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Design Criteria Package
for
Remedial Design Services
Remediation Area 1, Phase II

FDF Project No. 20710
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Revision E
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Environmental Remedial Action Project
Fernald Environmental Management Project
Fernald, Ohio
FDF Subcontract No. 2-21487
Project Order 175

PARSONS

175 Tri-County Parkway
Cincinnati, Ohio 45246

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Design Criteria Package
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Revision E

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LIST OF ACRONYMS AND ABBREVIATIONS

AASHTO	American Association of State Highway and Transportation Officials
ABMA	American Bearing Manufacturers Association
ACGIH	American Conference of Governmental Industrial Hygienists
ALARA	As Low As Reasonably Achievable
ASCE	American Society of Civil Engineers
ANSI	American National Standards Institute
ARAR	Applicable or Relevant and Appropriate Requirement
ASME	American Society of Mechanical Engineers
ASNT	American Society for Non-Destructive Testing
ASTM	American Society for Testing and Materials
AWPA	American Wood-Preservers Asso ciation
AWWA	American Water Works Association
AWWT	Advanced Wastewater Treatment (Facility)
CFC	Certified for Construction
CFR	Code of Federal Regulations
CG&E	Cincinnati Gas and Electric
D&D	Decontamination and Decommissioning
DCN	Design Change Notice
DCP	Design Criteria Package
DO	Dissolved Oxygen (Facility)
DOE	United States Department of Energy
EPA	Environmental Protection Agency
FCD	Facilities Closure and Demolition
FDF	Fluor Daniel Fernald, Inc.
FEMP	Fernald Environmental Management Project
FRD	Functional Requirements Document
FRL	Final Remediation Level
HDPE	High Density Polyethylene
IEEE	International Electrical and Electronics Engineers
NEMA	National Electrical Manufacturers Association
OAC	Ohio Administrative Code
ODNR	Ohio Department of Natural Resources
ODOT	Ohio Department of Transportation
OSDF	On-Site Disposal Facility
OU	Operable Unit
PCE	Perchloroethylene
POP	Project Order Plan

PSHSP	Project-Specific Health and Safety Plan
psi	pounds per square inch
RCI	Requests for Clarification of Information
RCRA	Resource Conservation and Recovery Act
SCS	Soil Conservation Service
SFES	South Field Extraction System
S/RID	Standards/Requirements Identification Document
STP	Sewage Treatment Plant
STRA	Short Term Risk Assessment
SWRB	Stormwater Retention Basin
TBC	To Be Considered
UL	Underwriters Laboratories Incorporated
VDS	Vendor Data Submittal
WAC	Waste Acceptance Criteria

SECTION 1

PROJECT DESCRIPTION

The Fernald Environmental Management Project (FEMP) is a 1,050 acre facility located in southwestern Ohio approximately 18 miles northwest of downtown Cincinnati, Ohio. The mission of the facility was to provide high-purity uranium metal products to support United States defense programs. Production operations were discontinued in 1989. Subsequently, the United States Department of Energy (DOE) decided to decontaminate and dismantle the facility and began environmental remediation of the site.

To facilitate management of the environmental remediation activities, the site was divided into seven sitewide remediation areas as shown in Figure 1-1. Several of these areas will be remediated in phases. Area 1 is subdivided into two major phases (Phase I and Phase II). Remedial design for Area 1, Phase I was completed in May 1996. Remediation of Area 1, Phase I began in September 1996 and was completed in March 1997.

Area 1, Phase II, encompasses approximately 153 acres and is located in the southeastern part of the FEMP (as shown in Figure 1-1). It is bordered on the east and south by the FEMP boundary; on the west by the South Access Road, an unnamed stream and former production area; and on the north by Area 1, Phase I. The terrain in this area is rolling pasture.

This Design Criteria Package (DCP) will serve as the basis for the Title I, II, and III design services for the remediation of Area 1, Phase II.

The DCP is developed consistent with the requirements of the Functional Requirements Document (FRD) prepared by Fluor Daniel Fernald (FDF), the Applicable or Relevant and Appropriate Requirements (ARARs) and To Be Considered (TBC) requirements prepared by FDF (Appendix A), appropriate DOE regulations, United States Environmental Protection Agency (EPA) directives, Ohio Environmental Protection Agency standards, Ohio Department of Natural Resources (ODNR) standards, and FDF Standards/Requirements Identification Documents (S/RIDs). The outline of the DCP is consistent with the FEMP Engineering Procedure Number 12-4003, Design Criteria Package, Revision 1.

1.1 Project Scope

PARSONS will provide necessary Title I/II design services, including reports, plans, calculations, drawings, specifications, and support FDF as necessary to obtain DOE and regulatory approval for the remediation of Area 1, Phase II. The design will meet the requirements presented in the FRD, and will be in compliance with the ARARs and TBCs. During construction PARSONS will provide Title III support services to FDF as requested.

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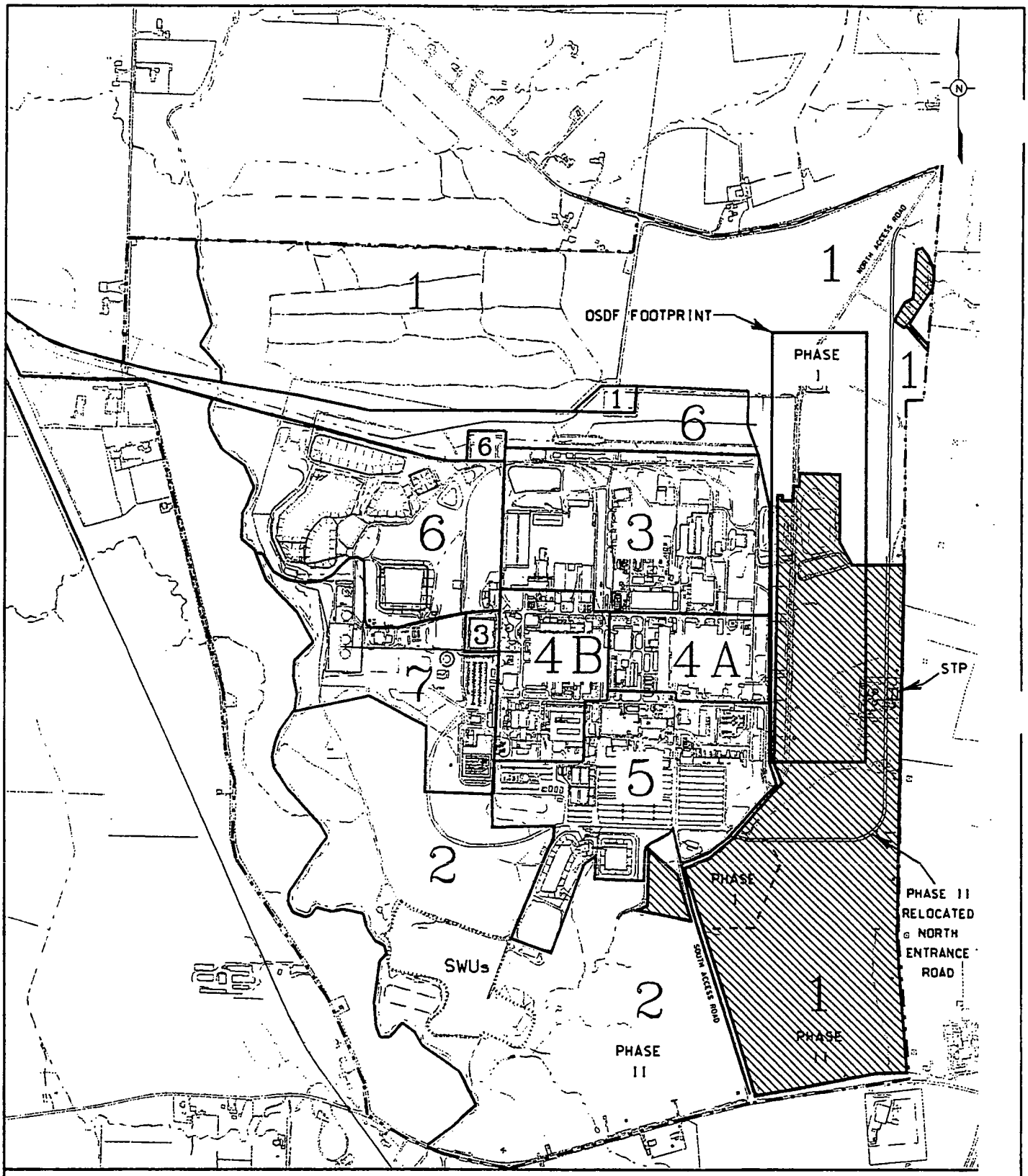

LEGEND:

- AREA 1-PHASE II
- PHASE BOUNDARIES
- FEMP BOUNDARY
- 1 REMEDIATION AREA

SCALE

1200 600 0 1200 FEET

FIGURE 1-1. SITEWIDE REMEDIATION AREAS

1.2 Description of Alternative Selected

The design work proposed for Area 1, Phase II is the result of the Remedial Investigation/Feasibility Study (RI/FS) process wherein the contamination, which was a result of a variety of past operating practices, was identified and delineated. The proposed alternative of contaminated soils excavation with on-site disposal, was determined to be the best remedial action. For overall project planning purposes, and especially for construction phasing and scheduling purposes, Sectors (1-3) were defined as shown on Figure 1-2.

Potential contamination in Area 1, Phase II includes wind-blown radiological contaminants from the former production area and the incinerator in the Sewage Treatment Plant (STP). The trap range contains soil contaminated with lead and arsenic [potentially Resource Conservation and Recovery Act (RCRA) characteristic wastes] and the sludge drying beds in the STP have contaminated the underlying soils and perched water with RCRA listed wastes. The sludge drying beds in the STP are designated as a hazardous waste management unit.

Using soil sample analytical results, FDF has estimated the approximate extent of soil excavation required to achieve the remedial objectives outlined in the Operable Unit (OU) 5 Record of Decision (ROD). The required excavation limits are defined by a model which consists of the three-dimensional (3-D) surface (1-foot interval topographic contours) defining the required excavation expected to satisfy Final Remediation Levels (FRLs).

The objective of the design work is to prepare design documents, in accordance with the Project Order Plan (POP) and this DCP, to excavate at-grade and below-grade structures, utilities and impacted material above FRLs in Area 1, Phase II.

The currently existing Advanced Waste Water Treatment Facility (AWWT) discharge line, Dissolved Oxygen (DO) Facility, Mid-Valley Pipeline Company oil pipeline, and the Cincinnati Gas and Electric (CG&E) electrical transmission towers, with the exception of one tower noted below in Sector 3, will remain during and after the Area 1, Phase II work. Specifications or other measures will control required nearby soil excavation to avoid potential damage to the towers or their foundations. The Facilities Closure and Demolition (FCD) Project is responsible for the demolition and disposal of all above grade facilities to be removed in Area 1, Phase II.

One design package (Construction Drawings and Technical Specifications) is planned to include all the Area 1, Phase II work. The sectors identified in the package will be used to phase the construction in order to integrate it with the entire FEMP site remediation plan and schedule. The limits of the sectors will be based on contamination model results, surface water drainage conditions, other FEMP construction projects, construction cost and scheduling, available funding, overall site remediation schedules, and other criteria. Adjustments may be made to the sector limits as additional information becomes available.

