	1351691.21	Thorium-232	A1P2-INV-99-3-G	0.9
A1P2-INV-99-4	479833.07	1351773.98	Thorium-232	A1P2-INV-99-4-G	0.9
A1P2-INV-99-5	479839.45	1351690.84	Thorium-232	A1P2-INV-99-5-G	1
A1P2-INV-100	479812.847	1351553.081	Thorium-232	A1P2-INV-100-G	0.3
A1P2-INV-101	479796.107	1351355.406	Thorium-232	A1P2-INV-101-G	0.7
A1P2-INV-102	479796.669	1351146.901	Thorium-232	A1P2-INV-102-G	0.9
A1P2-INV-102-2	479745.15	1351200.726	Thorium-232	A1P2-INV-102-2-G	1
A1P2-INV-102-3	479744.516	1351093.366	Thorium-232	A1P2-INV-102-3-G	1
A1P2-INV-102-4	479850.216	1351094.039	Thorium-232	A1P2-INV-102-4-G	1
A1P2-INV-102-5	479848.754	1351197.293	Thorium-232	A1P2-INV-102-5-G	1
A1P2-INV-103	479796.077	1350937.379	Thorium-232	A1P2-INV-103-G	1
A1P2-INV-103-2	479741.435	1350906.394	Thorium-232	A1P2-INV-103-2-G	1
A1P2-INV-103-3	479744.029	1350990.063	Thorium-232	A1P2-INV-103-3-G	1
A1P2-INV-103-4	479841.142	1350912.502	Thorium-232	A1P2-INV-103-4-G	1.1
A1P2-INV-103-5	479849.541	1350979.992	Thorium-232	A1P2-INV-103-5-G	1

TABLE 1 HPGe Results

Location	Northing	Easting	Parameter	Sample ID	Results (ppm)
A1P2-INV-104	480004.36	1350937.821	Thorium-232	A1P2-INV-104-G	1.1
A1P2-INV-104-2	479965.341	1350983.733	Thorium-232	A1P2-INV-104-2-G	1
A1P2-INV-104-3	480059.575	1350911.26	Thorium-232	A1P2-INV-104-3-G	1.1
A1P2-INV-104-4	479943.451	1350908.921	Thorium-232	A1P2-INV-104-4-G	1
A1P2-INV-104-5	480066.098	1350987.514	Thorium-232	A1P2-INV-104-5-G	1.1
A1P2-INV-105	480004.27	1351146.148	Thorium-232	A1P2-INV-105-G	1
A1P2-INV-105-2	480054.371	1351086.908	Thorium-232	A1P2-INV-105-2-G	1.1
A1P2-INV-105-3	479946.057	1351081.543	Thorium-232	A1P2-INV-105-3-G	0.9
A1P2-INV-105-4	480052.716	1351196.516	Thorium-232	A1P2-INV-105-4-G	1.1
A1P2-INV-105-5	479952.569	1351203.087	Thorium-232	A1P2-INV-105-5-G	1
A1P2-INV-106-9	479959.5943	1351388.236	Thorium-232	A1P2-INV-106-9-G	1
A1P2-INV-106-20	479922.2372	1351407.431	Thorium-232	A1P2-INV-106-20-G	0.7
A1P2-INV-106-21	479957.5391	1351430.186	Thorium-232	A1P2-INV-106-21-G	1.1
A1P2-INV-109-2	480255.409	1351769.202	Thorium-232	A1P2-INV-109-2-G	0.7
A1P2-INV-109-3	480253.657	1351695.331	Thorium-232	A1P2-INV-109-3-G	1.3
A1P2-INV-110-2	480258.132	1351510.744	Thorium-232	A1P2-INV-110-2-G	1.1
A1P2-INV-110-3	480253.46	1351604.977	Thorium-232	A1P2-INV-110-3-G	1.1
A1P2-INV-111-28	480252.2854	1351360.525	Thorium-232	A1P2-INV-111-28-G	1
A1P2-INV-111-32	480216.9835	1351337.77	Thorium-232	A1P2-INV-111-32-G	1.1
A1P2-INV-111-40	480250	1351319	Thorium-232	A1P2-INV-111-40-G	0.9
A1P2-INV-111-41	480220	1351287	Thorium-232	A1P2-INV-111-41-G	0.9
A1P2-INV-111-42	480180	1351319	Thorium-232	A1P2-INV-111-42-G	1
A1P2-INV-111-43	480181	1351280	Thorium-232	A1P2-INV-111-43-G	1
A1P2-INV-112	480212.348	1351146.579	Thorium-232	A1P2-INV-112-G	1.1
A1P2-INV-112-2	480254.679	1351087.745	Thorium-232	A1P2-INV-112-2-G	1.2
A1P2-INV-112-3	480157.899	1351090.203	Thorium-232	A1P2-INV-112-3-G	1.1
A1P2-INV-112-4	480162.32	1351184.983	Thorium-232	A1P2-INV-112-4-G	1.1
A1P2-INV-112-5	480257.597	1351193.295	Thorium-232	A1P2-INV-112-5-G	2
A1P2-INV-113	480212.484	1350958.333	Thorium-232	A1P2-INV-113-G	1.1
A1P2-INV-113-2	480159.335	1350945.07	Thorium-232	A1P2-INV-113-2-G	1.1
A1P2-INV-113-3	480162.826	1351006.153	Thorium-232	A1P2-INV-113-3-G	1.1
A1P2-INV-113-4	480263.467	1351004.081	Thorium-232	A1P2-INV-113-4-G	1
A1P2-INV-114	480420.545	1351054.985	Thorium-232	A1P2-INV-114-G	1.2
A1P2-INV-115	480420.247	1351146.533	Thorium-232	A1P2-INV-115-G	1
A1P2-INV-115	480420.247	1351146.533	Thorium-232	A1P2-INV-115-G	1.1
A1P2-INV-115	480420.247	1351146.533	Thorium-232	A1P2-INV-115-G	1.1
A1P2-INV-115-2	480468.58	1351185.968	Thorium-232	A1P2-INV-115-2-G	1.1
A1P2-INV-115-3	480369.534	1351096.317	Thorium-232	A1P2-INV-115-3-G	1.1
A1P2-INV-115-4	480462.312	1351117.284	Thorium-232	A1P2-INV-115-4-G	1.1
A1P2-INV-115-5	480350.407	1351198.603	Thorium-232	A1P2-INV-115-5-G	1.1
A1P2-INV-116	480420.03	1351355.284	Thorium-232	A1P2-INV-116-G	1.2
A1P2-INV-116	480420.03	1351355.284	Thorium-232	A1P2-INV-116-G	1.2
A1P2-INV-116	480420.03	1351355.284	Thorium-232	A1P2-INV-116-G	1.1
A1P2-INV-116-2	480468.376	1351299.865	Thorium-232	A1P2-INV-116-2-G	1.1

TABLE 1 HPGe Results

Location	Northing	Easting	Parameter	Sample ID	Results (ppm)
A1P2-INV-116-3	480361.719	1351299.474	Thorium-232	A1P2-INV-116-3-G	1.1
A1P2-INV-116-4	480469.469	1351404.257	Thorium-232	A1P2-INV-116-4-G	1.3
A1P2-INV-116-5	480367.183	1351406.325	Thorium-232	A1P2-INV-116-5-G	1.2
A1P2-INV-117	480420.639	1351562.327	Thorium-232	A1P2-INV-117-G	1.3
A1P2-INV-117	480420.639	1351562.327	Thorium-232	A1P2-INV-117-G	1.2
A1P2-INV-117-2	480476.643	1351613.798	Thorium-232	A1P2-INV-117-2-G	1.3
A1P2-INV-117-3	480370.386	1351621.836	Thorium-232	A1P2-INV-117-3-G	0.8
A1P2-INV-117-4	480475.796	1351506.118	Thorium-232	A1P2-INV-117-4-G	1.2
A1P2-INV-117-5	480377.439	1351511.382	Thorium-232	A1P2-INV-117-5-G	1.1
A1P2-INV-118	480420.186	1351699.575	Thorium-232	A1P2-INV-118-G	0.8
A1P2-INV-118-2	480473.822	1351784.219	Thorium-232	A1P2-INV-118-2-G	1.1
A1P2-INV-118-3	480487.415	1351704.606	Thorium-232	A1P2-INV-118-3-G	1.1
A1P2-INV-118-4	480379.622	1351755.69	Thorium-232	A1P2-INV-118-4-G	1.1
A1P2-INV-118-5	480369.956	1351688.945	Thorium-232	A1P2-INV-118-5-G	1.1
A1P2-INV-119	480628.686	1351699.344	Thorium-232	A1P2-INV-119-G	1.2
A1P2-INV-119-2	480663.585	1351785.28	Thorium-232	A1P2-INV-119-2-G	0.4
A1P2-INV-119-3	480667.417	1351714.22	Thorium-232	A1P2-INV-119-3-G	1.1
A1P2-INV-119-4	480569.696	1351711.045	Thorium-232	A1P2-INV-119-4-G	1.2
A1P2-INV-119-5	480586.656	1351784.019	Thorium-232	A1P2-INV-119-5-G	1.2
A1P2-INV-120	480628.367	1351563.267	Thorium-232	A1P2-INV-120-G	1.2
A1P2-INV-120	480628.367	1351563.267	Thorium-232	A1P2-INV-120-G	1.2
A1P2-INV-120-3	480566.509	1351497.927	Thorium-232	A1P2-INV-120-3-G	1.2
A1P2-INV-120-4	480689.152	1351628.794	Thorium-232	A1P2-INV-120-4-G	1.1
A1P2-INV-121	480628.36	1351355.457	Thorium-232	A1P2-INV-121-G	1.1
A1P2-INV-121-2	480679.013	1351401.353	Thorium-232	A1P2-INV-121-2-G	1.2
A1P2-INV-121-4	480557.013	1351378.749	Thorium-232	A1P2-INV-121-4-G	1.1
A1P2-INV-121-5	480677.331	1351340.454	Thorium-232	A1P2-INV-121-5-G	1.2
A1P2-INV-122	480628.255	1351208.733	Thorium-232	A1P2-INV-122-G	1.1
A1P2-INV-122-2	480572.39	1351212.681	Thorium-232	A1P2-INV-122-2-G	1.1
A1P2-INV-122-3	480648.569	1351251.092	Thorium-232	A1P2-INV-122-3-G	1.1
A1P2-INV-128	480836.216	1351440.228	Thorium-232	A1P2-INV-128-G	1.2
A1P2-INV-128-3	480771.437	1351393.798	Thorium-232	A1P2-INV-128-3-G	1.2
A1P2-INV-129	480836.145	1351563.759	Thorium-232	A1P2-INV-129-G	1.1
A1P2-INV-129-2	480767.485	1351495.638	Thorium-232	A1P2-INV-129-2-G	1.1
A1P2-INV-129-3	480879.39	1351520.628	Thorium-232	A1P2-INV-129-3-G	0.8
A1P2-INV-129-4	480781.983	1351624.653	Thorium-232	A1P2-INV-129-4-G	1.2
A1P2-INV-129-5	480870.747	1351610.577	Thorium-232	A1P2-INV-129-5-G	1.2
A1P2-INV-130-2	480784.293	1351707.189	Thorium-232	A1P2-INV-130-2-G	1.2
A1P2-INV-130-3	480837.971	1351711.162	Thorium-232	A1P2-INV-130-3-G	1.2
A1P2-INV-130-4	480835.613	1351775.758	Thorium-232	A1P2-INV-130-4-G	1.1
A1P2-INV-130-5	480778.264	1351782.208	Thorium-232	A1P2-INV-130-5-G	0.4
A1P2-INV-133	477458.157	1351806.325	Thorium-232	A1P2-INV-133-G	0.8
A1P2-INV-133-2	477494.138	1351800.021	Thorium-232	A1P2-INV-133-2-G	0.9
A1P2-INV-133-3	477528.379	1351802.311	Thorium-232	A1P2-INV-133-3-G	0.8

