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PROJECT SPECIFIC PLAN FOR AREA 1, PHASE II CERTIFIED FOR REUSE AREAS, TRAP RANGE, SECTOR 2C, AND SECTOR 3 CERTIFICATION SAMPLING

FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
FERNALD, OHIO

OCTOBER 1999

U.S. DEPARTMENT OF ENERGY
FERNALD AREA OFFICE

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REVISION A
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Document Number 20710-PSP-0009

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FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

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LIST OF ACRONYMS AND ABBREVIATIONS

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A1PII	Area 1, Phase II
APM	Area Project Manager
ASCOC	area-specific constituent of concern
ASL	analytical support level
BTV	Benchmark Toxicity Value
CDL	Certification Design Letter
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CG&E	Cincinnati Gas & Electric
CLP	Contract Laboratory Program
COC	constituent of concern
CU	certification unit
DQO	data quality objective
EPA	U.S. Environmental Protection Agency
FACTS	Fernald Analytical Customer Tracking System
FAL	Field Activity Log
FEMP	Fernald Environmental Management Project
FDF	Fluor Daniel Fernald
FRL	final remediation level
GFAA	Graphite-Furance Atomic Absorption Spectrometry
GIS	Graphical Information System
GPS	global positioning system
HAMDC	highest allowable minimum detection concentration
HPGe	high-purity germanium detector
HWMU	Hazardous Waste Management Unit
ICP-MS	Inductively Coupled Plasma - Mass Spectrometry
LAN	Local Area Network
MDL	minimum detection limit
mg/kg	milligram per kilogram
ml	millileter
OEPA	Ohio Environmental Protection Agency
PCB	polychlorinated biphenyl
pCi/g	picoCuries per gram
ppm	parts per million
PSP	Project Specific Plan
PWID	Project Waste Identification Document
QA/QC	Quality Assurance/Quality Control
RWP	radiological work permit
SDFP	Soil and Disposal Facility Project
SCQ	Sitewide CERCLA Quality Assurance Project Plan
SED	Sitewide Environmental Database
SEP	Sitewide Excavation Plan
SPL	Sample Processing Laboratory
STP	Sewage Treatment Plant
TAL	Target Analyte List
V/FCN	Variance/Field Change Notice
VOA	volatile organic analysis
WAC	waste acceptance criteria

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1.0 INTRODUCTION

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1.1 PURPOSE

The purpose of this Project Specific Plan (PSP) is to describe the certification sampling and analysis necessary to certify Area 1, Phase II (A1PII) Trap Range, Certified for Reuse Areas, remaining areas in Sector 2, and the entire Sector 3 area which includes the former Sewage Treatment Plant (STP) to demonstrate that final remediation level (FRL) risk-based area-specific constituents of concern (ASCOCs) have been met. The Certified for Reuse Areas, including the outfall area, A1PII Sedimentation basin, Trap Range ditches, and conveyance ditch, require recertification due to potential impacts from STP excavation after their construction. Figure 1-1 shows the boundaries for the three A1PII sectors.

1.2 SCOPE

This PSP covers all physical sampling associated with A1PII Trap Range, Certified for Reuse Areas, Sector 2C, and Sector 3 certification. The certification sampling is consistent with the Certification Design Letter (CDL) for A1PII Certified for Reuse Areas, Trap Range, Sector 2C, and Sector 3. All sampling and analysis activities will be as consistent as possible with the Sitewide Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Quality Assurance Project Plan (SCQ), Section 3.4 of the Sitewide Excavation Plan (SEP), and Data Quality Objective (DQO) SL-052, Revision 1. DQO SL-052 is included as Appendix A of this PSP.

1.3 KEY PERSONNEL

Key personnel responsible for performance of the project are listed in Table 1-1.

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TABLE 1-1
KEY PERSONNEL

Title	Primary	Alternate
DOE Contact	Rob Janke	Kathi Nickel
Area Project Manager	Tom Crawford	Jyh-Dong Chiou
Characterization Lead	Alex Duarte	Jenny Vance
Field Sampling Lead	Mike Frank	Tom Buhrlage
Surveying Lead	Jim Schwing	Jim Capannari
Laboratory Contact	Audrey Hannum	Grace Ruesink
Data Validation Contact	Jim Chambers	Jenine Rogers
Data Management Contact	Jenny Vance	Alex Duarte
Quality Assurance Contact	Reinhard Friske	Frank Thompson
Health and Safety Contact	Debra Grant	Lewis Wiedeman

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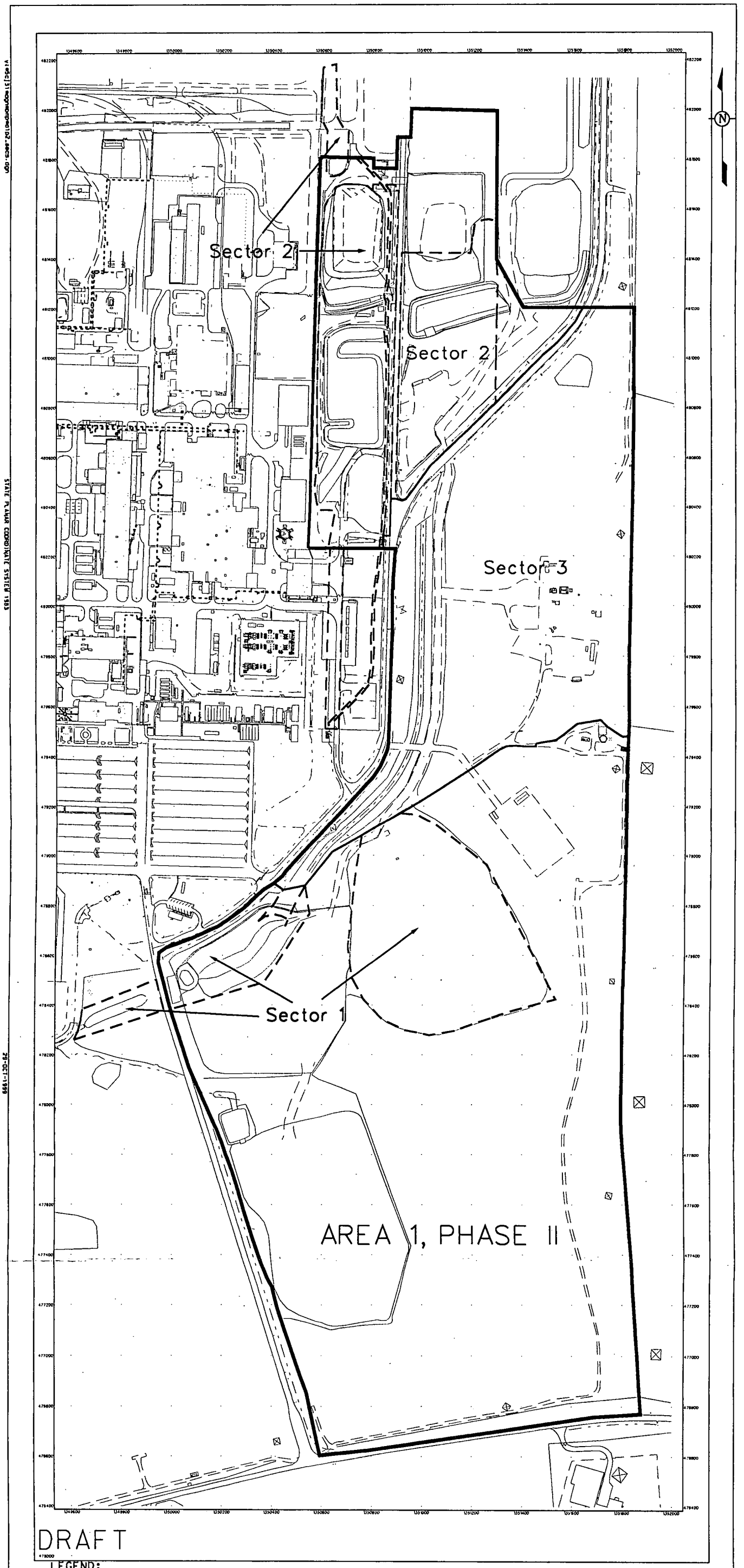

FIGURE 1-1. A1PII BOUNDARY AND SECTOR LOCATIONS

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2.0 CERTIFICATION SAMPLING PROGRAM

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2.1 CERTIFICATION DESIGN

Details and logic of the certification design for A1PII Trap Range, Certified for Reuse Areas, Sector 2C, and Sector 3 are described in the associated CDL. The certification design and sampling strategy generally follow Section 3.4 of the SEP. The areas to be certified consist of the following:

- Sector 1 - Eleven certification units (CUs) within the Trap Range and three CUs within sedimentation basins and outfall areas.
- Sector 2C - Eight CUs within non-impacted areas (i.e., area where no excavation was deemed necessary to obtain FRLs), four CUs within stockpile excavation footprints, four CUs within sedimentation basins, and one CU each within a stripping area, a haul road, the West Debris stockpile and surrounding area, and the abandoned leachate line footprint and the permanent leachate line.
- Sector 3 - Seven CUs within non-impacted areas, two CUs within conveyance ditch areas, five CUs within haul or access roads, ten CUs within stripped surface soil excavation areas, and two CUs within deep excavation areas, and one CU within a deep excavation area that contains a former Hazardous Waste Management Unit (HWMU) area.

Certification units are delineated as shown in Figure 2-1.

Sample locations were generated by dividing each CU into 16 approximately equal sub-CUs, then randomly selecting easting and northing coordinates within each sub-CU boundary. The selected locations must also meet the minimum distance criterion, defined as the minimum distance allowed between random sample locations, in order to eliminate the chance of random sample points clustering within a small area. Additional alternative random sample locations were also generated in case the original random sample location did not meet the minimum distance criterion. If this was the case, then the first alternative location was selected and all the locations were re-tested against the minimum distance criterion. This process was continued until all 16 random locations in each CU met this criterion. Certification samples will be collected at 12 of the randomly selected locations. The remaining four locations are designated for archive but will not be sampled at this time in order to make better use of field sampling crews. Random number generation was used to determine which locations would have duplicate samples taken and which CUs would be validated at Analytical Support Level (ASL) D.

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Exceptions to the above process include:

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- CU A1P2-S2LL-01 - Samples will be collected at depth beneath the leachate line bedding in the top 6 inches of undisturbed, native soil. Ground elevations and depth to native soil will be recorded. This area beneath the temporary leachate line is suspect because of leaking that may have occurred from the line. As discussed in the Sector 2B Certification Report, samples collected and analyzed during the leak investigations revealed no results exceeding the FRLs. However, 16 samples will be collected and analyzed for this CU. The fill area and leachate line are to be excavated. This material will be sampled for waste acceptance criteria (WAC) concerns separate from the certification sampling and will be done with a Variance/Field Change Notice (V/FCN) to the PSP for A1PII Field Sampling of Miscellaneous Areas. The top 6 inches will be collected and analyzed for WAC and a 6-inch archive sample will be collected at the bottom of the fill material.

- CU A1P2-S3HW-01 - This CU encompasses the footprint of the sludge drying beds, HWMU 41. A total of 16 samples will be collected and analyzed in this CU with eight sample points located within the footprint of the former HWMU area.

- CUs A1P2-S3SA-08 and A1P2-S3SA-09 - A Cincinnati Gas and Electric (CG&E) tower straddles the line dividing these two CUs which are located in the 6-inch stripping area. The area under the tower was not accessible for stripping. As agreed verbally with Ohio Environmental Protection Agency (OEPA), two additional surface samples will be collected there to ensure that the area meets FRLs. These results will not be used to determine if either of the CUs pass the statistical criteria for CU pass/fail conditions. If either of the two samples collected under the CG&E tower exceed FRL limits, the area will be excavated and resampled. A high-purity germanium (HPGe) detector shot was taken under the tower during precertification activities. The results for total uranium and thorium-232 were below the FRL limits, however, the result for radium-226 was 1.9 pCi/g, just above the 1.7 pCi/g FRL.

- CUs A1P2-S2HR-01, A1P2-S3HR-01, A1P2-S3HR-02, A1P2-S3HR-03, and A1P2-S3HR-05 - These CUs contain sections of various haul or access roadways. Samples will be collected in the top 6 inches of undisturbed, native soil beneath the asphalt/gravel surface and any subgrade materials or disturbed support materials. Ground elevations and depth to native soil will be recorded. CU A1P2-S3HR-05 contains a section of the north access roadway. The fill material beneath the road will be sampled for WAC concerns separate from the certification sampling and will be done with a V/FCN to the A1PII PSP for Field Sampling of Miscellaneous Areas. The top 6 inches will be collected and analyzed for WAC and a 6-inch archive sample will be collected at the bottom of the fill material. This sampling will be performed at the same time and location for the certification sampling.

- CUs A1P2-S3HR-04, A1P2-S3SA-02, and A1P2-S3SA-09 - During Removal Action 14, surface excavation was performed in sections of these CUs which removed the top 18 inches of soil. The areas were backfilled with material from an unknown source. One biased sample point location in each CU will be located in the areas

affected by Removal Action 14. For these locations, samples will be collected from the surface (0 to 6 inches) and from the top 6 inches of the native soil layer (expected to be at 12 to 18 inches because an additional 6 inches was removed during STP excavation). The samples at depth will be analyzed for Target Analyte List (TAL) A (total uranium, thorium-228, thorium-232, radium-226 and radium-228) only and the results will not be used to determine if either of the CUs pass the statistical criteria for CU pass/fail conditions.

- The OSDF Equipment Wash area, north of CU A1P2-S2-SP-01, consists of dirt, gravel, and construction trailers. This area will not be certified until the impacted material is excavated. Also, the area along the western boundary of A1PII containing the interim leachate line will not be certified until the line is taken out of service. Finally, the areas around the dissolved oxygen building will not be certified.

Maps of sample point locations, by sector, are shown in Figures 2-2 and 2-3.

2.2 SURVEYING

The NAD83 State Planar coordinates have been determined for each sample location and are listed in Appendix B. Before collection, sample locations will be identified and flagged using standard land surveying methods. Coordinates for Northing, Easting, and surface elevation will be recorded and forwarded to the Characterization Lead.

2.3 PHYSICAL SOIL SAMPLE COLLECTION

Surface soil samples will be collected using a 2 to 3-inch diameter plastic or stainless steel liner as identified in procedure SMPL-01, and will be sealed using plastic end caps. Stainless steel liners may not be used to collect samples for metals analysis. Other soil samples may be collected using Geoprobe® sampling equipment or hand augers depending on the specific area. At the discretion of the Field Sampling Manager, samples may be collected using other methods as specified in SMPL-01. Prior to sample collection, the field sampling technician will remove any surface material such as gravel, riprap if practicable, or vegetation from within a 6-inch radius from the points to be sampled using a gloved hand or stainless steel trowel taking care not to remove any of the surface soil. It is anticipated the following field conditions may be encountered:

- CUs A1P2-S1OF-01, A1P2-S3CD-01, and A1P2-S2NI-01 - Some locations may be covered with riprap which will have to be moved to expose the native soil layer for sampling. A geotextile liner will be encountered under the riprap.

- Sedimentation Basins and STP excavations - Standing water may be encountered which may require pumping after a minimum 48 hours of settling after a rain event prior to pumping.

- Haul and Access Roads - Samples will be collected beneath the roadway by boring through to the native soil layer. A geologist will determine where the undisturbed, native soil layer begins.

- A1P2-S2LL-01- Samples will be collected beneath the bedding material and temporary leachate line in the top 6 inches of native soil. A geologist will determine where the undisturbed, native soil layer begins.

Regardless of the sample collection apparatus, the sample interval will be from 0 to 6 inches ground surface except as noted above, where the native, subsurface soil will be certified. Core samples will either be capped/sealed and submitted to the laboratory or containerized as specified in Tables 3-1 and 3-2. In some cases, multiple cores at the certification sample point may be required to obtain the minimum mass required for analysis. If required, these additional cores must not be more than 12 inches from the original core. Where required, duplicate samples will be collected from the corresponding interval of a second core taken within 6 inches of the original core. Samples will be batched in the field by CU for purposes of sample submittal to the laboratory and data validation. Holding times permitting, all samples for a CU, including Quality Control samples, will be submitted to the Sample Processing Lab (SPL) on one Chain of Custody form, which will represent one analytical release.

If surface or subsurface obstacles prevent sample collection at any of the original locations identified in Appendix B or C, the location may be moved up to three feet in radius from the surveyed location without submitting a V/FCN. The distance and direction moved will be noted on the Field Activity Log (FAL). If the new location is greater than three feet in radius from the originally planned sample point, the change will be documented on a V/FCN form. If any certification sampling location is moved, the Characterization Lead must verify prior to sampling that the new location is within the boundary of the same sub-CU. Customer sample numbers and Fernald Analytical Customer Tracking System (FACTS) identification numbers will be assigned to all samples collected. The sample labels will be completed with sample collection information, and technicians will complete a FAL, Sample Collection Log, and Chain of Custody/Request for Analysis; this documentation is to be completed in the field prior to submitting of the samples.

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For samples collected at depth, the field team will record detailed information regarding the materials (strata) encountered at each boring location, the depth interval of each stratum, and a description of the material (asphalt, gravel, soil, tar, clay, etc.). This information will be used by the geologist or technician and Characterization Lead to properly determine where to collect the sample(s). Visual examination of the solid core or drill cuttings will be used to determine the type of material penetrated. All information on depth intervals for materials will be recorded on the FAL. The field team will ensure that all loose asphalt/tar/gravel is removed from the hole before coring the sample intervals to prevent potential cross-contamination.

2.3.1 Equipment Decontamination

Decontamination is performed to protect worker health and safety and to prevent the introduction of contaminants from sampling equipment to subsequent soil samples. Field technicians will ensure that sampling equipment has been decontaminated prior to transport to the field sampling site. Decontamination is only necessary in the field when sampling equipment is reused; therefore, core liners used with Geoprobe® samplers do not require decontamination. If an alternate sampling method is used, re-usable equipment will be decontaminated between collection of sample intervals and again after the sampling performed under this PSP is completed. Equipment that comes into contact with the sample will undergo Level II decontamination (Section K.11, SCQ) in the field. Equipment that does not contact the soil interval to be collected may be wiped down to remove visible soil, etc. Clean disposable wipes may be used instead of air drying of the equipment. See Section 4.0 for the frequency of collection of equipment rinsate samples.

2.3.2 Certification Physical Sample Identification

Each certification soil sample will be assigned a unique sample identification code, as follows:

A1P2-CU-Location-Suite-QC, where:

A1P2	=	Sample collected from Remediation A1PII (Note that the number "2" is used in place of the roman numeral "II" in the ID number for data management purposes)
CU	=	Certification unit from which sample was collected. The CU identifier references the sector where the CU is located, a prefix as listed below and a sequential number.

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TR - areas within the Trap Range
SB - sedimentation areas
OF - outfall areas
NI - non-impacted areas (areas not excavated to meet FRLs)
SP - stockpile footprints
SA - stripping areas
HR - haul or access roads
LL - leachate lines
OS - On-Site Disposal Facility areas
CD - conveyance ditches
DP - deep excavation areas
HW - former HWMU area

Location = Sample location number within each CU (1 through 16), CG for samples collected under the CG&E tower, and RA for surface samples collected in fill areas of Removal Action 14

Suite = "R", for radiological, "L" for volatiles, "M" for metals, "P" for PCBs, "V" if archives are collected.

Depth = **This designator will not be used for surface (0 to 6-inch) samples.** The designator "B" will be used to denote samples collected at depth. The depth of the sample interval will be denoted on the FAL.

QC = Quality control sample, if applicable. A "D" indicates a duplicate sample, "X" indicates a rinsate, "TB" indicates a trip blank sample.

Please note that the sample IDs in Appendix B list the "suite" designator as "X" for all samples. The "X" will be replaced with the appropriate suite designator(s) at the time of sample collection. For instance, the sample ID A1P2-S3DP-01-16-MP-D indicates that this surface sample is a duplicate of the sixteenth sample collected from A1PII CU S3DP-01 and that the analyses to be performed on this sample are metals and polychlorinated biphenyls (PCBs).

The samples will be analyzed either at the on-site laboratory or at an off-site laboratory depending on available lab capacity and ability to meet requested turn-around times. The Laboratory Contact, in conjunction with the Characterization Lead and Field Sampling Manager, will make this determination for each CU prior to sample collection.

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2.3.3 Borehole Abandonment

Shallow boreholes less than 2 feet will be manually backfilled with surrounding soil or similar material removed from the boreholes (gravel, etc.). Boreholes deeper than 2 feet will be plugged with bentonite pellets and hydrated after every 2 feet of pellets are placed.