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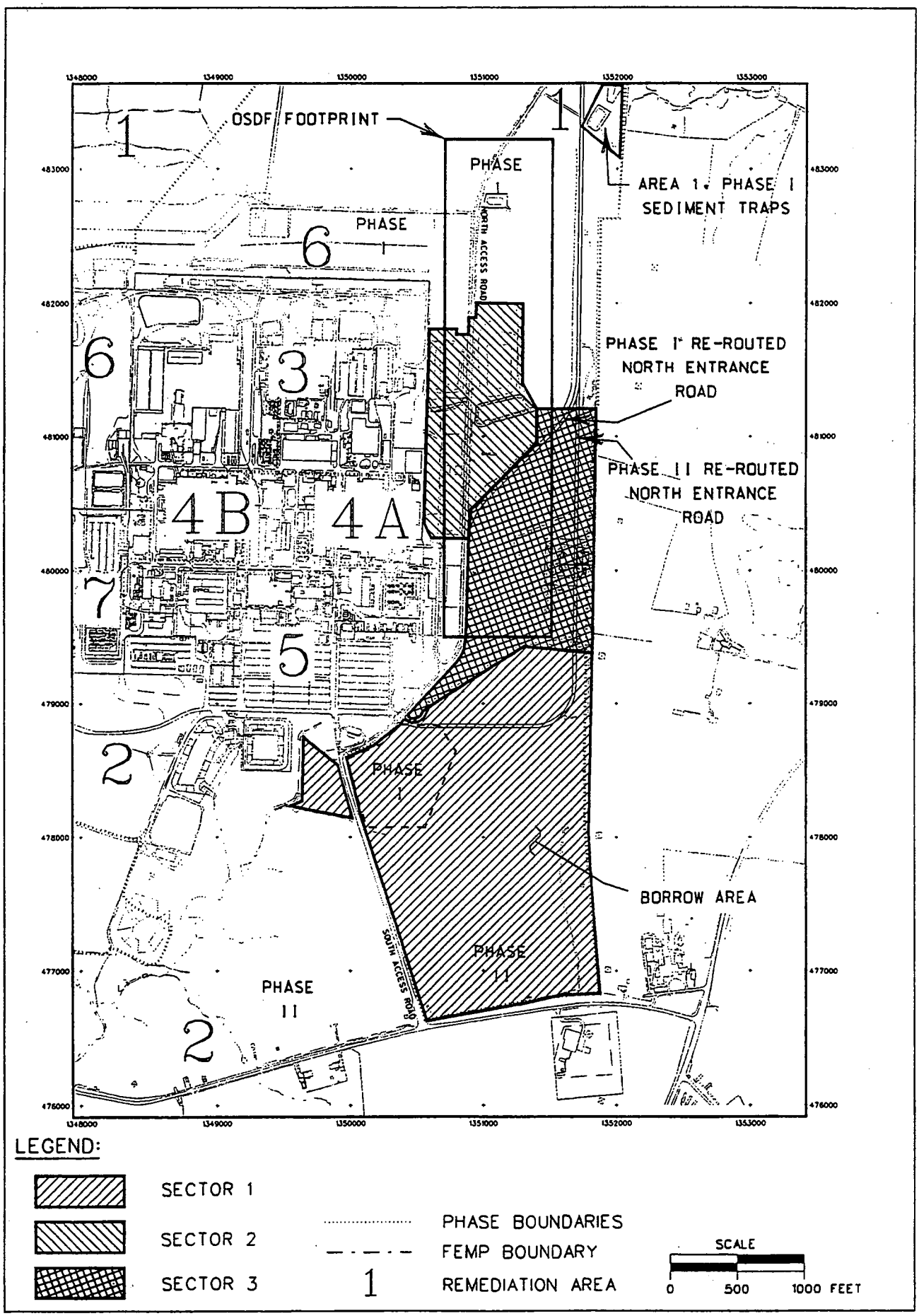

FIGURE 1-2 AREA 1 - PHASE II SECTORS

1.2.1 Sector 1

The Sector 1 design will include the construction of a sediment basin and conveyance channel to control stormwater runoff from Sectors 1 and 3 activities and remediation of the Trap Range.

After necessary remediation excavation and certification, most of Sector 1 will be developed as a borrow source for clean soil for the On-Site Disposal Facility (OSDF) cover. Development of the OSDF borrow area is not in the scope of this project. Also, an area in the southeast of Sector 1 has been identified as a potential borrow source for backfill material for the excavation at the STP area.

1.2.2 Sector 2

The Sector 2 design will include minor surficial soil excavation (stripping) and removal of agricultural drain tiles.

1.2.3 Sector 3

The Sector 3 design shall include the excavation, treatment (size reduction and moisture adjustment, if necessary), and transport of impacted soil and debris obtained from the STP area and its vicinity. This phase will include collection and transfer of water collected in the STP and associated utility excavation in the vicinity of the STP. Expected necessary excavations in the STP area will be the deepest overall throughout Area 1, Phase II. Except for the STP area and immediate vicinity, the remaining area of Sector 3 will be covered by minor surficial soil excavation as necessary.

The DO Facilities and associated substation and the Rerouted North Entrance Road will not be removed during this project.

1.3 General Description of the Project Components

1.3.1 Excavation

Design and/or specify systems and/or operations to excavate, treat, if necessary (limited to size reduction and moisture adjustment by blending), and dispose of all soils within Area 1, Phase II with contaminant concentrations above FRLs.

Design and/or specify systems and/or operations to efficiently excavate and dispose of abandoned utility lines and impacted soil from utility excavation. These utilities include concrete electric ducts, water, storm and sanitary sewer lines, field drain tile, and a 4-inch natural gas line.

Design and/or specify systems and/or operations to excavate, treat, if necessary (treatment limited to size reduction and moisture adjustment by blending), and dispose of RCRA listed waste (sludge) located in the vicinity of the STP sludge drying beds.

Disposal of all excavated materials will primarily be in the OSDF, but for materials above OSDF Waste Acceptance Criteria (WAC), will include disposal to a designated stockpile area in OU-1 for subsequent management by FDF.

1.3.2 Facilities D&D

Design and/or specify systems and/or operations for the removal of at and below-grade structures and facilities at the STP area. PARSONS will use existing facility drawings to delineate above-grade structures removal and at-grade and below-grade structures removal. Removal of the above-grade structures will be completed by the FCD Project following the OU-3 Sewage Treatment Plant Complex Implementation Plan for Above Grade D&D.

For at and below grade facilities, PARSONS will design and/or specify systems and/or operations to process (reduce size) structures, demolition debris (concrete, structural steel, etc.), and pipelines for acceptance into the OSDF.

1.3.3 Stormwater Controls

Design and/or specify stormwater control features to prevent stormwater run-on from upgradient contaminated and/or potentially contaminated areas (i.e., areas that have not been certified clean).

Prepare a Surface Water Management Plan which addresses surface water run-off, and erosion and sedimentation controls.

Develop an erosion control plan and design an erosion and sediment control system to minimize sediment run-off from the Area 1, Phase II area. Use the sediment basin included with Phase I of the OSDF construction, if practical. In Title I, PARSONS will determine the feasibility and make recommendations to FDF for the use of one basin to meet all Area 1, Phase II drainage/sediment control needs. Depending on Title I results and as agreed to by FDF, the Title II effort will either continue with the single basin or revert to a multiple basin system. Sediment basin sizing and design will be based on the entire disturbed area of Area 1, Phase II following ODNR requirements. Stormwater and water removed from the STP excavation area will be separately collected and routed for AWWT treatment as necessary. All other Area 1, Phase II surface water only requires retention for sediment control. As soon as an excavated area has been regraded and vegetation reestablished, its drainage water no longer requires retention and it can be redirected for direct discharge. Sediment basin water will discharge to the nearest natural water course with no provision for transfer to the AWWT.

1.3.4 Water Collection at the STP Area

Design and/or specify requirements for a water collection/management system at the STP excavation area for collection and transfer of water to the AWWT for potential pretreatment for removal of perchloroethylene (PCE), if it is present above prescribed levels. The system will collect or intercept water draining to the excavations at the STP area. Water entering the excavation is expected to require normal Phase I AWWT treatment. Collected water requiring only Phase I treatment can be transferred to the AWWT via the Stormwater Retention Basin (SWRB). PARSONS will make estimates of the quantity of water to be collected and make recommendations to FDF for the method to transfer the water to the AWWT. The water collection system(s) within the excavation area will be relocatable, temporary installations, provided as contractor supplied equipment included by identification in the excavation/dewatering specifications prepared by PARSONS. Based on Title I design and continuing design Title II, a series of tanks, located adjacent to the excavation, will be used to temporarily hold water pumped from the excavation. Sampling will then determine if the water requires Phase I or Phase II AWWT treatment.

If pretreatment is required the water will be transferred by tank truck to the AWWT; if Phase I AWWT treatment is sufficient, the water will be transferred by pumping (using existing pipelines to the extent practical) to the SWRB to route it to the AWWT.

After pretreatment the water will enter the Phase II treatment portion of the AWWT. The pretreatment system will be a small package unit suited for the required PCE removal. It will be located at the AWWT area.

In the event the SWRB is in overflow condition, there will be provision in the water handling system to pump and discharge water to the sediment basin.

Because of the relatively short duration of the excavation and associated certification activity for which the water handling system is required, it will be designed for short term use. Minimal automatic control and instrumentation will be included to prevent equipment damage and provide basic water quantity information. Basic system operations will be controlled manually.

1.3.5 Support Facilities

Locate and design support facilities (trailers) to be used during construction, including administration offices, radiation control, parking, equipment laydown areas, temporary stockpile area(s), and decontamination/ washing facilities. The support facilities will be located adjacent to work they support (primarily the STP area excavation) to the extent practical.

At the STP area a radiation control trailer will be included which will have electrical service, heating/cooling, telephone, and a fire alarm system, in addition to its specialized equipment. Portable toilets will be used. A gravel surface parking area will be included.

A centralized FDF construction support area is also under consideration. That would serve OSDF Area 1, Phase II, and other projects. At this time this project (PO-175) has not included any work associated with the potential centralized support area.

The decontamination facility will be a gravel pad with liner for use of a low-flow, high pressure washer to clean haul trucks and other equipment. The pad will be located adjacent to the STP area excavation. Wash water will be collected and transferred to the water handling system. The contractor will be required to provide water and power for the high pressure washer(s) (or use gas powered equipment).

As cleanup and certification progresses, and if any contamination areas become "landlocked", small relocatable equipment washing facilities may be employed for final cleanup of isolated areas.

1.3.6 Electrical Power

Electrical power will be provided from Substation N18-2 to the trailer(s), area lighting for the parking area (by floodlight mounted on the trailers), and the pumps associated with the water transfer system. Power will be provided to the pumps required to transfer water from the holding tanks to the SWRB and a power drop and panel will be provided for the contractor for pumps he will provide and use within the STP excavation area. The electric power supply work will be coordinated with other ongoing FEMP work currently in progress to upgrade the 13.2 kV system.

1.3.7 On-Site Traffic Routing

The design will include plans for on-site traffic routing during Area I, Phase II remediation. Consideration of transfers from excavation sites with contaminated conditions through or across clean areas or roads shall be included in the plans. Phasing of sector construction and integration with other FEMP project construction will also be considered in developing the traffic routing plans. It is assumed that the Rerouted North Entrance Road will be closed while impacted material is hauled to the OSDF.

1.3.8 Restoration Grading

Design and specify restoration grading of the site and restore vegetation after above Final Remedial Level (FRL) material has been excavated. Except for the STP area only minimal regrading will be performed sufficient to create positive drainage, reduce slope grades, and minimize future final regrading. The

restoration grading completed with this project is considered as interim grading which may later be altered to integrate it with an overall FEMP site final reclamation grading plan.

Within the STP area, grades will be restored to their original level. Backfill compaction within the STP area will be specified in accordance with design requirements for the OSDF and Rerouted North Entrance Road. The remaining area will be regraded to assure positive drainage.

In the disturbed and backfilled areas the vegetation will be restored through seeding. A temporary seeding mix will be used that is consistent with final reclamation plans. The final reclamation plans are the responsibility of the FDF Natural Resources Group.

1.3.9 Quantity Takeoffs and Construction Estimates

PARSONS will provide Construction Cost Estimates to FDF with the 30 percent and the 90 percent design packages. The cost estimate at the 30 percent design will include all work in one estimate. For the 90 percent design, costs associated with each sector will be identified. The construction quantities will also be updated based on the interim (approximately 60 percent) design package. A final cost estimate incorporating FDF comments will also be submitted. All estimates will be prepared using PCS-002 dated August 1994 and DOE Cost Estimating Guideline, Volume 6, Revision 0, dated November 1994. The direct and indirect costs will be summarized on the standard format provided by FDF.

1.3.10 Construction Scheduling

PARSONS will provide Construction Schedules with the 30 percent and 90 percent design packages. The Construction Schedules will be based on and tie into the estimated construction quantities, the activities and work by sector, the estimated construction crew(s), and their production/construction rates.

1.3.11 Construction and Post-Construction Systems Plan

PARSONS will prepare a Systems Plan for implementation and performance of the water handling system associated with the STP area excavation.

1.3.12 Title III Services

Title III services are included to provide engineering support during construction and to prepare as-built (record) drawings (from FDF redline drawings) of the final construction. PARSONS will assist FDF in reviewing and addressing Requests for Clarification of Information (RCIs) and Design Change Notices (DCNs) and reviewing construction contractor and Vendor Data Submittals (VDSs). During construction, PARSONS

will provide a representative(s) as requested to assist in resolution of technical issues, support FDF in their inspection of construction workmanship and specification compliance, and to evaluate design modifications.

1.4 Assumptions/Clarifications

1) The number of sediment basins shall be minimized to the extent practical to stay within the requirements of the ODNR Rainwater and Land Development Manual.

2) FDF will be responsible for compliance with stormwater management and wetlands issues, including all National Pollutant Discharge Elimination System and Clean Water Act requirements and permits.

3) FDF will prepare and implement any sampling and analysis plans to characterize soil, guide excavation, and determine compliance with clean-up levels.

4) Air monitoring will be provided by FDF in accordance with ARARs.

5) Above ground pipes associated with the water handling system will be provided with drains for the contractor's use to prevent freeze up. Heat tracing will not be used.