TABLE 1 HPGe Results

Location	Northing	Easting	Parameter	Sample ID	Results (ppm)
A1P2-INV-133-4	477565.848	1351801.22	Thorium-232	A1P2-INV-133-4-G	0.7
A1P2-INV-133-5	477611.309	1351798.05	Thorium-232	A1P2-INV-133-5-G	0.7
A1P2-INV-133-6	477651.717	1351795.624	Thorium-232	A1P2-INV-133-6-G	0.7
A1P2-INV-133-7	477481.472	1351773.225	Thorium-232	A1P2-INV-133-7-G	0.7
A1P2-INV-133-8	477513.058	1351771.777	Thorium-232	A1P2-INV-133-8-G	0.8
A1P2-INV-133-10	477583.328	1351772.14	Thorium-232	A1P2-INV-133-10-G	0.8
A1P2-INV-133-11	477631.474	1351771.79	Thorium-232	A1P2-INV-133-11-G	0.8
A1P2-INV-133-12	477668.781	1351770.552	Thorium-232	A1P2-INV-133-12-G	0.7
A1P2-INV-133-13	477476.865	1351749.874	Thorium-232	A1P2-INV-133-13-G	0.5
A1P2-INV-133-14	477508.177	1351749.178	Thorium-232	A1P2-INV-133-14-G	0.6
A1P2-INV-133-15	477541.121	1351748.824	Thorium-232	A1P2-INV-133-15-G	0.6
A1P2-INV-133-16	477580.086	1351748.656	Thorium-232	A1P2-INV-133-16-G	0.7
A1P2-INV-133-17	477618.099	1351739.238	Thorium-232	A1P2-INV-133-17-G	0.5
A1P2-INV-134	477686.884	1351794.985	Thorium-232	A1P2-INV-134-G	0.8
A1P2-INV-134-2	477722.889	1351794.456	Thorium-232	A1P2-INV-134-2-G	0.8
A1P2-INV-134-3	477765.003	1351790.54	Thorium-232	A1P2-INV-134-3-G	0.8
A1P2-INV-134-4	477796.399	1351788.156	Thorium-232	A1P2-INV-134-4-G	0.9
A1P2-INV-134-5	477830.327	1351786.268	Thorium-232	A1P2-INV-134-5-G	0.8
A1P2-INV-134-6	477702.733	1351768.838	Thorium-232	A1P2-INV-134-6-G	0.8
A1P2-INV-134-7	477745.701	1351770.256	Thorium-232	A1P2-INV-134-7-G	0.9
A1P2-INV-134-8	477780.021	1351769.506	Thorium-232	A1P2-INV-134-8-G	0.9
A1P2-INV-134-9	477811.469	1351768.686	Thorium-232	A1P2-INV-134-9-G	0.9
A1P2-INV-134-10	477844.195	1351769.567	Thorium-232	A1P2-INV-134-10-G	0.8
A1P2-INV-135	477864.092	1351788.023	Thorium-232	A1P2-INV-135-G	0.9
A1P2-INV-135-2	477908.143	1351784.73	Thorium-232	A1P2-INV-135-2-G	0.9
A1P2-INV-135-3	477943.545	1351781.725	Thorium-232	A1P2-INV-135-3	0.9
A1P2-INV-135-4	477983.598	1351780.465	Thorium-232	A1P2-INV-135-4-G	0.8
A1P2-INV-135-5	478020.888	1351778.46	Thorium-232	A1P2-INV-135-5-G	0.8
A1P2-INV-135-6	477884.958	1351761.739	Thorium-232	A1P2-INV-135-6-G	0.9
A1P2-INV-135-7	477927.352	1351764.339	Thorium-232	A1P2-INV-135-7-G	0.9
A1P2-INV-135-7	477927.352	1351764.339	Thorium-232	A1P2-INV-135-7-G	0.9
A1P2-INV-135-8	477966.486	1351763.306	Thorium-232	A1P2-INV-135-8-G	0.9
A1P2-INV-135-9	478003.395	1351762.421	Thorium-232	A1P2-INV-135-9-G	0.8
A1P2-INV-135-10	478043.493	1351760.661	Thorium-232	A1P2-INV-135-10-G	0.8
A1P2-INV-136	478062.844	1351775.307	Thorium-232	A1P2-INV-136-G	0.8
A1P2-INV-136-2	478105.127	1351776.276	Thorium-232	A1P2-INV-136-2-G	0.8
A1P2-INV-136-3	478143.626	1351777.493	Thorium-232	A1P2-INV-136-3-G	0.9
A1P2-INV-136-4	478182.029	1351779.746	Thorium-232	A1P2-INV-136-4-G	0.8
A1P2-INV-136-5	478214.901	1351780.541	Thorium-232	A1P2-INV-136-5-G	0.9
A1P2-INV-136-6	478079.49	1351755.396	Thorium-232	A1P2-INV-136-6-G	0.8
A1P2-INV-136-8	478164.426	1351756.384	Thorium-232	A1P2-INV-136-8-G	0.8
A1P2-INV-136-9	478195.033	1351756.563	Thorium-232	A1P2-INV-136-9-G	0.8
A1P2-INV-136-10	478231.964	1351758.339	Thorium-232	A1P2-INV-136-10	0.8
A1P2-INV-137	478263.171	1349814.048	Thorium-232	A1P2-INV-137-G	1

TABLE 1 HPGe Results

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Location	Northing	Easting	Parameter	Sample ID	Results (ppm)
A1P2-INV-137	478263.171	1349814.048	Thorium-232	A1P2-INV-137-G	1
A1P2-INV-138	478392.042	1349782.583	Thorium-232	A1P2-INV-138-G	1.1
A1P2-INV-139	478547.248	1349756.538	Thorium-232	A1P2-INV-139-G	0.9
A1P2-INV-140	478721.19	1349779.232	Thorium-232	A1P2-INV-140-G	1
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

TABLE 1 HPGe Results

Location	Northing	Easting	Parameter	Sample ID	Results (ppm)
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
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

TABLE 1 HPGe Results

Location	Northing	Easting	Parameter	Sample ID	Results (ppm)
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
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

TABLE 1 HPGe Results

Location	Northing	Easting	Parameter	Sample ID	Results (ppm)
A1P2-INV-78	478961.543	1351355.679	Radium-226	A1P2-INV-78-G	1.4
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-89	479379.064	1351699.374	Radium-226	A1P2-INV-89-G	0.9
A1P2-INV-90	479379.033	1351564.107	Radium-226	A1P2-INV-90-G	1
A1P2-INV-91	479379.079	1351355.098	Radium-226	A1P2-INV-91-G	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-96	479587.292	1351355.576	Radium-226	A1P2-INV-96-G	1.1
A1P2-INV-97	479588.003	1351564.215	Radium-226	A1P2-INV-97-G	0.9
A1P2-INV-98	479587.254	1351699.047	Radium-226	A1P2-INV-98-G	1
A1P2-INV-99	479797.947	1351709.831	Radium-226	A1P2-INV-99-G	1.2
A1P2-INV-99-2	479736.86	1351777.34	Radium-226	A1P2-INV-99-2-G	0.9
A1P2-INV-99-3	479740.23	1351691.21	Radium-226	A1P2-INV-99-3-G	0.9
A1P2-INV-99-4	479833.07	1351773.98	Radium-226	A1P2-INV-99-4-G	1
A1P2-INV-99-5	479839.45	1351690.84	Radium-226	A1P2-INV-99-5-G	1
A1P2-INV-100	479812.847	1351553.081	Radium-226	A1P2-INV-100-G	0.8
A1P2-INV-101	479796.107	1351355.406	Radium-226	A1P2-INV-101-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

Location	Northing	Easting	Parameter	Sample ID	Results (ppm)
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-106-9	479959.5943	1351388.236	Radium-226	A1P2-INV-106-9-G	2.2
A1P2-INV-106-20	479922.2372	1351407.431	Radium-226	A1P2-INV-106-20-G	1.6
A1P2-INV-106-21	479957.5391	1351430.186	Radium-226	A1P2-INV-106-21-G	1.9
A1P2-INV-109-2	480255.409	1351769.202	Radium-226	A1P2-INV-109-2-G	0.9
A1P2-INV-109-3	480253.657	1351695.331	Radium-226	A1P2-INV-109-3-G	1.1
A1P2-INV-110-2	480258.132	1351510.744	Radium-226	A1P2-INV-110-2-G	1
A1P2-INV-110-3	480253.46	1351604.977	Radium-226	A1P2-INV-110-3-G	1.1
A1P2-INV-111-28	480252.2854	1351360.525	Radium-226	A1P2-INV-111-28-G	1.1
A1P2-INV-111-32	480216.9835	1351337.77	Radium-226	A1P2-INV-111-32-G	1.2
A1P2-INV-111-40	480250	1351319	Radium-226	A1P2-INV-111-40-G	1.1
A1P2-INV-111-41	480220	1351287	Radium-226	A1P2-INV-111-41-G	1.2
A1P2-INV-111-42	480180	1351319	Radium-226	A1P2-INV-111-42-G	1.2
A1P2-INV-111-43	480181	1351280	Radium-226	A1P2-INV-111-43-G	1.3
A1P2-INV-112	480212.348	1351146.579	Radium-226	A1P2-INV-112-G	1.3
A1P2-INV-112-2	480254.679	1351087.745	Radium-226	A1P2-INV-112-2-G	1.1
A1P2-INV-112-3	480157.899	1351090.203	Radium-226	A1P2-INV-112-3-G	1.3
A1P2-INV-112-4	480162.32	1351184.983	Radium-226	A1P2-INV-112-4-G	1.3
A1P2-INV-112-5	480257.597	1351193.295	Radium-226	A1P2-INV-112-5-G	1
A1P2-INV-113	480212.484	1350958.333	Radium-226	A1P2-INV-113-G	1.2
A1P2-INV-113-2	480159.335	1350945.07	Radium-226	A1P2-INV-113-2-G	1.7
A1P2-INV-113-3	480162.826	1351006.153	Radium-226	A1P2-INV-113-3-G	1.3
A1P2-INV-113-4	480263.467	1351004.081	Radium-226	A1P2-INV-113-4-G	1.2
A1P2-INV-114	480420.545	1351054.985	Radium-226	A1P2-INV-114-G	1.1
A1P2-INV-115	480420.247	1351146.533	Radium-226	A1P2-INV-115-G	1
A1P2-INV-115	480420.247	1351146.533	Radium-226	A1P2-INV-115-G	1
A1P2-INV-115	480420.247	1351146.533	Radium-226	A1P2-INV-115-G	1
A1P2-INV-115-2	480468.58	1351185.968	Radium-226	A1P2-INV-115-2-G	1
A1P2-INV-115-3	480369.534	1351096.317	Radium-226	A1P2-INV-115-3-G	1
A1P2-INV-115-4	480462.312	1351117.284	Radium-226	A1P2-INV-115-4-G	1
A1P2-INV-115-5	480350.407	1351198.603	Radium-226	A1P2-INV-115-5-G	1
A1P2-INV-116	480420.03	1351355.284	Radium-226	A1P2-INV-116-G	1.1
A1P2-INV-116	480420.03	1351355.284	Radium-226	A1P2-INV-116-G	1