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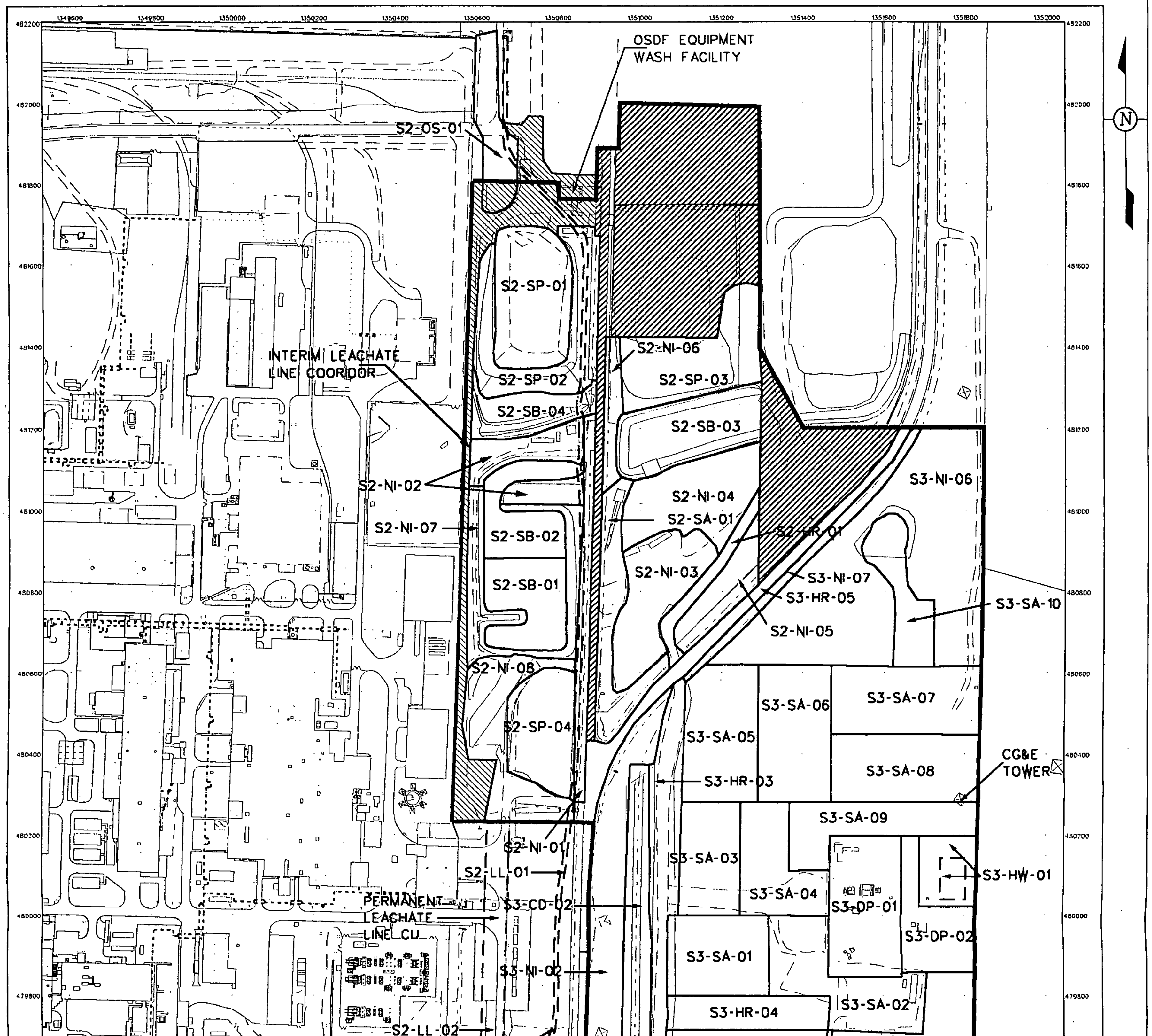

LEGEND:

A1P2 BOUNDARY

CU BOUNDARIES

LEACHATE LINE CU BOUNDARIES

CERTIFIED AREAS

AREAS TO BE CERTIFIED UNDER SEPARATE SCOPE

SCALE

300 150 0 300 FEET

FIGURE 2-1. A1PII CERTIFICATION UNITS DESIGN

STATE PLANAR COORDINATE SYSTEM 1983

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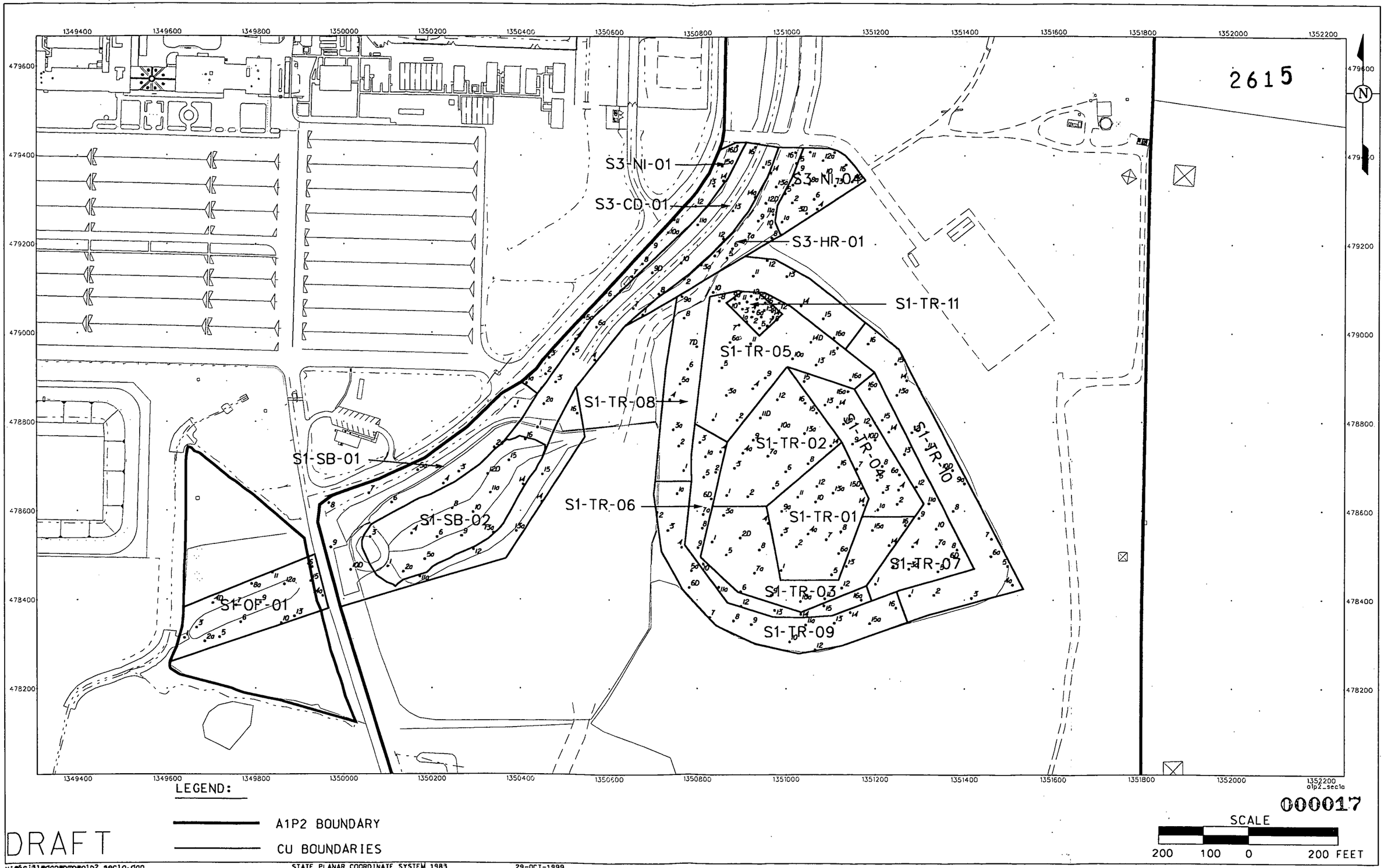

FIGURE 2-2. A1PII SECTOR 1 CU BOUNDARIES AND SAMPLE LOCATIONS

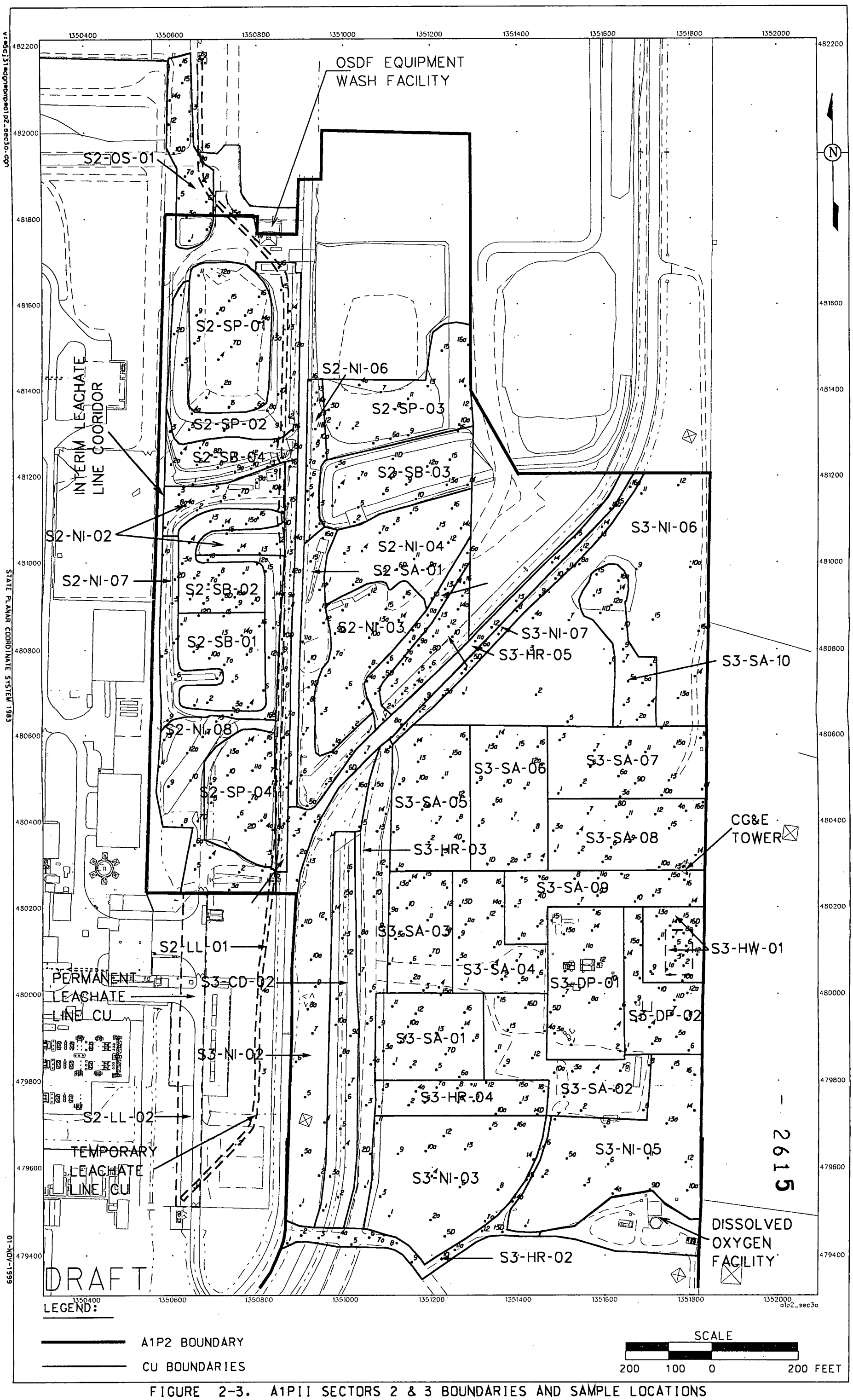

FIGURE 2-3. A1P11 SECTORS 2 & 3 BOUNDARIES AND SAMPLE LOCATIONS

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3.0 CERTIFICATION SAMPLE ANALYSIS

The necessary volume of all samples collected will be prepared for the appropriate analytical method per requirements of the SCQ. Sampling and analytical requirements are listed in Table 3-1 and 3-2. TALs are shown in Appendix E.

If the Area Project Manager (APM) decides to analyze samples subject to methods not described in the SCQ, the APM shall ensure that:

- A V/FCN is issued to include references confirming that the new method is sufficient to support data needs
- Variations from the SCQ methodology are documented in the PSP, or
- The APM may request data validation for affected samples or communicate to the lab that Data Qualifier Codes of J and R be attached to detected and nondetected constituents of concern, respectively.

TABLE 3-1
SAMPLING AND ANALYTICAL REQUIREMENTS – FOR THE ON-SITE LABORATORY

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Analyte	TAL	Sample Matrix	ASL	Preservative	Minimum Mass	Holding Time	Container[a]
Total Uranium, Radium-226, Radium-228, Thorium-228, Thorium-232[b]	A	Solid	E	None	300 g	12 months	Plastic or stainless steel core liner or glass or polyethylene sample container[d]
Technetium-99[c]	B	Solid	E	None	10 g	12 months	
Metals	C,D,G	Solid	D	Cool, 4° C	20 g	6 months	
Total Uranium, Radium-226, Radium-228, Thorium-228, Thorium-232	A	Liquid (rinsate)	E	HNO_3 to pH<2	NA	6 months	Two 4-liter polyethylene
Technetium-99[c]	B	Liquid (rinsate)	E	HNO_3 to pH<2	NA	6 months	1 liter polyethylene
Metals	C,D,G	Liquid (rinsate)	D	Cool, 4° C, HNO_3 to pH<2	NA	6 months	500 ml polyethylene[e]

[a] Sample containers may be changed at the discretion of the Field Sampling Lead

[b] The Highest Allowable Minimum Detectable Concentration (HAMDC) for total uranium for CU A1PII-S3DP-01 is 2.0 parts per million (ppm) and will be analyzed at the on-site laboratory.

[c] It is anticipated that all technetium-99 analyses will be performed at the on-site laboratory.

[d] Soil samples for metals analysis can not be submitted in stainless steel liners. The SCQ specifies glass containers with teflon lined caps, however, polyethylene containers may also be used as allowed by Contract Laboratory Program (CLP) procedure ILMO4.0.

[e] The SCQ specifies collection of 1 liter samples for metals analysis, however, this volume is adequate for field QC since laboratory QC is not required.

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TABLE 3-2
SAMPLING AND ANALYTICAL REQUIREMENTS FOR THE OFF-SITE LABORATORY

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Analyte	TAL	Sample Matrix	ASL	Preservative	Minimum Mass	Holding Time	Container[a&d]
Total Uranium, Radium-226, Radium-228, Thorium-228, Thorium-232	A	Solid	E	None	1000 g	12 months	Plastic or stainless steel core liner or glass or polyethylene sample container
Total Uranium, Radium-226, Radium-228, Thorium-228, Thorium-232	A	Liquid (rinsate)	E	HNO_3 to pH<2	NA	6 months	Two 4-liter polyethylene
Metals	C,D,G	Solid	D	Cool, 4° C	20 g	6 months	120 ml widemouth glass or polyethylene[b&c]
Metals	C,D,G	Liquid (rinsate)	D	Cool, 4° C, HNO_3 to pH<2	NA	6 months	500 ml polyethylene[c]
VOA	E	Solid	D	Cool, 4° C	50 g (no headspace)	14 days	60 ml glass with teflon lined septa
VOA	E	Liquid (rinsate/ trip blanks)	D	Cool, 4° C H_2SO_4 to pH<2	NA	14 days	Three 40-ml glass with teflon lined septa
PCB	F	Solid	D	Cool, 4° C	100 g	14 days	500 ml widemouth glass with teflon lined cap[b]
PCB	F	Liquid (rinsate)	D	Cool, 4° C	NA	7days	1 liter amber glass with teflon lined cap

[a] Sample containers may be changed at the discretion of the Field Sampling Lead

[b] For any soil samples which will be analyzed at the off-site laboratory for any combination of metals and PCB analyses (including TALs C, D, F, G), a single container may be submitted as long as the minimum mass requirement is met. If combined, a glass container MUST be used.

[c] The SCQ specifies glass containers with teflon lined caps for metals samples, however, polyethylene containers may also be used for samples for metals analysis only as allowed by CLP procedure ILMO4.0.

[d] Samples for radiological (TAL A) and chemical analyses (TALs C, D, E, F, G) should be documented on separate Chain of Custody forms.

[e] The SCQ specifies collection of 1 liter samples for metals analysis, however, this volume is adequate for field QC since laboratory QC is not required.

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4.0 QUALITY ASSURANCE/QUALITY CONTROL REQUIREMENTS

4.1 FIELD QUALITY CONTROL SAMPLES, ANALYTICAL REQUIREMENTS AND DATA VALIDATION

The field quality control, analytical, and data validation requirements are as follows:

- Field quality control requirements include one duplicate for each CU, as noted in Appendix B and further described in Section 2.3. One container blank (empty container, per SCQ Appendix K) will be submitted for the precleaned liner tubes. If an alternate sample collection method is used, one rinsate will be collected at a minimum frequency of 1 per 20 certification samples where reusable equipment (e.g., hand augers, liner tubes) is used for collection. Rinsate samples will be analyzed for the same constituents as the associated soil sample. Trip blanks will be analyzed only for TAL E volatiles.

- Analyses will be performed at ASL D and ASL E. The requirements for ASL E are identical with ASL D except that the HAMDC is at least 10 percent of the FRL.

- All field data will be validated. An ASL D analytical package will be provided for a minimum of 10 percent of the samples and an ASL B will be provided for the remaining samples. A minimum of ten percent of each analyte will be validated to ASL D and the remaining data to ASL B. This will be obtained by validating to ASL D seven randomly chosen CUs: A1PII-S1TR-08, A1PII-S1TR03, A1PII-S3SA-04, A1PII-S2NI-05, A1PII-S3DP-01, A1P2-S3HW-01, and A1PII-S3SA-07. If any result is rejected, all data from the laboratory with the rejected result will then be validated to determine the integrity of the results from that laboratory. This change will be documented in a V/FCN.

Once all data are validated as required, results will be entered into the Sitewide Environmental Database (SED) and a statistical analysis will be performed to evaluate the pass/fail criteria for the each CU. The statistical approach is discussed in Section 3.4.3 and Appendix G of the SEP. This work is being performed per the requirements as stated in DQO SL-052 (Appendix A).

4.2 PROCEDURES, MANUALS AND DOCUMENTS

To ensure consistency and data integrity, field activities in support of the PSP will follow the requirements and responsibilities outlined in the procedures and guidance documents referenced below.

- Sitewide Excavation Plan (SEP)

- Sitewide CERCLA Quality Assurance Project Plan (SCQ)

- Certification Design Letter for A1PII Certified for Reuse Areas, Trap Range, Sector 2C, and Sector 3
- Certification Report for A1PII Sector 2B -- 2615
- Project Specific Plan for A1PII Field Sampling of Miscellaneous Areas
- ADM-02, Field Project Prerequisites
- EQT-33, Real Time Differential Global Positioning System Operation
- SMPL-01, Solids Sampling
- SMPL-21, Collection of Field Quality Control Samples
- S.P. 766-S-1000, Shipping Samples to Offsite Laboratories
- Trimble Pathfinder Pro-XL GPS Operation Manual

Please note that this is not a complete list of all applicable documents and procedures.

4.3 TRAINING

Programs supporting this work are responsible for ensuring team members work to and are trained to applicable documents. Additionally, programs supporting this work are responsible for ensuring team members in their organizations are qualified and maintain qualification for site access requirements. The project manager will be responsible for ensuring any project specific training required to perform work per this PSP is conducted.

4.4 INDEPENDENT ASSESSMENT

An independent assessment will be performed by the FEMP Quality Assurance (QA) organization by conducting a surveillance, consisting of monitoring/observing ongoing project activities and work areas to verify conformance to specified requirements. Surveillances will be planned and documented in accordance with Section 12.3 of the SCQ.

4.5 IMPLEMENTATION OF CHANGES

Before implementing changes, the Field Sampling Lead will be informed of the proposed changes. Once the Field Sampling Lead has obtained written or verbal approval (electronic mail is acceptable) from the APM, QA, and the Characterization Lead for the changes to the PSP, the changes may be implemented. Changes to the PSP will be noted in the applicable FALs and on a V/FCN. QA must

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receive the completed V/FCN, which includes the signatures of the Characterization Lead, Field Sampling Lead, APM, and QA within seven working days of implementation of the change. Copies of all V/FCNs will be sent to U.S. Environmental Protection Agency (EPA) and OEPA. V/FCNs which document significant changes to the PSP must be approved by the Agencies prior to implementation.

5.0 HEALTH AND SAFETY -- 2615

Technicians will conform to precautionary surveys performed by personnel representing the Utility Engineer, Industrial Hygiene, and Radiological Control as applicable. All work performed on this project will be performed in accordance to applicable Environmental Monitoring project procedures, RM-0020 (Radiological Control Requirements Manual), RM-0021 (Safety Performance Requirements Manual), Fluor Daniel Fernald (FDF) work permit, Radiological Work Permit (RWP), penetration permits, and other applicable permits. Concurrence with applicable safety permits is required by each technician in the performance of their assigned duties. A safety briefing will be conducted prior to the initiation of field activities.

All emergencies shall be reported immediately on extension 911, or to the Site Communications Center at 648-6511 (if using a cellular phone), or using a radio and contacting "CONTROL" on Channel 11.

6.0 DATA MANAGEMENT -- 2615

A data management process will be implemented to collect and manage certification information collected during the investigation. As specified in Section 5.1 of the SCQ, daily activities will be recorded on the FAL, with sufficient detail to be able to reconstruct a particular situation without reliance on memory. Sample Collection Logs will be completed according to procedure ADM-02.

Electronically recorded data (including northings, eastings, and surface elevations) from the Geodimeter and global positioning system (GPS) will be downloaded to disks on a daily basis or as the project requires. Survey team members will review the data for completeness and accuracy and then download it onto the Local Area Network (LAN). Once on the LAN, the Data Management Contact will perform an evaluation of the coordinate data. Once complete, the data will be sent to the loader, where it will be loaded onto the Oracle system and an error log will be generated. The data will then be made available to users through both the Graphical Information System (GIS) and Microsoft Access Software. Survey field team members will retain all downloaded data on disk for future reference and archive.

Field documentation, such as the FAL, Geodimeter® Survey Files, the Sample Collection Log, and the Sample Request/Sample Analysis Chain of Custody Log will undergo an internal QA/QC review by the field team members. Field packages will then be generated and delivered to QA validation team where the data will be evaluated. Field data will then be sent to data entry personnel for input into the Oracle System. Uniquely numbered field logs may be completed in the field and maintained in loose-leaf form. Copies of the field data should be forwarded to the Data Management contact.

Analytical data from on-site and off-site laboratories will be reported in preliminary form to the Characterization Lead on at least a weekly basis. This will be done by the laboratory contact as soon as the data are available in the FACTS database. Off-site laboratories will submit ASL D data packages for all analyses performed. The on-site laboratory will report ASL D data packages for those CUs which will be validated to ASL D (see Appendix B) and ASL B data packages for the remaining CUs. Following required validation of the data for each sample release, the data from that release will be reported to the Characterization Lead in the final data report format. Qualified data will be entered into the SED.

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All records associated with this PSP should reference the PSP number and eventually be forwarded to Engineering/Construction Document Control to be placed in the project file.

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APPENDIX A

DATA QUALITY OBJECTIVE
DQO SL-052, REVISION 1

Control Number 2615

Fernald Environmental Management Project

Data Quality Objectives

Title: Sitewide Certification Sampling and Analysis without using HPGe Detectors

Number: SL-052

Revision: 1

Effective Date: June 10, 1999

Contact Name: Mike Rolfes

Approval: Frank Thompson FOR James Chambers
DQO Coordinator

Date: 6/10/99

Approval: J.D. Chiou
SCEP Project Director

Date: 6/10/99

Rev. #	0	1					
Effective Date:	4/28/99	6/10/99					

DATA QUALITY OBJECTIVES
Sitewide Certification Sampling and Analysis

Members of Data Quality Objectives (DQO) Scoping Team

The members of the scoping team included individuals with expertise in QA, analytical methods, field sampling, statistics, laboratory analytical methods and data management.

Conceptual Model of the Site

Soil sampling was conducted at the Fernald Environmental Management Project (FEMP) during the Operable Unit 5 (OU5) Remedial Investigation/Feasibility Study (RI/FS). Final Remediation Levels (FRLs) for constituents of concern (COCs), along with the extent of soil contaminated above the FRLs, were identified in the OU5 Record of Decision (ROD). Actual soil remediation activities now fall under the guidance of the final Sitewide Excavation Plan (SEP).