6) Above-grade vegetation will be cut, chipped, and stockpiled in the Area 2, Phase I woodchip pile as shown on the construction documents.

7) Specifications for the radiation control trailer and an FDF office trailer (if required) will be provided by PARSONS and the Site Plan will show the locations of the trailers. A location will also be shown for the contractor's trailer (if required).

8) Existing geotechnical and water data in the vicinity of the STP is available and is sufficient to provide a basis for design and/or specification of a water collection system at the STP area for collection and management of water. If these data are found to be not available or are insufficient, FDF may collect additional data to provide a basis for the design, or PARSONS will make the necessary assumptions (with FDF concurrence) on which to base the design.

9) The DO Facilities will be retained and not relocated or removed as part of this project work. At some future time the planned alignment of Phase II of the Rerouted North Entrance Road will be revised to avoid interference with the DO Facilities.

10) Wheel wash procedures and/or facilities will be required for trucks hauling material to the OSDF, prior to crossing public access roadways.

1.5 Project Interfaces

The Remediation of Area 1, Phase II requires interfacing with existing systems and procedures. The existing physical interfaces include:

1) Site access and haul roads
2) Site utilities and storm drains
3) AWWT
4) OSDF and Off-site Disposal
5) OU-5 South Field Extraction System and Injection Demonstration System (subject to doing work west of the South Access Road).
6) DO Facility
7) Rerouted North Entrance Road
8) Above WAC Stockpile Area at the OU-1 Facilities.
9) Staging area for containerized RCRA soils.

1.5.1 Site Access and Haul Roads

Traffic plans shall be included in the bid documents to illustrate to the contractor the site access and support area access, the haul route to the OSDF, above WAC OU-1 stockpile area, the vehicle decontamination location and other necessary access areas.

1.5.2 Site Utilities and Storm Drains

Tanks will be used for temporary water supply for wheel wash and equipment decontamination facilities. A water source (the OSDF well in Sector 1) for dust control is also available. No other water or any sanitary sewer will be required.

Once the FEMP has the new sewage treatment plant (STP) operational, the old plant can be dismantled. The existing AWWT discharge line will remain in place. At a future time the DO facilities will be removed for construction of Phase II of the Rerouted North Entrance Road or the road will be relocated if the DO Facilities are retained.

The existing utilities which serve the STP, namely the 3-inch drinking water forcemain, 8-inch sanitary forcemain and the 12-inch stormwater forcemain are to be properly capped and removed within the limits of Area 1, Phase II. The existing 4-inch fuel gas supply line shall also be properly capped and removed within the Area 1, Phase II limits. There are numerous culverts along the roads and drain tiles in the fields which are to be removed. As remediation is completed and the area certified and stabilized, runoff from the work area may be diverted from sediment control measures and discharged to natural water courses.

1.5.3 Advanced Wastewater Treatment Facility

Under normal conditions the AWWT will receive all water pumped from the STP area excavation. The contractor will store the water pumped from the STP excavation in tanks located adjacent to the excavation. Depending on sampling results the contractor will either transfer the water by tank truck to the AWWT for pretreatment or pump the water to the SWRB from where it will be transferred to the AWWT for Phase I treatment. Pretreatment will be required if perchloroethylene (PCE) is detected in the sampled water; following pretreatment, the water will enter the Phase II treatment at the AWWT.

1.5.4 OSDF and Off-Site Disposal

An OSDF will be constructed (by others) to dispose of low level impacted material and waste fill. The contractor will be responsible to ensure that the impacted material meets all OSDF WAC including size and moisture content. Impacted material or other material that does not conform to the OSDF WAC will be segregated and transported to areas designated by FDF (above WAC stockpile or transfer area) for further processing for off-site disposal.

1.5.5 South Field Extraction System (SFES) and Injection Demonstration System

Water lines from the SFES and the Injection Demonstration project run through Sector 1 west of the South Access Road. These shall be considered for any grading in this area.

1.5.6 DO Facility

The DO Facility (outfall line pit, building, tank) and associated substation are not included in any Area 1, Phase II work and are to be retained at this time.

1.5.7 Rerouted North Entrance Road

Phase I of the Rerouted North Entrance Road has been completed and will be in use at the start of Area 1, Phase II Remediation. Phase II of the Rerouted North Entrance Road will be completed (by others) following required Area 1, Phase II work. Depending on the future plans for the DO facilities, the current planned alignment of Phase II of the Rerouted North Entrance Road may require adjustment.

1.5.8 Above WAC Stockpile Area at the OU-1 Facilities

A location will be established and designated on the traffic plans for transfer of waste not meeting the OSDF WAC. Specifications will require the contractor to transport such material to the OU-1 Stockpile Area.

1.5.9 Staging Area for Containerized RCRA Soils

If the lead contaminated soils or any other soils must be disposed of off site they will be excavated and containerized adjacent to the excavation area and staged at a special material transfer area for further management and disposition by FDF.

1.6 Remediation Schedules

Scheduling of remediation activities needs to be closely integrated with all other work, including OSDF requirements. The schedule of OSDF and Area 1, Phase II activities maintained by FDF will be used for planning of and phasing of all Area 1, Phase II work. It is assumed Area 1, Phase II work will be done in conjunction with a phase of the OSDF development.

SECTION 2

DESIGN BASIS

2.1 Functional Requirements

The functional requirements for the Remediation of Area 1, Phase II will be in accordance with the draft FRD prepared by FDF for this project.

2.2 Design Criteria

Title I, II, and III work will be performed in compliance with pertinent S/RIDs as identified in the FDF *Policies and Requirements Manual*. Pertinent S/RIDs for this project are those requirements in the following S/RIDs contained in PARSONS Generic Requirements List forwarded to FDF on June 13, 1996 (PARSONS ID# 26:000:091:0128-96).

1) S/RID No. 2, Engineering Design
2) S/RID No. 3, Emergency Preparedness and Management
3) S/RID No. 5, Environmental Protection
4) S/RID No. 6, Fire Protection
5) S/RID No. 8, Management Systems
6) S/RID No. 10, Occupational Safety and Health
7) S/RID No. 14, Radiological Protection
8) S/RID No. 15, Security
9) S/RID No. 17, Environmental Restoration and Waste Management

2.2.1 Regulations, Codes, Standards, Orders, Manuals, and Guides

This section presents the general regulations, codes, standards, and orders that are to be followed for the design of the Remediation of Area 1, Phase II other than ARARs/TBCs. This information is organized by engineering discipline. Pertinent ARARs/TBCs developed by FDF are listed in Appendix A.

Civil

1) American Association of State Highway and Transportation Officials (AASHTO), GDHS-90, "Policy on Geometric Design of Highways and Streets," 1990, by AASHTO.

2) American Society of Civil Engineers (ASCE), Manual 37, "Design and Construction of Sanitary and Storm Sewers," ASCE.

3) ASCE, Manual 77, "Design and Construction of Urban Stormwater Management Systems".

4) American Water Works Association (AWWA) C 906-90 Polyethylene Pressure Pipe and Fittings, 4 Inch through 63 Inch for Water Distribution.

5) AWWA, C 600-93 Installation of Ductile-Iron Water Mains and their Appurtenances.

6) FEMP Stormwater Pollution Prevention Plan RM-0039.

7) North American Datum of 1983.

8) North American Vertical Datum of 1929.

9) ODOT, Location and Design Manual, Volume II, Drainage Design.

10) ODOT, Construction and Material Specifications, January 1997.

11) Ohio Department of Natural Resources (ODNR), "Rainwater and Land Development, Ohio's Standard for Stormwater Management, Land Development, and Urban Stream Protection," 2nd ed., 1996.

12) Soil Conservation Service (SCS), Soil Survey of Hamilton County, Ohio.

13) SCS, Soil Survey of Butler County, Ohio.

14) SCS, "TR-55 Urban Hydrology for Small Watersheds," Technical Release 55, SCS.

15) Ohio Safe Dams Act

16) TM 5 814-2, "Sanitary and Industrial Wastewater Collection - Pumping Stations and Force Mains," U.S. Dept. of Army.

17) AASHTO HS-20, Traffic Loadings across Force Mains.

Cost Estimating

1) FEMP, PCS-002, Cost Estimating.

2) DOE Office of Infrastructure Acquisition (FM-50), "Cost Estimating Guide, Cost Guide, Volume 6."

Electrical

1) American Bearing Manufacturers Association (ABMA) 9-90 Load Ratings and Fatigue Life for Ball Bearings.

2) ABMA 11-90 Load Ratings and Fatigue Life for Roller Bearings.

3) American National Standards Institute (ANSI) C80.1-90 Rigid Steel Conduit-Zinc Coated.

4) ANSI C2-97 National Electrical Safety Code.

5) ANSI C29.2-92 Insulators - Wet-Process Porcelain and Toughened Glass - Suspension Type.

6) ANSI C29.4-89 Wet-Process Porcelain Insulators - Strain Type.

7) ANSI C29.5-84 Wet-Process Porcelain Insulators - Low and Medium Voltage Types.

8) ANSI C135.1-79 Galvanized Steel Bolts and Nuts for Overhead Line Construction.

9) ANSI C135.22-88 Zinc-Coated Ferrous Pole-Top Insulator Pins with Lead Threads for Overhead Line Construction.

10) ANSI O5.1-92 Wood Poles Specifications and Dimensions.

11) American Society for Testing and Materials (ASTM) A36/A36M-96 Standard Specification for Carbon Structural Steel.

12) ASTM A475-95 Standard Specification for Zinc-Coated Steel Wire Strand.

13) ASTM A675/A675M Steel Bars, Carbon, Rev. A-90 Hot-Wrought, Special Quality, Mechanical Properties.

14) ASTM B231-95 Concentric-Lay- Stranded Aluminum 1350 Conductors.

15) ASTM B232-92 Standard Specification for Concentric-Lay-Stranded Aluminum Conductors, Coated-Steel Reinforced (ACSR).

16) ASTM D698-91 Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft^3).

17) American Wood-Preservers Association (AWPA).

18) AWPA C4-89 Poles - Pressure Process.

19) AWPA C25-89 Standard for the Preservative Treatment of Crossarms by the Pressure Process.

20) International Electrical Testing Association (NETA) NETA ATS-95 Acceptance Testing Specifications for Electrical Power Distribution Equipment and Systems.

21) Institute of Electrical and Electronics Engineers (IEEE) C2-97 National Electrical Safety Code.

22) IEEE 112-91 Standard Test Procedure for Polyphase Induction Motors and Generators.

23) National Electrical Manufacturers Association (NEMA) AB 1-93 Molded Case Circuit Breakers and Molded Case Switches.

24) NEMA ICS 1-93 Industrial Control and Systems General Requirements.

25) NEMA ICS 2-93 Industrial Control and System Controllers, Contractors, and Overload Relays Rated Not More Than 2000 Volts AC or 750 Volts DC.

26) NEMA ICS 4-93 Industrial Control and Systems Terminal Blocks.

27) NEMA ICS 6-93 Industrial Control and Systems Enclosures.

28) NEMA KS1- 90 Enclosed and Miscellaneous Distribution Equipment Switches (600 Volts Maximum).

29) NEMA LA 1-92 Surge Arresters.

30) NEMA MG 1-93 Motors and Generators.

31) NEMA MG 13-84 Frame Assignments for AC Integral-Horsepower Induction Motors.

32) NEMA OS 1-89 Sheet-Steel Outlet Boxes, Device Boxes, Covers, and Box Supports.

33) NEMA PB 1-90 Panelboards.

34) NEMA PB 1.1-91 General Instructions for Proper Installation, Operation, and Maintenance of Panelboards Rated 600 Volts or Less.

35) NEMA ST 20-92 Dry Type Transformers for General Applications.

36) NEMA TC 3-90 PVC Fittings for Use with Rigid PVC Conduit and Tubing.

37) NEMA TC 6-90 PVC and ABS Plastic Utilities Duct for Underground Installation.

38) NEMA WC 7-88 Cross-Linked-Thermosetting Polyethylene-Insulated Wire and Cable for the Transmission and Distribution of Electrical Energy.

39) NEMA WD 1-83 General Requirements for Wiring Devices.

40) NEMA WD 6-88 Wiring Devices - Dimensional Requirements.

41) NEMA 250-91 Enclosures for Electrical Equipment (1,000 Volts Maximum).

42) National Fire Protection Association 70 National Electrical Code, 1996 Edition.

43) Underwriters Laboratories, Inc. (UL) Electrical Construction Materials Directory 95-96.

44) UL 360-96 UL Standard for Safety Liquid-Tight Flexible Steel Conduit.

45) UL 486A-91 UL Standard for Safety Wire Connectors and Soldering Lugs for Use with Copper Conductors.

46) UL 510-94 UL Standard for Safety Polyvinyl Chloride, Polyethylene and Rubber Insulating Tape.