TABLE 1 HPGe Results

Location	Northing	Easting	Parameter	Sample ID	Results (ppm)
A1P2-INV-116	480420.03	1351355.284	Radium-226	A1P2-INV-116-G	0.9
A1P2-INV-116-2	480468.376	1351299.865	Radium-226	A1P2-INV-116-2-G	1.1
A1P2-INV-116-3	480361.719	1351299.474	Radium-226	A1P2-INV-116-3-G	1.1
A1P2-INV-116-4	480469.469	1351404.257	Radium-226	A1P2-INV-116-4-G	1.1
A1P2-INV-116-5	480367.183	1351406.325	Radium-226	A1P2-INV-116-5-G	1.1
A1P2-INV-117	480420.639	1351562.327	Radium-226	A1P2-INV-117-G	1.1
A1P2-INV-117	480420.639	1351562.327	Radium-226	A1P2-INV-117-G	1
A1P2-INV-117-2	480476.643	1351613.798	Radium-226	A1P2-INV-117-2-G	1.1
A1P2-INV-117-3	480370.386	1351621.836	Radium-226	A1P2-INV-117-3-G	0.9
A1P2-INV-117-4	480475.796	1351506.118	Radium-226	A1P2-INV-117-4-G	1.1
A1P2-INV-117-5	480377.439	1351511.382	Radium-226	A1P2-INV-117-5-G	1
A1P2-INV-118	480420.186	1351699.575	Radium-226	A1P2-INV-118-G	0.9
A1P2-INV-118-2	480473.822	1351784.219	Radium-226	A1P2-INV-118-2-G	1.2
A1P2-INV-118-3	480487.415	1351704.606	Radium-226	A1P2-INV-118-3-G	1.3
A1P2-INV-118-4	480379.622	1351755.69	Radium-226	A1P2-INV-118-4-G	1.2
A1P2-INV-118-5	480369.956	1351688.945	Radium-226	A1P2-INV-118-5-G	1.2
A1P2-INV-119	480628.686	1351699.344	Radium-226	A1P2-INV-119-G	1.1
A1P2-INV-119-2	480663.585	1351785.28	Radium-226	A1P2-INV-119-2-G	0.9
A1P2-INV-119-3	480667.417	1351714.22	Radium-226	A1P2-INV-119-3-G	1.3
A1P2-INV-119-4	480569.696	1351711.045	Radium-226	A1P2-INV-119-4-G	1.3
A1P2-INV-119-5	480586.656	1351784.019	Radium-226	A1P2-INV-119-5-G	1.3
A1P2-INV-120	480628.367	1351563.267	Radium-226	A1P2-INV-120-G	1.1
A1P2-INV-120	480628.367	1351563.267	Radium-226	A1P2-INV-120-G	1.5
A1P2-INV-120-3	480566.509	1351497.927	Radium-226	A1P2-INV-120-3-G	1.6
A1P2-INV-120-4	480689.152	1351628.794	Radium-226	A1P2-INV-120-4-G	1.3
A1P2-INV-121	480628.36	1351355.457	Radium-226	A1P2-INV-121-G	1.1
A1P2-INV-121-2	480679.013	1351401.353	Radium-226	A1P2-INV-121-2-G	1.5
A1P2-INV-121-4	480557.013	1351378.749	Radium-226	A1P2-INV-121-4-G	1.7
A1P2-INV-121-5	480677.331	1351340.454	Radium-226	A1P2-INV-121-5-G	1.6
A1P2-INV-122	480628.255	1351208.733	Radium-226	A1P2-INV-122-G	1.1
A1P2-INV-122-2	480572.39	1351212.681	Radium-226	A1P2-INV-122-2-G	1.8
A1P2-INV-122-3	480648.569	1351251.092	Radium-226	A1P2-INV-122-3-G	1.8
A1P2-INV-128	480836.216	1351440.228	Radium-226	A1P2-INV-128-G	1.1
A1P2-INV-128-3	480771.437	1351393.798	Radium-226	A1P2-INV-128-3-G	1.1
A1P2-INV-129	480836.145	1351563.759	Radium-226	A1P2-INV-129-G	1.1
A1P2-INV-129-2	480767.485	1351495.638	Radium-226	A1P2-INV-129-2-G	1.1
A1P2-INV-129-3	480879.39	1351520.628	Radium-226	A1P2-INV-129-3-G	0.8
A1P2-INV-129-4	480781.983	1351624.653	Radium-226	A1P2-INV-129-4-G	1.2
A1P2-INV-129-5	480870.747	1351610.577	Radium-226	A1P2-INV-129-5-G	1.2
A1P2-INV-130-2	480784.293	1351707.189	Radium-226	A1P2-INV-130-2-G	1.4
A1P2-INV-130-3	480837.971	1351711.162	Radium-226	A1P2-INV-130-3-G	1.4
A1P2-INV-130-4	480835.613	1351775.758	Radium-226	A1P2-INV-130-4-G	1.3
A1P2-INV-130-5	480778.264	1351782.208	Radium-226	A1P2-INV-130-5-G	0.9
A1P2-INV-133	477458.157	1351806.325	Radium-226	A1P2-INV-133-G	0.9

TABLE 1 HPGe Results

Location	Northing	Easting	Parameter	Sample ID	Results (ppm)
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
A1P2-INV-133-15	477541.121	1351748.824	Radium-226	A1P2-INV-133-15-G	1
A1P2-INV-133-16	477580.086	1351748.656	Radium-226	A1P2-INV-133-16-G	1
A1P2-INV-133-17	477618.099	1351739.238	Radium-226	A1P2-INV-133-17-G	1
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
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

TABLE 1 HPGe Results

Location	Northing	Easting	Parameter	Sample ID	Results (ppm)
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

TABLE 2
PHYSICAL SAMPLE RESULTS

See Figure 1 for the location identifier. For example A1P2-INV-*10*-1-1R is located in the acre noted as Number 10 in Figure 1.

SAMPLE ID	EASTING	NORTHING	PARAMETER	RESULT	UNITS
A1P2-INV-1-1-1R-D	1351777.248	476857.791	Uranium, Total	7.3	ug/g dry
A1P2-INV-10-1-1R	1351065.398	477055.833	Radium-226	0.97	pCi/g dry
A1P2-INV-10-1-1R	1351065.398	477055.833	Radium-228	1	pCi/g dry
A1P2-INV-10-1-1R	1351065.398	477055.833	Thorium-228	0.88	pCi/g dry
A1P2-INV-10-1-1R	1351065.398	477055.833	Thorium-232	1	pCi/g dry
A1P2-INV-10-1-1R	1351065.398	477055.833	Uranium, Total	5.11	ppm dry
A1P2-INV-10-1-1R	1351065.398	477055.833	Uranium-235	0.19	pCi/g dry
A1P2-INV-10-1-1R	1351065.398	477055.833	Uranium-238	3.1	pCi/g dry
A1P2-INV-101-1-1R	1351355.406	479796.107	Uranium, Total	16	ppm dry
A1P2-INV-103-1-1R	1350937.379	479796.077	Uranium, Total	31.7	ppm dry
A1P2-INV-105-1-1R	1351146.148	480004.27	Uranium, Total	35.1	ppm dry
A1P2-INV-11-1-1R	1351283.131	477064.286	Radium-226	1.1	pCi/g dry
A1P2-INV-11-1-1R	1351283.131	477064.286	Radium-228	1.1	pCi/g dry
A1P2-INV-11-1-1R	1351283.131	477064.286	Thorium-228	1	pCi/g dry
A1P2-INV-11-1-1R	1351283.131	477064.286	Thorium-232	1.1	pCi/g dry
A1P2-INV-11-1-1R	1351283.131	477064.286	Uranium, Total	6.21	ppm dry
A1P2-INV-11-1-1R	1351283.131	477064.286	Uranium-235	0.14	pCi/g dry
A1P2-INV-11-1-1R	1351283.131	477064.286	Uranium-238	2.8	pCi/g dry
A1P2-INV-111-1-1R	1351355.259	480212.258	Uranium, Total	16.1	ppm dry
A1P2-INV-113-1-1R	1350958.333	480212.484	Uranium, Total	67.6	ppm dry
A1P2-INV-115-1-1R	1351146.533	480420.247	Uranium, Total	29.4	ppm dry
A1P2-INV-117-1-1R	1351562.327	480420.639	Uranium, Total	78.7	ppm dry
A1P2-INV-119-1-1R-	1351699.344	480628.686	Uranium, Total	57.3	ppm dry
A1P2-INV-12-1-1R	1351491.463	477076.743	Radium-226	1	pCi/g dry
A1P2-INV-12-1-1R	1351491.463	477076.743	Radium-228	0.75	pCi/g dry
A1P2-INV-12-1-1R	1351491.463	477076.743	Thorium-228	0.85	pCi/g dry
A1P2-INV-12-1-1R	1351491.463	477076.743	Thorium-232	0.75	pCi/g dry
A1P2-INV-12-1-1R	1351491.463	477076.743	Uranium, Total	5.53	ppm dry
A1P2-INV-12-1-1R	1351491.463	477076.743	Uranium-235	0.15	pCi/g dry
A1P2-INV-12-1-1R	1351491.463	477076.743	Uranium-238	3.5	pCi/g dry
A1P2-INV-121-1-1R	1351355.457	480628.36	Uranium, Total	40.6	ppm dry
A1P2-INV-123-1-1R	1350932.634	480670.238	Uranium, Total	83.8	ppm dry
A1P2-INV-123-1-1R-	1350932.634	480670.238	Uranium, Total	80.3	ppm dry
A1P2-INV-126-1-1R	1350932.008	480841.544	Uranium, Total	86.2	ppm dry
A1P2-INV-127-1-1R	1351131.058	480818.369	Uranium, Total	47.8	ppm dry
A1P2-INV-129-1-1R	1351563.759	480836.145	Uranium, Total	2.11	ppm dry
A1P2-INV-13-1-1R	1351772.31	477082.73	Uranium, Total	8.01	ppm dry
A1P2-INV-131-1-1R	1351737.521	481044.285	Uranium, Total	4	ppm dry
A1P2-INV-132-1-1R	1351502.528	481135.224	Uranium, Total	50.2	ppm dry
A1P2-INV-133-1-1R	1351806.325	477458.157	Uranium, Total	3.75	ppm dry
A1P2-INV-134-1-1R	1351794.985	477686.884	Uranium, Total	5.43	ppm dry
A1P2-INV-135-1-1R	1351788.023	477864.092	Uranium, Total	8.11	ppm dry
A1P2-INV-136-1-1R	1351775.307	478062.844	Uranium, Total	11.4	ppm dry
A1P2-INV-137-1-1R	1349814.048	478263.171	Uranium, Total	11	ppm dry
A1P2-INV-138-1-1R	1349782.583	478392.042	Uranium, Total	12.8	ppm dry
A1P2-INV-139-1-1R	1349756.538	478547.248	Uranium, Total	17.6	ppm dry
A1P2-INV-14-1-1R	1351772.31	477290.735	Uranium, Total	5.85	ppm dry