As outlined in the SEP, the FEMP has been divided into individual Remediation Areas (or phased areas within a Remediation Area) to sequentially carry out soil remedial activities. Under the strategy identified in the SEP, pre-design investigations are first conducted to better define the limits of soil excavation requirements. Following any necessary excavation, pre-certification real-time scanning activities are conducted to evaluate residual patterns of soil contamination. Pre-certification scan data should provide a level of assurance that the FRLs will be achieved. When pre-certification data indicate that remediation goals are likely to be met, they are used to define certification units (CUs) within the Remediation Area of interest. Table 2-9 of the final SEP identifies a list of area-specific COCs (ASCOCs) for each Remediation Area at the FEMP. Based on existing data and production knowledge, a subset of these ASCOCs are conservatively identified within each CU as potentially present in the CU. This suite of CU-specific COCs is the subset of the ASCOCs to be evaluated against the FRLs within that CU. At a minimum, the five primary radiological COCs (total uranium, radium-226, radium-228, thorium-228, thorium-232) will be retained as CU-specific COCs for certification of each CU.

Delineation and justification for the final CU boundaries, along with each corresponding suite of CU-specific ASCOCs is documented in a Certification Design Letter. Upon approval of the Certification Design Letter by the EPA, certification activities can begin. Section 3.4 of the final SEP presents the general certification strategy.

1.0 Statement of Problem

FEMP soil and potentially impacted adjacent off-property soil must be certified on a CU by CU basis for compliance with the FRLs of all CU-specific ASCOCs. The appropriate sampling, analytical and information management criteria must be developed to provide the required qualified data necessary to demonstrate attainment of certification statistical criteria. For every area undergoing certification, a sampling plan must be in place that will direct soil samples to be collected which are representative of the CU-specific COC concentrations within the framework of the certification approach identified in the final SEP. The appropriate analytical methodologies must be selected to provide the required data.

Exposure to Soil

The cleanup standards, or FRLs, were developed for a final site land use as an undeveloped park. Under this exposure scenario, receptors could be directly exposed to contaminated soil through dermal contact, external radiation, incidental ingestion, and/or inhalation of fugitive dust while visiting the park. Exposure to contaminated soil by the modeled receptor is expected to occur at random locations within the boundaries of the FEMP and would not be limited to any single area. Some soil FRLs were developed based on the modeled cross-media impact potential of soil contamination to the underlying aquifer. In these instances, potential exposure to contaminants would be indirect through the groundwater pathway, and not directly linked to soil exposure. Off-site soil FRLs were established at more conservative levels than the on-property soil FRLs, based on an agricultural receptor. Benchmark Toxicity Values (BTVs) are also being considered in the cleanup process by assessing habitat impact of individual BTVs under post-remedial conditions.

Available Resources

Time: Certification sampling will be accomplished by the field sampling team prior to interim or final regrading or release of soil for construction activities. The certification sampling schedule must allow sufficient time, in the event additional remediation is required, to demonstrate certification of FRLs prior to permanent construction or regrading. Certification sampling will have to be completed and analytical results validated and statistical analysis completed prior to submission of a Certification Report to the regulatory agencies.

Project Constraints: Certification sampling and analytical testing must be performed with existing manpower, materials and equipment to support the certification effort. Remediation areas are prioritized for certification sampling and analysis according to the date required for initiation of sequential construction activities in those areas. Fluor Daniel Fernald (FDF) and DOE must demonstrate post-remedial compliance

with the CU-specific COC FRLs to release the designated Remediation Area for planned interim grading, eventual restoration under the Natural Resources Restoration Plan (NRRP), and other final land use activities.

2.0 Identify the Decision

Decision

Demonstrate within each CU if all CU-specific COCs pass the certification criteria. These criteria are as follows: 1) The average concentration of each CU-specific COC is below the FRL and within the agreed upon confidence limits (95% for primary ASCOCs and 90% for secondary ASCOCs); and 2) the hot-spot criteria, that no result for any CU-specific COC is more than two times the associated soil FRL. The certification criteria are discussed in greater detail in Section 3.4.4 of the final SEP.

Possible Results

1. The average concentration of each CU-specific COC can be demonstrated to be below the FRLs within the confidence level, with no single result for any CU-specific COC greater than two times the associated FRL. The CU can then be certified as attaining remediation goals.

2. The average concentration of at least one CU-specific COC is demonstrated to be above the FRL at the given confidence level. The CU will fail certification and require additional remedial action, per Section 3.4.5 of the final SEP.

3. If a result(s) of one or more CU-specific COC is demonstrated to be at or above two times the FRL, the CU will fail certification. The CU will fail certification and require additional remedial action per Section 3.4.5 of the final SEP. A combination of results 2 and 3 also constitutes certification failure.

3.0 Inputs That Affect the Decision

Required Information

Certification data will be obtained through physical soil sampling. Based on the certification analytical results, the average concentrations of each CU-specific COC with specified confidence levels will be calculated using the statistical methods identified in Appendix G of the final SEP.

Source of Information
Per the SEP, analysis of certification samples for each CU-specific COC will be conducted at analytical support level (ASL) D in accordance with methods and QA/QC standards in the FEMP Sitewide CERCLA Quality Assurance Project Plan [SCQ].

Contaminant-Specific Action Levels
The cleanup levels are the soil FRLs published in the OU5 and OU2 RODs. BTVs being considered in the remediation process are published in the OU5 Ecological Risk Assessment and are being reviewed for site consideration in the NRRP.

Methods of Sampling and Analysis
Physical soil samples will be collected in accordance with the applicable site sampling procedures. Per the SEP, laboratory analysis will be conducted at ASL D using QA/QC protocols specified in the SCQ. Full raw data deliverables will be required from the laboratory to allow for appropriate data validation. For FEMP-approved on- and off-site laboratories, the analytical method used will meet the required precision, accuracy and detection capabilities necessary to achieve FRL analyte ranges.

4.0 The Boundaries of the Situation

Spatial Boundaries
Domain of the Decision: The boundaries of this certification DQO extend to all surface and stockpile soil in areas that are undergoing certification as part of FEMP remediation.

Population of Soil: Soil includes all excavated surfaces, defined sub-surface intervals, and undisturbed, relatively unimpacted native soil in areas undergoing certification sampling and analysis.

Scale of Decision Making
Based on considerations of the final certification units and the COC evaluation process, the CU-specific COCs are determined. The area undergoing certification will be evaluated on a CU basis, based on physical sample results, as to whether it has passed or failed the criteria for attainment of certification (final SEP Section 3.4.4).

Temporal Boundaries
Time frame: Certification sampling must be performed in time to sequentially release certified areas for scheduled interim grading, restoration, and other final land use activities. Certification sampling data received from the laboratory will be

validated and statistically evaluated. Certification results and findings will be documented in Certification Reports, which must be submitted to and approved by the regulatory agencies prior to release of the areas for scheduled interim grading, restoration, and other final land use activities.

Practical Considerations: Some areas undergoing remediation will not be accessible for certification sampling until decontamination/demolition and excavation activities are complete. Other areas, such as wood lots, that are relatively uncontaminated and not planned for excavation, may require preparation, such as cutting of grass or removal of undergrowth prior to certification sampling, thus requiring coordination with FEMP Maintenance personnel.

5.0 Decision Rule

Successful certification of soil within the boundaries of a certification unit (CU) demonstrates that the certified soil (surface or subsurface) has concentrations of CU-specific COC(s) that meet the established criteria for attainment of Certification.

Parameters of Interest

The parameters of interest are the individual and average surface soil concentrations of CU-specific COCs and confidence limits on the calculated average within a CU. OU2 and OU5 ROD identify all applicable soil FRLs. The SEP identifies the ASCOCs, a subset of which will be used to establish CU-specific COCs within each Remediation Area undergoing certification sampling and analysis.

Action Levels

The applicable action levels are the on- and off-property soil FRLs published in the OU5 or OU2 ROD for each ASCOC.

Decision Rules

If the average concentration for each CU-specific COC is demonstrated to be below the FRLs within the agreed upon confidence level (95% for primary COCs; 90% for secondary COCs), and no analytical result exceeds two times the soil FRL, then the CU can be certified as complying with the cleanup criteria. If a CU does not meet the FRLs within the agreed upon confidence level for one or more CU-specific COCs, or one or more analytical results for one or more CU-specific COCs is greater than two times the associated soil FRL, then the CU fails certification and requires further assessment as per the SEP.

6.0 Limits on Decision Errors

Types of Decision Errors and Consequences

Definition

Decision Error 1: This decision error occurs when the decision maker decides that a CU has met the certification criteria, when in reality, the certification criteria have not been met. This situation could result in an increased risk to human health and the environment. In addition, this type of error could result in regulatory fees and penalties.

Decision Error 2: This decision error occurs when the decision maker decides a CU does not met the certification criteria, when actually, the certification criteria have been met. This error would result in unnecessary added costs due to the excavation of soil containing COC concentrations below their FRLs, and an increased volume of soil assigned to the OSDF. In addition, unnecessary delays in the remediation schedule may result.

True State of Nature for the Decision Errors

The true state of nature for Decision Error 1 is that the certification criteria are not met (average CU-specific COC concentrations not below the FRL within the specified confidence limits; or a single sample result above two times the FRL). The true state of nature for Decision Error 2 is that certification criteria are met (average CU-specific COC concentrations are below the FRL within the specified confidence limits, and no result is above two times the FRL). Decision Error 1 is the more severe error due to the potential threat this poses to human health and the environment.

Null Hypothesis

H_o: The average concentration of at least one CU-specific COC within a CU is equal to or greater than the associated FRL.

H_1: The average concentration of all CU-specific COCs within a CU is less than the action levels.

False Positive and False Negative Errors

A false positive is Decision Error 1: less than or equal to five percent ($p = .05$) is considered the acceptable decision error in determination of compliance with FRLs for primary ASCOCs, while ten percent ($p = .10$) is acceptable for secondary ASCOCs.

A false negative is Decision Error 2: less than or equal to 20 percent is considered the acceptable decision error. This decision error is controlled through the determination of sample sizes (see Section G.1.4.1 of the final SEP).

7.0 Design for Obtaining Quality Data

Section 3.4.2 of the final SEP presents the specifics of the certification sampling design. The following text describes the general certification sampling design.

Soil Sample Locations

In order to select certification sampling locations, each CU is divided into 16 approximately equal cells (or sub-CUs). Certification sample locations are then generated by randomly selecting an easting and northing coordinate within the boundaries of each cell. Additional alternative sample locations are also generated in case the original random sample location fails the minimum distance criteria. The minimum distance criteria is defined as the minimum distance allowed between random sample locations in order to eliminate the chance of random sample points clustering within a small area. This clustering would tend to over emphasize a small area and, conversely, under represent a large area in certification determination. By not allowing sample locations to be too closely arranged, the sample locations are spread out and provide a more uniform coverage, thus reducing the possibility of large unsampled areas.

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

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

The equation used to check the minimum distance criteria is

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

This equation was derived under the following assumptions:

- $\sqrt{\text{Area}_{sub-CU}}$ = the average length of a CU side

since the area of a CU (in its simplest form, a square) is equal to height time width;

- $\sqrt{16}$ = **the average number of *sub-CUs* on a side of the CU**

since the number of cells or sub-CUs (in its simplest form, a 4x4 configuration) is equal to 4; and ½ was chosen to allow sample points to be only as close as ½ of the average sub-CU side length.

In the event that the original random sample location failed the minimum distance criteria, the first alternate location was selected and all the locations were retested versus the minimum distance criteria. This process continued until all 16 random locations passed the minimum distance criteria.

Physical Samples
Physical soil certification samples will be collected according to SMPL-01 at all 16 locations per CU except for A2P3-1S, A2P3-1SF, A2P3-4S, and A2P3-4SF. Only 12 sample locations will be generated for CUs A2P3-1S and A2P3-1SF due to the small size of the pile, as identified in the area certification PSP. Eighteen sample locations will be generated for CUs A2P3-4S and A2P3-4SF due to the larger size of the pile, as identified in the area certification PSP. Sample collection depth will be 0"-6", unless otherwise noted in the PSP. As defined in the PSP, 8 to 18 samples per CU will be submitted to the on-site laboratory or a FDF approved off-site laboratory for analysis at ASL D requirements per the SCQ.

Validation
All field data will be validated. Also, a minimum of 10 percent of the analytical data from each laboratory will be subject to analytical validation to ASL D requirements in the SCQ and will require an ASL D data package. The remaining analytical data will be validated to a minimum of ASL B and will require an ASL B data package. If any result is rejected, all data from the laboratory with the rejected result will then be validated to determine the integrity of the results from that laboratory. This change will be documented in a variance to this PSP.

8.0 Use of Data to Test Null Hypothesis

Appendix G of the final SEP discusses in detail, the statistical evaluations of certification data used to determine attainment of certification criteria.

Data Quality Objectives
Sitewide Certification Sampling and Analysis

1A. Task/Description: Certification Sampling and Analysis

1.B. Project Phase: (Put an X in the appropriate selection.)

RI ☐ FS ☐ RD ☐ RA ☒ R_VA ☐ OTHER_____

1.C. DQO No.: SL-052, Rev. 0 DQO Reference No.:_____

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2. Media Characterization: (Put an X in the appropriate selection.)

Air ☐ Biological ☐ Groundwater ☐ Sediment ☐ Soil ☒

Waste ☐ Wastewater ☐ Surface water ☐ Other (specify) _____

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3. Data Use with Analytical Support Level (A-E): (Put an X in the appropriate Analytical Support Level selection(s) beside each applicable Data Use.)

Site Characterization A ☐ B ☐ C ☐ D ☐ E ☐	Risk Assessment A ☐ B ☐ C ☐ D ☐ E ☐
Evaluation of Alternatives A ☐ B ☐ C ☐ D ☐ E ☐	Engineering Design A ☐ B ☐ C ☐ D ☐ E ☐
Monitoring during remediation activities A ☐ B ☐ C ☐ D ☐ E ☐	Other (Certification) A ☐ B ☐ C ☐ D ☒* E ☐

4.A. Drivers: Remediation Area Remedial Action Work Plans, Applicable or Relevant and Appropriate Requirements (ARARs) and Operable Unit 2 and Operable Unit 5 Records of Decision (ROD), Sitewide Excavation Plan (SEP).

4.B. Objective: Confirmation that remediation areas at the FEMP, or adjacent off-property areas, have met certification criteria on a CU by CU basis.

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5. Site Information (Description):

The OU2 and OU5 RODs have identified areas at the FEMP that require soil remediation activities. The RODs specify that the soil in these areas will be demonstrated to be below the FRLs. Certification is necessary for all FEMP soil and some adjacent off-property soil to demonstrate that the residual soil does not contain COC contamination exceeding the FRL at a specified confidence level.

6.A. Data Types with appropriate Analytical Support Level Equipment Selection and SCQ Reference: (Place an "X" to the right of the appropriate box or boxes selecting the type of analysis or analyses required. Then select the type of equipment to perform the analysis if appropriate. Please include a reference to the SCQ Section.)

1. pH	☐	2. Uranium	☒	3. BTX	☐
Temperature	☐	Full Radiological	☒*	TPH	☐
Spec. Conductance	☐	Metals	☒*	Oil/Grease	☐
Dissolved Oxygen	☐	Cyanide	☐		
Technetium-99	☒*	Silica	☐		
4. Cations	☐	5. VOA	☒*	6. Other (specify)	
Anions	☐	BNA	☐		
TOC	☐	Pesticides	☒*		
TCLP	☐	PCB	☒*		
CEC	☐				
COD	☐				

*As identified in the Area certification PSP

6.B. Equipment Selection and SCQ Reference:

Equipment Selection		Refer to SCQ Section
ASL A	_____	SCQ Section: _____
ASL B	_____	SCQ Section: _____
ASL C	_____	SCQ Section: _____
ASL D	Per SCQ, and PSP	SCQ Section: Appendix. G , Tbls. 1 & 3
ASL E	_____	SCQ Section: Appendix H (final)

7.A. Sampling Methods: (Put an X in the appropriate selection.)

Biased [ ] Composite [ ] Environmental [ ] Grab [X] Grid [ ]
Intrusive [X] Non-Intrusive [ ] Random [X]* Phased [ ] Source [ ]
*Systematic random samples, selected one per cell and meeting the minimum distance criterion

7.B. Sample Work Plan Reference: Project Specific Plan for the associated Remediation area Remedial Action Work Plan

Background samples: OU5 RI

7.C. Sample Collection Reference:

Sample Collection Reference: Associated PSP(s), SMPL-01

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8. Quality Control Samples: (Place an "X" in the appropriate selection box.)

8.A. Field Quality Control Samples:

Trip Blanks	[X]*	Container Blanks	[X]**
Field Blanks	[X]**	Duplicate Samples	[X]
Equipment Rinsate Samples	[X]	Split Samples	[X]***
Preservative Blanks	[ ]	Performance Evaluation Samples	[ ]

Other (specify)
*Collected for volatile organic sampling
**As noted in the PSP
*** Split samples will be collected where required by the EPA.

8.B. Laboratory Quality Control Samples:

Method Blank	[X]	Matrix Duplicate/Replicate	[X]
Matrix Spike	[X]	Surrogate Spikes	[X]
Tracer Spike	[X]		

Other (specify) _____

9. Other: Please provide any other germane information that may impact the data quality or gathering of this particular objective, task or data use.

Sample density will be dependent upon the CU size (Group 1 [250'x250'] or Group 2 [500'x500']), as determined by historical and pre-certification scan data.

APPENDIX B

CU SAMPLES/COORDINATES/IDENTIFICATION

APPENDIX B
CU SAMPLES/COORDINATES/IDENTIFICATION

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CERTIFICATION UNIT	SAMPLE IDENTIFICATION	EASTING	NORTHING	TALs	ASL/VSL
A1P2-S1TR-01	A1P2-S1TR-01-01-X	1350989	478467	A,C	D/B
A1P2-S1TR-01	A1P2-S1TR-01-02-X	1351023	478520	A,C	D/B
A1P2-S1TR-01	A1P2-S1TR-01-03-X	1350990	478547	A,C	D/B
A1P2-S1TR-01	A1P2-S1TR-01-04-X	1351049	478549	Not Collected	D/B
A1P2-S1TR-01	A1P2-S1TR-01-05-X	1351102	478457	A,C	D/B
A1P2-S1TR-01	A1P2-S1TR-01-06-X	1351118	478505	Not Collected	D/B
A1P2-S1TR-01	A1P2-S1TR-01-07-X	1351090	478536	A,C	D/B
A1P2-S1TR-01	A1P2-S1TR-01-08-X	1351123	478554	A,C	D/B
A1P2-S1TR-01	A1P2-S1TR-01-09-X	1350990	478600	Not Collected	D/B
A1P2-S1TR-01	A1P2-S1TR-01-10-X	1351066	478621	A,C	D/B
A1P2-S1TR-01	A1P2-S1TR-01-11-X	1351026	478632	A,C	D/B
A1P2-S1TR-01	A1P2-S1TR-01-12-X	1351069	478656	A,C	D/B
A1P2-S1TR-01	A1P2-S1TR-01-13-X	1351105	478641	Not Collected	D/B
A1P2-S1TR-01	A1P2-S1TR-01-14-X	1351174	478614	A,C	D/B
A1P2-S1TR-01	A1P2-S1TR-01-15-X	1351169	478651	A,C	D/B
A1P2-S1TR-01	A1P2-S1TR-01-15-X-D	1351169	478651	A,C	D/B
A1P2-S1TR-01	A1P2-S1TR-01-16-X	1351118	478699	A,C	D/B
A1P2-S1TR-02	A1P2-S1TR-02-01-X	1350867	478636	A,C	D/B
A1P2-S1TR-02	A1P2-S1TR-02-02-X	1350914	478633	A,C	D/B
A1P2-S1TR-02	A1P2-S1TR-02-03-X	1350884	478697	A,C	D/B
A1P2-S1TR-02	A1P2-S1TR-02-04-X	1350903	478731	Not Collected	D/B
A1P2-S1TR-02	A1P2-S1TR-02-05-X	1350971	478652	A,C	D/B
A1P2-S1TR-02	A1P2-S1TR-02-06-X	1350999	478689	A,C	D/B
A1P2-S1TR-02	A1P2-S1TR-02-07-X	1350959	478724	Not Collected	D/B
A1P2-S1TR-02	A1P2-S1TR-02-08-X	1351049	478707	A,C	D/B
A1P2-S1TR-02	A1P2-S1TR-02-09-X	1350926	478760	A,C	D/B
A1P2-S1TR-02	A1P2-S1TR-02-10-X	1350984	478784	Not Collected	D/B
A1P2-S1TR-02	A1P2-S1TR-02-11-X	1350942	478810	A,C	D/B
A1P2-S1TR-02	A1P2-S1TR-02-11-X-D	1350942	478810	A,C	D/B
A1P2-S1TR-02	A1P2-S1TR-02-12-X	1350980	478851	A,C	D/B
A1P2-S1TR-02	A1P2-S1TR-02-13-X	1351041	478775	Not Collected	D/B
A1P2-S1TR-02	A1P2-S1TR-02-14-X	1351100	478747	A,C	D/B
A1P2-S1TR-02	A1P2-S1TR-02-15-X	1351068	478821	A,C	D/B
A1P2-S1TR-02	A1P2-S1TR-02-16-X	1351042	478843	A,C	D/B
A1P2-S1TR-03	A1P2-S1TR-03-01-X	1350834	478531	A,C	D/D
A1P2-S1TR-03	A1P2-S1TR-03-02-X	1350897	478540	A,C	D/D
A1P2-S1TR-03	A1P2-S1TR-03-02-X-D	1350897	478540	A,C	D/D
A1P2-S1TR-03	A1P2-S1TR-03-03-X	1350860	478591	Not Collected	D/D
A1P2-S1TR-03	A1P2-S1TR-03-04-X	1350960	478573	A,C	D/D
A1P2-S1TR-03	A1P2-S1TR-03-05-X	1350866	478502	A,C	D/D
A1P2-S1TR-03	A1P2-S1TR-03-06-X	1350898	478419	A,C	D/D
A1P2-S1TR-03	A1P2-S1TR-03-07-X	1350929	478461	Not Collected	D/D
A1P2-S1TR-03	A1P2-S1TR-03-08-X	1350940	478513	A,C	D/D
A1P2-S1TR-03	A1P2-S1TR-03-09-X	1350967	478411	A,C	D/D
A1P2-S1TR-03	A1P2-S1TR-03-10-X	1351032	478397	Not Collected	D/D
A1P2-S1TR-03	A1P2-S1TR-03-11-X	1351087	478403	A,C	D/D
A1P2-S1TR-03	A1P2-S1TR-03-12-X	1351125	478427	A,C	D/D
A1P2-S1TR-03	A1P2-S1TR-03-13-X	1351135	478476	A,C	D/D