47) UL 854-96 Service-Entrance Cables.

48) UL 870-95 UL Standard for Safety Wireways, Auxiliary Gutters, and Associated Fittings.

49) UL 467-93 UL Standard for Safety Grounding and Bonding Equipment.

50) UL 96-94 UL Standard for Safety Lightning Protection Components.

Environmental Safety and Health

1) 29 Code of Federal Regulations (CFR) 1910, "Occupational Safety and Health Standards."

2) 29 CFR 1926, "Safety and Health Regulations for Construction."

3) 10 CFR 835, "Occupational Radiation Protection" (this is the promulgation of DOE Order 5480.11).

4) DOE Order 5480.10, "Contractor Industrial Hygiene Program."

5) DOE/EH-0256T, Radiological Control Manual.

6) DOE-EM-STD-5502-94, "Hazard Baseline Documentation."

7) DOE-STD-1088-95, DOE Standard "Fire Protection for Relocatable Structures," June 1995.

8) RM-0016, Management Plan FDF Policies and Requirements Manual.

9) RM-0021, Safety Performance Requirements Manual.

10) RM-0047, Fugitive Dust Control Requirement.

Geotechnical

1) American Society for Testing and Materials (ASTM), Annual Book of Standards, Section 4, Construction; applicable standards, practices and guidelines associated with investigating, testing and construction with soil, rock and geosynthetic materials.

2) Department of the Navy, NAVFAC DM-7.1, Soil Mechanics.

3) Department of the Navy. NAVFAC DM-7.2, Foundations and Earth Structures.

4) Department of the Navy. NAVFAC DM-7.3, Dynamics, Deep Stabilization and Special Geotechnical Construction.

5) Department of the Navy, NAVFAC P-418, Dewatering and Groundwater Control.

Material Handling

1) ANSI B30.10-87, Hooks.

2) DOE/ID-10500, Hoisting and Rigging Manual.

3) Ohio Administrative Code (OAC) 3745-20-05, Standards for Asbestos Waste Handling.

Mechanical Process/Piping

1) ASME B31.3, Process Piping.

2) American Society for Non-Destructive Testing (ASNT) SNT-TC-1A, Recommended Practices.

3) ASTM A36, Standard Specifications for Carbon Structural Steel.

4) ASTM A53, Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless.

5) ASTM A105/A105M Revision B, Standard Specification for Carbon Steel Forgings for Piping Applications.

6) ASTM A193, Standard Specification for Alloy-Steel and Stainless Steel Bolting Material for High Temperature Service.

7) ASTM A194, Standard Specification for Carbon and Alloy Steel Nuts for Bolts for High-Pressure and High-Temperature Service.

8) American Welding Society D1.1, Structural Welding Code, Steel.

2.3 Discipline Criteria

2.3.1 Civil and Site Development

General

The emphasis of the civil design will relate to site preparation required to support construction activities; control of stormwater; collecting and sending potentially contaminated and contaminated water to treatment; excavation of impacted material; sediment control; and restoration grading and stabilization.

Site Preparation

The Area 1, Phase II excavation areas will have a radiation control trailer to support the construction activities and a FDF construction trailer (if required). Space will also be designated for the contractor to provide a construction trailer (if required). The trailers will require electric power in order to function. The contractor is to supply water for the wheel wash station. The contractor shall provide temporary sanitary service (port-a-johns) and the contractor's own phone service. PARSONS will design electrical power to the trailers, and all fire and evacuation alarm services (as required). Temporary gravel roads or drives may also be required to serve the trailers and construction activities as well as access to OSDF activities. The locations for the roads, trailers, utilities, as well as access control and security issues will be coordinated with FDF.

Clearing

Clearing will be minimal, as the Area 1, Phase II area is essentially clear of any major vegetation or debris. Trees, bushes, and high grass will be removed from the areas that require excavation. The vegetation will be chipped and transferred to a stockpile area that will be designated on the construction drawings. The specifications will require that the contractor will clear the entire area and will grind stumps at the areas specified by FDF. This is to control the area that has been cleared at any one time to limit the amount of erosion and sedimentation from exposed/disturbed areas.

Stormwater Controls

One of the major design issues is how stormwater and sediment is controlled, both during and after construction. Stormwater runon needs to be minimized to the extent practical, since stormwater that runs onto disturbed areas must also be controlled and sent through a sediment basin before leaving the site. This will be accomplished primarily by diversion dikes, culverts, ditches, and similar drainage controls upstream of the contaminated areas being excavated. Runoff controls will be designed consistent with the ODNR "Rainwater and Land Development Manual".

Dewatering Pump

The contractor shall use a dewatering pump (typical portable trash or submersible) to remove water from the STP excavation area. The pump(s) will discharge to temporary tanks and later be taken by truck to the AWWT or pumped to the SWRB for treatment at the AWWT. Water from the wheel wash pad will be collected and also transferred to the temporary tanks.

Sediment Control

1) Minimum total volume - determines invert elevation of principal riser and is based on 67 cubic yards per watershed acre in accordance with ODNR *"Rainwater and Land Development"*.

2) Maximum sediment cleanout elevation - determines maximum cleanout elevation and is based on 27 cubic yards per watershed acre in accordance with ODNR *"Rainwater and Land Development"*.

3) A basin designed to store less than 15 acre-feet at elevation where water would overflow embankment.

4) Principal spillway structures - 2 riser/barrel structures consisting of a 48-inch riser with a 36-inch spool piece, which enlarges to a 48-inch barrel. The 10-year, 24-hour storm event is routed through outlet structures to evaluate performance under worst case conditions for A1PII. Spillway hydraulics evaluated by examining head losses through system (i.e., entrance, bend, enlargement, friction, and velocity). A tailwater condition was assumed using a 16-foot bottom width, 3H:1V side slopes, 0.8 percent channel slope, and a uniform flow depth of 2.85 feet (250 cfs).

   (Note that the second principal spillway structure was added to provide additional capacity if OSDF elects to add to the drainage area beyond that for the A1PII basin. No analysis was performed for any additional areas and will be the responsibility of others).

5) A defined emergency spillway will not be constructed for Sediment Basin 1 due to the close proximity of the existing South Access Road. Instead, emergency overflow (should an overflow situation ever arise), will flow in a northwest direction over the South Access Road.

6) Culvert 1 is a series of three pipes which convey drainage from the Trap Range underneath the gravel road leading to the STP. This culvert will be designed for the 10-year, 24-hour storm event.

7) Culvert 2 is a series of 5 pipes used to convey flow from Conveyance Channel 1 into Sediment Basin 1. In anticipation of future use by the OSDF, Culvert 2 is designed to carry 250 cfs (10-year peak flow = 99 cfs) with an assumed tailwater elevation (height above outlet invert) at 575.0. Culvert 2 is located to pass approximately 2 feet below existing 24-inch diameter groundwater line.

8) Channel designed to convey 10-year, 24 hour peak runoff from A1PII at a velocity which allows erosion control mat lining without using check dams (i.e., less than 3 fps).

Excavation

Impacted material that meets the OSDF WAC will be transported to the OSDF. Pockets of impacted material exceeding the WAC will be excavated and transported to the above-WAC OU-1 Stockpile Area as they are encountered. Each of the excavated areas will serve as the initial sump for stormwater control. The sequence of excavation needs to consider stormwater and sediment control.

Sector 1 will be surveyed for contamination and the impacted areas (above FRL) will be removed by spot excavation. Typically, stormwater runon and runoff will be limited to the extent practical, with the excavation area made to collect stormwater. The level of radioactivity found will determine if the water can be pumped out for direct discharge or sent to the AWWT for treatment. The threshold shall be established by FDF depending on the National Pollutant Discharge Elimination System permit limits. RCRA contaminated soils at the trap shooting range will undergo additional management including stabilization and disposal in the OSDF.

Section 2 contamination (areas above FRL) will be removed by spot excavation or stripping of the top layer (typically 6 inches) for larger areas if they are identified.

Sector 3 excavation will include deep (10-foot to 20-foot) excavation at the STP and spot excavation or top layer (6 inches) stripping as necessary. Geotechnical analysis will establish typical slopes for shallow and deeper excavations. Excavation at the STP will also include wall (below grade), floor slab, and foundation removal. Perched water is expected at the STP and may be contaminated at levels that will require pretreatment. Water pumped from the STP excavations will be handled through the water handling system and either routed or transported to the AWWT for treatment. The deep areas excavated in the STP that are in the area of Phase II of the Rerouted North Entrance Road will be backfilled to match existing grade (in the fill areas). Backfill in the footprint of the roadway and OSDF will have special material and compaction requirements. RCRA contaminated soils that may be encountered at the STP area will undergo additional management depending on the volume encountered.

Stabilization and Landscaping

During excavation, temporary seeding with a quick-germinating seed mixture or other temporary stabilization measures, such as erosion control mats or crusting agent, will be applied within seven days to limit erosion of excavated areas not expected to be worked for a period of 45 days or more. The final configuration of the sites will be to grade them to blend in with the adjacent topography, with positive drainage if possible. Low areas may remain and be maintained until the FEMP Final Sitewide Remediation Grading is performed.

Maximum slopes during initial excavation/grading will be determined by slope stability calculations prepared by PARSONS. The maximum slope after final grading shall be 2 horizontal to 1 vertical or as otherwise determined by PARSONS. Flatter slopes shall be used where feasible to provide a slope that is easier to maintain. Once final excavation has occurred, seed and mulch will be applied according to technical specifications. No other landscaping or improvements are planned as part of this project.

Site Preparation

1) Support Area: Area 1, Phase II will require an area for a personnel access/radiological monitoring trailer and contractor and FDF office trailers (if required), and parking. The support areas will be gravel.

2) Roads: Roads shall be crowned with a transverse slope of 2 percent. Longitudinal slopes shall be between 1 and 6 percent. Roads shall comply with AASHTO GDHS-90.

3) Dust control will be required for all activities within the Project area. Dust control procedures will be provided by the contractor as required by FDF. Air particulate emission requirements are listed in the ARARs in Appendix A. (Fugitive Dust Control Requirement, RM-0047)

   The contractor will proactively apply water or a dust suppressant using tanks with a suitable sprinkling device to control dust within the project area for all activities involving the potential for generating airborne emissions.

4) Access Control: The type, size, and location of fences and gates will be determined in conjunction with FDF.

Utilities

The locations of existing utilities are available on FEMP Grid Utilities drawings. Major utilities include the Cincinnati Gas and Electric-supplied 4-inch gas line (to be removed), South Plume water extraction line, electrical lines and the South Field Extraction System. Due to site conditions, utility relocation will be avoided if possible.

Civil Design Drawings and Specifications

Separate listings of drawings and specifications are being maintained on a continuous basis. The initial listing of drawings has been presented in the POP and the listings will be updated as necessary.

Calculations

The following calculations will be provided:

1) Stormwater (runon and runoff) management
2) Earthwork
3) Water lines (if necessary)

2.3.2 Electrical

General

Electrical power will be provided to the FDF construction support facilities (if required), radiation control facilities, and the water handling system (including power for the contractors dewatering pumps).

Electrical Design Drawings and Specifications

Separate listings of drawings and specifications are being maintained on a continuous basis. The initial listing of drawings has been presented in the POP and the listings will be updated as necessary.

2.3.3 Environmental Safety and Health Requirements

The subsections below describe worker health and safety, radiation exposure, and other regulatory requirements. All of the requirements provided are derived from pertinent S/RIDs identified in the *Management Plan, FDF Policies and Requirements Manual (RM-0016)*, and PARSONS Generic Requirements List.

Worker Health and Safety

Several health-and-safety-related requirements for this project are provided below. This subsection complements the Project-Specific Health and Safety Plan (PSHSP) (to be prepared later by FDF) and is not to be considered a replacement or summary of the Health and Safety Plan.

Waste unit excavation activities will take place in controlled areas; therefore, workers shall be required to have Hazardous Waste Operations and Emergency Response training in accordance with 29 CFR 1910.120.

Site clearing activities shall be done in accordance with 29 CFR 1926.604. Equipment used in site clearing activities shall also meet this requirement.

Material handling equipment shall meet the requirements of 29 CFR 1926.602. These requirements address seat belts, brakes, rollover protection, audible alarms, and scissor points.

Workers may be required to enter excavated trenches to relocate or remove utilities. This type of work will be minimized. Excavations shall be maintained in accordance with 29 CFR 1926, Subpart P.

Measures shall be identified and implemented which comply with American Conference of Governmental Industrial Hygienists (ACGIH) and FDF requirements to prevent heat stress during warm weather. Heat stress hazards are more serious for activities where special protective clothing and equipment are required.

Valves, switches, and like devices shall be designed to accept a FDF Facility Owner's lock shank to provide a means for energy control.