TABLE 2
PHYSICAL SAMPLE RESULTS

SAMPLE ID	EASTING	NORTHING	PARAMETER	RESULT	UNITS
A1P2-INV-140-1-1R	1349779.232	478721.19	Uranium, Total	19.1	ppm dry
A1P2-INV-141-1-1R	1351347.583	481023.586	Uranium, Total	42.8	ppm dry
A1P2-INV-142-1-1R	1351166.444	481014.797	Uranium, Total	56.9	ppm dry
A1P2-INV-143-1-1R	1350976.292	481052.487	Uranium, Total	38.1	ppm dry
A1P2-INV-145-1-3R	1350704.762	481176.37	Uranium, Total	2.95	ppm dry
A1P2-INV-146-1-1R	1350967.819	481256.192	Uranium, Total	13	ppm dry
A1P2-INV-147-1-1R	1351099.647	481285.399	Uranium, Total	22.9	ppm dry
A1P2-INV-148-1-1R	1351252.455	481310.146	Uranium, Total	3.1	ppm dry
A1P2-INV-15-1-1R	1351536.483	477291.69	Radium-226	1.1	pCi/g dry
A1P2-INV-15-1-1R	1351536.483	477291.69	Radium-228	1.1	pCi/g dry
A1P2-INV-15-1-1R	1351536.483	477291.69	Thorium-228	1	pCi/g dry
A1P2-INV-15-1-1R	1351536.483	477291.69	Thorium-232	1.1	pCi/g dry
A1P2-INV-15-1-1R	1351536.483	477291.69	Uranium, Total	6.22	ppm dry
A1P2-INV-15-1-1R	1351536.483	477291.69	Uranium-235	0.2	pCi/g dry
A1P2-INV-15-1-1R	1351536.483	477291.69	Uranium-238	3.7	pCi/g dry
A1P2-INV-150-1-1R	1350940.053	481467.604	Uranium, Total	41.2	ppm dry
A1P2-INV-150-1-1R-	1350940.053	481467.604	Uranium, Total	43.1	ppm dry
A1P2-INV-151-1-1R	1350627.72	481459.236	Uranium, Total	55.8	ppm dry
A1P2-INV-152-1-1R	1350626.033	481667.344	Uranium, Total	27.3	ppm dry
A1P2-INV-153-1-1R	1350942.093	481731.353	Uranium, Total	30.9	ppm dry
A1P2-INV-154-1-1R	1351241.075	481697.407	Uranium, Total	16.3	ppm dry
A1P2-INV-155-1-1R	1351069.585	481857.505	Uranium, Total	13.4	ppm dry
A1P2-INV-156-1-1R	1350948.577	481878.171	Uranium, Total	23.3	ppm dry
A1P2-INV-16-1-1R	1351326.408	477329.124	Radium-226	1.1	pCi/g dry
A1P2-INV-16-1-1R	1351326.408	477329.124	Radium-228	1.1	pCi/g dry
A1P2-INV-16-1-1R	1351326.408	477329.124	Thorium-228	0.99	pCi/g dry
A1P2-INV-16-1-1R	1351326.408	477329.124	Thorium-232	1.1	pCi/g dry
A1P2-INV-16-1-1R	1351326.408	477329.124	Uranium, Total	6.59	ppm dry
A1P2-INV-16-1-1R	1351326.408	477329.124	Uranium-235	0.24	pCi/g dry
A1P2-INV-16-1-1R	1351326.408	477329.124	Uranium-238	3.8	pCi/g dry
A1P2-INV-17-1-1R	1351117.234	477320.536	Radium-226	1.3	pCi/g dry
A1P2-INV-17-1-1R	1351117.234	477320.536	Radium-228	1.1	pCi/g dry
A1P2-INV-17-1-1R	1351117.234	477320.536	Thorium-228	1.1	pCi/g dry
A1P2-INV-17-1-1R	1351117.234	477320.536	Thorium-232	1.1	pCi/g dry
A1P2-INV-17-1-1R	1351117.234	477320.536	Uranium, Total	7.65	ppm dry
A1P2-INV-17-1-1R	1351117.234	477320.536	Uranium-235	0.25	pCi/g dry
A1P2-INV-17-1-1R	1351117.234	477320.536	Uranium-238	2	pCi/g dry
A1P2-INV-18-1-1R	1350896.917	477311.299	Uranium, Total	6.88	ppm dry
A1P2-INV-19-1-1R	1350708.619	477292.221	Uranium, Total	5.62	ppm dry
A1P2-INV-2-1-1R	1351529.296	476938.598	Radium-226	1.2	pCi/g dry
A1P2-INV-2-1-1R	1351529.296	476938.598	Radium-228	1	pCi/g dry
A1P2-INV-2-1-1R	1351529.296	476938.598	Thorium-228	0.97	pCi/g dry
A1P2-INV-2-1-1R	1351529.296	476938.598	Thorium-232	1	pCi/g dry
A1P2-INV-2-1-1R	1351529.296	476938.598	Uranium, Total	5.46	ppm dry
A1P2-INV-2-1-1R	1351529.296	476938.598	Uranium-235	0.16	pCi/g dry
A1P2-INV-2-1-1R	1351529.296	476938.598	Uranium-238	3.1	pCi/g dry
A1P2-INV-2-1-1R-D	1351529.296	476938.598	Uranium, Total	5.99	ppm dry
A1P2-INV-20-1-1R	1350492.934	477284.524	Uranium, Total	5.95	ppm dry
A1P2-INV-21-1-1R	1350468.915	477489.063	Uranium, Total	6.08	ppm dry
A1P2-INV-22-1-1R	1350695.369	477501.904	Uranium, Total	6.17	ppm dry
A1P2-INV-23-1-1R	1350882.652	477490.651	Uranium, Total	5.93	ppm dry
A1P2-INV-24-1-1R	1351122.982	477497.289	Uranium, Total	5.61	ppm dry

TABLE 2
PHYSICAL SAMPLE RESULTS

SAMPLE ID	EASTING	NORTHING	PARAMETER	RESULT	UNITS
A1P2-INV-25-1-1R-D	1351331.148	477517.579	Uranium, Total	7.8	ug/g dry
A1P2-INV-26-1-1R	1351526.705	477512.968	Uranium, Total	4.91	ppm dry
A1P2-INV-26-1-1R-D	1351526.705	477512.968	Uranium, Total	5.01	ppm dry
A1P2-INV-27-1-1R	1351552.022	477697.382	Uranium, Total	5.7	ppm dry
A1P2-INV-28-1-1R	1351331.386	477677.577	Uranium, Total	6.62	ppm dry
A1P2-INV-29-1-1R	1351157.092	477672.572	Uranium, Total	15.3	ppm dry
A1P2-INV-3-1-1R	1351355.551	476927.261	Radium-226	1.3	pCi/g dry
A1P2-INV-3-1-1R	1351355.551	476927.261	Radium-228	0.99	pCi/g dry
A1P2-INV-3-1-1R	1351355.551	476927.261	Thorium-228	0.94	pCi/g dry
A1P2-INV-3-1-1R	1351355.551	476927.261	Thorium-232	0.99	pCi/g dry
A1P2-INV-3-1-1R	1351355.551	476927.261	Uranium, Total	5.46	ppm dry
A1P2-INV-3-1-1R	1351355.551	476927.261	Uranium-235	0.14	pCi/g dry
A1P2-INV-3-1-1R	1351355.551	476927.261	Uranium-238	2.8	pCi/g dry
A1P2-INV-30-1-1R	1350880.878	477657.343	Uranium, Total	8.29	ppm dry
A1P2-INV-31-1-1R	1350669.858	477654.116	Uranium, Total	9.26	ppm dry
A1P2-INV-32-1-1R	1350493.814	477669.96	Uranium, Total	7.29	ppm dry
A1P2-INV-33-1-1R	1350315.977	477674.317	Uranium, Total	8.77	ppm dry
A1P2-INV-34-1-1R	1350279.91	477860.998	Uranium, Total	10.5	ppm dry
A1P2-INV-35-1-1R	1350540.107	477880.983	Uranium, Total	9.14	ppm dry
A1P2-INV-36-1-1R	1350667.188	477885.139	Uranium, Total	10.7	ppm dry
A1P2-INV-36-1-1R-D	1350667.188	477885.139	Uranium, Total	10	ppm dry
A1P2-INV-37-1-1R	1350872.978	477872.218	Uranium, Total	8.68	ppm dry
A1P2-INV-38-1-1R	1351151.547	477918.741	Uranium, Total	7.17	ppm dry
A1P2-INV-39-1-1R	1351356.568	477887.701	Uranium, Total	10.1	ppm dry
A1P2-INV-4-1-1R	1351185.447	476842.57	Radium-226	1	pCi/g dry
A1P2-INV-4-1-1R	1351185.447	476842.57	Radium-228	1.2	pCi/g dry
A1P2-INV-4-1-1R	1351185.447	476842.57	Thorium-228	1.1	pCi/g dry
A1P2-INV-4-1-1R	1351185.447	476842.57	Thorium-232	1.2	pCi/g dry
A1P2-INV-4-1-1R	1351185.447	476842.57	Uranium, Total	5.33	ppm dry
A1P2-INV-4-1-1R	1351185.447	476842.57	Uranium-235	0.21	pCi/g dry
A1P2-INV-4-1-1R	1351185.447	476842.57	Uranium-238	3	pCi/g dry
A1P2-INV-40-1-1R	1351574.243	477892.252	Uranium, Total	3.91	ppm dry
A1P2-INV-41-1-1R	1351574.744	478126.016	Uranium, Total	7.22	ppm dry
A1P2-INV-42-1-1R	1351363.032	478125.003	Uranium, Total	11	ppm dry
A1P2-INV-43-1-1R	1351161.298	478117.397	Uranium, Total	16	ppm dry
A1P2-INV-44-1-1R	1350946.606	478118.287	Uranium, Total	9.77	ppm dry
A1P2-INV-45-1-1R	1350729.546	478126.071	Uranium, Total	10.4	ppm dry
A1P2-INV-46-1-1R	1350519.073	478126.164	Uranium, Total	10.2	ppm dry
A1P2-INV-47-1-1R-D	1350310.369	478126.321	Uranium, Total	9.77	ppm dry
A1P2-INV-48-1-1R	1350200.568	478126.065	Uranium, Total	12.5	ppm dry
A1P2-INV-49-1-1R	1350101.803	478335.161	Uranium, Total	14.9	ppm dry
A1P2-INV-5-1-1R	1350949.788	476849.2	Uranium, Total	5.8	ppm dry
A1P2-INV-50-1-1R	1350310.214	478335.491	Uranium, Total	17.1	ppm dry
A1P2-INV-51-1-1R	1350519.13	478335.459	Uranium, Total	16.3	ppm dry
A1P2-INV-52-1-1R	1350729.541	478335.868	Uranium, Total	24.5	ppm dry
A1P2-INV-52-1-1R-D	1350729.541	478335.868	Uranium, Total	22.3	ppm dry
A1P2-INV-53-1-1R	1350937.658	478335.891	Uranium, Total	12.7	ppm dry
A1P2-INV-54-1-1R	1351146.613	478335.105	Uranium, Total	10.2	ppm dry
A1P2-INV-55-1-1R	1351355.269	478335.066	Uranium, Total	8.53	ppm dry
A1P2-INV-56-1-1R	1351564.4	478335.626	Uranium, Total	8.23	ppm dry
A1P2-INV-56-1-1R-D	1351564.4	478335.626	Uranium, Total	8.2	ppm dry
A1P2-INV-57-1-1R	1351699.12	478335.163	Uranium, Total	7.23	ppm dry

TABLE 2
PHYSICAL SAMPLE RESULTS

SAMPLE ID	EASTING	NORTHING	PARAMETER	RESULT	UNITS
A1P2-INV-58-1-1R	1351698.732	478544.636	Uranium, Total	14.6	ppm dry
A1P2-INV-59-1-1R	1351564.59	478544.146	Uranium, Total	11	ppm dry
A1P2-INV-6-1-1R	1350645.206	476828.706	Uranium, Total	6.54	ppm dry
A1P2-INV-60-1-1R	1351355.76	478544.837	Uranium, Total	9.26	ppm dry
A1P2-INV-61-1-1R	1351146.107	478544.715	Uranium, Total	11.6	ppm dry
A1P2-INV-62-1-1R	1350937.473	478544.054	Uranium, Total	16.8	ppm dry
A1P2-INV-63-1-1R-D	1350729.666	478544.29	Uranium, Total	17.1	ppm dry
A1P2-INV-64-1-1R	1350519.372	478544.637	Uranium, Total	15.2	ppm dry
A1P2-INV-65-1-1R	1350310.914	478544.53	Uranium, Total	20.9	ppm dry
A1P2-INV-66-1-1R	1350105.01	478547.58	Uranium, Total	13.9	ppm dry
A1P2-INV-67-1-1R	1350081.094	478632.709	Uranium, Total	14.5	ppm dry
A1P2-INV-68-1-1R	1350310.828	478753.125	Uranium, Total	14.8	ppm dry
A1P2-INV-69-1-1R	1350519.547	478752.484	Uranium, Total	22.5	ppm dry
A1P2-INV-7-1-1R	1350712.945	476705.012	Uranium, Total	4.96	ppm dry
A1P2-INV-70-1-1R	1350720.026	478752.188	Uranium, Total	30.8	ppm dry
A1P2-INV-71-1-1R	1350937.041	478752.467	Uranium, Total	12	ppm dry
A1P2-INV-72-1-1R	1351146.698	478752.166	Uranium, Total	20.6	ppm dry
A1P2-INV-73-1-1R	1351355.494	478752.147	Uranium, Total	7.51	ppm dry
A1P2-INV-74-1-1R	1351564.545	478752.54	Uranium, Total	7.74	ppm dry
A1P2-INV-75-1-1R	1351699.057	478751.92	Uranium, Total	13.3	ppm dry
A1P2-INV-76-1-1R	1351699.476	478961.563	Uranium, Total	7.01	ppm dry
A1P2-INV-77-1-1R	1351564.309	478961.195	Uranium, Total	7.55	ppm dry
A1P2-INV-78-1-1R	1351355.679	478961.543	Uranium, Total	10.4	ppm dry
A1P2-INV-79-1-1R	1351146.783	478961.85	Uranium, Total	19.4	ppm dry
A1P2-INV-8-1-1R	1350657.89	477034.896	Uranium, Total	5.59	ppm dry
A1P2-INV-80-1-1R	1350937.187	478961.038	Uranium, Total	17	ppm dry
A1P2-INV-80-1-1R-D	1350937.187	478961.038	Uranium, Total	17.5	ppm dry
A1P2-INV-81-1-1R	1350732.619	478960.925	Uranium, Total	29.1	ppm dry
A1P2-INV-82-1-1R	1350519.063	478961.392	Uranium, Total	2.78	ppm dry
A1P2-INV-83-1-1R	1350729.574	479170.207	Uranium, Total	7.68	ppm dry
A1P2-INV-85-1-1R	1351146.975	479170.588	Uranium, Total	19.5	ppm dry
A1P2-INV-87-1-1R	1351563.332	479170.254	Uranium, Total	5.93	ppm dry
A1P2-INV-89-1-1R-D	1351699.374	479379.064	Uranium, Total	3.03	ppm dry
A1P2-INV-9-1-1R	1350858.01	477048.504	Uranium, Total	4.39	ppm dry
A1P2-INV-91-1-1R	1351355.098	479379.079	Uranium, Total	10.3	ppm dry
A1P2-INV-93-1-1R	1350938.509	479379.269	Uranium, Total	12.5	ppm dry
A1P2-INV-95-1-1R	1351146.806	479587.921	Uranium, Total	7.21	ppm dry
A1P2-INV-97-1-1R	1351564.215	479588.003	Uranium, Total	3.66	ppm dry
A1P2-INV-99-1-1R	1351709.831	479797.947	Uranium, Total	11.8	ppm dry
A1P2MIS-114-1-1K	TBD	TBD	Uranium, Total	6.07	ppm dry
A1P2MIS-114-1-2K	TBD	TBD	Uranium, Total	5.16	ppm dry
A1P2MIS-118-1-1K	TBD	TBD	Uranium, Total	90.4	ppm dry
A1P2MIS-118-1-2K	TBD	TBD	Uranium, Total	52.3	ppm dry
A1P2MIS-118-1-3K	TBD	TBD	Uranium, Total	111	ppm dry
A1P2MIS-118-1-4K	TBD	TBD	Uranium, Total	75.1	ppm dry
A1P2MIS-123-1-1K	TBD	TBD	Uranium, Total	7.6	ppm dry
A1P2MIS-123-1-2K	TBD	TBD	Uranium, Total	25.2	ppm dry
A1PII-INV-102-1-1R	1351146.901	479796.669	Uranium, Total	20.8	ppm dry
A1PII-INV-102-2-1R	1351200.726	479745.15	Uranium, Total	11.8	ppm dry
A1PII-INV-102-3-1R	1351093.366	479744.516	Uranium, Total	15.7	ppm dry
A1PII-INV-102-4-1R	1351094.039	479850.216	Uranium, Total	34.5	ppm dry
A1PII-INV-102-5-1R	1351197.293	479848.754	Uranium, Total	28.1	ppm dry