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CERTIFICATION UNIT	SAMPLE IDENTIFICATION	EASTING	NORTHING	TALs	ASL/VSL
A1P2-S1TR-03	A1P2-S1TR-03-14-X	1351232	478523	A,C	D/D
A1P2-S1TR-03	A1P2-S1TR-03-15-X	1351194	478557	Not Collected	D/D
A1P2-S1TR-03	A1P2-S1TR-03-16-X	1351268	478568	A,C	D/D
A1P2-S1TR-04	A1P2-S1TR-04-01-X	1351206	478603	Not Collected	D/B
A1P2-S1TR-04	A1P2-S1TR-04-02-X	1351250	478616	A,C	D/B
A1P2-S1TR-04	A1P2-S1TR-04-03-X	1351218	478642	A,C	D/B
A1P2-S1TR-04	A1P2-S1TR-04-04-X	1351253	478648	A,C	D/B
A1P2-S1TR-04	A1P2-S1TR-04-05-X	1351205	478670	A,C	D/B
A1P2-S1TR-04	A1P2-S1TR-04-06-X	1351255	478682	Not Collected	D/B
A1P2-S1TR-04	A1P2-S1TR-04-07-X	1351159	478695	A,C	D/B
A1P2-S1TR-04	A1P2-S1TR-04-08-X	1351216	478701	A,C	D/B
A1P2-S1TR-04	A1P2-S1TR-04-09-X	1351149	478751	A,C	D/B
A1P2-S1TR-04	A1P2-S1TR-04-10-X	1351200	478760	A,C	D/B
A1P2-S1TR-04	A1P2-S1TR-04-10-X-D	1351200	478760	A,C	D/B
A1P2-S1TR-04	A1P2-S1TR-04-11-X	1351129	478796	Not Collected	D/B
A1P2-S1TR-04	A1P2-S1TR-04-12-X	1351189	478793	A,C	D/B
A1P2-S1TR-04	A1P2-S1TR-04-13-X	1351087	478839	A,C	D/B
A1P2-S1TR-04	A1P2-S1TR-04-14-X	1351115	478834	A,C	D/B
A1P2-S1TR-04	A1P2-S1TR-04-15-X	1351040	478892	A,C	D/B
A1P2-S1TR-04	A1P2-S1TR-04-16-X	1351138	478869	Not Collected	D/B
A1P2-S1TR-05	A1P2-S1TR-05-01-X	1350836	478806	A,C	D/B
A1P2-S1TR-05	A1P2-S1TR-05-02-X	1350890	478805	A,C	D/B
A1P2-S1TR-05	A1P2-S1TR-05-03-X	1350866	478861	Not Collected	D/B
A1P2-S1TR-05	A1P2-S1TR-05-04-X	1350925	478876	A,C	D/B
A1P2-S1TR-05	A1P2-S1TR-05-05-X	1350856	478923	A,C	D/B
A1P2-S1TR-05	A1P2-S1TR-05-06-X	1350874	478980	Not Collected	D/B
A1P2-S1TR-05	A1P2-S1TR-05-07-X	1350894	479019	A,C	D/B
A1P2-S1TR-05	A1P2-S1TR-05-08-X	1350850	479073	A,C	D/B
A1P2-S1TR-05	A1P2-S1TR-05-09-X	1350953	478900	A,C	D/B
A1P2-S1TR-05	A1P2-S1TR-05-10-X	1351014	478943	Not Collected	D/B
A1P2-S1TR-05	A1P2-S1TR-05-11-X	1350920	478977	A,C	D/B
A1P2-S1TR-05	A1P2-S1TR-05-12-X	1350984	479068	A,C	D/B
A1P2-S1TR-05	A1P2-S1TR-05-13-X	1351067	478929	A,C	D/B
A1P2-S1TR-05	A1P2-S1TR-05-14-X	1351055	478980	A,C	D/B
A1P2-S1TR-05	A1P2-S1TR-05-14-X-D	1351055	478980	A,C	D/B
A1P2-S1TR-05	A1P2-S1TR-05-15-X	1351115	478967	A,C	D/B
A1P2-S1TR-05	A1P2-S1TR-05-16-X	1351144	478895	Not Collected	D/B
A1P2-S1TR-06	A1P2-S1TR-06-01-X	1350819	478723	Not Collected	D/B
A1P2-S1TR-06	A1P2-S1TR-06-02-X	1350842	478688	A,C	D/B
A1P2-S1TR-06	A1P2-S1TR-06-03-X	1350806	478755	A,C	D/B
A1P2-S1TR-06	A1P2-S1TR-06-04-X	1350853	478734	A,C	D/B
A1P2-S1TR-06	A1P2-S1TR-06-05-X	1350815	478677	A,C	D/B
A1P2-S1TR-06	A1P2-S1TR-06-06-X	1350832	478628	A,C	D/B
A1P2-S1TR-06	A1P2-S1TR-06-06-X-D	1350832	478628	A,C	D/B
A1P2-S1TR-06	A1P2-S1TR-06-07-X	1350814	478593	Not Collected	D/B
A1P2-S1TR-06	A1P2-S1TR-06-08-X	1350812	478562	A,C	D/B
A1P2-S1TR-06	A1P2-S1TR-06-09-X	1350802	478518	A,C	D/B
A1P2-S1TR-06	A1P2-S1TR-06-10-X	1350814	478481	A,C	D/B

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A1P2-S1TR-06	A1P2-S1TR-06-11-X	1350849	478429	Not Collected	D/B
A1P2-S1TR-06	A1P2-S1TR-06-12-X	1350899	478386	A,C	D/B
A1P2-S1TR-06	A1P2-S1TR-06-13-X	1350974	478377	A,C	D/B
A1P2-S1TR-06	A1P2-S1TR-06-14-X	1351033	478368	A,C	D/B
A1P2-S1TR-06	A1P2-S1TR-06-15-X	1351085	478387	A,C	D/B
A1P2-S1TR-06	A1P2-S1TR-06-16-X	1351169	478400	Not Collected	D/B
A1P2-S1TR-07	A1P2-S1TR-07-01-X	1351201	478436	A,C	D/B
A1P2-S1TR-07	A1P2-S1TR-07-02-X	1351241	478476	A,C	D/B
A1P2-S1TR-07	A1P2-S1TR-07-03-X	1351276	478470	Not Collected	D/B
A1P2-S1TR-07	A1P2-S1TR-07-04-X	1351285	478520	A,C	D/B
A1P2-S1TR-07	A1P2-S1TR-07-05-X	1351341	478464	A,C	D/B
A1P2-S1TR-07	A1P2-S1TR-07-06-X	1351365	478491	A,C	D/B
A1P2-S1TR-07	A1P2-S1TR-07-06-X-D	1351365	478491	A,C	D/B
A1P2-S1TR-07	A1P2-S1TR-07-07-X	1351338	478520	Not Collected	D/B
A1P2-S1TR-07	A1P2-S1TR-07-08-X	1351384	478513	A,C	D/B
A1P2-S1TR-07	A1P2-S1TR-07-09-X	1351299	478584	A,C	D/B
A1P2-S1TR-07	A1P2-S1TR-07-10-X	1351337	478560	A,C	D/B
A1P2-S1TR-07	A1P2-S1TR-07-11-X	1351321	478617	Not Collected	D/B
A1P2-S1TR-07	A1P2-S1TR-07-12-X	1351293	478655	A,C	D/B
A1P2-S1TR-07	A1P2-S1TR-07-13-X	1351266	478728	A,C	D/B
A1P2-S1TR-07	A1P2-S1TR-07-14-X	1351231	478778	A,C	D/B
A1P2-S1TR-07	A1P2-S1TR-07-15-X	1351216	478805	A,C	D/B
A1P2-S1TR-07	A1P2-S1TR-07-16-X	1351187	478875	Not Collected	D/B
A1P2-S1TR-08	A1P2-S1TR-08-01-X	1350769	478692	A,C	D/D
A1P2-S1TR-08	A1P2-S1TR-08-02-X	1350757	478747	A,C	D/D
A1P2-S1TR-08	A1P2-S1TR-08-03-X	1350744	478784	Not Collected	D/D
A1P2-S1TR-08	A1P2-S1TR-08-04-X	1350736	478852	A,C	D/D
A1P2-S1TR-08	A1P2-S1TR-08-05-X	1350760	478887	Not Collected	D/D
A1P2-S1TR-08	A1P2-S1TR-08-06-X	1350778	478921	A,C	D/D
A1P2-S1TR-08	A1P2-S1TR-08-07-X	1350799	478971	A,C	D/D
A1P2-S1TR-08	A1P2-S1TR-08-07-X-D	1350799	478971	A,C	D/D
A1P2-S1TR-08	A1P2-S1TR-08-08-X	1350770	479036	A,C	D/D
A1P2-S1TR-08	A1P2-S1TR-08-09-X	1350765	479084	Not Collected	D/D
A1P2-S1TR-08	A1P2-S1TR-08-10-X	1350836	479093	A,C	D/D
A1P2-S1TR-08	A1P2-S1TR-08-11-X	1350926	479129	A,C	D/D
A1P2-S1TR-08	A1P2-S1TR-08-12-X	1350957	479164	A,C	D/D
A1P2-S1TR-08	A1P2-S1TR-08-13-X	1351001	479128	A,C	D/D
A1P2-S1TR-08	A1P2-S1TR-08-14-X	1351033	479062	A,C	D/D
A1P2-S1TR-08	A1P2-S1TR-08-15-X	1351083	479033	A,C	D/D
A1P2-S1TR-08	A1P2-S1TR-08-16-X	1351107	478990	Not Collected	D/D
A1P2-S1TR-09	A1P2-S1TR-09-01-X	1350753	478640	Not Collected	D/B
A1P2-S1TR-09	A1P2-S1TR-09-02-X	1350708	478598	A,C	D/B
A1P2-S1TR-09	A1P2-S1TR-09-03-X	1350732	478557	A,C	D/B
A1P2-S1TR-09	A1P2-S1TR-09-04-X	1350764	478519	A,C	D/B
A1P2-S1TR-09	A1P2-S1TR-09-05-X	1350787	478466	Not Collected	D/B
A1P2-S1TR-09	A1P2-S1TR-09-06-X	1350782	478428	A,C	D/B
A1P2-S1TR-09	A1P2-S1TR-09-06-X-D	1350782	478428	A,C	D/B
A1P2-S1TR-09	A1P2-S1TR-09-07-X	1350828	478361	A,C	D/B

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CERTIFICATION UNIT	SAMPLE IDENTIFICATION	EASTING	NORTHING	TALs	ASL/VSL
A1P2-S1TR-09	A1P2-S1TR-09-08-X	1350882	478353	A,C	D/B
A1P2-S1TR-09	A1P2-S1TR-09-09-X	1350922	478345	A,C	D/B
A1P2-S1TR-09	A1P2-S1TR-09-10-X	1351008	478306	A,C	D/B
A1P2-S1TR-09	A1P2-S1TR-09-11-X	1351044	478344	Not Collected	D/B
A1P2-S1TR-09	A1P2-S1TR-09-12-X	1351065	478288	A,C	D/B
A1P2-S1TR-09	A1P2-S1TR-09-13-X	1351108	478348	A,C	D/B
A1P2-S1TR-09	A1P2-S1TR-09-14-X	1351144	478372	A,C	D/B
A1P2-S1TR-09	A1P2-S1TR-09-15-X	1351188	478347	Not Collected	D/B
A1P2-S1TR-09	A1P2-S1TR-09-16-X	1351247	478382	A,C	D/B
A1P2-S1TR-10	A1P2-S1TR-10-01-X	1351278	478410	A,C	D/B
A1P2-S1TR-10	A1P2-S1TR-10-02-X	1351332	478411	A,C	D/B
A1P2-S1TR-10	A1P2-S1TR-10-03-X	1351416	478404	A,C	D/B
A1P2-S1TR-10	A1P2-S1TR-10-04-X	1351508	478434	Not Collected	D/B
A1P2-S1TR-10	A1P2-S1TR-10-05-X	1351497	478476	A,C	D/B
A1P2-S1TR-10	A1P2-S1TR-10-06-X	1351460	478498	Not Collected	D/B
A1P2-S1TR-10	A1P2-S1TR-10-07-X	1351461	478537	A,C	D/B
A1P2-S1TR-10	A1P2-S1TR-10-08-X	1351375	478600	A,C	D/B
A1P2-S1TR-10	A1P2-S1TR-10-09-X	1351400	478662	Not Collected	D/B
A1P2-S1TR-10	A1P2-S1TR-10-10-X	1351374	478692	A,C	D/B
A1P2-S1TR-10	A1P2-S1TR-10-10-X-D	1351374	478692	A,C	D/B
A1P2-S1TR-10	A1P2-S1TR-10-11-X	1351315	478739	A,C	D/B
A1P2-S1TR-10	A1P2-S1TR-10-12-X	1351283	478777	A,C	D/B
A1P2-S1TR-10	A1P2-S1TR-10-13-X	1351249	478861	Not Collected	D/B
A1P2-S1TR-10	A1P2-S1TR-10-14-X	1351271	478894	A,C	D/B
A1P2-S1TR-10	A1P2-S1TR-10-15-X	1351246	478931	A,C	D/B
A1P2-S1TR-10	A1P2-S1TR-10-16-X	1351184	478976	A,C	D/B
A1P2-S1TR-11	A1P2-S1TR-11-01-X	1350911	479027	Not Collected	D/B
A1P2-S1TR-11	A1P2-S1TR-11-02-X	1350922	479037	A,C	D/B
A1P2-S1TR-11	A1P2-S1TR-11-03-X	1350902	479055	A,C	D/B
A1P2-S1TR-11	A1P2-S1TR-11-04-X	1350926	479049	A,C	D/B
A1P2-S1TR-11	A1P2-S1TR-11-05-X	1350940	479012	A,C	D/B
A1P2-S1TR-11	A1P2-S1TR-11-06-X	1350944	479037	Not Collected	D/B
A1P2-S1TR-11	A1P2-S1TR-11-07-X	1350957	479017	A,C	D/B
A1P2-S1TR-11	A1P2-S1TR-11-08-X	1350970	479037	A,C	D/B
A1P2-S1TR-11	A1P2-S1TR-11-09-X	1350885	479077	Not Collected	D/B
A1P2-S1TR-11	A1P2-S1TR-11-10-X	1350895	479068	A,C	D/B
A1P2-S1TR-11	A1P2-S1TR-11-11-X	1350912	479071	A,C	D/B
A1P2-S1TR-11	A1P2-S1TR-11-12-X	1350921	479084	A,C	D/B
A1P2-S1TR-11	A1P2-S1TR-11-13-X	1350951	479052	Not Collected	D/B
A1P2-S1TR-11	A1P2-S1TR-11-14-X	1350968	479049	A,C	D/B
A1P2-S1TR-11	A1P2-S1TR-11-15-X	1350934	479077	A,C	D/B
A1P2-S1TR-11	A1P2-S1TR-11-15-X-D	1350934	479077	A,C	D/B
A1P2-S1TR-11	A1P2-S1TR-11-16-X	1350953	479069	A,C	D/B
A1P2-S1SB-01	A1P2-S1SB-01-01-X	1350388	478834	A,C	D/B
A1P2-S1SB-01	A1P2-S1SB-01-02-X	1350341	478743	Not Collected	D/B
A1P2-S1SB-01	A1P2-S1SB-01-03-X	1350261	478688	A,C	D/B
A1P2-S1SB-01	A1P2-S1SB-01-04-X	1350226	478661	A,C	D/B
A1P2-S1SB-01	A1P2-S1SB-01-05-X	1350168	478691	Not Collected	D/B

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A1P2-S1SB-01	A1P2-S1SB-01-06-X	1350109	478618	A,C	D/B
A1P2-S1SB-01	A1P2-S1SB-01-07-X	1350057	478639	A,C	D/B
A1P2-S1SB-01	A1P2-S1SB-01-08-X	1349966	478617	A,C	D/B
A1P2-S1SB-01	A1P2-S1SB-01-09-X	1349971	478517	A,C	D/B
A1P2-S1SB-01	A1P2-S1SB-01-10-X	1350016	478466	A,C	D/B
A1P2-S1SB-01	A1P2-S1SB-01-10-X-D	1350016	478466	A,C	D/B
A1P2-S1SB-01	A1P2-S1SB-01-11-X	1350173	478451	Not Collected	D/B
A1P2-S1SB-01	A1P2-S1SB-01-12-X	1350294	478513	A,C	D/B
A1P2-S1SB-01	A1P2-S1SB-01-13-X	1350391	478555	Not Collected	D/B
A1P2-S1SB-01	A1P2-S1SB-01-14-X	1350449	478622	A,C	D/B
A1P2-S1SB-01	A1P2-S1SB-01-15-X	1350450	478683	A,C	D/B
A1P2-S1SB-01	A1P2-S1SB-01-16-X	1350529	478820	A,C	D/B
A1P2-S1SB-02	A1P2-S1SB-02-01-X	1350100	478474	A,B,C,D	D/B
A1P2-S1SB-02	A1P2-S1SB-02-02-X	1350135	478462	Not Collected	D/B
A1P2-S1SB-02	A1P2-S1SB-02-03-X	1350060	478540	A,B,C,D	D/B
A1P2-S1SB-02	A1P2-S1SB-02-04-X	1350154	478548	A,B,C,D	D/B
A1P2-S1SB-02	A1P2-S1SB-02-05-X	1350184	478490	Not Collected	D/B
A1P2-S1SB-02	A1P2-S1SB-02-06-X	1350212	478540	A,B,C,D	D/B
A1P2-S1SB-02	A1P2-S1SB-02-07-X	1350190	478569	A,B,C,D	D/B
A1P2-S1SB-02	A1P2-S1SB-02-08-X	1350246	478605	A,B,C,D	D/B
A1P2-S1SB-02	A1P2-S1SB-02-09-X	1350267	478543	A,B,C,D	D/B
A1P2-S1SB-02	A1P2-S1SB-02-10-X	1350293	478597	A,B,C,D	D/B
A1P2-S1SB-02	A1P2-S1SB-02-11-X	1350332	478641	Not Collected	D/B
A1P2-S1SB-02	A1P2-S1SB-02-12-X	1350326	478683	A,B,C,D	D/B
A1P2-S1SB-02	A1P2-S1SB-02-12-X-D	1350326	478683	A,B,C,D	D/B
A1P2-S1SB-02	A1P2-S1SB-02-13-X	1350339	478551	Not Collected	D/B
A1P2-S1SB-02	A1P2-S1SB-02-14-X	1350406	478660	A,B,C,D	D/B
A1P2-S1SB-02	A1P2-S1SB-02-15-X	1350374	478714	A,B,C,D	D/B
A1P2-S1SB-02	A1P2-S1SB-02-16-X	1350411	478761	A,B,C,D	D/B
A1P2-S1OF-01	A1P2-S1OF-01-01-X	1349639	478314	A,C	D/B
A1P2-S1OF-01	A1P2-S1OF-01-02-X	1349685	478306	Not Collected	D/B
A1P2-S1OF-01	A1P2-S1OF-01-03-X	1349666	478337	A,C	D/B
A1P2-S1OF-01	A1P2-S1OF-01-04-X	1349703	478392	A,C	D/B
A1P2-S1OF-01	A1P2-S1OF-01-04-X-D	1349703	478392	A,C	D/B
A1P2-S1OF-01	A1P2-S1OF-01-05-X	1349718	478315	A,C	D/B
A1P2-S1OF-01	A1P2-S1OF-01-06-X	1349766	478349	A,C	D/B
A1P2-S1OF-01	A1P2-S1OF-01-07-X	1349755	478387	A,C	D/B
A1P2-S1OF-01	A1P2-S1OF-01-08-X	1349791	478435	Not Collected	D/B
A1P2-S1OF-01	A1P2-S1OF-01-09-X	1349811	478393	A,C	D/B
A1P2-S1OF-01	A1P2-S1OF-01-10-X	1349858	478347	A,C	D/B
A1P2-S1OF-01	A1P2-S1OF-01-11-X	1349838	478460	A,C	D/B
A1P2-S1OF-01	A1P2-S1OF-01-12-X	1349865	478434	Not Collected	D/B
A1P2-S1OF-01	A1P2-S1OF-01-13-X	1349888	478362	A,C	D/B
A1P2-S1OF-01	A1P2-S1OF-01-14-X	1349952	478408	Not Collected	D/B
A1P2-S1OF-01	A1P2-S1OF-01-15-X	1349925	478441	A,C	D/B
A1P2-S1OF-01	A1P2-S1OF-01-16-X	1349928	478473	A,C	D/B
A1P2-S2NI-01	A1P2-S2NI-01-01-X	1350843	480319	A,C	D/B
A1P2-S2NI-01	A1P2-S2NI-01-02-X	1350860	480395	A,C	D/B

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CERTIFICATION UNIT	SAMPLE IDENTIFICATION	EASTING	NORTHING	TALs	ASL/VSL
A1P2-S2NI-01	A1P2-S2NI-01-03-X	1351637	480455	Not Collected	D/B
A1P2-S2NI-01	A1P2-S2NI-01-04-X	1350866	480478	A,C	D/B
A1P2-S2NI-01	A1P2-S2NI-01-05-X	1350865	480546	A,C	D/B
A1P2-S2NI-01	A1P2-S2NI-01-06-X	1350859	480594	A,C	D/B
A1P2-S2NI-01	A1P2-S2NI-01-07-X	1350865	480641	Not Collected	D/B
A1P2-S2NI-01	A1P2-S2NI-01-08-X	1350860	480708	A,C	D/B
A1P2-S2NI-01	A1P2-S2NI-01-09-X	1350856	480791	A,C	D/B
A1P2-S2NI-01	A1P2-S2NI-01-10-X	1350856	480824	A,C	D/B
A1P2-S2NI-01	A1P2-S2NI-01-10-X-D	1350856	480824	A,C	D/B
A1P2-S2NI-01	A1P2-S2NI-01-11-X	1350872	480893	A,C	D/B
A1P2-S2NI-01	A1P2-S2NI-01-12-X	1350874	480970	Not Collected	D/B
A1P2-S2NI-01	A1P2-S2NI-01-13-X	1350862	481014	A,C	D/B
A1P2-S2NI-01	A1P2-S2NI-01-14-X	1350877	481048	Not Collected	D/B
A1P2-S2NI-01	A1P2-S2NI-01-15-X	1350869	481136	A,C	D/B
A1P2-S2NI-01	A1P2-S2NI-01-16-X	1350873	481222	A,C	D/B
A1P2-S2NI-02	A1P2-S2NI-02-01-X	1350584	481081	A,C	D/B
A1P2-S2NI-02	A1P2-S2NI-02-02-X	1350658	481121	A,C	D/B
A1P2-S2NI-02	A1P2-S2NI-02-03-X	1350616	481158	A,C	D/B
A1P2-S2NI-02	A1P2-S2NI-02-04-X	1350631	481131	Not Collected	D/B
A1P2-S2NI-02	A1P2-S2NI-02-05-X	1350696	481165	A,C	D/B
A1P2-S2NI-02	A1P2-S2NI-02-06-X	1350713	481142	A,C	D/B
A1P2-S2NI-02	A1P2-S2NI-02-07-X	1350756	481155	A,C	D/B
A1P2-S2NI-02	A1P2-S2NI-02-07-X-D	1350756	481155	A,C	D/B
A1P2-S2NI-02	A1P2-S2NI-02-08-X	1350796	481185	Not Collected	D/B
A1P2-S2NI-02	A1P2-S2NI-02-09-X	1350831	481200	A,C	D/B
A1P2-S2NI-02	A1P2-S2NI-02-10-X	1350828	481164	Not Collected	D/B
A1P2-S2NI-02	A1P2-S2NI-02-11-X	1350857	481116	A,C	D/B
A1P2-S2NI-02	A1P2-S2NI-02-12-X	1350843	481043	A,C	D/B
A1P2-S2NI-02	A1P2-S2NI-02-13-X	1350803	481021	A,C	D/B
A1P2-S2NI-02	A1P2-S2NI-02-14-X	1350754	481028	A,C	D/B
A1P2-S2NI-02	A1P2-S2NI-02-15-X	1350727	481067	A,C	D/B
A1P2-S2NI-02	A1P2-S2NI-02-16-X	1350746	480920	Not Collected	D/B
A1P2-S2NI-03	A1P2-S2NI-03-01-X	1350975	480577	Not Collected	D/B
A1P2-S2NI-03	A1P2-S2NI-03-02-X	1351020	480617	A,C	D/B
A1P2-S2NI-03	A1P2-S2NI-03-03-X	1350947	480650	A,C	D/B
A1P2-S2NI-03	A1P2-S2NI-03-04-X	1351034	480666	A,C	D/B
A1P2-S2NI-03	A1P2-S2NI-03-05-X	1350957	480740	A,C	D/B
A1P2-S2NI-03	A1P2-S2NI-03-06-X	1351006	480711	A,C	D/B
A1P2-S2NI-03	A1P2-S2NI-03-07-X	1350977	480781	Not Collected	D/B
A1P2-S2NI-03	A1P2-S2NI-03-08-X	1351059	480760	A,C	D/B
A1P2-S2NI-03	A1P2-S2NI-03-09-X	1350979	480837	A,C	D/B
A1P2-S2NI-03	A1P2-S2NI-03-09-X-D	1350979	480837	A,C	D/B
A1P2-S2NI-03	A1P2-S2NI-03-10-X	1351058	480827	Not Collected	D/B
A1P2-S2NI-03	A1P2-S2NI-03-11-X	1350996	480890	A,C	D/B
A1P2-S2NI-03	A1P2-S2NI-03-12-X	1351057	480925	A,C	D/B
A1P2-S2NI-03	A1P2-S2NI-03-13-X	1351077	480859	Not Collected	D/B
A1P2-S2NI-03	A1P2-S2NI-03-14-X	1351126	480867	A,C	D/B
A1P2-S2NI-03	A1P2-S2NI-03-15-X	1351096	480892	A,C	D/B