Worker Exposure

1) Radiological: Radiologically contaminated soil will become airborne during earth-moving activities in contaminated areas. 10 CFR 835.1002 requires that airborne radioactive material be controlled and that the inhalation of such material by workers be kept to levels that are As Low As Reasonably Achievable (ALARA). The Nearfield Box Model and/or the Industrial Source Complex Version 3 (ISC3) were used to conservatively model dispersion of airborne contaminated soil generated during excavation activities [OU-5 FS Short Term Risk Assessment (STRA)]. The results indicate that conventional dust suppression techniques, when properly used, will maintain exposures below levels requiring further consideration of engineered controls for airborne radioactive materials.

   Eating, drinking, and smoking shall not be allowed in radiologically controlled areas. The need for respirators will be specified in the PSHSP and/or the Radiation Work Permit, when it is prepared.

   Waste materials of varying concentrations are expected and modeling of external dose components with Microshield 4.0 was completed (OU-5 FS STRA). 10 CFR 835.1002 requires that personnel exposure to external sources of radiation be controlled to an average of 1 rem per year, or ALARA. Additional engineered controls for limiting personnel exposure are not anticipated as being required. A Radiation Protection Program will be in place for the remediation activities.

2) Particulates, Gases, and Vapors: Remedial activities will have the potential to generate various particulates, gases, and vapors. Where necessary, exposure monitoring will be provided to ensure that worker exposures are properly controlled within Occupational Safety and Health Administration (29 CFR 1910 and 1926) and ACGIH limits. Specific control measures and Personal Protective Equipment will be identified in the PSHSP to be developed by FDF.

   The excavation of the STP and the trap shooting range may generate particulate emissions that may exceed regulatory requirements for airborne particulates. Particulates are regulated under OAC 3745-17-02. This requirement states that the level of the primary and secondary 24-hour ambient air quality standards for total suspended particulates is 150 $\mu g/m^3$, 24-hour average concentrations. The level

of the primary and secondary annual standards for total suspended particulates is 50 $\mu g/m^3$, annual arithmetic mean. Also, the emission rates provided in OAC 3745-17-11 apply (see Appendix A for values). Particulate emissions from excavation will be modeled using ISC3.

Applicable or Relevant and Appropriate Requirements

The ARARs for this project have been prepared by FDF and are provided in Appendix A of this DCP. The table provides a requirement summary and implementation strategy for each ARAR. The implementation strategy references applicable sections of this DCP where appropriate.

2.3.4 Geotechnical

General

The emphasis of the geotechnical Title I/II design effort will relate to support for excavation planning, and the water collection/management system at the STP area for collection, and transfer of water to the AWWT. Based on scope of the project, it is also anticipated that geotechnical Title I/II activities will include evaluation of subsurface conditions from existing data, slope stability analyses, and providing geotechnical recommendations and specifications pertaining to geotechnical aspects of the design. Title III Services will include support of a geotechnical engineer to assist FDF in addressing geotechnical related RCIs, DCNs and reviewing geotechnical related VDSs.

Geotechnical Data

Existing geotechnical data from prior investigation at the project site provide the basis for geotechnical design and recommendations. These data come from the following sources:

1) 3-Dimensional Geological Computer Model (files maintained by FDF)

2) Remedial Investigation Boring Logs and Well Completion records (files maintained by FDF)

3) Remedial Investigation and subsequent water elevation measurements and contour maps (files maintained FDF)

4) *Final Remedial Investigation Report for Operable Unit 5*, U.S. Department of Energy

5) *Geotechnical Investigation Report On-Site Disposal Facility*, Revision 0, December 1995. (PARSONS Project Order 140)

6) *Geotechnical Data and Evaluation Report for East and South Field Borrow Areas*, Revision 0, June 1996 (PARSONS Project Order 154)

Additionally, if data contained in these sources or other existing data provided by FDF are insufficient to support the design, it is assumed that FDF will collect additional site-specific geotechnical data to provide a basis for the design, or otherwise PARSONS and FDF will agree on necessary assumptions on which to base the design.

Calculations

1) Slope Stability
2) Water Collection/Management system (at STP) - geotechnical related calculations

2.3.5 Material Handling

General

The design will describe methods for waste excavation or retrieval, size reduction, and segregation into separate waste streams. Packaging and hauling requirements will be established for on and off-site disposal for the various waste streams, including low-level radioactive, hazardous, and mixed waste. The method for separation, handling, and packaging of lead, arsenic, and perchloroethylene or other RCRA contaminated soil will be addressed in the specifications. Material Handling and or Civil will develop these specifications with input from Environmental Safety and Health. If asbestos is encountered during this remedial action, it must be prepared for disposal in accordance with the requirements of OAC 3745-20-05 (Standards for Asbestos Waste Handling) and the Impacted Material Placement Plan for the OSDF.

Impacted material that is to be placed within the OSDF must satisfy OSDF WAC for moisture content and size.

Equipment

1) Mobile size reduction equipment may include chipper, grinder, shredder, shear, and baler

2) Excavation equipment may include front-end loaders, backhoe, hydraulic crane, and track dozers

3) Transportation equipment may include covered or uncovered dump trucks, stake-bed trucks, forklift, flatbed semi trucks, and tank trucks

Testing

Lifting devices shall be tested in accordance with DOE/ID-10500 Hoisting and Rigging Manual.

Material Handling Specifications

Separation, packaging, and hauling of impacted materials (STP related hazardous materials, lead and arsenic contaminated wastes associated with the trap shooting range) and asbestos containing material (if encountered) are part of the Division 2 specifications.

2.3.6 Mechanical Process/Piping

General

The design shall meet the requirements of all applicable regulations, codes and standards.

Truck (Wheel) Wash Station (Equipment Decontamination Facility)

A truck (wheel) wash station will be located as near to the STP area excavation as possible. This facility is intended to be used to remove bulk solids from haul vehicles by high-pressure spray from an engine-driven portable pressure washer.
A tank for temporary water supply will be provided by the contractor for this facility. Wash water will be collected and transferred to the STP area excavation water handling system.

Testing

Except for the buried systems (HDPE), pipe and pipe systems testing shall conform to the requirements set forth in ASME B31.3 and ASNT SNT-TC-1A.

Pipe Supports

Pipe supports shall be spaced in accordance with ASME B31.3. Auxiliary steel supports shall be in accordance with ASTM A-36 and A-576.

Welding/Joining

Welding shall be in accordance with ASME B31.3 and American Welding Society D1.1. HDPE pipe material shall be joined/fused per manufacturer's instructions.

Materials

Corrosion, abrasion resistance, and ease of decontamination shall be considered when selecting pipe, fittings, valves, and equipment items.

Mechanical Process/Piping Design Drawings and Specifications

Separate listings of drawings and specifications are being maintained on a continuous basis. The initial listing of drawings has been presented in the POP and the listings will be updated as necessary.

Calculations

The following calculations will be provided:

1) Transfer pump head

2.3.7 Mechanical Utilities

General

A personnel access control point will be established at the egress point of the STP area excavation. Lockers and change-out area will be provided. Portable sanitary facilities will be used and will be serviced periodically by the contractor.

2.3.8 Structural

Structural Material/Design Requirements

Design requirements for structural materials and design are as follows:

1) Concrete: Concrete material, design, and construction shall be per American Concrete Institute 318-89. Minimum concrete strength at 28 days shall be 3,000 psi for foundations and 4,000 psi for slabs.

2) Reinforcement: Deformed billet steel shall conform to ASTM A615, Grade 60.

2.3.9 Instrumentation and Controls

General

Instrumentation will be included to indicate water level in the water handling system tanks and to measure flow rate and totalize flow (water pumped) from the system. Controls will be included to shut off inflow of water from the contractors dewatering pump(s) and to shut off the water handling system pumps when flow drops to zero gpm.

Equipment

1) Flow meter
2) Water level indicator (pipe manometers)
3) High level float switches
4) Pressure gauges.

SECTION 3

REFERENCES

This DCP and the associated work is/will be based on the following documents:

1) FERMCO, September 1994. FEMP Engineering Procedure, Document No. 12-4003, Design Criteria Package. Fernald, Ohio: FERMCO.

2) FERMCO, February 16, 1996. *Policies and Requirements Manual.* Fernald: FERMCO.

3) FERMCO, September 30, 1994. Document No. RM-0012, *Quality Assurance Program, Revision 3.* Fernald: FERMCO.

4) FERMCO, February 28, 1996. *Site Procedures Manuals*, Volumes 1 - 12. Fernald: FERMCO.

5) FERMCO, 1996. *Remediation of Area 1, Phase I.* Design and as-built drawings.

6) Project Order 175, Revision 0, *Waste Units Remediation Statement of Work*, December 7, 1996.

7) Record of Decision for Remedial Actions at Operable Unit 5, August 1995.

8) Remedial Design Work Plan for Remedial Actions at Operable Unit 5, April 1996.

9) U.S. Department of Energy, 1995a, *Final Remedial Investigation for Operable Unit 2, FEMP. Fernald, OH, Remedial Investigation, Feasibility Study*, U.S. DOE Fernald Office, Fernald, OH.

10) U.S. Department of Energy, 1995a, *Final Feasibility Study Report for Operable Unit 2, FEMP, Fernald OH, Remedial Investigation, Feasibility Study,* U.S. DOE Fernald Office, Fernald, OH.

11) U.S. Department of Energy, 1995a, *Final Record of Decision for Remedial Actions at Operable Unit 2, FEMP, Fernald, OH,* U.S. DOE Fernald Office, Fernald OH.

12) U.S. Department of Energy, 1995, *Draft Remedial Design Work Plan for Remedial Actions at Operable Unit 2, FEMP, Fernald, OH,* U.S. DOE Fernald Office, Fernald OH.

13) United States Environmental Protection Agency, 1990. *OSWER Directive 9355.5-01, Interim Guidance on EPA Oversight of Remedial Designs and Remedial Actions Performed by Potentially Responsible Parties.*

14) PARSONS, 1996. Rerouted North Entrance Road. CFC drawings, plus Design Change Notices (DCNs) during construction.

15) GeoSyntec OSDF Legacy Package (Plans and Calculations)

16) GeoSyntec, PARSONS, FDF, OSDF. *Leachate Conveyance System.*

17) Sitewide Excavation Plan, July 1997, Revision C.

18) Waste Acceptance Criteria Attainment Plan for the On Site Disposal Facility, August 1997, Revision B.

19) Impacted Materials Placement Plan, On Site Disposal Facility, August 1997, Revision H.

APPENDIX A

ARARS AND TBCs FOR AREA 1, PHASE II

Appendix A has been prepared by FDF and identifies design and implementation-related ARARs and TBCs for the Area 1, Phase II Remediation Project. Compliance with these ARARs/TBCs is addressed therein. See the Site Wide Excavation Plan and the Implementation Plan for further discussion.

TABLE A-1

GROUPINGS OF ARARs AND TBCs USED IN TABLE A-2

FOR REMEDIATION AREA 1 PHASE II

Presentation Group	Topical Subdivision(s)	Page
Natural and Cultural Resources	Threatened and Endangered Species Protection	A-2
	Archeological, Historic, and Cultural Resource Protection	A-3
Air Pathway	Noise Pollution Control	A-8
	Air Emissions	A-8
Surface Water Pathway	Wetlands/Floodplain Protection	A-17
	Discharge to Surface Water	A-24
Groundwater Pathway	Groundwater Protection	A-28
	Wells - Construction	A-28
	Wells - Abandonment	A-28
Soil Remediation	Closure of Hazardous Waste Management Units	A-29
	Radionuclide Concentrations	A-33
	Lead Concentration	A-36
	PCB Concentration	A-36
	Certification of Cleanup	A-37
Impacted Material Management	Definitions and General Facility Standards	A-39
	Management of Low-level Radioactive Waste Material	A-53
	Management of Hazardous Remediation Waste	A-53
	Management of PCB-tainted Material	A-60
Post-Closure	Description of Post-closure Care	A-62
	Modifications to Post-closure Care Plan or Period	A-64
	Property Use Restrictions	A-64
	Post-closure Notice/Survey Plat	A-66
	Deed Notation	A-66

TABLE A-2

PERTINENT ARARs AND TBCs FOR REMEDIATION AREA 1 PHASE II

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
NATURAL & CULTURAL RESOURCES						
	THREATENED & ENDANGERED SPECIES PROTECTION					
Procedures for Implementing the National Environmental Policy Act 40 CFR §6.302(h) 10 CFR Part 1021 Endangered Species Act 16 U.S.C. §1531, et seq. Endangered and Threatened Wildlife and Plants 50 CFR §17.21, §17.31, §17.61, §17.71, and §17.94 Interagency Cooperation-Endangered Species Act 50 CFR §402.01	All federal agencies must ensure that any action authorized, funded, or carried out by them is not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of the constituent elements essential to the conservation of a listed species within a defined critical habitat. Additional requirements apply if it is determined that a proposed activity could adversely affect these species or their habitat.	Appl	Appl	Appl	Findings of 1993-94 updated surveys at the FEMP property: • Populations of the state-listed threatened Sloan's crayfish (*Orconectes sloanii*) are located in sections of Paddy's Run. • Good habitat for the federally-listed endangered Indiana bat (*Myotis sodalis*) exists along Paddy's Run and the storm sewer outfall ditch. • Suitable habitat exists in limited areas for the federal-listed endangered running buffalo clover (*Trifolium stoloniferum*), and only in the northern woodlot for the state-listed threatened spring corralroot (*Corallorhiza wisteriana*). • Marginal habitat for the state-listed endangered cave salamander (*Eurycea lucifuga*) exists in a very limited single area. • Neither habitat nor populations were located for the state-listed endangered mountain bindweed (*Polygonum cilinode*) and slender fingergrass (*Digitaria filiformis*).	Addressed in Section 5.1 of the Sitewide Excavation Plan, and will be addressed in the IEMP's Natural Resource Impact Monitoring Plan (NRIMP); however, DOE does not expect to encounter any federal- or state-listed threatened or endangered species or critical habitat in the Remediation Area 1 Phase 2 areas to be addressed by this remediation project; no additional surveys conducted or planned.