TABLE 2
PHYSICAL SAMPLE RESULTS

SAMPLE ID	EASTING	NORTHING	PARAMETER	RESULT	UNITS
A1PII-INV-103-2-1R	1350906.394	479741.435	Uranium, Total	33.9	ppm dry
A1PII-INV-103-3-1R	1350937.379	479796.077	Uranium, Total	21.5	ppm dry
A1PII-INV-103-4-1R	1350912.502	479841.142	Uranium, Total	41.7	ppm dry
A1PII-INV-103-5-1R	1350937.379	479796.077	Uranium, Total	27	ppm dry
A1PII-INV-103-5-1R-	1350937.379	479796.077	Uranium, Total	26	ppm dry
A1PII-INV-104-1-1R	1350937.821	480004.36	Uranium, Total	27.6	ppm dry
A1PII-INV-104-2-1R	1350937.821	480004.36	Uranium, Total	30.7	ppm dry
A1PII-INV-104-2-1R-	1350937.821	480004.36	Uranium, Total	34.9	ppm dry
A1PII-INV-104-3-1R	1350911.26	480059.575	Uranium, Total	72.2	ppm dry
A1PII-INV-104-4-1R	1350908.921	479943.451	Uranium, Total	47.1	ppm dry
A1PII-INV-104-5-1R	1350987.514	480066.098	Uranium, Total	52.3	ppm dry
A1PII-INV-105-2-1R	1351086.908	480054.371	Uranium, Total	66.2	ppm dry
A1PII-INV-105-3-1R	1351081.543	479946.057	Uranium, Total	30.6	ppm dry
A1PII-INV-105-4-1R	1351196.516	480052.716	Uranium, Total	78.2	ppm dry
A1PII-INV-105-5-1R	1351203.087	479952.569	Uranium, Total	21.7	ppm dry
A1PII-INV-109-2-1R	1351769.202	480255.409	Uranium, Total	43.1	ppm dry
A1PII-INV-109-3-1R	1351695.331	480253.657	Uranium, Total	84.1	ppm dry
A1PII-INV-110-2-1R	1351510.744	480258.132	Uranium, Total	5.89	ppm dry
A1PII-INV-110-3-1R	1351604.977	480253.46	Uranium, Total	11.6	ppm dry
A1PII-INV-112-1-1R	1351146.579	480212.348	Uranium, Total	68.3	ppm dry
A1PII-INV-112-1-1R-	1351146.579	480212.348	Uranium, Total	70.1	ppm dry
A1PII-INV-112-2-1R	1351087.745	480254.679	Uranium, Total	47.6	ppm dry
A1PII-INV-112-3-1R	1351090.203	480157.899	Uranium, Total	65	ppm dry
A1PII-INV-112-4-1R	1351184.983	480162.32	Uranium, Total	33.7	ppm dry
A1PII-INV-112-5-1R	1351193.295	480257.597	Uranium, Total	102	ppm dry
A1PII-INV-113-2-1R	1350945.07	480159.335	Uranium, Total	54.2	ppm dry
A1PII-INV-113-3-1R	1351006.153	480162.826	Uranium, Total	74.8	ppm dry
A1PII-INV-113-4-1R	1350958.333	480212.484	Uranium, Total	18.7	ppm dry
A1PII-INV-115-2-1R	1351146.533	480420.247	Uranium, Total	36.3	ppm dry
A1PII-INV-115-3-1R	1351096.317	480369.534	Uranium, Total	53.8	ppm dry
A1PII-INV-115-4-1R	1351117.284	480462.312	Uranium, Total	47	ppm dry
A1PII-INV-115-5-1R	1351198.603	480350.407	Uranium, Total	55.5	ppm dry
A1PII-INV-116-1-1R	1351355.284	480420.03	Uranium, Total	52.6	ppm dry
A1PII-INV-116-2-1R	1351299.865	480468.376	Uranium, Total	67.2	ppm dry
A1PII-INV-116-3-1R	1351299.474	480361.719	Uranium, Total	58.2	ppm dry
A1PII-INV-116-3-1R-	1351299.474	480361.719	Uranium, Total	58	ppm dry
A1PII-INV-116-4-1R	1351404.257	480469.469	Uranium, Total	61.6	ppm dry
A1PII-INV-116-5-1R	1351406.325	480367.183	Uranium, Total	27.9	ppm dry
A1PII-INV-117-2-1R	1351562.327	480420.639	Uranium, Total	60.9	ppm dry
A1PII-INV-117-3-1R	1351621.836	480370.386	Uranium, Total	107	ppm dry
A1PII-INV-117-4-1R	1351506.118	480475.796	Uranium, Total	68.5	ppm dry
A1PII-INV-117-5-1R	1351511.382	480377.439	Uranium, Total	61.6	ppm dry
A1PII-INV-118-1-1R	1351699.575	480420.186	Uranium, Total	65.8	ppm dry
A1PII-INV-118-2-1R	1351784.219	480473.822	Uranium, Total	77.9	ppm dry
A1PII-INV-118-2-1R-	1351784.219	480473.822	Uranium, Total	79.6	ppm dry
A1PII-INV-118-3-1R	1351704.606	480487.415	Uranium, Total	70	ppm dry
A1PII-INV-118-4-1R	1351755.69	480379.622	Uranium, Total	46.2	ppm dry
A1PII-INV-118-5-1R	1351688.945	480369.956	Uranium, Total	97.1	ppm dry
A1PII-INV-119-2-1R	1351785.28	480663.585	Uranium, Total	1.69	ppm dry
A1PII-INV-119-3-1R	1351714.22	480667.417	Uranium, Total	62.5	ppm dry
A1PII-INV-119-3-1R-	1351714.22	480667.417	Uranium, Total	63.2	ppm dry
A1PII-INV-119-4-1R	1351711.045	480569.696	Uranium, Total	60.4	ppm dry

TABLE 2
PHYSICAL SAMPLE RESULTS

SAMPLE ID	EASTING	NORTHING	PARAMETER	RESULT	UNITS
A1PII-INV-119-5-1R	1351784.019	480586.656	Uranium, Total	38.9	ppm dry
A1PII-INV-120-1-1R	1351563.267	480628.367	Uranium, Total	61.5	ppm dry
A1PII-INV-120-2-1R	1351511.885	480679.447	Uranium, Total	50.7	ppm dry
A1PII-INV-120-3-1R	1351497.927	480566.509	Uranium, Total	60.4	ppm dry
A1PII-INV-120-4-1R	1351628.794	480689.152	Uranium, Total	31.9	ppm dry
A1PII-INV-120-5-1R	1351631.67	480560.32	Uranium, Total	72.1	ppm dry
A1PII-INV-121-2-1R	1351401.353	480679.013	Uranium, Total	62.5	ppm dry
A1PII-INV-121-2-1R-	1351401.353	480679.013	Uranium, Total	62.4	ppm dry
A1PII-INV-121-3-1R	1351300.818	480577.911	Uranium, Total	48.7	ppm dry
A1PII-INV-121-4-1R	1351378.749	480557.013	Uranium, Total	50.4	ppm dry
A1PII-INV-121-5-1R	1351340.454	480677.331	Uranium, Total	64.5	ppm dry
A1PII-INV-122-1-1R	1351208.733	480628.255	Uranium, Total	48.4	ppm dry
A1PII-INV-122-2-1R	1351212.681	480572.39	Uranium, Total	63.8	ppm dry
A1PII-INV-122-3-1R	1351251.092	480648.569	Uranium, Total	45.3	ppm dry
A1PII-INV-128-1-1R	1351440.228	480836.216	Uranium, Total	37.3	ppm dry
A1PII-INV-128-2-1R	1351441.994	480788.524	Uranium, Total	41.9	ppm dry
A1PII-INV-128-3-1R	1351393.798	480771.437	Uranium, Total	67.2	ppm dry
A1PII-INV-129-2-1R	1351495.638	480767.485	Uranium, Total	9.97	ppm dry
A1PII-INV-129-3-1R	1351520.628	480879.39	Uranium, Total	15.9	ppm dry
A1PII-INV-129-4-1R	1351624.653	480781.983	Uranium, Total	8.38	ppm dry
A1PII-INV-129-4-1R-	1351624.653	480781.983	Uranium, Total	7.83	ppm dry
A1PII-INV-129-5-1R	1351610.577	480870.747	Uranium, Total	51.8	ppm dry
A1PII-INV-130-1-1R	1351699.403	480836.257	Uranium, Total	47.2	ppm dry
A1PII-INV-130-2-1R	1351707.189	480784.293	Uranium, Total	44.5	ppm dry
A1PII-INV-130-3-1R	1351711.162	480837.971	Uranium, Total	43.8	ppm dry
A1PII-INV-130-4-1R	1351775.758	480835.613	Uranium, Total	31.9	ppm dry
A1PII-INV-130-5-1R	1351782.208	480778.264	Uranium, Total	2.62	ppm dry
A1PII-INV-94-1-1R	1350938.588	479587.417	Uranium, Total	30	ppm dry
A1PII-INV-94-2-1R	1350989.625	479536.014	Uranium, Total	21.6	ppm dry
A1PII-INV-94-2-1R-D	1350989.625	479536.014	Uranium, Total	22	ppm dry
A1PII-INV-94-3-1R	1350903.69	479534.675	Uranium, Total	18.5	ppm dry
A1PII-INV-94-4-1R	1350905.352	479638.598	Uranium, Total	35.3	ppm dry
A1PII-INV-94-5-1R	1350938.588	479587.417	Uranium, Total	20.4	ppm dry
A1PII-INV-95-2-1R	1351199.496	479537.818	Uranium, Total	28.6	ppm dry
A1PII-INV-95-3-1R	1351092.146	479533.824	Uranium, Total	16.4	ppm dry
A1PII-INV-95-4-1R	1351092.875	479638.73	Uranium, Total	11.3	ppm dry
A1PII-INV-95-5-1R	1351197.316	479640.567	Uranium, Total	16.6	ppm dry