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CERTIFICATION UNIT	SAMPLE IDENTIFICATION	EASTING	NORTHING	TALs	ASL/VSL
A1P2-S2NI-03	A1P2-S2NI-03-16-X	1351137	480919	A,C	D/B
A1P2-S2NI-04	A1P2-S2NI-04-01-X	1350960	480950	A,C	D/B
A1P2-S2NI-04	A1P2-S2NI-04-02-X	1351020	480948	Not Collected	D/B
A1P2-S2NI-04	A1P2-S2NI-04-03-X	1350999	481021	A,C	D/B
A1P2-S2NI-04	A1P2-S2NI-04-04-X	1351040	481026	A,C	D/B
A1P2-S2NI-04	A1P2-S2NI-04-05-X	1351084	480973	A,C	D/B
A1P2-S2NI-04	A1P2-S2NI-04-06-X	1351121	480983	A,C	D/B
A1P2-S2NI-04	A1P2-S2NI-04-06-X-D	1351121	480983	A,C	D/B
A1P2-S2NI-04	A1P2-S2NI-04-07-X	1351081	481068	Not Collected	D/B
A1P2-S2NI-04	A1P2-S2NI-04-08-X	1351114	481088	A,C	D/B
A1P2-S2NI-04	A1P2-S2NI-04-09-X	1351192	480984	Not Collected	D/B
A1P2-S2NI-04	A1P2-S2NI-04-10-X	1351202	480916	A,C	D/B
A1P2-S2NI-04	A1P2-S2NI-04-11-X	1351161	481007	A,C	D/B
A1P2-S2NI-04	A1P2-S2NI-04-12-X	1351240	481045	A,C	D/B
A1P2-S2NI-04	A1P2-S2NI-04-13-X	1351215	481077	A,C	D/B
A1P2-S2NI-04	A1P2-S2NI-04-14-X	1351269	481078	Not Collected	D/B
A1P2-S2NI-04	A1P2-S2NI-04-15-X	1351153	481113	A,C	D/B
A1P2-S2NI-04	A1P2-S2NI-04-16-X	1351248	481124	A,C	D/B
A1P2-S2NI-05	A1P2-S2NI-05-01-X	1351112	480669	A,C	D/D
A1P2-S2NI-05	A1P2-S2NI-05-02-X	1351134	480697	A,C	D/D
A1P2-S2NI-05	A1P2-S2NI-05-03-X	1351111	480716	A,C	D/D
A1P2-S2NI-05	A1P2-S2NI-05-04-X	1351163	480718	Not Collected	D/D
A1P2-S2NI-05	A1P2-S2NI-05-05-X	1351173	480747	A,C	D/D
A1P2-S2NI-05	A1P2-S2NI-05-06-X	1351199	480759	A,C	D/D
A1P2-S2NI-05	A1P2-S2NI-05-07-X	1351136	480766	Not Collected	D/D
A1P2-S2NI-05	A1P2-S2NI-05-08-X	1351200	480793	A,C	D/D
A1P2-S2NI-05	A1P2-S2NI-05-08-X-D	1351200	480793	A,C	D/D
A1P2-S2NI-05	A1P2-S2NI-05-09-X	1351172	480809	Not Collected	D/D
A1P2-S2NI-05	A1P2-S2NI-05-10-X	1351250	480829	A,C	D/D
A1P2-S2NI-05	A1P2-S2NI-05-11-X	1351206	480830	A,C	D/D
A1P2-S2NI-05	A1P2-S2NI-05-12-X	1351241	480852	A,C	D/D
A1P2-S2NI-05	A1P2-S2NI-05-13-X	1351220	480869	A,C	D/D
A1P2-S2NI-05	A1P2-S2NI-05-14-X	1351263	480891	Not Collected	D/D
A1P2-S2NI-05	A1P2-S2NI-05-15-X	1351273	480922	A,C	D/D
A1P2-S2NI-05	A1P2-S2NI-05-16-X	1351277	480952	A,C	D/D
A1P2-S2NI-06	A1P2-S2NI-06-01-X	1350912	481050	A,C	D/B
A1P2-S2NI-06	A1P2-S2NI-06-02-X	1350934	481083	Not Collected	D/B
A1P2-S2NI-06	A1P2-S2NI-06-03-X	1350939	481127	A,C	D/B
A1P2-S2NI-06	A1P2-S2NI-06-04-X	1350915	481145	A,C	D/B
A1P2-S2NI-06	A1P2-S2NI-06-05-X	1350913	481165	A,C	D/B
A1P2-S2NI-06	A1P2-S2NI-06-06-X	1350920	481195	A,C	D/B
A1P2-S2NI-06	A1P2-S2NI-06-07-X	1350912	481223	Not Collected	D/B
A1P2-S2NI-06	A1P2-S2NI-06-08-X	1350950	481246	A,C	D/B
A1P2-S2NI-06	A1P2-S2NI-06-09-X	1350928	481263	A,C	D/B
A1P2-S2NI-06	A1P2-S2NI-06-10-X	1350939	481282	Not Collected	D/B
A1P2-S2NI-06	A1P2-S2NI-06-11-X	1350932	481309	A,C	D/B
A1P2-S2NI-06	A1P2-S2NI-06-11-X-D	1350932	481309	A,C	D/B
A1P2-S2NI-06	A1P2-S2NI-06-12-X	1350950	481320	A,C	D/B

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CERTIFICATION UNIT	SAMPLE IDENTIFICATION	EASTING	NORTHING	TALs	ASL/VSL
A1P2-S2NI-06	A1P2-S2NI-06-13-X	1350940	481337	A,C	D/B
A1P2-S2NI-06	A1P2-S2NI-06-14-X	1350931	481367	Not Collected	D/B
A1P2-S2NI-06	A1P2-S2NI-06-15-X	1350935	481394	A,C	D/B
A1P2-S2NI-06	A1P2-S2NI-06-16-X	1350921	481423	A,C	D/B
A1P2-S2NI-07	A1P2-S2NI-07-01-X	1350579	481018	Not Collected	D/B
A1P2-S2NI-07	A1P2-S2NI-07-02-X	1350607	480961	A,C	D/B
A1P2-S2NI-07	A1P2-S2NI-07-02-X-D	1350607	480961	A,C	D/B
A1P2-S2NI-07	A1P2-S2NI-07-03-X	1350602	480906	A,C	D/B
A1P2-S2NI-07	A1P2-S2NI-07-04-X	1350606	480816	A,C	D/B
A1P2-S2NI-07	A1P2-S2NI-07-05-X	1350579	480786	A,C	D/B
A1P2-S2NI-07	A1P2-S2NI-07-06-X	1350609	480733	A,C	D/B
A1P2-S2NI-07	A1P2-S2NI-07-07-X	1350706	480734	A,C	D/B
A1P2-S2NI-07	A1P2-S2NI-07-08-X	1350614	480680	Not Collected	D/B
A1P2-S2NI-07	A1P2-S2NI-07-09-X	1350590	480635	A,C	D/B
A1P2-S2NI-07	A1P2-S2NI-07-10-X	1350739	480648	A,C	D/B
A1P2-S2NI-07	A1P2-S2NI-07-11-X	1350828	480643	A,C	D/B
A1P2-S2NI-07	A1P2-S2NI-07-12-X	1350826	480782	Not Collected	D/B
A1P2-S2NI-07	A1P2-S2NI-07-13-X	1350836	480850	A,C	D/B
A1P2-S2NI-07	A1P2-S2NI-07-14-X	1350836	480918	Not Collected	D/B
A1P2-S2NI-07	A1P2-S2NI-07-15-X	1350817	480979	A,C	D/B
A1P2-S2NI-07	A1P2-S2NI-07-16-X	1350683	481006	A,C	D/B
A1P2-S2NI-08	A1P2-S2NI-08-01-X	1350809	480286	A,C	D/B
A1P2-S2NI-08	A1P2-S2NI-08-02-X	1350755	480282	A,C	D/B
A1P2-S2NI-08	A1P2-S2NI-08-03-X	1350732	480241	Not Collected	D/B
A1P2-S2NI-08	A1P2-S2NI-08-04-X	1350688	480316	A,C	D/B
A1P2-S2NI-08	A1P2-S2NI-08-05-X	1350653	480289	A,C	D/B
A1P2-S2NI-08	A1P2-S2NI-08-06-X	1350652	480345	Not Collected	D/B
A1P2-S2NI-08	A1P2-S2NI-08-07-X	1350660	480401	A,C	D/B
A1P2-S2NI-08	A1P2-S2NI-08-07-X-D	1350660	480401	A,C	D/B
A1P2-S2NI-08	A1P2-S2NI-08-08-X	1350623	480392	A,C	D/B
A1P2-S2NI-08	A1P2-S2NI-08-09-X	1350592	480481	A,C	D/B
A1P2-S2NI-08	A1P2-S2NI-08-10-X	1350643	480495	A,C	D/B
A1P2-S2NI-08	A1P2-S2NI-08-11-X	1350571	480528	A,C	D/B
A1P2-S2NI-08	A1P2-S2NI-08-12-X	1350636	480559	Not Collected	D/B
A1P2-S2NI-08	A1P2-S2NI-08-13-X	1350583	480590	A,C	D/B
A1P2-S2NI-08	A1P2-S2NI-08-14-X	1350672	480596	A,C	D/B
A1P2-S2NI-08	A1P2-S2NI-08-15-X	1350703	480632	A,C	D/B
A1P2-S2NI-08	A1P2-S2NI-08-16-X	1350816	480635	Not Collected	D/B
A1P2-S2SP-01	A1P2-S2SP-01-01-X	1350681	481383	A,C	D/B
A1P2-S2SP-01	A1P2-S2SP-01-02-X	1350717	481408	Not Collected	D/B
A1P2-S2SP-01	A1P2-S2SP-01-03-X	1350654	481510	A,C	D/B
A1P2-S2SP-01	A1P2-S2SP-01-04-X	1350709	481472	A,C	D/B
A1P2-S2SP-01	A1P2-S2SP-01-05-X	1350733	481361	A,C	D/B
A1P2-S2SP-01	A1P2-S2SP-01-06-X	1350794	481358	Not Collected	D/B
A1P2-S2SP-01	A1P2-S2SP-01-07-X	1350739	481501	A,C	D/B
A1P2-S2SP-01	A1P2-S2SP-01-07-X-D	1350739	481501	A,C	D/B
A1P2-S2SP-01	A1P2-S2SP-01-08-X	1350798	481462	A,C	D/B
A1P2-S2SP-01	A1P2-S2SP-01-09-X	1350659	481575	A,C	D/B

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CERTIFICATION UNIT	SAMPLE IDENTIFICATION	EASTING	NORTHING	TALs	ASL/VSL
A1P2-S2SP-01	A1P2-S2SP-01-10-X	1350707	481579	A,C	D/B
A1P2-S2SP-01	A1P2-S2SP-01-11-X	1350664	481668	A,C	D/B
A1P2-S2SP-01	A1P2-S2SP-01-12-X	1350712	481667	Not Collected	D/B
A1P2-S2SP-01	A1P2-S2SP-01-13-X	1350771	481574	A,C	D/B
A1P2-S2SP-01	A1P2-S2SP-01-14-X	1350804	481558	Not Collected	D/B
A1P2-S2SP-01	A1P2-S2SP-01-15-X	1350734	481608	A,C	D/B
A1P2-S2SP-01	A1P2-S2SP-01-16-X	1350803	481617	A,C	D/B
A1P2-S2SP-02	A1P2-S2SP-02-01-X	1350623	481622	A,C	D/B
A1P2-S2SP-02	A1P2-S2SP-02-02-X	1350607	481532	A,C	D/B
A1P2-S2SP-02	A1P2-S2SP-02-02-X-D	1350607	481532	A,C	D/B
A1P2-S2SP-02	A1P2-S2SP-02-03-X	1350625	481460	A,C	D/B
A1P2-S2SP-02	A1P2-S2SP-02-04-X	1350647	481346	Not Collected	D/B
A1P2-S2SP-02	A1P2-S2SP-02-05-X	1350640	481308	A,C	D/B
A1P2-S2SP-02	A1P2-S2SP-02-06-X	1350721	481306	A,C	D/B
A1P2-S2SP-02	A1P2-S2SP-02-07-X	1350782	481310	A,C	D/B
A1P2-S2SP-02	A1P2-S2SP-02-08-X	1350821	481352	Not Collected	D/B
A1P2-S2SP-02	A1P2-S2SP-02-09-X	1350854	481318	A,C	D/B
A1P2-S2SP-02	A1P2-S2SP-02-10-X	1350846	481390	A,C	D/B
A1P2-S2SP-02	A1P2-S2SP-02-11-X	1350875	481429	A,C	D/B
A1P2-S2SP-02	A1P2-S2SP-02-12-X	1350881	481497	Not Collected	D/B
A1P2-S2SP-02	A1P2-S2SP-02-13-X	1350844	481532	Not Collected	D/B
A1P2-S2SP-02	A1P2-S2SP-02-14-X	1350874	481584	A,C	D/B
A1P2-S2SP-02	A1P2-S2SP-02-15-X	1350854	481633	A,C	D/B
A1P2-S2SP-02	A1P2-S2SP-02-16-X	1350849	481686	A,C	D/B
A1P2-S2SP-03	A1P2-S2SP-03-01-X	1350982	481311	A,C	D/B
A1P2-S2SP-03	A1P2-S2SP-03-02-X	1351019	481310	A,C	D/B
A1P2-S2SP-03	A1P2-S2SP-03-03-X	1350963	481354	A,C	D/B
A1P2-S2SP-03	A1P2-S2SP-03-03-X-D	1350963	481354	A,C	D/B
A1P2-S2SP-03	A1P2-S2SP-03-04-X	1351034	481412	Not Collected	D/B
A1P2-S2SP-03	A1P2-S2SP-03-05-X	1351066	481276	A,C	D/B
A1P2-S2SP-03	A1P2-S2SP-03-06-X	1351106	481286	Not Collected	D/B
A1P2-S2SP-03	A1P2-S2SP-03-07-X	1351084	481395	A,C	D/B
A1P2-S2SP-03	A1P2-S2SP-03-08-X	1351117	481355	A,C	D/B
A1P2-S2SP-03	A1P2-S2SP-03-09-X	1351147	481294	A,C	D/B
A1P2-S2SP-03	A1P2-S2SP-03-10-X	1351265	481319	Not Collected	D/B
A1P2-S2SP-03	A1P2-S2SP-03-11-X	1351147	481379	A,C	D/B
A1P2-S2SP-03	A1P2-S2SP-03-12-X	1351292	481356	A,C	D/B
A1P2-S2SP-03	A1P2-S2SP-03-13-X	1351193	481409	A,C	D/B
A1P2-S2SP-03	A1P2-S2SP-03-14-X	1351279	481409	A,C	D/B
A1P2-S2SP-03	A1P2-S2SP-03-15-X	1351226	481491	A,C	D/B
A1P2-S2SP-03	A1P2-S2SP-03-16-X	1351287	481505	Not Collected	D/B
A1P2-S2SP-04	A1P2-S2SP-04-01-X	1350725	480350	A,C	D/B
A1P2-S2SP-04	A1P2-S2SP-04-02-X	1350770	480379	A,C	D/B
A1P2-S2SP-04	A1P2-S2SP-04-02-X-D	1350770	480379	A,C	D/B
A1P2-S2SP-04	A1P2-S2SP-04-03-X	1350832	480318	A,C	D/B
A1P2-S2SP-04	A1P2-S2SP-04-04-X	1350833	480380	Not Collected	D/B
A1P2-S2SP-04	A1P2-S2SP-04-05-X	1350691	480444	A,C	D/B
A1P2-S2SP-04	A1P2-S2SP-04-06-X	1350753	480410	A,C	D/B

APPENDIX B
CU SAMPLES/COORDINATES/IDENTIFICATION -- 2615

CERTIFICATION UNIT	SAMPLE IDENTIFICATION	EASTING	NORTHING	TALs	ASL/VSL
A1P2-S2SP-04	A1P2-S2SP-04-07-X	1350779	480445	Not Collected	D/B
A1P2-S2SP-04	A1P2-S2SP-04-08-X	1350807	480402	A,C	D/B
A1P2-S2SP-04	A1P2-S2SP-04-09-X	1350690	480487	A,C	D/B
A1P2-S2SP-04	A1P2-S2SP-04-10-X	1350729	480507	A,C	D/B
A1P2-S2SP-04	A1P2-S2SP-04-11-X	1350787	480518	Not Collected	D/B
A1P2-S2SP-04	A1P2-S2SP-04-12-X	1350827	480479	A,C	D/B
A1P2-S2SP-04	A1P2-S2SP-04-13-X	1350730	480553	Not Collected	D/B
A1P2-S2SP-04	A1P2-S2SP-04-14-X	1350773	480580	A,C	D/B
A1P2-S2SP-04	A1P2-S2SP-04-15-X	1350816	480546	A,C	D/B
A1P2-S2SP-04	A1P2-S2SP-04-16-X	1350816	480585	A,C	D/B
A1P2-S2SA-01	A1P2-S2SA-01-01-X	1351055	480607	A,C	D/B
A1P2-S2SA-01	A1P2-S2SA-01-02-X	1351006	480550	A,C	D/B
A1P2-S2SA-01	A1P2-S2SA-01-03-X	1350957	480486	A,C	D/B
A1P2-S2SA-01	A1P2-S2SA-01-04-X	1350964	480551	Not Collected	D/B
A1P2-S2SA-01	A1P2-S2SA-01-05-X	1350913	480436	Not Collected	D/B
A1P2-S2SA-01	A1P2-S2SA-01-06-X	1350900	480507	A,C	D/B
A1P2-S2SA-01	A1P2-S2SA-01-07-X	1350905	480602	A,C	D/B
A1P2-S2SA-01	A1P2-S2SA-01-08-X	1350916	480675	A,C	D/B
A1P2-S2SA-01	A1P2-S2SA-01-09-X	1350918	480713	A,C	D/B
A1P2-S2SA-01	A1P2-S2SA-01-09-X-D	1350918	480713	A,C	D/B
A1P2-S2SA-01	A1P2-S2SA-01-10-X	1350918	480772	A,C	D/B
A1P2-S2SA-01	A1P2-S2SA-01-11-X	1350904	480818	Not Collected	D/B
A1P2-S2SA-01	A1P2-S2SA-01-12-X	1350952	480861	A,C	D/B
A1P2-S2SA-01	A1P2-S2SA-01-13-X	1350944	480890	A,C	D/B
A1P2-S2SA-01	A1P2-S2SA-01-14-X	1350942	480937	A,C	D/B
A1P2-S2SA-01	A1P2-S2SA-01-15-X	1350921	481002	A,C	D/B
A1P2-S2SA-01	A1P2-S2SA-01-16-X	1350949	481056	Not Collected	D/B
A1P2-S2SB-01	A1P2-S2SB-01-01-X	1350652	480672	A,C	D/B
A1P2-S2SB-01	A1P2-S2SB-01-02-X	1350682	480678	A,C	D/B
A1P2-S2SB-01	A1P2-S2SB-01-03-X	1350742	480665	Not Collected	D/B
A1P2-S2SB-01	A1P2-S2SB-01-04-X	1350776	480667	A,C	D/B
A1P2-S2SB-01	A1P2-S2SB-01-05-X	1350742	480727	A,C	D/B
A1P2-S2SB-01	A1P2-S2SB-01-06-X	1350813	480706	A,C	D/B
A1P2-S2SB-01	A1P2-S2SB-01-07-X	1350723	480766	Not Collected	D/B
A1P2-S2SB-01	A1P2-S2SB-01-08-X	1350775	480789	A,C	D/B
A1P2-S2SB-01	A1P2-S2SB-01-09-X	1350652	480796	A,C	D/B
A1P2-S2SB-01	A1P2-S2SB-01-10-X	1350688	480781	Not Collected	D/B
A1P2-S2SB-01	A1P2-S2SB-01-11-X	1350624	480859	A,C	D/B
A1P2-S2SB-01	A1P2-S2SB-01-12-X	1350663	480878	A,C	D/B
A1P2-S2SB-01	A1P2-S2SB-01-12-X-D	1350663	480878	A,C	D/B
A1P2-S2SB-01	A1P2-S2SB-01-13-X	1350713	480830	A,C	D/B
A1P2-S2SB-01	A1P2-S2SB-01-14-X	1350763	480833	Not Collected	D/B
A1P2-S2SB-01	A1P2-S2SB-01-15-X	1350721	480877	A,C	D/B
A1P2-S2SB-01	A1P2-S2SB-01-16-X	1350804	480854	A,C	D/B
A1P2-S2SB-02	A1P2-S2SB-02-01-X	1350643	480916	A,C	D/B
A1P2-S2SB-02	A1P2-S2SB-02-02-X	1350652	480964	A,C	D/B
A1P2-S2SB-02	A1P2-S2SB-02-03-X	1350624	480998	Not Collected	D/B
A1P2-S2SB-02	A1P2-S2SB-02-04-X	1350640	481046	A,C	D/B