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs FOR REMEDIATION AREA 1 PHASE II

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
THREATENED & ENDANGERED SPECIES PROTECTION, continued						
Interagency Cooperation-Endangered Species Act 50 CFR §402.12(a), (b)	A biological assessment shall evaluate the potential effects of the action on listed and proposed critical habitat and determine whether any such species or habitat are likely to be adversely affected by the action and is used in determining whether formal consultation or a conference is necessary. These procedures are required for federal actions that are "major construction activities."	Appl	Appl	Appl	No critical habitat is present on the Fernald property. Updated surveys of the FEMP property in 1993 found marginal habitat for the state-listed endangered cave salamander (*Eurycea lucifuga*) exists in a very limited single area.	See preceding.
Endangered Species Regulations ORC 1531.25	No person shall take or possess any native species of wild animal, or any eggs or offspring thereof, that is endangered with state-wide extinction.	Appl	Appl	Appl	Updated surveys of the FEMP property in 1993-94 found populations of the state-listed threatened Sloan's crayfish (*Orconectes sloanii*) in sections of Paddy's Run.	See preceding.
Endangered Species Regulations ORC 1518.02 OAC 1501:18-1	No person shall root-up, injure, destroy, remove, or carry away on or from public highways, public property, or waters of the state, or on or from the property of another, without the written permission of the owner, lessee, or other person entitled to possession, any endangered plant listed in OAC 1501:18-1.	Appl	Appl	Appl	Surveys of the FEMP property in 1994 did not locate populations of the following plants: the federal-listed endangered running buffalo clover (*Trifolium stoloniferum*); the state-listed endangered mountain bindweed (*Polygonum cilinode*) and slender fingergrass (*Digitaria filiformis*); and the state-listed threatened spring corralroot (*Corallorhiza wisteriana*).	See preceding.
ARCHAEOLOGICAL, HISTORIC AND CULTURAL RESOURCE PROTECTION						
Antiquities Act of 1906 16 U.S.C. §431 Historic Sites Preservation Act 16 U.S.C. §461-467	No person may appropriate, excavate, injure, or destroy any historic or prehistoric ruin or monument, or any object of antiquity situated or controlled by the Government of the United States without an applicable permit. Identification and preservation of cultural resources on federal lands is required, including natural landmarks.	Appl ✓	Appl Appl	Appl Appl	Proposed areas of disturbance will be surveyed and consultation will occur between DOE, the Advisory Council on Historic Preservation and the State of Ohio Historic Preservation Office (OHPO) as agreed upon in the Programmatic Agreements (later entries).	Section F.4.2 of the Sitewide Excavation Plan

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs FOR REMEDIATION AREA 1 PHASE II

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	ARCHAEOLOGICAL, HISTORIC AND CULTURAL RESOURCE PROTECTION, continued					
Archaeological Resources Protection Act 16 U.S.C. § 470aa-470ll Procedures for Implementing the National Environmental Policy Act 40 CFR §6.301(c) Protection of Archaeological Resources 43 CFR §7.4(a)	Whenever any Federal agency finds, or is notified, in writing, by an appropriate historical or archaeological authority, that its activities in connection with any Federal construction project or federally licensed project, activity, or program may cause irreparable loss or destruction of significant scientific prehistorical, historical, or archaeological data, such agency shall notify the Secretary of the Interior, in writing, and shall provide the Secretary with appropriate information concerning the project, program, or activity. No person may excavate, remove, damage, or otherwise alter or deface or attempt to excavate, remove, damage, or otherwise alter or deface any archaeological resource located on public lands unless such activity is pursuant to a permit. If an EPA activity may cause irreparable loss or destruction of significant scientific, prehistoric, historic, or archaeological data, the responsible official or the secretary of the Interior is authorized to undertake data recovery and preservation activities.	Appl	Appl	Appl	See preceding.	See preceding.
National Historic Preservation Act (NHPA) 16 U.S.C. §470 Protection of Historic Properties 36 CFR Part 800 Procedures for Implementing the National Environmental Policy Act 40 CFR §6.301(a), (b)	A federal agency (DOE) must take into account the effect of an undertaking on historic properties and accord the Advisory Council on Historic Preservation a reasonable opportunity to comment. Historic properties are defined as any prehistoric or historic district, building, site, structure, or object included in or eligible for inclusion in the National Register of Historic Places. This term includes artifacts, records, and persons released to and located within such properties. Historic properties that are to be substantially altered or demolished must be recorded for future use and reference. The purpose of this Act is not only to protect those properties listed in or eligible for the National Register of Historic Places, but also those properties that have not been listed or formally determined eligible for the listings. The heads of all Federal agencies shall assume responsibility for the preservation of historic properties which are owned or controlled by such agency. Prior to any Federal undertaking which may directly and adversely affect any National Historic Landmark, the head of the responsible agency shall, to the extent possible, minimize the harm to such landmark.	Appl	Appl	Appl	See preceding.	See preceding.
Archaeological and Historic Preservation Act 16 U.S.C. §469	Upon discovery that a project may cause the irreparable loss, destruction, significant scientific finding, prehistorical finding, or loss of historical or archaeological data, DOE must notify the Dept. of the Interior in writing and provide appropriate information concerning the project. DOE must, with possible assistance from the OHPO, undertake recovery, protection, and preservation of the data.	√	Appl	Appl	See preceding.	See preceding.

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs FOR REMEDIATION AREA 1 PHASE II

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	ARCHAEOLOGICAL, HISTORIC AND CULTURAL RESOURCE PROTECTION, continued					
Executive Order 11593, Protection and Enhancement of Cultural Environment 3 CFR Part 54	An inventory of a site with potential historic places is required for eligibility in the National Register of Historic Places.	√	Appl	Appl	See preceding and following entries.	See preceding.
Programmatic Agreement Regarding Disposition of Facilities under the Operable Unit 3 Record of Decision for Interim Remedial Action at the Fernald Environmental Management Project (January 16, 1996)	• Prepare a report package describing the primary buildings and structures at the FEMP, using existing information to provide information regarding construction details, production process descriptions, design changes, current structural conditions, and current use. The report package is to include written descriptions, photographs, representative engineering drawings, and videotape, as appropriate. If existing documentation is not adequate, additional documentation will be obtained (i.e., additional photographs). Representative support buildings and structures are to be documented with photographs and written summaries as well. • Prepare a separate report package describing the FEMP's role in the DOE weapons complex and the significance of the FEMP contribution to the U.S. defense.		√	√	Draft reports have been submitted to the Ohio Historic Preservation Office (OHPO). Once finalized, both documents will be available to the public in the Public Environmental Information Center and archived as appropriate.	See preceding.

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs FOR REMEDIATION AREA 1 PHASE II

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	ARCHAEOLOGICAL, HISTORIC AND CULTURAL RESOURCE PROTECTION, continued					
Programmatic Agreement Regarding Archaeological Investigations at the Fernald Environmental Management Project (March 6, 1997)	Annual report packages, the first of which must be submitted on July 1,1997, must be submitted to the Ohio Historic Preservation Office (OHPO) and the Advisory Council on Historic Preservation (the Advisory Council) containing the following information: 1 list of all response actions and associated activities initiated within the year reported on; 2. map showing locations of above response actions/ associated activities; 3. list of response actions/associated activities conducted in previously surveyed (archeological survey) areas; 4. a list of surveys which identified no eligible historic properties; 5. a list of eligible historic properties that were avoided when implementing response actions and/or associated activities; 6. a list of Phase I-III reports generated; and 7. a map of locations of areas identified in item 6 and all properties identified. DOE-FEMP must also submit any and all Phase I reports generated within the last year, and not previously submitted, with the annual report. By September 2, 1997 (within 180 days of the signing of the Programmatic Agreement), submit to the OHPO and the Advisory Council a literature search, examination of aerial photographs, and use of a predictive model for all disturbed and/or contaminated areas of the FEMP (as defined in the Agreement). The predictive model is to utilize existing archeological data from the FEMP and surrounding area to determine the likelihood of additional archeological sites within the contaminated/disturbed areas and the spatial distribution, physical characteristics, and uses.	√	√	√	All of Remediation Area 1 Phase 2 has been surveyed in accordance with this programmatic agreement. All potential historic properties discovered have undergone data recovery after consultation with the OHPO and the Advisory Council. Unexpected discoveries will be addressed accordingly (see Section F.4.2 of the SEP). Draft reports are under preparation for submission to the OHPO and the Advisory Council. Once finalized, the reports will be available to the public in the Public Environmental Information Center and archived as appropriate.	See preceding.

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs FOR REMEDIATION AREA 1 PHASE II

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
ARCHAEOLOGICAL, HISTORIC AND CULTURAL RESOURCE PROTECTION, continued						
Native American Graves Protection and Repatriation Act 25 U.S.C. §3001 et seq.	Identification and preservation of cultural resources on federal lands is required, including natural landmarks. DOE must consult with appropriate Indian tribes before the intentional excavation or removal after an inadvertent discovery of Native American cultural items including human remains and objects of cultural significance.	Appl	Appl	Appl	DOE will consult with likely culturally affiliated tribes to determine the excavation, treatment, analysis and preparation of any extra reviews, associated funerary objects, unassociated funerary objects, sacred objects, or objects of cultural patrimony. Consultation will be coordinated with NHPA compliance when possible.	See preceding.
43 CFR Part 10	Provides for the return of human remains and cultural objects from Native American graves to affiliated tribes.	Appl	√	√		
American Indian Religious Freedom Act 42 U.S.C. §1996	Provides for tribal access by native peoples to grave sites and sites of cultural, symbolic, or religious significance.	Appl	Appl	Appl	See preceding.	See preceding.

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs FOR REMEDIATION AREA 1 PHASE II

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
AIR PATHWAY						
	NOISE POLLUTION CONTROL					
Noise Control Act, as amended 42 U.S.C. §4901, *et seq.* Noise Pollution and Abatement Act 42 U.S.C. §7641	The public must be protected from noises that jeopardize health and welfare.	Appl	Appl	R&A	Appropriate engineering controls and best management practices will be implemented so that nuisance noise from vehicles and equipment will be reduced to the maximum practicable extent during conduct of the actions.	Section 5.1.2.1 of the Sitewide Excavation Plan
	AIR EMISSIONS					
Solid Waste and Infectious Waste Regulations, Authorized, Limited, and Prohibited Solid Waste Disposal Methods OAC 3745-27-05 ORC 3734.03	Open dumping of solid waste is prohibited [OAC 3745-27-05(C)]. Solid waste disposal by means of open burning, as defined in OAC 3745-19, is permitted only as provided therein [OAC 3745-27-05(B)].	Appl	Appl	Appl		Addressed through the description of the selected remedy in the OU2 ROD (Section 9.0), OU5 ROD (Section 9.0), and OU3 ROD (Section 8.0)
Criteria for Classification of Solid Waste Disposal Facilities and Practices, Air 40 CFR §257.3-7]	Open burning of residential, commercial, institutional or industrial solid waste is prohibited. This requirement does not apply to infrequent burning of agricultural wastes in the field, silvicultural wastes for forest management purposes, land-clearing debris, diseased trees, debris from emergency clean-up operations, and ordnance [40 CFR §257.3-7].	√	√	Appl		
Open Burning Standards, Open Burning in Unrestricted Areas OAC 3745-19-04(C)	Open burning is allowed for the following purposes [OAC 3745-19-04(C)]: • Recognized horticultural, silvicultural, range, or wildlife management practices [OAC 3745-19-04(C)(5)]. • Disposal of land clearing waste if the following conditions are met [OAC 3745-19-04(C)(4)]: - The fire is set only when atmospheric conditions will readily dissipate contaminants; - The fire does not create a visibility hazard on roadways, railroad tracks, or air fields; - The fire is located at a point on the premises no less than 1000 feet from any inhabited building not located on said premises.	√	√	Appl		