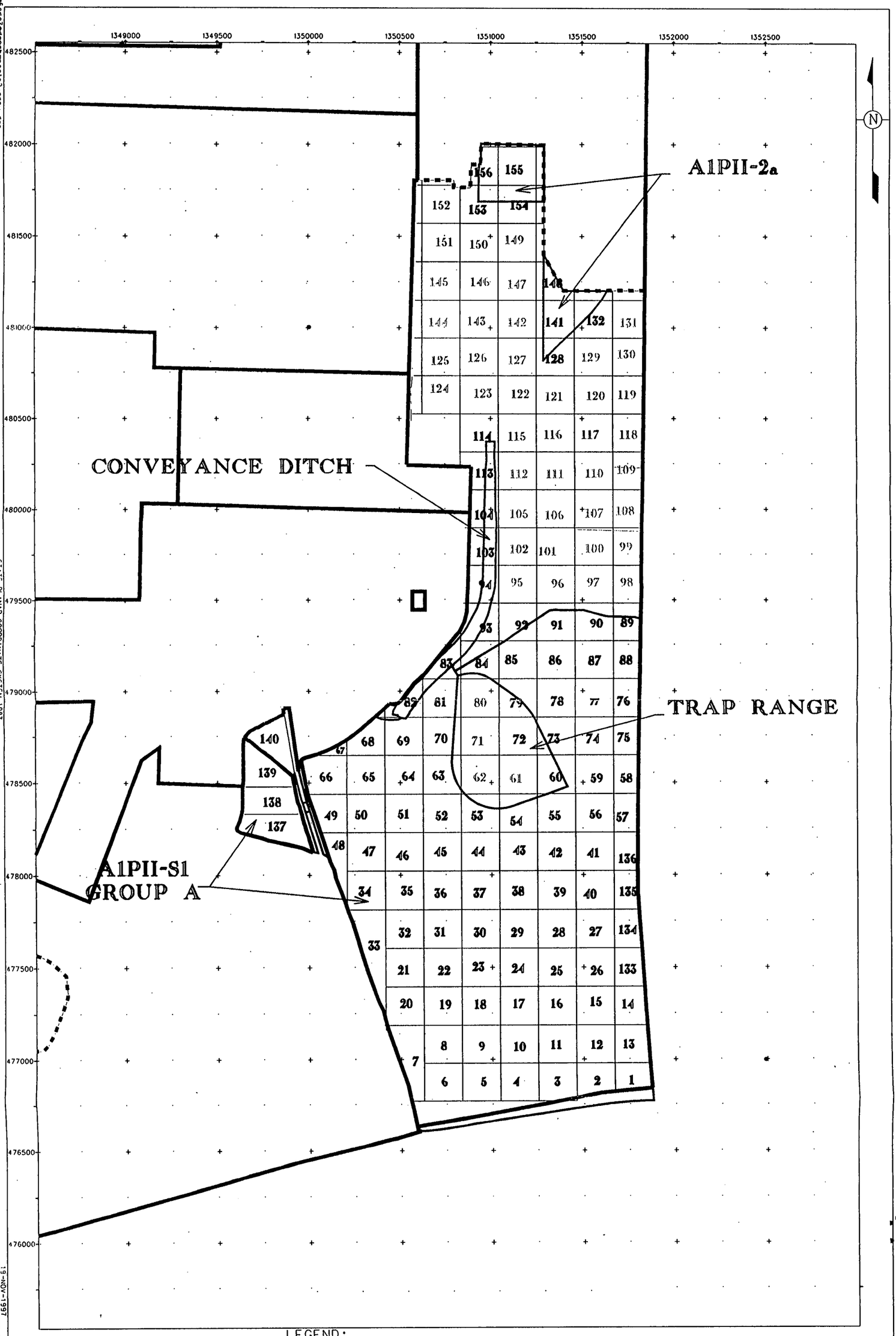
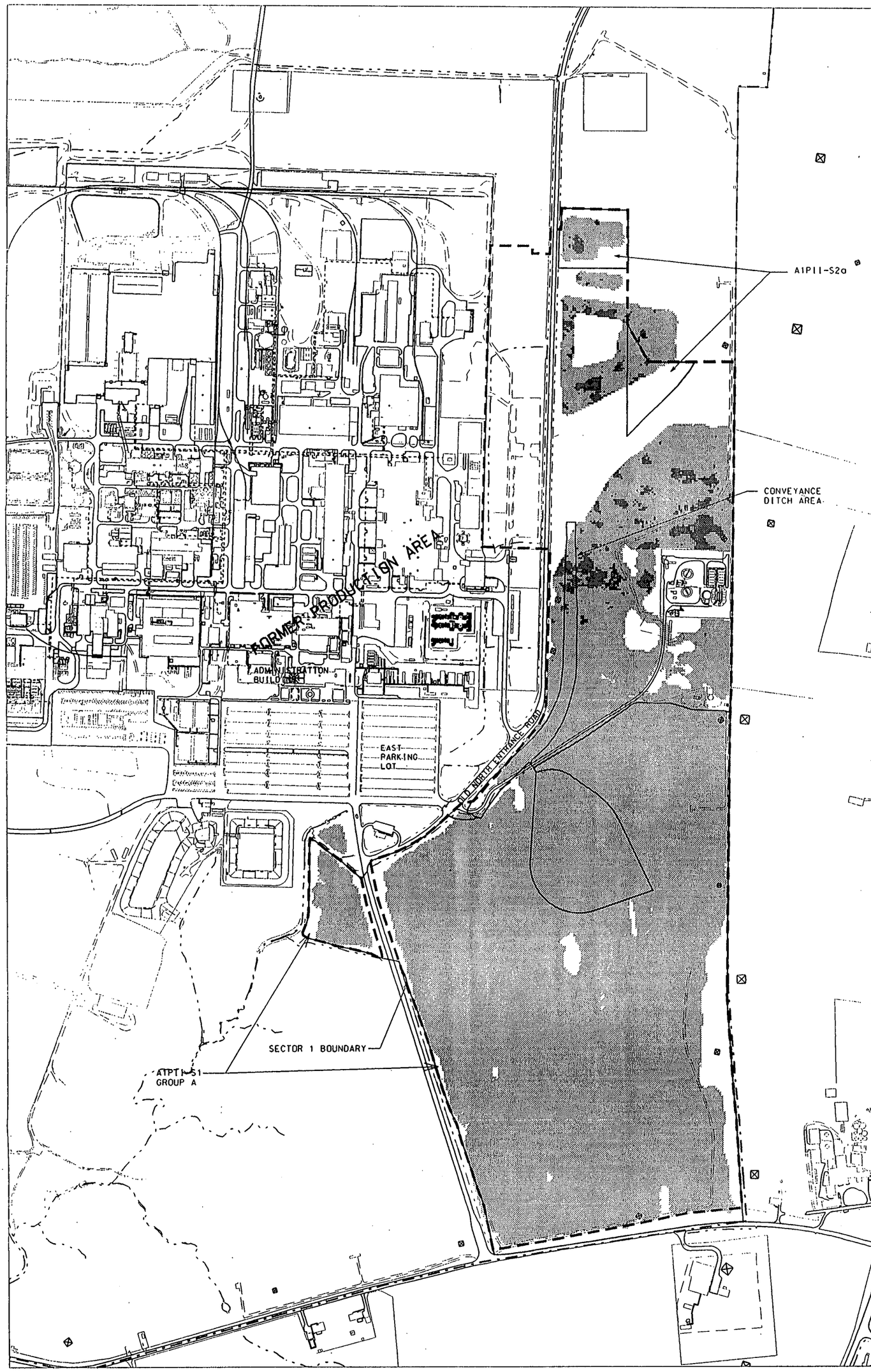


FIGURE 1. ACRE NUMBERING SYSTEM

STATE PLANAR COORDINATE SYSTEM 1983
13-NOV-1997
000041
2048



LEGEND:

- LESS THAN 66 PPM
- GREATER THAN 66 PPM
- FEMP BOUNDARY
- AREA 1 PHASE II BOUNDARY

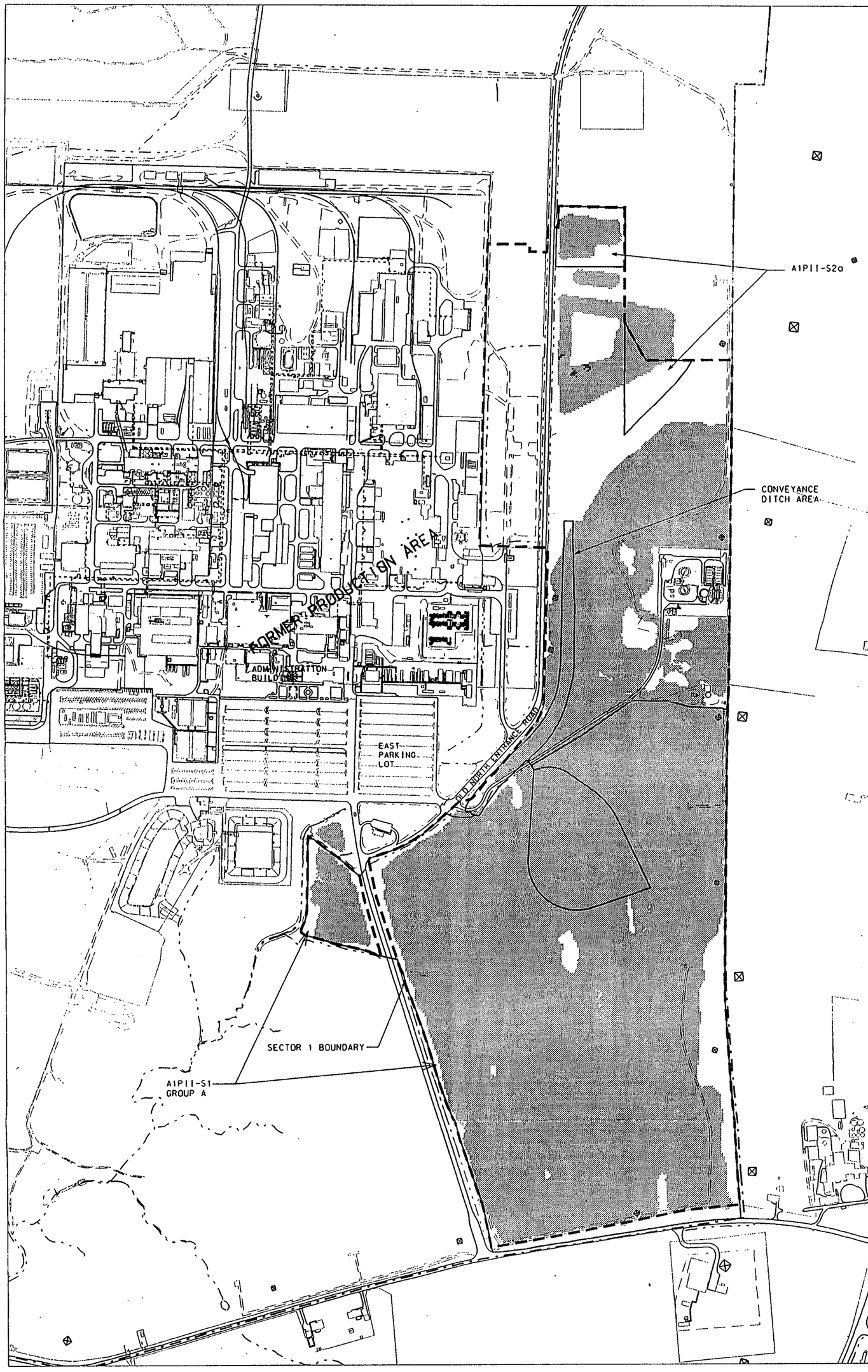
SCALE

500 250 0 500 FEET

DRAFT

FIGURE 2. RTRAK SPATIAL AVERAGES, TOTAL URANIUM CONCENTRATIONS

v:\5ord3\cgm\ord3-12015.cgm
STATE PLANAR COORDINATE SYSTEM 1983
19-NOV-1997
000042
2048



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 3. RTRAK SPATIAL AVERAGES, THORIUM-232 ACTIVITY