APPENDIX B
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CERTIFICATION UNIT	SAMPLE IDENTIFICATION	EASTING	NORTHING	TALs	ASL/VSL
A1P2-S2SB-02	A1P2-S2SB-02-05-X	1350674	480906	A,C	D/B
A1P2-S2SB-02	A1P2-S2SB-02-06-X	1350718	480914	A,C	D/B
A1P2-S2SB-02	A1P2-S2SB-02-06-X-D	1350718	480914	A,C	D/B
A1P2-S2SB-02	A1P2-S2SB-02-07-X	1350685	480950	Not Collected	D/B
A1P2-S2SB-02	A1P2-S2SB-02-08-X	1350709	480971	A,C	D/B
A1P2-S2SB-02	A1P2-S2SB-02-09-X	1350750	480897	A,C	D/B
A1P2-S2SB-02	A1P2-S2SB-02-10-X	1350787	480905	A,C	D/B
A1P2-S2SB-02	A1P2-S2SB-02-11-X	1350766	480975	A,C	D/B
A1P2-S2SB-02	A1P2-S2SB-02-12-X	1350797	480996	Not Collected	D/B
A1P2-S2SB-02	A1P2-S2SB-02-13-X	1350689	481095	A,C	D/B
A1P2-S2SB-02	A1P2-S2SB-02-14-X	1350718	481085	A,C	D/B
A1P2-S2SB-02	A1P2-S2SB-02-15-X	1350772	481089	Not Collected	D/B
A1P2-S2SB-02	A1P2-S2SB-02-16-X	1350799	481103	A,C	D/B
A1P2-S2SB-03	A1P2-S2SB-03-01-X	1350971	481131	A,C	D/B
A1P2-S2SB-03	A1P2-S2SB-03-02-X	1351022	481093	A,C	D/B
A1P2-S2SB-03	A1P2-S2SB-03-03-X	1350980	481221	Not Collected	D/B
A1P2-S2SB-03	A1P2-S2SB-03-04-X	1350986	481174	A,C	D/B
A1P2-S2SB-03	A1P2-S2SB-03-05-X	1351031	481127	A,C	D/B
A1P2-S2SB-03	A1P2-S2SB-03-06-X	1351089	481158	A,C	D/B
A1P2-S2SB-03	A1P2-S2SB-03-07-X	1351032	481194	Not Collected	D/B
A1P2-S2SB-03	A1P2-S2SB-03-08-X	1351107	481194	A,C	D/B
A1P2-S2SB-03	A1P2-S2SB-03-09-X	1351142	481180	A,C	D/B
A1P2-S2SB-03	A1P2-S2SB-03-10-X	1351165	481146	A,C	D/B
A1P2-S2SB-03	A1P2-S2SB-03-11-X	1351111	481239	A,C	D/B
A1P2-S2SB-03	A1P2-S2SB-03-11-X-D	1351111	481239	A,C	D/B
A1P2-S2SB-03	A1P2-S2SB-03-12-X	1351191	481221	Not Collected	D/B
A1P2-S2SB-03	A1P2-S2SB-03-13-X	1351236	481179	Not Collected	D/B
A1P2-S2SB-03	A1P2-S2SB-03-14-X	1351284	481179	A,C	D/B
A1P2-S2SB-03	A1P2-S2SB-03-15-X	1351243	481237	A,C	D/B
A1P2-S2SB-03	A1P2-S2SB-03-16-X	1351262	481303	A,C	D/B
A1P2-S2SB-04	A1P2-S2SB-04-01-X	1350648	481181	A,C	D/B
A1P2-S2SB-04	A1P2-S2SB-04-02-X	1350598	481227	Not Collected	D/B
A1P2-S2SB-04	A1P2-S2SB-04-03-X	1350596	481304	A,C	D/B
A1P2-S2SB-04	A1P2-S2SB-04-04-X	1350622	481254	A,C	D/B
A1P2-S2SB-04	A1P2-S2SB-04-05-X	1350658	481226	A,C	D/B
A1P2-S2SB-04	A1P2-S2SB-04-06-X	1350706	481220	A,C	D/B
A1P2-S2SB-04	A1P2-S2SB-04-07-X	1350665	481266	Not Collected	D/B
A1P2-S2SB-04	A1P2-S2SB-04-08-X	1350692	481249	A,C	D/B
A1P2-S2SB-04	A1P2-S2SB-04-08-X-D	1350692	481249	A,C	D/B
A1P2-S2SB-04	A1P2-S2SB-04-09-X	1350746	481209	Not Collected	D/B
A1P2-S2SB-04	A1P2-S2SB-04-10-X	1350783	481217	A,C	D/B
A1P2-S2SB-04	A1P2-S2SB-04-11-X	1350739	481241	A,C	D/B
A1P2-S2SB-04	A1P2-S2SB-04-12-X	1350781	481245	A,C	D/B
A1P2-S2SB-04	A1P2-S2SB-04-13-X	1350821	481221	A,C	D/B
A1P2-S2SB-04	A1P2-S2SB-04-14-X	1350830	481271	A,C	D/B
A1P2-S2SB-04	A1P2-S2SB-04-15-X	1350876	481260	Not Collected	D/B
A1P2-S2SB-04	A1P2-S2SB-04-16-X	1350880	481306	A,C	D/B
A1P2-S2HR-01	A1P2-S2HR-01-01B-X	1351090	480636	A,C	D/B

APPENDIX B
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CERTIFICATION UNIT	SAMPLE IDENTIFICATION	EASTING	NORTHING	TALs	ASL/VSL
A1P2-S2HR-01	A1P2-S2HR-01-02B-X	1351094	480659	A,C	D/B
A1P2-S2HR-01	A1P2-S2HR-01-03B-X	1351072	480698	A,C	D/B
A1P2-S2HR-01	A1P2-S2HR-01-04B-X	1351053	480727	Not Collected	D/B
A1P2-S2HR-01	A1P2-S2HR-01-05B-X	1351091	480736	A,C	D/B
A1P2-S2HR-01	A1P2-S2HR-01-05B-X-D	1351091	480736	A,C	D/B
A1P2-S2HR-01	A1P2-S2HR-01-06B-X	1351101	480770	A,C	D/B
A1P2-S2HR-01	A1P2-S2HR-01-07B-X	1351139	480784	Not Collected	D/B
A1P2-S2HR-01	A1P2-S2HR-01-08B-X	1351152	480817	A,C	D/B
A1P2-S2HR-01	A1P2-S2HR-01-09B-X	1351179	480833	A,C	D/B
A1P2-S2HR-01	A1P2-S2HR-01-10B-X	1351159	480844	A,C	D/B
A1P2-S2HR-01	A1P2-S2HR-01-11B-X	1351193	480878	Not Collected	D/B
A1P2-S2HR-01	A1P2-S2HR-01-12B-X	1351225	480912	A,C	D/B
A1P2-S2HR-01	A1P2-S2HR-01-13B-X	1351233	480938	A,C	D/B
A1P2-S2HR-01	A1P2-S2HR-01-14B-X	1351254	480945	A,C	D/B
A1P2-S2HR-01	A1P2-S2HR-01-15B-X	1351267	480980	A,C	D/B
A1P2-S2HR-01	A1P2-S2HR-01-16B-X	1351284	481021	Not Collected	D/B
A1P2-S2LL-01	A1P2-S2LL-01-01B-X	1350649	479555	A,C	D/B
A1P2-S2LL-01	A1P2-S2LL-01-02B-X	1350746	479652	A,C	D/B
A1P2-S2LL-01	A1P2-S2LL-01-03B-X	1350801	479823	A,C	D/B
A1P2-S2LL-01	A1P2-S2LL-01-04BX	1350803	480019	A,C	D/B
A1P2-S2LL-01	A1P2-S2LL-01-05B-X	1350832	480278	A,C	D/B
A1P2-S2LL-01	A1P2-S2LL-01-06B-X	1350841	480380	A,C	D/B
A1P2-S2LL-01	A1P2-S2LL-01-07B-X	1350845	480521	A,C	D/B
A1P2-S2LL-01	A1P2-S2LL-01-07B-X-D	1350845	480521	A,C	D/B
A1P2-S2LL-01	A1P2-S2LL-01-08B-X	1350856	480754	A,C	D/B
A1P2-S2LL-01	A1P2-S2LL-01-09B-X	1350857	480920	A,C	D/B
A1P2-S2LL-01	A1P2-S2LL-01-10B-X	1350855	481092	A,C	D/B
A1P2-S2LL-01	A1P2-S2LL-01-11B-X	1350851	481243	A,C	D/B
A1P2-S2LL-01	A1P2-S2LL-01-12B-X	1350862	481335	A,C	D/B
A1P2-S2LL-01	A1P2-S2LL-01-13B-X	1350863	481543	A,C	D/B
A1P2-S2LL-01	A1P2-S2LL-01-14B-X	1350793	481752	A,C	D/B
A1P2-S2LL-01	A1P2-S2LL-01-15B-X	1350733	481804	A,C	D/B
A1P2-S2LL-01	A1P2-S2LL-01-16B-X	1350672	481965	A,C	D/B
A1P2-S2LL-02	A1P2-S2LL-02-01-X	TBD	TBD	A,C	D/B
A1P2-S2LL-02	A1P2-S2LL-02-02-X	TBD	TBD	A,C	D/B
A1P2-S2LL-02	A1P2-S2LL-02-03-X	TBD	TBD	A,C	D/B
A1P2-S2LL-02	A1P2-S2LL-02-04-X	TBD	TBD	A,C	D/B
A1P2-S2LL-02	A1P2-S2LL-02-05-X	TBD	TBD	A,C	D/B
A1P2-S2LL-02	A1P2-S2LL-02-05-X-D	TBD	TBD	A,C	D/B
A1P2-S2LL-02	A1P2-S2LL-02-06-X	TBD	TBD	A,C	D/B
A1P2-S2LL-02	A1P2-S2LL-02-07-X	TBD	TBD	A,C	D/B
A1P2-S2LL-02	A1P2-S2LL-02-08-X	TBD	TBD	A,C	D/B
A1P2-S2LL-02	A1P2-S2LL-02-09-X	TBD	TBD	A,C	D/B
A1P2-S2LL-02	A1P2-S2LL-02-10-X	TBD	TBD	A,C	D/B
A1P2-S2LL-02	A1P2-S2LL-02-11-X	TBD	TBD	A,C	D/B
A1P2-S2LL-02	A1P2-S2LL-02-12-X	TBD	TBD	A,C	D/B
A1P2-S2OS-01	A1P2-S2OS-01-01-X	1350643	481749	A,C	D/B
A1P2-S2OS-01	A1P2-S2OS-01-02-X	1350683	481775	A,C	D/B

APPENDIX B
CU SAMPLES/COORDINATES/IDENTIFICATION

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CERTIFICATION UNIT	SAMPLE IDENTIFICATION	EASTING	NORTHING	TALs	ASL/VSL
A1P2-S2OS-01	A1P2-S2OS-01-03-X	1350636	481803	Not Collected	D/B
A1P2-S2OS-01	A1P2-S2OS-01-04-X	1350692	481812	A,C	D/B
A1P2-S2OS-01	A1P2-S2OS-01-05-X	1350618	481848	A,C	D/B
A1P2-S2OS-01	A1P2-S2OS-01-06-X	1350682	481839	A,C	D/B
A1P2-S2OS-01	A1P2-S2OS-01-07-X	1350633	481898	Not Collected	D/B
A1P2-S2OS-01	A1P2-S2OS-01-08-X	1350675	481888	A,C	D/B
A1P2-S2OS-01	A1P2-S2OS-01-09-X	1350664	481930	Not Collected	D/B
A1P2-S2OS-01	A1P2-S2OS-01-10-X	1350607	481951	A,C	D/B
A1P2-S2OS-01	A1P2-S2OS-01-10-X-D	1350607	481951	A,C	D/B
A1P2-S2OS-01	A1P2-S2OS-01-11-X	1350640	481984	A,C	D/B
A1P2-S2OS-01	A1P2-S2OS-01-12-X	1350596	482018	A,C	D/B
A1P2-S2OS-01	A1P2-S2OS-01-13-X	1350645	482048	A,C	D/B
A1P2-S2OS-01	A1P2-S2OS-01-14-X	1350600	482074	Not Collected	D/B
A1P2-S2OS-01	A1P2-S2OS-01-15-X	1350629	482114	A,C	D/B
A1P2-S2OS-01	A1P2-S2OS-01-16-X	1350625	482155	A,C	D/B
A1P2-S3CD-01	A1P2-S3CD-01-01-X	1350439	478788	A,B,C,D	D/B
A1P2-S3CD-01	A1P2-S3CD-01-02-X	1350453	478841	Not Collected	D/B
A1P2-S3CD-01	A1P2-S3CD-01-03-X	1350480	478890	A,B,C,D	D/B
A1P2-S3CD-01	A1P2-S3CD-01-04-X	1350568	478940	A,B,C,D	D/B
A1P2-S3CD-01	A1P2-S3CD-01-05-X	1350520	478953	A,B,C,D	D/B
A1P2-S3CD-01	A1P2-S3CD-01-06-X	1350572	479014	Not Collected	D/B
A1P2-S3CD-01	A1P2-S3CD-01-07-X	1350655	479056	A,B,C,D	D/B
A1P2-S3CD-01	A1P2-S3CD-01-08-X	1350712	479089	A,B,C,D	D/B
A1P2-S3CD-01	A1P2-S3CD-01-09-X	1350697	479137	A,B,C,D	D/B
A1P2-S3CD-01	A1P2-S3CD-01-09-X-D	1350697	479137	A,B,C,D	D/B
A1P2-S3CD-01	A1P2-S3CD-01-10-X	1350763	479160	A,B,C,D	D/B
A1P2-S3CD-01	A1P2-S3CD-01-11-X	1350801	479246	Not Collected	D/B
A1P2-S3CD-01	A1P2-S3CD-01-12-X	1350859	479213	A,B,C,D	D/B
A1P2-S3CD-01	A1P2-S3CD-01-13-X	1350880	479276	A,B,C,D	D/B
A1P2-S3CD-01	A1P2-S3CD-01-14-X	1350930	479307	Not Collected	D/B
A1P2-S3CD-01	A1P2-S3CD-01-15-X	1350948	479374	A,B,C,D	D/B
A1P2-S3CD-01	A1P2-S3CD-01-16-X	1350930	479419	A,B,C,D	D/B
A1P2-S3CD-02	A1P2-S3CD-02-01-X	1350948	479502	A,B,C,D	D/B
A1P2-S3CD-02	A1P2-S3CD-02-02-X	1350982	479532	A,B,C,D	D/B
A1P2-S3CD-02	A1P2-S3CD-02-03-X	1350964	479579	Not Collected	D/B
A1P2-S3CD-02	A1P2-S3CD-02-04-X	1350996	479644	A,B,C,D	D/B
A1P2-S3CD-02	A1P2-S3CD-02-05-X	1350988	479688	A,B,C,D	D/B
A1P2-S3CD-02	A1P2-S3CD-02-06-X	1351001	479752	A,B,C,D	D/B
A1P2-S3CD-02	A1P2-S3CD-02-07-X	1351009	479790	A,B,C,D	D/B
A1P2-S3CD-02	A1P2-S3CD-02-08-X	1350989	479858	Not Collected	D/B
A1P2-S3CD-02	A1P2-S3CD-02-09-X	1351012	479904	A,B,C,D	D/B
A1P2-S3CD-02	A1P2-S3CD-02-09-X-D	1351012	479904	A,B,C,D	D/B
A1P2-S3CD-02	A1P2-S3CD-02-10-X	1350978	479930	Not Collected	D/B
A1P2-S3CD-02	A1P2-S3CD-02-11-X	1350980	479989	A,B,C,D	D/B
A1P2-S3CD-02	A1P2-S3CD-02-12-X	1351001	480087	A,B,C,D	D/B
A1P2-S3CD-02	A1P2-S3CD-02-13-X	1350994	480129	A,B,C,D	D/B
A1P2-S3CD-02	A1P2-S3CD-02-14-X	1350973	480190	A,B,C,D	D/B
A1P2-S3CD-02	A1P2-S3CD-02-15-X	1351001	480225	Not Collected	D/B

APPENDIX B
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CERTIFICATION UNIT	SAMPLE IDENTIFICATION	EASTING	NORTHING	TALs	ASL/VSL
A1P2-S3CD-02	A1P2-S3CD-02-16-X	1351008	480284	A,B,C,D	D/B
A1P2-S3NI-01	A1P2-S3NI-01-01-X	1350414	478888	Not Collected	D/B
A1P2-S3NI-01	A1P2-S3NI-01-02-X	1350457	478908	A,C	D/B
A1P2-S3NI-01	A1P2-S3NI-01-03-X	1350465	478945	A,C	D/B
A1P2-S3NI-01	A1P2-S3NI-01-04-X	1350525	478987	A,C	D/B
A1P2-S3NI-01	A1P2-S3NI-01-05-X	1350544	479036	Not Collected	D/B
A1P2-S3NI-01	A1P2-S3NI-01-06-X	1350594	479092	A,C	D/B
A1P2-S3NI-01	A1P2-S3NI-01-07-X	1350652	479128	A,C	D/B
A1P2-S3NI-01	A1P2-S3NI-01-08-X	1350675	479157	A,C	D/B
A1P2-S3NI-01	A1P2-S3NI-01-09-X	1350696	479205	A,C	D/B
A1P2-S3NI-01	A1P2-S3NI-01-10-X	1350733	479228	Not Collected	D/B
A1P2-S3NI-01	A1P2-S3NI-01-11-X	1350746	479257	A,C	D/B
A1P2-S3NI-01	A1P2-S3NI-01-12-X	1350796	479288	A,C	D/B
A1P2-S3NI-01	A1P2-S3NI-01-13-X	1350838	479332	A,C	D/B
A1P2-S3NI-01	A1P2-S3NI-01-14-X	1350859	479344	A,C	D/B
A1P2-S3NI-01	A1P2-S3NI-01-15-X	1350856	479377	Not Collected	D/B
A1P2-S3NI-01	A1P2-S3NI-01-16-X	1350890	479422	A,C	D/B
A1P2-S3NI-01	A1P2-S3NI-01-16-X-D	1350890	479422	A,C	D/B
A1P2-S3NI-02	A1P2-S3NI-02-01-X	1350895	479513	A,C	D/B
A1P2-S3NI-02	A1P2-S3NI-02-02-X	1350938	479581	A,C	D/B
A1P2-S3NI-02	A1P2-S3NI-02-03-X	1350899	479627	Not Collected	D/B
A1P2-S3NI-02	A1P2-S3NI-02-04-X	1350951	479702	A,C	D/B
A1P2-S3NI-02	A1P2-S3NI-02-05-X	1350907	479761	A,C	D/B
A1P2-S3NI-02	A1P2-S3NI-02-06-X	1350886	479844	A,C	D/B
A1P2-S3NI-02	A1P2-S3NI-02-07-X	1350924	479910	A,C	D/B
A1P2-S3NI-02	A1P2-S3NI-02-08-X	1350913	479965	Not Collected	D/B
A1P2-S3NI-02	A1P2-S3NI-02-09-X	1350931	480017	A,C	D/B
A1P2-S3NI-02	A1P2-S3NI-02-10-X	1350921	480079	Not Collected	D/B
A1P2-S3NI-02	A1P2-S3NI-02-11-X	1350901	480158	A,C	D/B
A1P2-S3NI-02	A1P2-S3NI-02-11-X-D	1350901	480158	A,C	D/B
A1P2-S3NI-02	A1P2-S3NI-02-12-X	1350956	480173	A,C	D/B
A1P2-S3NI-02	A1P2-S3NI-02-13-X	1350914	480298	A,C	D/B
A1P2-S3NI-02	A1P2-S3NI-02-14-X	1350962	480358	A,C	D/B
A1P2-S3NI-02	A1P2-S3NI-02-15-X	1351034	480387	A,C	D/B
A1P2-S3NI-02	A1P2-S3NI-02-16-X	1351028	480474	Not Collected	D/B
A1P2-S3NI-03	A1P2-S3NI-03-01-X	1351101	479489	A,C	D/B
A1P2-S3NI-03	A1P2-S3NI-03-02-X	1351197	479480	Not Collected	D/B
A1P2-S3NI-03	A1P2-S3NI-03-03-X	1351080	479533	A,C	D/B
A1P2-S3NI-03	A1P2-S3NI-03-04-X	1351199	479580	A,C	D/B
A1P2-S3NI-03	A1P2-S3NI-03-05-X	1351230	479443	A,C	D/B
A1P2-S3NI-03	A1P2-S3NI-03-05-X-D	1351230	479443	A,C	D/B
A1P2-S3NI-03	A1P2-S3NI-03-06-X	1351264	479555	A,C	D/B
A1P2-S3NI-03	A1P2-S3NI-03-07-X	1351323	479477	Not Collected	D/B
A1P2-S3NI-03	A1P2-S3NI-03-08-X	1351352	479549	A,C	D/B
A1P2-S3NI-03	A1P2-S3NI-03-09-X	1351121	479630	A,C	D/B
A1P2-S3NI-03	A1P2-S3NI-03-10-X	1351185	479636	Not Collected	D/B
A1P2-S3NI-03	A1P2-S3NI-03-11-X	1351073	479700	A,C	D/B
A1P2-S3NI-03	A1P2-S3NI-03-12-X	1351227	479671	A,C	D/B