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs FOR REMEDIATION AREA 1 PHASE II

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	AIR EMISSIONS, continued					
General Provisions on Air Pollution Control, Air Pollution Nuisances Prohibited OAC 3745-15-07 ORC 3704.01-.05	Measures shall be taken to adopt and maintain a program for the prevention, control, and abatement of air pollution in order to protect and enhance the quality of the state's air resource so as to promote the public health, welfare, and economic vitality of the people of the state. The emission or escape into open air from any source whatsoever of smoke, ashes, dust, dirt, grime, acids, fumes, gases, vapors, odors and combinations of the above in such a manner or in such amounts as to endanger the health, safety, and welfare of the public, or to cause unreasonable injury or damage to property shall be declared to be a public nuisance. It is unlawful for any person to cause, permit, or maintain any such public nuisance.	Appl	Appl	Appl	Only fugitive dust (dirt, flyash, bottom ash) is anticipated from this soil remedial action project. Air pollution nuisance prohibitions will be met by employing best management practices for control of fugitive dust.	FEMP Fugitive Dust Control BAT Determination, Fugitive Dust Control Requirements (RM-0047), and Section 5.1.2 of the Sitewide Excavation Plan
ORC 3734.02(I)	No owner or operator of a hazardous waste facility, in the operation of the facility, shall cause, permit, or allow the emission therefrom of any particulate matter, dust, fumes, gas, mist, smoke, vapor, or odorous substances that, in the opinion of the Director [of Environmental Protection, a.k.a., the Director of the OEPA], unreasonably interferes with comfortable enjoyment of life or property by persons living or working in the vicinity of the facility, or that is injurious to public health. Any such action is hereby declared to be a public nuisance.	✓	✓	R&A		
Particulate Matter Standards, Non-Degradation Policy OAC 3745-17-05	The significant and avoidable deterioration of air quality in any part of the area where presently existing air quality is better than the particulate ambient air quality standards in OAC 3745-17-02 (described above) shall be prohibited.	Appl	Appl	✓	Appropriate control measures will be applied to all construction grading, excavation, loading/unloading and material management activities to reduce fugitive emissions. Also see preceding entry.	FEMP Fugitive Dust Control BAT Determination, Fugitive Dust Control Requirements (RM-0047), and Section 5.1.2.2 of the Sitewide Excavation Plan
Particulate Matter Standards, Control of Visible Particulate Emissions from Stationary Sources OAC 3745-17-07(A)(1)(a)	Visible particulate emissions from any point source shall not exceed 20 percent opacity, as a six-minute average, but shall not exceed 60 percent opacity, as a six-minute average, at any time. Transient exceedance limits are included in this regulation.	Appl	Appl	Appl	All point sources associated with a remedial action project (i.e., sludge dewatering, etc.) will employ best available emissions control technologies to mitigate particulate emissions.	As necessary, monitoring requirements will be addressed in the appropriate IRDP.

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs FOR REMEDIATION AREA 1 PHASE II

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	AIR EMISSIONS, continued					
Particulate Matter Standards, Control of Visible Particulate Emissions from Stationary Sources OAC 3745-17-07(B)(1)	Visible particulate emissions from any fugitive dust source shall not exceed 20 percent opacity, as a three-minute average.	√	√	√	Appropriate control measures will be applied to all construction grading, excavation, loading/unloading and material management activities to reduce fugitive emissions.	See preceding.
Particulate Matter Standards, Control of Visible Particulate Emissions from Stationary Sources OAC 3745-17-07 (B)(4), (5), (6)	There shall be no visible particulate emissions from any paved roadway or paved parking area except for a period of time not to exceed six minutes during any 60-minute observation period. There shall be no visible particulate emissions from any unpaved roadway or unpaved parking area except for a period of time not to exceed 13 minutes during any 60-minute observation period. There shall be no visible particulate emissions from any material storage piles except for a period of time not to exceed 13 minutes during any 60-minute observation period.	Appl	R&A	√	Appropriate control measures will be applied to all construction grading, excavation, loading/unloading and material management activities to reduce fugitive emissions.	FEMP Fugitive Dust Control BAT Determination, Fugitive Dust Control Requirements (RM-0047), and Section 5.1.2.2 of the Sitewide Excavation Plan
Particulate Matter Standards, Restriction of Emission of Fugitive Dust OAC 3745-17-08(B)	No person shall cause or permit any fugitive dust source to be operated; or any materials to be handled, transported, or stored; or a building (or its appurtenances) or a road to be used, constructed, altered, repaired, or demolished without taking or installing reasonably available control measures to prevent fugitive dust from becoming airborne. Such reasonably available control measures shall include, but are not limited to, one or more of the following which are appropriate to minimize or eliminate visible particulate emissions of fugitive dust. • The use of water or other suitable dust suppression chemicals for the control of fugitive dust from the demolition of existing buildings or structures, construction operations, the grading of roads, or the clearing of land; or • The periodic application of asphalt, oil, water, or other suitable dust suppression chemicals on dirt or gravel roads and parking lots, and any other surfaces that may cause emissions of fugitive dust.	Appl	R&A	Appl	This requirement is applicable only to certain cities in Butler and Hamilton Counties. Appropriate control measures will be applied to all construction grading, excavation, loading/unloading and material management activities to reduce fugitive emissions.	See preceding.

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs FOR REMEDIATION AREA 1 PHASE II

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	AIR EMISSIONS, continued					
Particulate Matter Standards, Restrictions on Particulate Emissions from Industrial Processes OAC 3745-17-11	The following are restrictions for particulates from any operation, process, or activity which releases or may release particulate emissions into the ambient air. These limits are based on the weight of material being processed. Process Weight at Maximum Capacity (lb/hr) — Allowable Particulate Emission Rate (lb/hr) 100 — 0.551 200 — 0.877 400 — 1.40 600 — 1.83 800 — 2.22 1000 — 2.58 *These limits do not apply to generation of fugitive dust* subject to OAC 3745-17-08 (listed above).	Appl		R&A	All point sources associated with a remedial action project (i.e., sludge dewatering, etc.) will employ best available emissions control technologies to mitigate particulate emissions.	See preceding.
Permit to Install New Sources of Pollution OAC 3745-31-05 (A)(3)	The installation or modification and operation of an air contaminant source, solid waste disposal facility, water pollution source, disposal system, land application of sludge, or public water system, must employ the best available technology. The terms used in the above are defined in OAC 3745-15-01, unless otherwise defined in OAC 3745-31-01.	R&A	Appl	R&A	Appropriate control measures will be applied to all construction grading, excavation, loading/unloading and material management activities to reduce fugitive emissions. All point sources associated with a remedial action project (i.e., sludge dewatering, etc.) will employ best available emissions control technologies to mitigate particulate emissions.	FEMP Fugitive Dust Control BAT Determination, Fugitive Dust Control Requirements (RM-0047), and Section 5.1.2.2 of the Sitewide Excavation Plan

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs FOR REMEDIATION AREA 1 PHASE II

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	AIR EMISSIONS, continued					
Standards of Performance for New Stationary Sources, Subpart OOO—Standards of Performance for Nonmetallic Mineral Processing Plants 40 CFR §60.672(a), (d), (e)	No owner or operator shall cause to be discharged into the atmosphere from a crusher any emissions which: • Contain particulate matter in excess of 0.05 grams per dry cubic meter at standard conditions (g/dscm); and • Exhibit greater than 7 percent opacity Truck dumping of nonmetallic minerals into any crusher is exempt from these requirements.	R&A	✓		It is not anticipated that a crusher will be used during this remedial action project. All point sources associated with a remedial action project (i.e., sludge dewatering, etc.) will employ best available emissions control technologies to mitigate particulate emissions.	See preceding.
40 CFR Part 61, Subpart M-National Emission Standard for Asbestos, Standard for Waste Disposal for Manufacturing, Fabrication, Demolition, Renovation, and Spraying Operation 40 CFR §61.150	(a) Discharge no visible emissions to the outside air during the collection, processing, packaging, or transporting of any asbestos-containing waste material, or use one of the emission control methods specified in paragraphs (a)(1) through (4) of this section: (1) Adequately wet asbestos-containing material. After wetting, seal all asbestos-containing waste material in leak-tight containers while wet; or, put materials that will not fit into containers without additional breaking into leak-tight wrapping. Label the containers or wrapped materials in accordance with 29 CFR 1910.1001(j)(2) or 1926.58(k)(2)(iii). ... (4) Use an alternative emission control and waste treatment method that has received prior approval from the Administrator. (5) As applied to demolition and renovation, the requirements above under paragraph (a) of this section do not apply to Category I non-friable ACM waste and Category II non-friable ACM waste that did not become crumbled, pulverized, or reduced to powder. "Adequately wet" means sufficiently mix or penetrate with liquid to prevent the release of particulates; if visible emissions are observed coming from the asbestos-containing material, the material has not been adequately wetted [40 CFR §61.41].	✓	✓	Appl		See preceding, and following sections of the Sitewide Excavation Plan: 2.5.8 Special Materials 3.3.2.2 Special Materials F.4.1.1 Asbestos
Asbestos Emission Control, Standard for Asbestos Waste Handling OAC 3745-20-05(B), (C)&(D)	(B) Discharge no visible emissions [of asbestos] during the collection, processing, packaging, transporting or deposition of any asbestos-containing waste material, and use one of the emission control methods below: (1) Adequately wet asbestos-containing material and seal the material into durable leak-tight containers or enclosure system. (2) For facilities where asbestos was not removed prior to demolition [or excavation], keep asbestos-containing waste adequately wet or sealed/encapsulated until collected for disposal.					

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs FOR REMEDIATION AREA 1 PHASE II

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	(C) Seal all friable asbestos-containing waste material into durable leak-tight disposal containers or use an approved alternative disposal system in accordance with the following: (1) Label all containers of asbestos-containing waste material: DANGER CONTAINS ASBESTOS FIBERS AVOID CREATING DUST CANCER AND LUNG DISEASE HAZARD R.Q. Hazardous Substance N.O.S. asbestos ORM-E 9188 (2) Seal asbestos-containing waste materials in plastic bags at least 6 mils (0.006 inch) thick, and seal that in a second clean, leak-tight plastic bag at least 6 mils thick; or (4) Facility components coated with, covered or containing friable asbestos materials and removed in sections or units — Seal with leak-tight plastic at least 12 mils (0.012 inch) thick or leak-tight polypropylene woven fabric at least 10 mils (0.010 inch) thick; or (3) Whenever necessary to prevent any asbestos-containing waste material from pentrating a container (bag or wrap) — Seal the materials using a combination of a 6 mils thick plastic bag and a leak-tight steel, plastic, or fiber drum, or reinforced disposal box, leak-tight polypropylene woven fabric bag, or similar suitable and durable container. Fit drums with a matching lid and lock-rims. Band and seal boxes with reinforced tape or in accordance with manufacturers recommendations; or (5) Asbestos-containing waste materials, facility components, and contaminated debris may be disposed of using an alternative disposal system which has received prior approval from the Director. (D) Prepare and secure any load of asbestos-containing waste material in a manner that prevents any visible emissions [of asbestos], load loss, and spillage or leakage of liquids.					

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs FOR REMEDIATION AREA 1 PHASE II

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	AIR EMISSIONS, continued					
Asbestos Emission Control, Standard for Active Asbestos Disposal Sites OAC 3745-20-06(A)&(B) [40 CFR Part 61, Subpart M-National Emission Standard for Asbestos, Standard for Active Waste Disposal Sites, 40 CFR §61.154]	(A) Each owner or operator of an active asbestos waste disposal site shall cause or permit no visible emissions [of asbestos] to the outside air; or shall comply with the requirements of paragraph (B) of this rule. (B) Rather than meet the no visible emissions requirement of paragraph (A) of this rule, each owner or operator of an active asbestos waste disposal site shall comply with the following: (1) There shall be no visible emissions [of asbestos] from asbestos-containing waste materials during the on-site transportation, transfer, deposition or compacting operations. (2) Deposition and burial operations shall be conducted in a manner which prevents handling by equipment or persons that causes asbestos-containing waste materials to be broken-up or dispersed before the materials are buried. (3) As soon as practicable after deposition of the asbestos-containing waste materials but no later than at the end of each operating day, the asbestos-containing waste material deposited at the site during the operating day shall be buried with at least twelve inches of compacted nonasbestos-containing material. Alternatively, any owner or operator of an active asbestos waste disposal site may apply for approval of the Director [of Environmental Protection, a.k.a. Director of the OEPA] to utilize alternative control measures to bind dust, control wind erosion or convert [friable] asbestos to non-friable forms. (4) During the unloading, deposition, burial, and initial compaction of asbestos-containing materials, the owner or operator of the active [asbestos] waste disposal site shall establish a restricted area adequate to deter the unauthorized entry of the general public and any unauthorized personnel from any location within one hundred feet of the operations, and shall display the following information on a sign not less than twenty by fourteen inches, so that it is visible before entering the restricted area: ASBESTOS DUST HAZARD Do Not Remain In Area Unless Your Work Requires It Breathing Asbestos Dust Is Hazardous To Your Health	√	√	Appl	Pertinent to the management of asbestos-containing materials. Also note that requirements from paragraphs (A) and (B) which are pertinent to disposal of asbestos-containing materials, are included in the OSDF Impacted Materials Placement Plan.. NOTE: The sizing & language for warning signs under (B)(4) at left conflicts with that required by OSHA under 29 CFR §1926.1101(k)(7). The FEMP will follow either the Ohio active asbestos disposal sites language or the OSHA required sign language: DANGER ASBESTOS CANCER & LUNG DISEASE HAZARD AUTHORIZED PERSONNEL ONLY OSHA does not impose a minimum sign size.	See preceding.