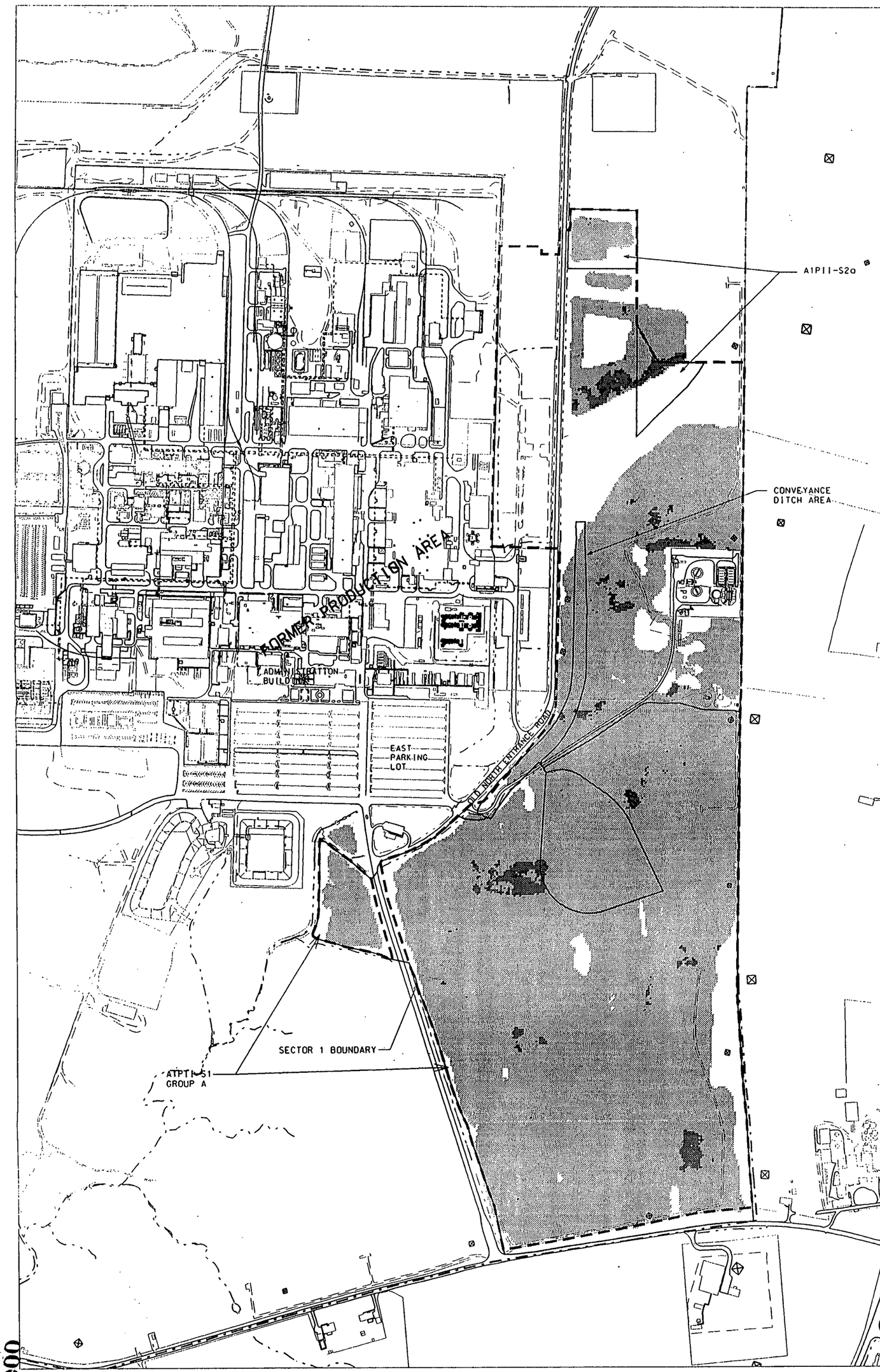
STATE PLANAR COORDINATE SYSTEM 1983

v:\gcra3\dgn\emp\b20is.dgn

18-NOV-1997

000043

2048



LEGEND:

- LESS THAN 1.57 PCI/G
- GREATER THAN 1.57 PCI/G
- FEMP BOUNDARY
- AREA 1 PHASE II BOUNDARY

SCALE

500 250 0 500 FEET

DRAFT

FIGURE 4. RTRAK SPATIAL AVERAGES, RADIUM-226 ACTIVITY

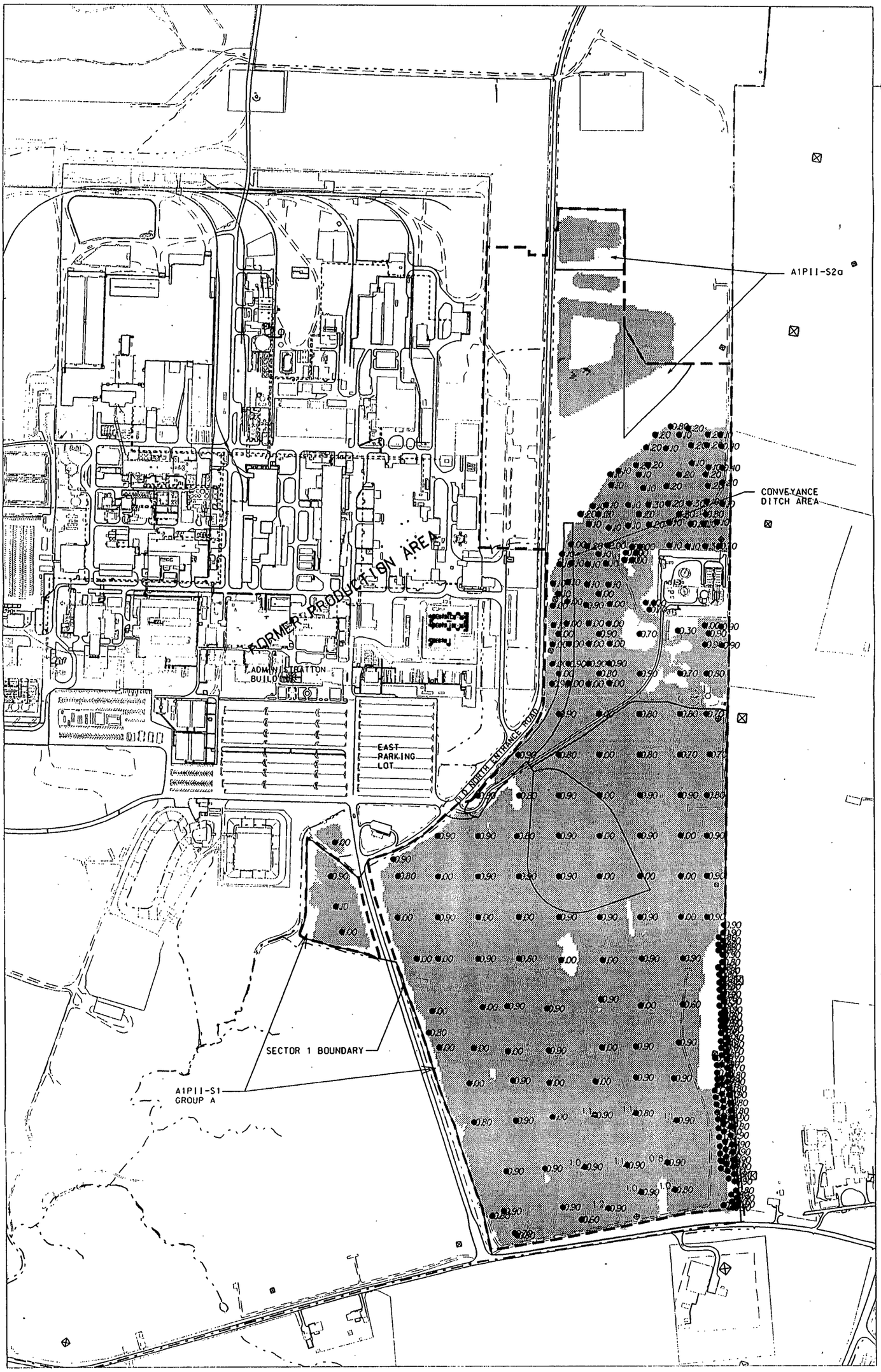
STATE PLANAR COORDINATE SYSTEM 1983

19-NOV-1997

000044

2048

FIGURE 5. RTRAK SPATIAL AVERAGES, HPGe RESULTS, AND PHYSICAL SAMPLES FOR TOTAL URANIUM



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

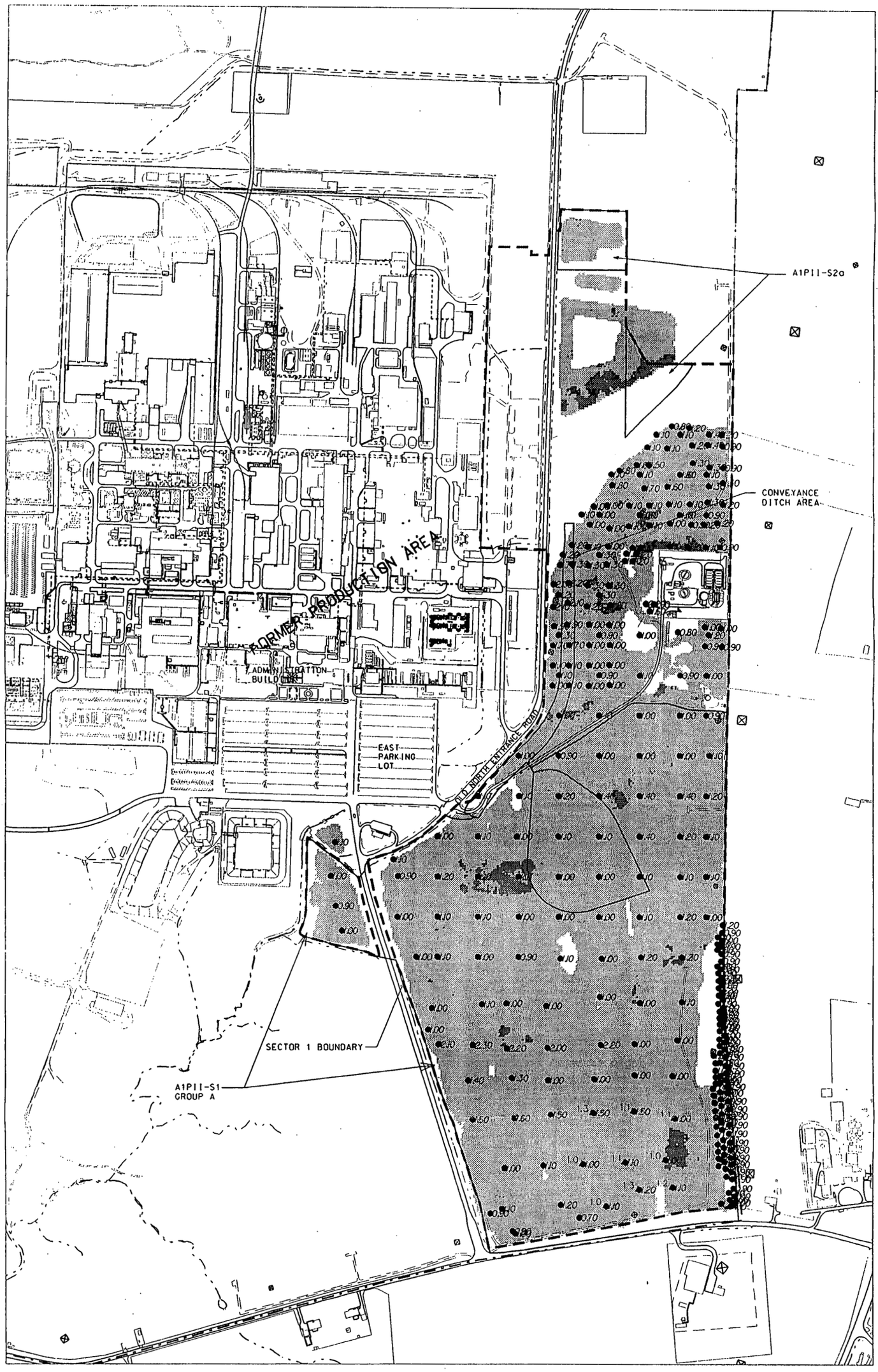
500 250 0 500 FEET

DRAFT

000046

FIGURE 6. RTRAK SPATIAL AVERAGES, HPGe RESULTS, AND PHYSICAL SAMPLES FOR THORIUM-232

STATE PLANAR COORDINATE SYSTEM 1983
19-NOV-1997
2048



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

STATE PLANAR COORDINATE SYSTEM 1983
000047
2048

APPENDIX B-9

LEACHABILITY STUDIES AND KRIGING METHODS USED TO DEVELOP ESTIMATED LIMITS OF EXCAVATION

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- 3.5 Trap Range Area 7
- 3.6 A1PII Modeling Results 8
- 3.7 STP Excavation Limits 8
- 3.8 Trap Range Excavation Limits 8

1.0 INTRODUCTION

Estimation of the excavation required for A1PII remediation proceeded in three steps:

- Collection of representative and reliable site data to describe soil contamination,
- Selection of those constituents of concern that, when removed, will encompass unacceptable concentrations of other constituents, and
- Modeling the geological and analytical data to predict the required soil excavation volumes.