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APPENDIX B
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CERTIFICATION UNIT	SAMPLE IDENTIFICATION	EASTING	NORTHING	TALs	ASL/VSL
A1P2-S3NI-03	A1P2-S3NI-03-13-X	1351276	479640	A,C	D/B
A1P2-S3NI-03	A1P2-S3NI-03-14-X	1351434	479617	A,C	D/B
A1P2-S3NI-03	A1P2-S3NI-03-15-X	1351334	479687	A,C	D/B
A1P2-S3NI-03	A1P2-S3NI-03-16-X	1351392	479687	Not Collected	D/B
A1P2-S3NI-04	A1P2-S3NI-04-01-X	1350990	479251	Not Collected	D/B
A1P2-S3NI-04	A1P2-S3NI-04-02-X	1351013	479294	A,C	D/B
A1P2-S3NI-04	A1P2-S3NI-04-03-X	1351045	479270	A,C	D/B
A1P2-S3NI-04	A1P2-S3NI-04-03-X-D	1351045	479270	A,C	D/B
A1P2-S3NI-04	A1P2-S3NI-04-04-X	1351069	479280	A,C	D/B
A1P2-S3NI-04	A1P2-S3NI-04-05-X	1350997	479315	A,C	D/B
A1P2-S3NI-04	A1P2-S3NI-04-06-X	1351062	479302	A,C	D/B
A1P2-S3NI-04	A1P2-S3NI-04-07-X	1351014	479334	A,C	D/B
A1P2-S3NI-04	A1P2-S3NI-04-08-X	1351051	479336	Not Collected	D/B
A1P2-S3NI-04	A1P2-S3NI-04-09-X	1351027	479362	A,C	D/B
A1P2-S3NI-04	A1P2-S3NI-04-10-X	1351085	479355	A,C	D/B
A1P2-S3NI-04	A1P2-S3NI-04-11-X	1351053	479408	A,C	D/B
A1P2-S3NI-04	A1P2-S3NI-04-12-X	1351082	479389	Not Collected	D/B
A1P2-S3NI-04	A1P2-S3NI-04-13-X	1351109	479332	A,C	D/B
A1P2-S3NI-04	A1P2-S3NI-04-14-X	1351147	479341	Not Collected	D/B
A1P2-S3NI-04	A1P2-S3NI-04-15-X	1351108	479407	A,C	D/B
A1P2-S3NI-04	A1P2-S3NI-04-16-X	1351134	479379	A,C	D/B
A1P2-S3NI-05	A1P2-S3NI-05-01-X	1351416	479466	A,C	D/B
A1P2-S3NI-05	A1P2-S3NI-05-02-X	1351455	479578	A,C	D/B
A1P2-S3NI-05	A1P2-S3NI-05-03-X	1351552	479559	A,C	D/B
A1P2-S3NI-05	A1P2-S3NI-05-04-X	1351617	479540	Not Collected	D/B
A1P2-S3NI-05	A1P2-S3NI-05-05-X	1351511	479619	Not Collected	D/B
A1P2-S3NI-05	A1P2-S3NI-05-06-X	1351607	479606	A,C	D/B
A1P2-S3NI-05	A1P2-S3NI-05-07-X	1351484	479709	A,C	D/B
A1P2-S3NI-05	A1P2-S3NI-05-08-X	1351599	479692	A,C	D/B
A1P2-S3NI-05	A1P2-S3NI-05-09-X	1351704	479549	A,C	D/B
A1P2-S3NI-05	A1P2-S3NI-05-09-X-D	1351704	479549	A,C	D/B
A1P2-S3NI-05	A1P2-S3NI-05-10-X	1351791	479547	Not Collected	D/B
A1P2-S3NI-05	A1P2-S3NI-05-11-X	1351699	479620	A,C	D/B
A1P2-S3NI-05	A1P2-S3NI-05-12-X	1351787	479611	A,C	D/B
A1P2-S3NI-05	A1P2-S3NI-05-13-X	1351743	479699	Not Collected	D/B
A1P2-S3NI-05	A1P2-S3NI-05-14-X	1351807	479729	A,C	D/B
A1P2-S3NI-05	A1P2-S3NI-05-15-X	1351755	479829	A,C	D/B
A1P2-S3NI-05	A1P2-S3NI-05-16-X	1351807	479813	A,C	D/B
A1P2-S3NI-06	A1P2-S3NI-06-01-X	1351276	480698	A,C	D/B
A1P2-S3NI-06	A1P2-S3NI-06-02-X	1351444	480694	A,C	D/B
A1P2-S3NI-06	A1P2-S3NI-06-03-X	1351425	480792	A,C	D/B
A1P2-S3NI-06	A1P2-S3NI-06-04-X	1351436	480871	Not Collected	D/B
A1P2-S3NI-06	A1P2-S3NI-06-05-X	1351517	480630	A,C	D/B
A1P2-S3NI-06	A1P2-S3NI-06-06-X	1351615	480767	A,C	D/B
A1P2-S3NI-06	A1P2-S3NI-06-07-X	1351519	480866	A,C	D/B
A1P2-S3NI-06	A1P2-S3NI-06-08-X	1351543	480994	Not Collected	D/B
A1P2-S3NI-06	A1P2-S3NI-06-09-X	1351675	480982	A,C	D/B
A1P2-S3NI-06	A1P2-S3NI-06-10-X	1351800	480987	Not Collected	D/B

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CERTIFICATION UNIT	SAMPLE IDENTIFICATION	EASTING	NORTHING	TALs	ASL/VSL
A1P2-S3NI-06	A1P2-S3NI-06-11-X	1351686	481158	A,C	D/B
A1P2-S3NI-06	A1P2-S3NI-06-12-X	1351771	481177	A,C	D/B
A1P2-S3NI-06	A1P2-S3NI-06-13-X	1351773	480686	Not Collected	D/B
A1P2-S3NI-06	A1P2-S3NI-06-14-X	1351811	480737	A,C	D/B
A1P2-S3NI-06	A1P2-S3NI-06-15-X	1351713	480867	A,C	D/B
A1P2-S3NI-06	A1P2-S3NI-06-16-X	1351819	480841	A,C	D/B
A1P2-S3NI-06	A1P2-S3NI-06-16-X-D	1351819	480841	A,C	D/B
A1P2-S3NI-07	A1P2-S3NI-07-01-X	1351138	480613	A,C	D/B
A1P2-S3NI-07	A1P2-S3NI-07-02-X	1351175	480655	A,C	D/B
A1P2-S3NI-07	A1P2-S3NI-07-03-X	1351229	480693	Not Collected	D/B
A1P2-S3NI-07	A1P2-S3NI-07-04-X	1351272	480745	A,C	D/B
A1P2-S3NI-07	A1P2-S3NI-07-05-X	1351295	480773	A,C	D/B
A1P2-S3NI-07	A1P2-S3NI-07-05-X-D	1351295	480773	A,C	D/B
A1P2-S3NI-07	A1P2-S3NI-07-06-X	1351317	480802	Not Collected	D/B
A1P2-S3NI-07	A1P2-S3NI-07-07-X	1351357	480835	A,C	D/B
A1P2-S3NI-07	A1P2-S3NI-07-08-X	1351399	480887	A,C	D/B
A1P2-S3NI-07	A1P2-S3NI-07-09-X	1351452	480923	A,C	D/B
A1P2-S3NI-07	A1P2-S3NI-07-10-X	1351488	480961	A,C	D/B
A1P2-S3NI-07	A1P2-S3NI-07-11-X	1351516	480982	Not Collected	D/B
A1P2-S3NI-07	A1P2-S3NI-07-12-X	1351547	481027	A,C	D/B
A1P2-S3NI-07	A1P2-S3NI-07-13-X	1351588	481054	A,C	D/B
A1P2-S3NI-07	A1P2-S3NI-07-14-X	1351595	481081	A,C	D/B
A1P2-S3NI-07	A1P2-S3NI-07-15-X	1351628	481130	A,C	D/B
A1P2-S3NI-07	A1P2-S3NI-07-16-X	1351660	481173	Not Collected	D/B
A1P2-S3HR-01	A1P2-S3HR-01-01B-X	1350676	479042	A,C	D/B
A1P2-S3HR-01	A1P2-S3HR-01-02B-X	1350770	479124	A,C	D/B
A1P2-S3HR-01	A1P2-S3HR-01-03B-X	1350809	479155	Not Collected	D/B
A1P2-S3HR-01	A1P2-S3HR-01-04B-X	1350840	479175	A,C	D/B
A1P2-S3HR-01	A1P2-S3HR-01-05B-X	1350867	479170	A,C	D/B
A1P2-S3HR-01	A1P2-S3HR-01-06B-X	1350879	479191	A,C	D/B
A1P2-S3HR-01	A1P2-S3HR-01-07B-X	1350908	479210	Not Collected	D/B
A1P2-S3HR-01	A1P2-S3HR-01-08B-X	1350967	479215	A,C	D/B
A1P2-S3HR-01	A1P2-S3HR-01-09B-X	1350937	479253	A,C	D/B
A1P2-S3HR-01	A1P2-S3HR-01-10B-X	1350965	479239	A,C	D/B
A1P2-S3HR-01	A1P2-S3HR-01-11B-X	1350970	479268	Not Collected	D/B
A1P2-S3HR-01	A1P2-S3HR-01-12B-X	1350954	479293	A,C	D/B
A1P2-S3HR-01	A1P2-S3HR-01-12B-X-D	1350954	479293	A,C	D/B
A1P2-S3HR-01	A1P2-S3HR-01-13B-X	1350977	479330	Not Collected	D/B
A1P2-S3HR-01	A1P2-S3HR-01-14B-X	1350965	479361	A,C	D/B
A1P2-S3HR-01	A1P2-S3HR-01-15B-X	1351022	479383	A,C	D/B
A1P2-S3HR-01	A1P2-S3HR-01-16B-X	1351020	479407	A,C	D/B
A1P2-S3HR-02	A1P2-S3HR-02-01B-X	1350865	479427	A,C	D/B
A1P2-S3HR-02	A1P2-S3HR-02-02B-X	1350897	479445	A,C	D/B
A1P2-S3HR-02	A1P2-S3HR-02-03B-X	1350938	479439	A,C	D/B
A1P2-S3HR-02	A1P2-S3HR-02-04B-X	1350984	479441	Not Collected	D/B
A1P2-S3HR-02	A1P2-S3HR-02-05B-X	1351014	479424	A,C	D/B
A1P2-S3HR-02	A1P2-S3HR-02-06B-X	1351055	479440	A,C	D/B
A1P2-S3HR-02	A1P2-S3HR-02-07B-X	1351089	479446	Not Collected	D/B

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CERTIFICATION UNIT	SAMPLE IDENTIFICATION	EASTING	NORTHING	TALs	ASL/VSL
A1P2-S3HR-02	A1P2-S3HR-02-08B-X	1351119	479427	A,C	D/B
A1P2-S3HR-02	A1P2-S3HR-02-09B-X	1351154	479384	A,C	D/B
A1P2-S3HR-02	A1P2-S3HR-02-10B-X	1351223	479391	A,C	D/B
A1P2-S3HR-02	A1P2-S3HR-02-11B-X	1351253	479412	Not Collected	D/B
A1P2-S3HR-02	A1P2-S3HR-02-12B-X	1351316	479455	A,C	D/B
A1P2-S3HR-02	A1P2-S3HR-02-13B-X	1351363	479453	A,C	D/B
A1P2-S3HR-02	A1P2-S3HR-02-13B-X-D	1351363	479453	A,C	D/B
A1P2-S3HR-02	A1P2-S3HR-02-14B-X	1351386	479522	Not Collected	D/B
A1P2-S3HR-02	A1P2-S3HR-02-15B-X	1351418	479572	A,C	D/B
A1P2-S3HR-02	A1P2-S3HR-02-16B-X	1351457	479646	A,C	D/B
A1P2-S3HR-03	A1P2-S3HR-03-01B-X	1351045	479556	A,B,C,D	D/B
A1P2-S3HR-03	A1P2-S3HR-03-02B-X	1351057	479630	A,B,C,D	D/B
A1P2-S3HR-03	A1P2-S3HR-03-02B-X-D	1351057	479630	A,B,C,D	D/B
A1P2-S3HR-03	A1P2-S3HR-03-03B-X	1351048	479742	A,B,C,D	D/B
A1P2-S3HR-03	A1P2-S3HR-03-04B-X	1351059	479838	Not Collected	D/B
A1P2-S3HR-03	A1P2-S3HR-03-05B-X	1351051	479933	A,B,C,D	D/B
A1P2-S3HR-03	A1P2-S3HR-03-06B-X	1351058	480006	A,B,C,D	D/B
A1P2-S3HR-03	A1P2-S3HR-03-07B-X	1351033	480045	A,B,C,D	D/B
A1P2-S3HR-03	A1P2-S3HR-03-08B-X	1351033	480133	Not Collected	D/B
A1P2-S3HR-03	A1P2-S3HR-03-09B-X	1351090	480148	A,B,C,D	D/B
A1P2-S3HR-03	A1P2-S3HR-03-10B-X	1351067	480225	A,B,C,D	D/B
A1P2-S3HR-03	A1P2-S3HR-03-11B-X	1351067	480268	Not Collected	D/B
A1P2-S3HR-03	A1P2-S3HR-03-12B-X	1351097	480294	A,B,C,D	D/B
A1P2-S3HR-03	A1P2-S3HR-03-13B-X	1351075	480376	A,B,C,D	D/B
A1P2-S3HR-03	A1P2-S3HR-03-14B-X	1351095	480417	A,B,C,D	D/B
A1P2-S3HR-03	A1P2-S3HR-03-15B-X	1351065	480475	Not Collected	D/B
A1P2-S3HR-03	A1P2-S3HR-03-16B-X	1351106	480573	A,B,C,D	D/B
A1P2-S3HR-04	A1P2-S3HR-04-01-X	1351078	479739	A,C	D/B
A1P2-S3HR-04	A1P2-S3HR-04-02-X	1351146	479742	A,C	D/B
A1P2-S3HR-04	A1P2-S3HR-04-03-X	1351087	479778	A,C	D/B
A1P2-S3HR-04	A1P2-S3HR-04-04-X	1351163	479774	Not Collected	D/B
A1P2-S3HR-04	A1P2-S3HR-04-05-X	1351183	479748	A,C	D/B
A1P2-S3HR-04	A1P2-S3HR-04-06-X	1351261	479749	A,C	D/B
A1P2-S3HR-04	A1P2-S3HR-04-07-X	1351211	479783	Not Collected	D/B
A1P2-S3HR-04	A1P2-S3HR-04-08-X	1351259	479781	A,C	D/B
A1P2-S3HR-04	A1P2-S3HR-04-09-X	1351296	479751	A,C	D/B
A1P2-S3HR-04	A1P2-S3HR-04-10-X	1351347	479721	Not Collected	D/B
A1P2-S3HR-04	A1P2-S3HR-04-11-X	1351291	479791	A,C	D/B
A1P2-S3HR-04	A1P2-S3HR-04-12-X	1351325	479795	A,C	D/B
A1P2-S3HR-04	A1P2-S3HR-04-13B-X	1351404	479747	A,C	D/B
A1P2-S3HR-04	**A1P2S3HR04-13RA-X**	**1351404**	**479747**	**A**	**D/B**
A1P2-S3HR-04	A1P2-S3HR-04-14-X	1351443	479720	A,C	D/B
A1P2-S3HR-04	A1P2-S3HR-04-14-X-D	1351443	479720	A,C	D/B
A1P2-S3HR-04	A1P2-S3HR-04-15-X	1351396	479800	Not Collected	D/B
A1P2-S3HR-04	A1P2-S3HR-04-16-X	1351458	479774	A,C	D/B
A1P2-S3HR-05	A1P2-S3HR-05-01B-X	1350889	480263	A,C	D/B
A1P2-S3HR-05	A1P2-S3HR-05-02B-X	1350891	480320	Not Collected	D/B
A1P2-S3HR-05	A1P2-S3HR-05-03B-X	1350883	480367	A,C	D/B

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CERTIFICATION UNIT	SAMPLE IDENTIFICATION	EASTING	NORTHING	TALs	ASL/VSL
A1P2-S3HR-05	A1P2-S3HR-05-04B-X	1350898	480406	A,C	D/B
A1P2-S3HR-05	A1P2-S3HR-05-05B-X	1350931	480399	A,C	D/B
A1P2-S3HR-05	A1P2-S3HR-05-06B-X	1351005	480515	A,C	D/B
A1P2-S3HR-05	A1P2-S3HR-05-06B-X-D	1351005	480515	A,C	D/B
A1P2-S3HR-05	A1P2-S3HR-05-07B-X	1351048	480559	A,C	D/B
A1P2-S3HR-05	A1P2-S3HR-05-08B-X	1351132	480624	Not Collected	D/B
A1P2-S3HR-05	A1P2-S3HR-05-09B-X	1351187	480684	A,C	D/B
A1P2-S3HR-05	A1P2-S3HR-05-10B-X	1351253	480775	A,C	D/B
A1P2-S3HR-05	A1P2-S3HR-05-11B-X	1351303	480818	Not Collected	D/B
A1P2-S3HR-05	A1P2-S3HR-05-12B-X	1351341	480850	A,C	D/B
A1P2-S3HR-05	A1P2-S3HR-05-13B-X	1351398	480910	A,C	D/B
A1P2-S3HR-05	A1P2-S3HR-05-14B-X	1351480	480998	A,C	D/B
A1P2-S3HR-05	A1P2-S3HR-05-15B-X	1351532	481056	A,C	D/B
A1P2-S3HR-05	A1P2-S3HR-05-16B-X	1351614	481123	Not Collected	D/B
A1P2-S3SA-01	A1P2-S3SA-01-01-X	1351112	479839	A,B,C,D	D/B
A1P2-S3SA-01	A1P2-S3SA-01-02-X	1351151	479831	A,B,C,D	D/B
A1P2-S3SA-01	A1P2-S3SA-01-03-X	1351088	479869	Not Collected	D/B
A1P2-S3SA-01	A1P2-S3SA-01-04-X	1351129	479890	A,B,C,D	D/B
A1P2-S3SA-01	A1P2-S3SA-01-05-X	1351210	479825	A,B,C,D	D/B
A1P2-S3SA-01	A1P2-S3SA-01-06-X	1351263	479808	Not Collected	D/B
A1P2-S3SA-01	A1P2-S3SA-01-07-X	1351232	479861	A,B,C,D	D/B
A1P2-S3SA-01	A1P2-S3SA-01-07-X-D	1351232	479861	A,B,C,D	D/B
A1P2-S3SA-01	A1P2-S3SA-01-08-X	1351296	479892	A,B,C,D	D/B
A1P2-S3SA-01	A1P2-S3SA-01-09-X	1351079	479924	A,B,C,D	D/B
A1P2-S3SA-01	A1P2-S3SA-01-10-X	1351145	479925	Not Collected	D/B
A1P2-S3SA-01	A1P2-S3SA-01-11-X	1351109	479971	A,B,C,D	D/B
A1P2-S3SA-01	A1P2-S3SA-01-12-X	1351163	479955	A,B,C,D	D/B
A1P2-S3SA-01	A1P2-S3SA-01-13-X	1351210	479910	A,B,C,D	D/B
A1P2-S3SA-01	A1P2-S3SA-01-14-X	1351271	479922	A,B,C,D	D/B
A1P2-S3SA-01	A1P2-S3SA-01-15-X	1351221	479997	Not Collected	D/B
A1P2-S3SA-01	A1P2-S3SA-01-16-X	1351276	479957	A,B,C,D	D/B
A1P2-S3SA-02	A1P2-S3SA-02-01-X	1351505	479761	A,B,C,D,G	D/B
A1P2-S3SA-02	A1P2-S3SA-02-02-X	1351544	479729	A,B,C,D,G	D/B
A1P2-S3SA-02	A1P2-S3SA-02-03-X	1351524	479821	Not Collected	D/B
A1P2-S3SA-02	A1P2-S3SA-02-04-X	1351574	479819	A,B,C,D,G	D/B
A1P2-S3SA-02	A1P2-S3SA-02-05-X	1351620	479775	A,B,C,D,G	D/B
A1P2-S3SA-02	A1P2-S3SA-02-06-X	1351689	479730	A,B,C,D,G	D/B
A1P2-S3SA-02	A1P2-S3SA-02-07-X	1351635	479822	Not Collected	D/B
A1P2-S3SA-02	A1P2-S3SA-02-08-X	1351702	479835	A,B,C,D,G	D/B
A1P2-S3SA-02	A1P2-S3SA-02-09-X	1351367	479834	A,B,C,D,G	D/B
A1P2-S3SA-02	A1P2-S3SA-02-10-X	1351482	479818	Not Collected	D/B
A1P2-S3SA-02	A1P2-S3SA-02-11-X	1351348	479868	A,B,C,D,G	D/B
A1P2-S3SA-02	A1P2-S3SA-02-12-X	1351432	479852	A,B,C,D,G	D/B
A1P2-S3SA-02	A1P2-S3SA-02-13-X	1351376	479917	A,B,C,D,G	D/B
A1P2-S3SA-02	A1P2-S3SA-02-14-X	1351461	479914	Not Collected	D/B
A1P2-S3SA-02	A1P2-S3SA-02-15-X	1351354	479992	A,B,C,D,G	D/B
A1P2-S3SA-02	A1P2-S3SA-02-16B-X	1351417	479967	A,B,C,D,G	D/B
A1P2-S3SA-02	A1P2-S3SA-02-16B-X-D	1351417	479967	A,B,C,D,G	D/B