Concerns about possible contamination of the Great Miami Aquifer led investigators to perform a study to determine the leachability coefficient , K_l, for each constituent of concern. K_l describes the fraction of absorbed constituent that may be leached from contaminated soil. The report of the leachability testing is reported in Attachment F.2.1 of the OU5 Feasibility Study titled Operable Unit 5 Post-RI Field and Laboratory Geochemical Study (DOE March 1995). Earlier batch test procedures were reported in Uranium Partition Coefficient Evaluation Study (DOE 1993).

Mathematical modeling of contaminant movement in soil requires knowledge of the soil/water partitioning coefficient, K_D. K_D is very closely related to K_l. For modeling purposes, K_D for each constituent was assumed to equal the measured value of K_l. Modeling performed to estimate A1PII excavation quantities is discussed below.

2.0 LEACHABILITY AND PARTITIONING COEFFICIENTS TESTING

To determine if soil contamination was affecting the underlying Great Miami Aquifer (GMA), FEMP performed batch desorption tests to find the leachability coefficient (K_L) of site surface soil. Surface soil samples in source areas of suspected contamination, including the former production area and the STP, have a K_L value of 15 L/kg, indicating the presence of a "soluble" form of uranium which is the dominant contaminant in the STP area. Uranyl nitrate is the main contaminant in areas where uranium was dissolved in a water carrier, such as at the STP. Because of its high solubility, uranyl nitrate is largely responsible for the low K_L value and poses a risk through potential cross-media migration, which could impact the underlying aquifer.

In areas of lower uranium solubility, the K_l value of 222 L/kg was assigned to account for airborne dispersion of fine particulate from stack or incinerator emissions. Uranium released to the environment in this manner was in a highly reduced (redox) state due to high processing temperatures. The emitted particulate quickly settled to the ground due to its high density, became oxidized, and was incorporated into the surface soil layer as a uranium oxide. Uranium oxide is less soluble and mobile than uranyl nitrate, so it poses less potential for cross-media impact.

Areas with low K_l values (15 L/kg), have soil cleanup levels of 20 ppm total uranium, based on mass-based source term modeling. This level will protect the aquifer from the more soluble and transmissible chemical fraction. The FRL of 82 ppm total uranium, which is based on surface receptor exposure risk, will be applied for the remainder of A1PII. As reflected in the engineering design, the 20 ppm total uranium cleanup level applies to the western portion of the STP Area.

3.0 SUMMARY OF GEOSTATISTICS AND KRIGING

Geostatistics is a branch of mathematics that was developed to complement classical statistical methods for the analysis of variables that have a spatial relationship in their variability (called regionalized variables). The primary tool used in geostatistics is the variogram, a measure of the variability of the data categorized by distance and direction.

Kriging is an estimation technique used to obtain estimates of a regionalized variable at locations where measurements do not exist. In general, kriging is a Best Linear Unbiased Estimate; "linear" because estimates are obtained as linear combinations of the measurements, "best" in that it attempts to minimize the variance of the estimation errors, and "unbiased" in that the estimation error is, on average, zero.

3.1 A1PII KRIGING MODEL DESCRIPTIONS

Based on using the kriging concepts described above, models were developed for the STP Area and the Trap Range Area using tailored methods necessary to account for site-specific contamination and excavation depths.

3.2 GENERAL METHODOLOGY

A stratigraphy model was developed using geostatistical techniques that estimate potential locations of coarse-grained material (CGM). The estimation variable used was a zero/one indicator derived from the classification of the input data points as CGM (1's) or not CGM (0's). This technique is called "indicator kriging."

To account for the heterogeneous nature of the till stratigraphy and contamination, variogram models were developed to estimate variability in the input data by direction and distance. Anisotropic conditions can be estimated by examining the variability in several directions, . The variogram models also serve as the primary controls for the kriging process. Kriging provides an estimate, or expected value, for the estimation variable at every node in the three-dimensional model.

By applying the same process to total uranium analytical results, a second three-dimensional model was developed to estimate the concentration of total uranium within surface and subsurface soils. In this model, samples were classified as either surface or sub-surface. For each of the two sample

distributions, separate variogram models were developed and kriging estimates were calculated from the associated analytical results. The two sets of kriging results were combined to form an overall estimation model for total uranium in soils. The model was bounded above by a 1992 model of ground surface and bounded below by the top of the Great Miami Aquifer (GMA).

All geostatistical analyses and displays developed in this study were performed using software developed by Intergraph Corporation of Huntsville, Alabama.

3.3 SEWAGE TREATMENT PLANT AREA

Two models were created for the STP Area:

- The stratigraphy model to determine the extent of the coarse-grained material (CGM) that would hold perched groundwater that may be encountered during soil excavation
- The total uranium analytical model to estimate the extent of excavation.

Stratigraphy Model

A digital terrain model of the current ground surface was developed from contours of the site taken from the 1992 flyover. A model of the top of the GMA from the OU5 FS was used to define the base of till material. Figures from the Removal Action No. 14 report were used to define areas of pre-excavation.

Sample intervals were coded according to the lithological type. Two types of material were considered:

- CGM, which included sand, gravel, sandy gravel, gravely sand, silty sand, clayey sand, silty sandy gravel, silty gravely sand, clayey sandy gravel, and clayey gravely sand, and
- Clay, which included sandy silty clay, silty sandy clay, sandy clay, gravely clay, silt and clay. Samples grouped in the CGM category were assigned a value of one. Other samples were assigned a value of zero.

To satisfy the support requirements for geostatistical analysis, samples were split into six-inch intervals with X, Y, Z coordinates assigned at the center of each six-inch interval. Samples or sample sub-intervals of less than three inches were not considered.

000053

A block model was defined to cover the STP area with an additional buffer of 200 feet in all four directions. The larger size ensured that data outside the model area but close enough to have an impact on the modeling were included in the analysis. The model location (NAD 1983) is as follows:

X(East)	:	1,350,950	to	1,352,200
Y(North)	:	479,300	to	482,800
Z(Elevation)	:	555.5 MSL	to	606.5 MSL

A grid spacing of 25 feet horizontally and one foot vertically was used, resulting in a model of just over 160,000 blocks.

The resulting kriging estimates, distributed between zero (0) and one (1), were used to classify points in the model as CGM or non-CGM. Kriging estimates near zero indicate little likelihood of a point being CGM while estimates near one indicate high likelihood of a point being CGM.

The distribution of the input data was examined to select an indicator value above which soil could be classified as CGM (i.e. a "cutoff" value). Declustered statistics of the input stratigraphic data showed that about 4.8 percent of the input data points were classified as CGM material. The kriging model was calibrated by choosing a cutoff value which provided volumetric estimates of modeled CGM in the range of 4.8 percent of the entire model volume. Using this technique, a cutoff value of 0.23 was selected and model locations with an estimated indicator value above 0.23 were thereafter treated as CGM locations.

Total Uranium Model

A three-dimensional block model was defined to cover the same area as the stratigraphic block model. Blocks in the model were coded as air, top one foot of soil, CGM soil below one foot, non-CGM soil below one foot, or GMA. The CGM/non-CGM designation was based on the estimates in the stratigraphic block model and using a cutoff value of 0.23.

Statistical and geostatistical review of uranium analytical results indicated that data lying at the surface described a different distribution from data lying beneath the surface. To better model these two data

populations, surface and sub-surface models were created and kriged separately, then combined later into a single analytical model.

Samples with total uranium analytical results and with a bottom depth less than 2.5 feet were extracted to a "surface soils" data set and split into six-inch intervals in the same manner as for the stratigraphic data. Samples down to a depth of 2.5 feet were included to provide some basis for estimating the vertical component of the variogram model. The deeper data points also provided additional data coverage in areas where no surface samples existed yet samples were present close to the surface.

Samples containing total uranium analytical results and with a top depth of six inches or more were extracted to a "subsurface soils" data set, and were split into six-inch intervals in the same manner as for the stratigraphic data. The subsurface data was further divided into CGM and non-CGM data according to two criteria, in order of precedence: (1) stratigraphic information from the borehole strip log over the sample interval, or (2) estimated CGM coding from the position of the sample within the stratigraphic block model. Using these criteria, only two samples were categorized as being within CGM, too few to perform a separate kriging analysis. As a result, all samples were recombined into one list and further analysis was performed without regard to soil type. Once again, the samples were split into six-inch intervals in the same manner as for the stratigraphic data.

Variogram analysis of the surface total uranium results indicated a horizontal variogram range of about 240 feet and a vertical variogram range of about 2.5 feet. Analysis of the sub-surface total uranium results indicated a horizontal variogram range of about 150 feet and a vertical variogram range of about 4 feet. No horizontal anisotropies were evident in either data set.

Using the respective variogram models and search radii equal to the variogram ranges, separate kriging runs were completed for each of the two data sets (surface, subsurface). The total uranium estimates derived from the surface data were assigned to blocks coded as "top one foot of soil". Similarly, estimates derived from the subsurface data sets were assigned to model blocks below the top one foot of soil, but above the top of GMA surface. Blocks designated as air (including those previously marked as excavated by Removal Action 14) or blocks designated within the GMA were not assigned a total uranium estimate.

3.4 TRAP RANGE AREA

Geostatistical techniques were used to estimate concentrations of lead in surface soils in the Trap Range area. Because the geostatistical analyses of lead results in the Trap Range area were to be restricted to surface soils and the surface soils in the area are relatively homogeneous, there is no need to define a stratigraphic model of the Trap Range area.

Analytical Model

A review of analytical results for lead in the Trap Range area indicated that all samples with elevated concentrations were contained within the top one foot of soil, and that all but two of those samples were contained in the top six inches of soil. As a result, it was determined that a surface model of lead concentrations would be sufficient to characterize the distribution of lead in the area

To satisfy the support requirements for geostatistical analysis, samples were split into three-inch intervals with X, Y, Z coordinates assigned at the center of each three-inch interval. Samples or sample sub-intervals of less than 1.5 inches were not considered.

A three-dimensional block model was defined to cover the Trap Range area. The model location (NAD 1983) is as follows :

X(East)	:	1,350,400	to	1,351,800
Y(North)	:	478,200	to	479,600
Z(Depth below Surface)	:	0	to	3

A grid spacing of 20 feet horizontal and one-half foot vertical was used, resulting in a model of just over 30,000 blocks.

Variogram analysis of the lead results indicated a horizontal variogram range of about 250 feet and a vertical variogram range of about 2 feet, with no discernible horizontal anisotropy. Using this variogram model, and search radii equal to the variogram ranges, a kriging run was completed for the upper (surface) layer of the model.

3.5 A1PII MODELING RESULTS

The results of the modeling discussed above indicate the need for excavation of surface soil and deeper excavations to address contamination above the soil FRLs. The deeper excavations will occur in the STP Area. The depths and volumes of all planned soil excavation are described below.

3.6 STP EXCAVATION LIMITS

The estimated depth of soil excavation within the STP fenced boundary is depicted in Figure 2-9 (Section 2 of text). These depths were determined based upon the results of the STP Area total uranium analytical model. This model incorporated all available lithologic data within the STP area, total uranium soil data within the STP area, and the excavation of at- or below-grade structures (e.g., building foundations and piping) in the STP area. The excavation will result in 29,500 yd^3 of soil. Figure 2-10 shows the impacted zones with the STP. Note that the removal of the foundations generally envelopes the contamination.

3.7 TRAP RANGE EXCAVATION LIMITS

The Trap Range excavation limits are based upon the 400 p.m. contour of lead contamination, which is the soil FRL for lead (Figure 2-11). This results in an excavation "footprint" that also incorporates any arsenic contamination above the soil FRL of 12 ppm. The top 6 inches of soil will be excavated within the 105,732 ft^2 footprint, resulting in 1,958 yd^3 of excavated soil.