APPENDIX B
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CERTIFICATION UNIT	SAMPLE IDENTIFICATION	EASTING	NORTHING	TALs	ASL/VSL
A1P2-S3SA-02	**A1P2S3SA02-16RA-X-D**	**1351417**	**479967**	**A**	**D/B**
A1P2-S3SA-02	**A1P2S3SA02-16RA-X**	**1351417**	**479967**	**A**	**D/B**
A1P2-S3SA-03	A1P2-S3SA-03-01-X	1351103	480069	A,B,C,D	D/B
A1P2-S3SA-03	A1P2-S3SA-03-02A-X	1351153	480029	Not Collected	D/B
A1P2-S3SA-03	A1P2-S3SA-03-03-X	1351181	480008	A,B,C,D	D/B
A1P2-S3SA-03	A1P2-S3SA-03-04-X	1351217	480015	A,B,C,D	D/B
A1P2-S3SA-03	A1P2-S3SA-03-05A-X	1351117	480127	Not Collected	D/B
A1P2-S3SA-03	A1P2-S3SA-03-06-X	1351152	480071	A,B,C,D	D/B
A1P2-S3SA-03	A1P2-S3SA-03-07-X-D	1351197	480088	A,B,C,D	D/B
A1P2-S3SA-03	A1P2-S3SA-03-08-X	1351233	480136	A,B,C,D	D/B
A1P2-S3SA-03	A1P2-S3SA-03-09A-X	1351103	480185	Not Collected	D/B
A1P2-S3SA-03	A1P2-S3SA-03-10-X	1351143	480198	A,B,C,D	D/B
A1P2-S3SA-03	A1P2-S3SA-03-11-X	1351191	480170	A,B,C,D	D/B
A1P2-S3SA-03	A1P2-S3SA-03-12-X	1351232	480199	A,B,C,D	D/B
A1P2-S3SA-03	A1P2-S3SA-03-13A-X	1351122	480245	Not Collected	D/B
A1P2-S3SA-03	A1P2-S3SA-03-14-X	1351150	480261	A,B,C,D	D/B
A1P2-S3SA-03	A1P2-S3SA-03-15-X	1351183	480268	A,B,C,D	D/B
A1P2-S3SA-03	A1P2-S3SA-03-16-X	1351236	480245	A,B,C,D	D/B
A1P2-S3SA-04	A1P2-S3SA-04-01-X	1351278	480022	A,B,C,D,G	D/D
A1P2-S3SA-04	A1P2-S3SA-04-02-X	1351363	480033	A,B,C,D,G	D/D
A1P2-S3SA-04	A1P2-S3SA-04-03-X	1351260	480078	Not Collected	D/D
A1P2-S3SA-04	A1P2-S3SA-04-04-X	1351342	480062	A,B,C,D,G	D/D
A1P2-S3SA-04	A1P2-S3SA-04-05-X	1351402	480024	Not Collected	D/D
A1P2-S3SA-04	A1P2-S3SA-04-06-X	1351445	480038	A,B,C,D,G	D/D
A1P2-S3SA-04	A1P2-S3SA-04-07-X	1351397	480076	A,B,C,D,G	D/D
A1P2-S3SA-04	A1P2-S3SA-04-08-X	1351446	480084	A,B,C,D,G	D/D
A1P2-S3SA-04	A1P2-S3SA-04-09-X	1351264	480130	A,B,C,D,G	D/D
A1P2-S3SA-04	A1P2-S3SA-04-10-X	1351345	480107	A,B,C,D,G	D/D
A1P2-S3SA-04	A1P2-S3SA-04-11-X	1351279	480160	Not Collected	D/D
A1P2-S3SA-04	A1P2-S3SA-04-12-X	1351330	480175	A,B,C,D,G	D/D
A1P2-S3SA-04	A1P2-S3SA-04-13-X	1351266	480203	A,B,C,D,G	D/D
A1P2-S3SA-04	A1P2-S3SA-04-13-X-D	1351266	480203	A,B,C,D,G	D/D
A1P2-S3SA-04	A1P2-S3SA-04-14-X	1351363	480202	Not Collected	D/D
A1P2-S3SA-04	A1P2-S3SA-04-15-X	1351266	480250	A,B,C,D,G	D/D
A1P2-S3SA-04	A1P2-S3SA-04-16-X	1351365	480249	A,B,C,D,G	D/D
A1P2-S3SA-05	A1P2-S3SA-05-01-X	1351120	480288	Not Collected	D/B
A1P2-S3SA-05	A1P2-S3SA-05-02-X	1351194	480351	A,B,C,D	D/B
A1P2-S3SA-05	A1P2-S3SA-05-03-X	1351225	480321	A,B,C,D	D/B
A1P2-S3SA-05	A1P2-S3SA-05-04-X	1351274	480353	A,B,C,D	D/B
A1P2-S3SA-05	A1P2-S3SA-05-04-X-D	1351274	480353	A,B,C,D	D/B
A1P2-S3SA-05	A1P2-S3SA-05-05-X	1351113	480374	A,B,C,D	D/B
A1P2-S3SA-05	A1P2-S3SA-05-06-X	1351179	480427	Not Collected	D/B
A1P2-S3SA-05	A1P2-S3SA-05-07-X	1351212	480395	A,B,C,D	D/B
A1P2-S3SA-05	A1P2-S3SA-05-08-X	1351260	480400	A,B,C,D	D/B
A1P2-S3SA-05	A1P2-S3SA-05-09-X	1351127	480485	A,B,C,D	D/B
A1P2-S3SA-05	A1P2-S3SA-05-10-X	1351168	480491	Not Collected	D/B
A1P2-S3SA-05	A1P2-S3SA-05-11-X	1351227	480500	A,B,C,D	D/B
A1P2-S3SA-05	A1P2-S3SA-05-12-X	1351259	480453	A,B,C,D	D/B

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CERTIFICATION UNIT	SAMPLE IDENTIFICATION	EASTING	NORTHING	TALs	ASL/VSL
A1P2-S3SA-05	A1P2-S3SA-05-13-X	1351170	480537	A,B,C,D	D/B
A1P2-S3SA-05	A1P2-S3SA-05-14-X	1351163	480577	A,B,C,D	D/B
A1P2-S3SA-05	A1P2-S3SA-05-15-X	1351245	480549	Not Collected	D/B
A1P2-S3SA-05	A1P2-S3SA-05-16-X	1351283	480589	A,B,C,D	D/B
A1P2-S3SA-06	A1P2-S3SA-06-01-X	1351329	480300	A,B,C,D	D/B
A1P2-S3SA-06	A1P2-S3SA-06-01-X-D	1351329	480300	A,B,C,D	D/B
A1P2-S3SA-06	A1P2-S3SA-06-02-X	1351378	480299	Not Collected	D/B
A1P2-S3SA-06	A1P2-S3SA-06-03-X	1351416	480309	A,B,C,D	D/B
A1P2-S3SA-06	A1P2-S3SA-06-04-X	1351455	480308	A,B,C,D	D/B
A1P2-S3SA-06	A1P2-S3SA-06-05-X	1351310	480389	A,B,C,D	D/B
A1P2-S3SA-06	A1P2-S3SA-06-06-X	1351344	480438	Not Collected	D/B
A1P2-S3SA-06	A1P2-S3SA-06-07-X	1351386	480405	A,B,C,D	D/B
A1P2-S3SA-06	A1P2-S3SA-06-08-X	1351437	480377	A,B,C,D	D/B
A1P2-S3SA-06	A1P2-S3SA-06-09-X	1351306	480488	A,B,C,D	D/B
A1P2-S3SA-06	A1P2-S3SA-06-10-X	1351369	480481	A,B,C,D	D/B
A1P2-S3SA-06	A1P2-S3SA-06-11-X	1351416	480475	A,B,C,D	D/B
A1P2-S3SA-06	A1P2-S3SA-06-12-X	1351456	480530	Not Collected	D/B
A1P2-S3SA-06	A1P2-S3SA-06-13-X	1351328	480563	Not Collected	D/B
A1P2-S3SA-06	A1P2-S3SA-06-14-X	1351353	480595	A,B,C,D	D/B
A1P2-S3SA-06	A1P2-S3SA-06-15-X	1351399	480569	A,B,C,D	D/B
A1P2-S3SA-06	A1P2-S3SA-06-16-X	1351447	480572	A,B,C,D	D/B
A1P2-S3SA-07	A1P2-S3SA-07-01-X	1351494	480463	A,B,C,D	D/D
A1P2-S3SA-07	A1P2-S3SA-07-02-X	1351546	480481	A,B,C,D	D/D
A1P2-S3SA-07	A1P2-S3SA-07-03-X	1351498	480587	A,B,C,D	D/D
A1P2-S3SA-07	A1P2-S3SA-07-04-X	1351789	480423	Not Collected	D/D
A1P2-S3SA-07	A1P2-S3SA-07-05-X	1351568	480525	A,B,C,D	D/D
A1P2-S3SA-07	A1P2-S3SA-07-06-X	1351633	480503	Not Collected	D/D
A1P2-S3SA-07	A1P2-S3SA-07-07-X	1351578	480563	A,B,C,D	D/D
A1P2-S3SA-07	A1P2-S3SA-07-08-X	1351651	480570	A,B,C,D	D/D
A1P2-S3SA-07	A1P2-S3SA-07-09-X	1351672	480486	A,B,C,D	D/D
A1P2-S3SA-07	A1P2-S3SA-07-09-X-D	1351672	480486	A,B,C,D	D/D
A1P2-S3SA-07	A1P2-S3SA-07-10-X	1351733	480458	Not Collected	D/D
A1P2-S3SA-07	A1P2-S3SA-07-11-X	1351696	480559	A,B,C,D	D/D
A1P2-S3SA-07	A1P2-S3SA-07-12-X	1351734	480614	A,B,C,D	D/D
A1P2-S3SA-07	A1P2-S3SA-07-13-X	1351750	480493	A,B,C,D	D/D
A1P2-S3SA-07	A1P2-S3SA-07-14-X	1351826	480472	A,B,C,D	D/D
A1P2-S3SA-07	A1P2-S3SA-07-15-X	1351763	480571	Not Collected	D/D
A1P2-S3SA-07	A1P2-S3SA-07-16-X	1351824	480591	A,B,C,D	D/D
A1P2-S3SA-08	A1P2-S3SA-08-01-X	1351486	480330	A,B,C,D	D/B
A1P2-S3SA-08	A1P2-S3SA-08-02-X	1351541	480325	A,B,C,D	D/B
A1P2-S3SA-08	A1P2-S3SA-08-03-X	1351482	480377	Not Collected	D/B
A1P2-S3SA-08	A1P2-S3SA-08-04-X	1351538	480370	A,B,C,D	D/B
A1P2-S3SA-08	A1P2-S3SA-08-05-X	1351596	480304	Not Collected	D/B
A1P2-S3SA-08	A1P2-S3SA-08-06-X	1351616	480338	A,B,C,D	D/B
A1P2-S3SA-08	A1P2-S3SA-08-07-X	1351562	480417	A,B,C,D	D/B
A1P2-S3SA-08	A1P2-S3SA-08-08-X	1351627	480433	A,B,C,D	D/B
A1P2-S3SA-08	A1P2-S3SA-08-08-X-D	1351627	480433	A,B,C,D	D/B
A1P2-S3SA-08	A1P2-S3SA-08-09-X	1351658	480350	A,B,C,D	D/B

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APPENDIX B
CU SAMPLES/COORDINATES/IDENTIFICATION =- 2615

CERTIFICATION UNIT	SAMPLE IDENTIFICATION	EASTING	NORTHING	TALs	ASL/VSL
A1P2-S3SA-08	A1P2-S3SA-08-10-X	1351727	480291	Not Collected	D/B
A1P2-S3SA-08	A1P2-S3SA-08-11-X	1351653	480408	A,B,C,D	D/B
A1P2-S3SA-08	A1P2-S3SA-08-12-X	1351718	480415	A,B,C,D	D/B
A1P2-S3SA-08	A1P2-S3SA-08-13-X	1351782	480292	A,B,C,D	D/B
A1P2-S3SA-08	A1P2-S3SA-08-14-X	1351811	480320	A,B,C,D	D/B
A1P2-S3SA-08	A1P2-S3SA-08-15-X	1351750	480382	A,B,C,D	D/B
A1P2-S3SA-08	A1P2-S3SA-08-16-X	1351828	480442	Not Collected	D/B
A1P2-S3SA-08	**A1P2-S3SA-08-CG-X**	**1351784**	**480294**	**A,B,C,D**	**D/B**
A1P2-S3SA-09	A1P2-S3SA-09-01-X	1351402	480127	Not Collected	D/B
A1P2-S3SA-09	A1P2-S3SA-09-02B-X	1351445	480155	A,B,C,D,G	D/B
A1P2-S3SA-09	**A1P2S3SA09-02RA-X**	1351445	480155	**A**	**D/B**
A1P2-S3SA-09	A1P2-S3SA-09-03-X	1351394	480202	A,B,C,D,G	D/B
A1P2-S3SA-09	A1P2-S3SA-09-04-X	1351442	480216	A,B,C,D,G	D/B
A1P2-S3SA-09	A1P2-S3SA-09-04-X-D	1351442	480216	A,B,C,D,G	D/B
A1P2-S3SA-09	A1P2-S3SA-09-05-X	1351409	480268	A,B,C,D,G	D/B
A1P2-S3SA-09	A1P2-S3SA-09-06-X	1351450	480271	Not Collected	D/B
A1P2-S3SA-09	A1P2-S3SA-09-07-X	1351540	480206	A,B,C,D,G	D/B
A1P2-S3SA-09	A1P2-S3SA-09-08-X	1351531	480265	A,B,C,D,G	D/B
A1P2-S3SA-09	A1P2-S3SA-09-09-X	1351584	480226	A,B,C,D,G	D/B
A1P2-S3SA-09	A1P2-S3SA-09-10-X	1351671	480212	A,B,C,D,G	D/B
A1P2-S3SA-09	A1P2-S3SA-09-11-X	1351586	480266	Not Collected	D/B
A1P2-S3SA-09	A1P2-S3SA-09-12-X	1351640	480276	A,B,C,D,G	D/B
A1P2-S3SA-09	A1P2-S3SA-09-13-X	1351713	480226	A,B,C,D,G	D/B
A1P2-S3SA-09	A1P2-S3SA-09-14-X	1351797	480204	A,B,C,D,G	D/B
A1P2-S3SA-09	A1P2-S3SA-09-15-X	1351750	480264	Not Collected	D/B
A1P2-S3SA-09	A1P2-S3SA-09-16-X	1351785	480262	A,B,C,D,G	D/B
A1P2-S3SA-09	**A1P2-S3SA-09-CG-X**	**1351791**	**480278**	**A,B,C,D,G**	**D/B**
A1P2-S3SA-10	A1P2-S3SA-10-01-X	1351633	480618	A,C	D/B
A1P2-S3SA-10	A1P2-S3SA-10-02-X	1351678	480634	Not Collected	D/B
A1P2-S3SA-10	A1P2-S3SA-10-03-X	1351648	480670	A,C	D/B
A1P2-S3SA-10	A1P2-S3SA-10-04-X	1351706	480669	A,C	D/B
A1P2-S3SA-10	A1P2-S3SA-10-05-X	1351657	480725	A,C	D/B
A1P2-S3SA-10	A1P2-S3SA-10-06-X	1351690	480721	Not Collected	D/B
A1P2-S3SA-10	A1P2-S3SA-10-07-X	1351646	480771	A,C	D/B
A1P2-S3SA-10	A1P2-S3SA-10-08-X	1351710	480763	A,C	D/B
A1P2-S3SA-10	A1P2-S3SA-10-09-X	1351645	480799	A,C	D/B
A1P2-S3SA-10	A1P2-S3SA-10-10-X	1351643	480846	A,C	D/B
A1P2-S3SA-10	A1P2-S3SA-10-11-X	1351592	480882	A,C	D/B
A1P2-S3SA-10	A1P2-S3SA-10-11-X-D	1351592	480882	A,C	D/B
A1P2-S3SA-10	A1P2-S3SA-10-12-X	1351618	480900	Not Collected	D/B
A1P2-S3SA-10	A1P2-S3SA-10-13-X	1351577	480922	A,C	D/B
A1P2-S3SA-10	A1P2-S3SA-10-14-X	1351632	480930	A,C	D/B
A1P2-S3SA-10	A1P2-S3SA-10-15-X	1351583	480970	A,C	D/B
A1P2-S3SA-10	A1P2-S3SA-10-16-X	1351634	480956	Not Collected	D/B
A1P2-S3DP-01	A1P2-S3DP-01-01-X	1351522	479882	A,B,C,D,E,F,G	D/D
A1P2-S3DP-01	A1P2-S3DP-01-02-X	1351635	479868	A,B,C,D,E,F,G	D/D
A1P2-S3DP-01	A1P2-S3DP-01-03-X	1351484	479909	Not Collected	D/D
A1P2-S3DP-01	A1P2-S3DP-01-04-X	1351624	479919	A,B,C,D,E,F,G	D/D

APPENDIX B
CU SAMPLES/COORDINATES/IDENTIFICATION - 2615

CERTIFICATION UNIT	SAMPLE IDENTIFICATION	EASTING	NORTHING	TALs	ASL/VSL
A1P2-S3DP-01	A1P2-S3DP-01-05-X	1351475	479957	A,B,C,D,E,F,G	D/D
A1P2-S3DP-01	A1P2-S3DP-01-05-X-D	1351475	479957	A,B,C,D,E,F,G	D/D
A1P2-S3DP-01	A1P2-S3DP-01-06-X	1351637	479964	A,B,C,D,E,F,G	D/D
A1P2-S3DP-01	A1P2-S3DP-01-07-X	1351505	479994	A,B,C,D,E,F,G	D/D
A1P2-S3DP-01	A1P2-S3DP-01-08-X	1351565	479978	Not Collected	D/D
A1P2-S3DP-01	A1P2-S3DP-01-09-X	1351508	480051	A,B,C,D,E,F,G	D/D
A1P2-S3DP-01	A1P2-S3DP-01-10-X	1351611	480025	A,B,C,D,E,F,G	D/D
A1P2-S3DP-01	A1P2-S3DP-01-11-X	1351553	480100	Not Collected	D/D
A1P2-S3DP-01	A1P2-S3DP-01-12-X	1351585	480068	A,B,C,D,E,F,G	D/D
A1P2-S3DP-01	A1P2-S3DP-01-13-X	1351506	480137	Not Collected	D/D
A1P2-S3DP-01	A1P2-S3DP-01-14-X	1351571	480145	A,B,C,D,E,F,G	D/D
A1P2-S3DP-01	A1P2-S3DP-01-15-X	1351478	480169	A,B,C,D,E,F,G	D/D
A1P2-S3DP-01	A1P2-S3DP-01-16-X	1351575	480193	A,B,C,D,E,F,G	D/D
A1P2-S3DP-02	A1P2-S3DP-02-01-X	1351648	479871	A,B,C,D,E,F,G	D/B
A1P2-S3DP-02	A1P2-S3DP-02-02-X	1351710	479884	Not Collected	D/B
A1P2-S3DP-02	A1P2-S3DP-02-03-X	1351673	479937	A,B,C,D,E,F,G	D/B
A1P2-S3DP-02	A1P2-S3DP-02-04-X	1351704	479923	A,B,C,D,E,F,G	D/B
A1P2-S3DP-02	A1P2-S3DP-02-05-X	1351766	479900	Not Collected	D/B
A1P2-S3DP-02	A1P2-S3DP-02-06-X	1351794	479869	A,B,C,D,E,F,G	D/B
A1P2-S3DP-02	A1P2-S3DP-02-07-X	1351754	479954	A,B,C,D,E,F,G	D/B
A1P2-S3DP-02	A1P2-S3DP-02-08-X	1351790	479942	A,B,C,D,E,F,G	D/B
A1P2-S3DP-02	A1P2-S3DP-02-09-X	1351672	479979	A,B,C,D,E,F,G	D/B
A1P2-S3DP-02	A1P2-S3DP-02-10-X	1351726	480012	A,B,C,D,E,F,G	D/B
A1P2-S3DP-02	A1P2-S3DP-02-11-X	1351762	479984	A,B,C,D,E,F,G	D/B
A1P2-S3DP-02	A1P2-S3DP-02-11-X-D	1351762	479984	A,B,C,D,E,F,G	D/B
A1P2-S3DP-02	A1P2-S3DP-02-12-X	1351792	480001	Not Collected	D/B
A1P2-S3DP-02	A1P2-S3DP-02-13-X	1351682	480035	A,B,C,D,E,F,G	D/B
A1P2-S3DP-02	A1P2-S3DP-02-14-X	1351648	480082	A,B,C,D,E,F,G	D/B
A1P2-S3DP-02	A1P2-S3DP-02-15-X	1351684	480111	Not Collected	D/B
A1P2-S3DP-02	A1P2-S3DP-02-16-X	1351686	480166	A,B,C,D,E,F,G	D/B
A1P2-S3HW-01	A1P2-S3HW-01-01-X	1351745	480055	A,B,C,D,E,F,G	D/D
A1P2-S3HW-01	A1P2-S3HW-01-02-X	1351783	480063	A,B,C,D,E,F,G	D/D
A1P2-S3HW-01	A1P2-S3HW-01-03-X	1351764	480075	A,B,C,D,E,F,G	D/D
A1P2-S3HW-01	A1P2-S3HW-01-04-X	1351782	480087	A,B,C,D,E,F,G	D/D
A1P2-S3HW-01	A1P2-S3HW-01-05-X	1351763	480108	A,B,C,D,E,F,G	D/D
A1P2-S3HW-01	A1P2-S3HW-01-06-X	1351789	480109	A,B,C,D,E,F,G	D/D
A1P2-S3HW-01	A1P2-S3HW-01-07-X	1351759	480130	A,B,C,D,E,F,G	D/D
A1P2-S3HW-01	A1P2-S3HW-01-08-X	1351783	480139	A,B,C,D,E,F,G	D/D
A1P2-S3HW-01	A1P2-S3HW-01-09-X	1351707	480050	A,B,C,D,E,F,G	D/D
A1P2-S3HW-01	A1P2-S3HW-01-10-X	1351780	480029	A,B,C,D,E,F,G	D/D
A1P2-S3HW-01	A1P2-S3HW-01-11-X	1351726	480125	A,B,C,D,E,F,G	D/D
A1P2-S3HW-01	A1P2-S3HW-01-12-X	1351814	480089	A,B,C,D,E,F,G	D/D
A1P2-S3HW-01	A1P2-S3HW-01-13-X	1351721	480178	A,B,C,D,E,F,G	D/D
A1P2-S3HW-01	A1P2-S3HW-01-14-X	1351752	480156	A,B,C,D,E,F,G	D/D
A1P2-S3HW-01	A1P2-S3HW-01-15-X	1351778	480170	A,B,C,D,E,F,G	D/D
A1P2-S3HW-01	A1P2-S3HW-01-16-X	1351812	480156	A,B,C,D,E,F,G	D/D
A1P2-S3HW-01	A1P2-S3HW-01-16-X-D	1351812	480156	A,B,C,D,E,F,G	D/D

APPENDIX C

TARGET ANALYTE LISTS

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APPENDIX C
TARGET ANALYTE LISTS

TAL A
Gamma Spectroscopy Method
(ASL E[a])

Analyte	FRL Limit	HAMDC
Total Uranium	82 ppm/20 ppm[b]	8 ppm/2 ppm[b]
Thorium-228	1.7 pCi/g	.17 pCi/g
Thorium-232	1.5 pCi/g	.15 pCi/g
Radium-228	1.8 pCi/g	.20 pCi/g
Radium-226	1.7 pCi/g	.20 pCi/g

[a] Analytical requirements will be classified as ASL E, but will have the same requirements as ASL D with the HAMDCs set at least 10 percent of the FRL.

[b] The total uranium FRL for CU A1P2-S3DP-01 is 20 ppm. Subsequently, the HAMDC for samples collected from this CU is 2.0 ppm. For all other CUs, the FRL and HAMDC are 82 ppm and 8.2 ppm, respectively. Samples from CU A1P2-S3DP-01 will be analyzed at the on-site laboratory.

TAL B
Gas Proportional Counting Method
(ASL E[a])

Analyte	FRL Limit	HAMDC
Technetium-99	30 pCi/g	3.0 pCi/g

[a] Analytical requirements will be classified as ASL E, but will have the same requirements as ASL D with the HAMDCs set at least 10 percent of the FRL.

TAL C
ICP or ICP-MS or GFAA
(ASL D)

Analyte	FRL Limit	MDL
Arsenic	12 mg/kg	1.2 mg/kg
Lead	400 mg/kg	40 mg/kg

MDL - Minimum Detection Limit
ICP-MS - Inductively Coupled Plasma - Mass Spectrometry
GFAA - Graphite-Furance Atomic Absorption Spectrometry

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TAL D
ICP or ICP-MS
(ASL D)

Analyte	FRL/BTV Limit	MDL
Antimony	10 mg/kg (BTV)	1.0 mg/kg
Beryllium	1.5 mg/kg (FRL)	0.15 mg/kg

TAL E
Gas Chromatography
(ASL D)

Analyte	FRL Limit	MDL
Aroclor 1254	0.13 mg/kg	0.013 mg/kg
Aroclor 1260	0.13 mg/kg	0.013 mg/kg

TAL F
Gas Chromatography-Mass Spectroscopy
(ASL D)

Analyte	FRL limit	MDL
Tetrachloroethene[a]	3.6 mg/kg	0.36 mg/kg

[a]Tetrachloroethene is another name for Perchloroethylene (PCE)

TAL G
ICP or ICP-MS
(ASL D)

Analyte	BTV value	MDL
Molybdenum	10.0 mg/kg	1.0 mg/kg

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