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs FOR REMEDIATION AREA 1 PHASE II

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	AIR EMISSIONS, continued					
Asbestos Emission Control, Standard for Inactive Asbestos Disposal Sites OAC 3745-20-07(C) [40 CFR Part 61, Subpart M-National Emission Standard for Asbestos, Standard for Inactive Waste Disposal Sites, for Asbestos Mills and Manufacturing and Fabricating Operations 40 CFR §61.151]	The owner or operator may use an alternate control method that has received prior approval of the Director [of Environmental Protection, a.k.a. Director of the OEPA] rather than comply with the requirements of paragraph (A) [emissions and cover requirements] or (B) [posting and access control requirements] of this rule.	√	√	Appl	These requirements for inactive asbestos waste disposal sites are very similar to those for active asbestos waste disposal sites under OAC 3745-20-06 (preceding entry). During soil remediation activities under this remedial action project, the requirements for active asbestos disposal sites (preceding entry) will be followed while managing friable asbestos-containing material. Also note that requirements pertinent to disposal of asbestos-containing materials under paragraphs (A) and (C) of OAC 3745-20-07 are included in the OSDF Impacted Materials Placement Plan.	See preceding.

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs FOR REMEDIATION AREA 1 PHASE II

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	AIR EMISSIONS, continued					
Asbestos Emission Control, Standard for Inactive Asbestos Disposal Sites OAC 3745-20-07(D) [40 CFR Part 61, Subpart M-National Emission Standard for Asbestos, Standard for Inactive Waste Disposal Sites for Asbestos Mills and Manufacturing and Fabricating Operations, 40 CFR §61.151(d)]	Each owner or operator of an inactive asbestos waste disposal site shall notify the Director [of Environmental Protection, a.k.a. the Director of the OEPA] in writing prior to disturbing or removing any asbestos-containing waste material. The notice shall contain:	✓	✓	✓	Submission of the project-specific IRDPs to OEPA constitute this notification.	
	• the reason for disturbing the waste,					The reason for disturbing the material is documented in the OU2, OU5 and OU3 RODs.
	• the procedures to be used to control emissions,					FEMP Fugitive Dust Control BAT Determination, Fugitive Dust Control Requirements (RM-0047), the OSDF Impacted Materials Placement Plan (20100-PL-007), and following sections of the Sitewide Excavation Plan: 2.5.8 Special Materials 3.3.2.2 Special Materials 5.1.2.2 Fugitive Emissions F.4.1.1 Asbestos
	• the duration of the operation, and				Project schedules contained in project-specific IRDPs.	
	• the location of the final disposal site.					The OSDF, unless the OSDF WAC is not met; else, an off-site permitted/licensed disposal facility.

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs FOR REMEDIATION AREA 1 PHASE II

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	AIR EMISSIONS, continued					
National Emission Standards for Hazardous Air Pollutants, Subpart H—National Emission Standards for Emissions of Radionuclides Other Than Radon From Department of Energy Facilities, 40 CFR §61.90, §61.91 and §61.92 - .97 [Radiation Protection of the Public and the Environment DOE Order 5400.5 Chapter II (1)(b)]	Emissions of radionuclides (except radon-220 and radon-222) to the ambient air from DOE facilities shall not exceed those amounts that would cause any member of the public to receive in any year an effective dose equivalent of 10 mrem/yr. To determine compliance with the standard, radionuclide emissions shall be determined and effective dose equivalent values to members of the public calculated using EPA-approved sampling procedures, computer models CAP-88 or AIRDOS-PC, or other procedures for which EPA has granted prior approval.	Appl	Appl	Appl		Section 6 of the Integrated Environmental Monitoring Plan (IEMP) and the following sections of the Sitewide Excavation Plan: 5.1.2.3 Airborne Radiological Particulates 5.1.2.4 Radon 5.1.2.5 Direct Radiation
National Emission Standards for Hazardous Air Pollutants, Subpart Q—National Emission Standards for Radon Emissions From Department of Energy Facilities 40 CFR §61.190, §61.192	No source at a DOE facility shall emit more than 20 pCi/m²/sec of radon-222 as an average for the entire source into the air.	Appl	Appl	R&A	The existing distribution of contaminants within the site soils attains compliance with this requirement. Will be addressed sitewide as necessary by the Integrated Environmental Monitoring Plan (IEMP).	

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs FOR REMEDIATION AREA 1 PHASE II

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
SURFACE WATER PATHWAY						
	WETLANDS/FLOODPLAIN PROTECTION					
Executive Order 11990, Protection of Wetlands	Federal agencies are required to take action to avoid adversely impacting wetlands wherever possible, to minimize wetland destruction, and to preserve the values of wetlands.	Appl	Appl		Floodplain and wetland impacts associated with soil remediation activities will be minimized and avoided to the maximum extent practicable. Projects with unavoidable impacts will be undertaken in accordance with 33 CFR Parts 323 and 330. Based on an overlay of the Remediation Area 1 Phase 2 boundary on the FEMP Jurisdictional Wetland Delineation (Drwg. 75X-5500-G-00372), approximately 0.71 acres of jurisdictional wetlands are anticipated to be dredged and filled during excavation of the remediation area. Dredge and fill activities within these wetlands will comply with the substantive requirements of Nationwide Permit Nos. 38 and 26 (subsequent entry) — promulgated in Appendix A of 33 CFR Part 330 (subsequent entry) and OEPA's corresponding State Water Quality Certification (see subsequent entry for OAC 3745-32).	Approximately 35.9 acres of jurisdictional wetlands and 8.9 acres of waters of the United States were identified on the FEMP property as a result of the 1993 Jurisdictional Wetlands & Waters of the U.S. (1993 FEMP Wetland Delineation). The U.S. Army Corps of Engineers officially approved the delineation on August 19, 1993. See also: Appendix H of the OU2 FS Report; Appendix J of the OU5 FS Report, and Appendix J of OU3 RI/FS. The Natural Resources Restoration Plan (NRRP); also, operable unit closure reports must include NEPA compliance, as per following sections of the Sitewide Excavation Plan: 1.4.2 Related Documents 7.3 Certification Report 7.4 Other Related Future Documents

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs FOR REMEDIATION AREA 1 PHASE II

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	WETLANDS/FLOODPLAIN PROTECTION, continued					
Procedure for Implementing the National Environmental Policy Act 40 CFR §6.302(a)	Federal agencies conducting certain activities must avoid, to the extent possible, the adverse impacts associated with the destruction or loss of wetlands, and avoid support of new construction in wetlands when a practicable alternative exists.	Appl	Appl		See preceding.	See preceding.
Executive Order 11988, Floodplain Management Procedures for Implementing the National Environmental Policy Act 40 CFR §6.302(b)	Federal agencies must evaluate the potential effects of actions they may take in a floodplain to avoid, to the extent possible, adverse effects associated with direct and indirect development of a floodplain.	Appl	Appl		Remediation is needed, and can not be avoided. Nationwide Permit # 38 (subsequent entry) authorizes such remedial activity in a floodplain. A wetland/floodplain assessment has been conducted. Remediation Area 1 Phase 2 is located *outside* the 100 yr floodplains of Paddy's Run and of the Great Miami River. No floodplain impacts will result from excavation activities associated with this soil remediation project.	An updated floodplain determination was conducted in October 1992 for Paddy's Run using the U.S. Army Corps of Engineers' standard HEC2 water surface profile analysis program. The 100-year flood elevations reach the western slope of the Inactive Flyash Pile and the toe of the South Field slope.

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs FOR REMEDIATION AREA 1 PHASE II

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	WETLANDS/FLOODPLAIN PROTECTION, continued					
DOE Compliance with Floodplain/ Wetlands Environmental Review Requirements 10 CFR §1022.3(a), 3(b)(1), 3(b)(2), 3(b)(3), 3(b)(5), 3(b)(6), 3(c), 3(d), 3(e)	DOE shall exercise leadership and take action to: • Avoid to the extent possible the long- and short-term adverse impacts associated with the destruction of wetlands and the occupancy and modification of floodplains and wetlands, and avoid direct and indirect support of floodplain and wetland development wherever there is a practicable alternative. • Incorporate floodplain management goals and wetlands protection considerations into its planning, regulatory, and decision-making processes and shall to the extent practicable: - Reduce the hazard and risk of flood loss. - Minimize the impact of floods on human safety, health, and welfare. - Restore and preserve natural and beneficial values served by the floodplain. - Minimize the destruction, loss, or degradation of wetlands. - Preserve and enhance the natural and beneficial values of wetlands. • Undertake a careful evaluation of the potential effects of any DOE action taken in a floodplain and any new construction undertaken by DOE in wetlands not located in a floodplain. • Identify, evaluate, and as appropriate, implement alternative actions which may avoid or mitigate adverse floodplain/wetlands impacts. • Provide opportunity for early public review of any plans or proposals for actions in floodplains and new construction in wetlands.	Appl	Appl	Appl	10 CFR Part 1022 is the DOE implementing regulation for Executive Orders 11988 and 11990 (see corresponding preceding entries).	Remediation decisions included avoidance to/ minimization of wetlands impacts. See: Appendix H of the OU2 FS Report; Appendix J of the OU5 FS Report, and Appendix J of OU3 RI/FS. Also, see preceding entries.
DOE Compliance with Floodplain/ Wetlands Environmental Review Requirements 10 CFR §1022.5(b), (h)	This part shall apply to all proposed floodplain/wetlands actions, including those sponsored jointly with other agencies, where practicable alternatives to the proposed actions are still available. The policies and procedures of this part which are applicable to floodplain actions shall apply to all proposed actions which occur in a wetlands located in a floodplain.	Appl	Appl	Appl	See preceding entries.	See preceding entries.

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs FOR REMEDIATION AREA 1 PHASE II

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	WETLANDS/FLOODPLAIN PROTECTION, continued					
DOE Compliance with Floodplain/ Wetlands Environmental Review Requirements 10 CFR §1022.11 (a), (b), (c)	Concurrent with its review of a proposed action to determine appropriate NEPA requirements, DOE shall determine applicability of the floodplain management and wetlands protection requirements of this part. In making a floodplain determination, DOE shall utilize the Flood Insurance Rate Maps (FIRMs) or the Flood Hazard Boundary Maps (FHBMs) prepared by the Federal Insurance Administration of the Department of Housing and Urban Development to determine if a proposed action is located in the base or critical action floodplain, as appropriate. For a proposed action in an area of predominately federal or state land holdings where FIRM or FHBM maps are not available, information shall be sought from the land administering agency (e.g., Bureau of Land Management, Soil Conservation Service, etc.) or from agencies with floodplain analysis expertise.	Appl	Appl		See preceding entries.	See preceding entries.
DOE Compliance with Floodplain/ Wetlands Assessments 10 CFR §1022.12(a)	If DOE determines, pursuant to 10 CFR §§ 1022.5 and 1022.11, that this part is applicable to the proposed action, DOE shall prepare a floodplain/wetlands assessment, according to the requirements in this section (10 CFR §1022.12).	Appl	Appl		See preceding entries.	See preceding entries.
DOE Compliance with Floodplain/ Wetlands Environmental Review Requirements 10 CFR §1022.15(a)	If DOE finds that no practicable alternative to locating in the floodplain/wetland is available, consistent with the policy set forth in Executive Order 11988, DOE shall, before taking action, design, or modify its action in order to minimize potential harm to or within the floodplain or wetland.	Appl	Appl		See preceding entries.	See preceding entries.
Federal Water Pollution Control Act (a.k.a., Clean Water Act) General Regulatory Policies 33 CFR §323.3	Permits will be required for the discharge of dredged or fill material into waters of the United States including wetlands. Certain discharges specified in 33 CFR Part 330 are permitted by that regulation (nationwide permits). If a discharge of dredged or fill material is not permitted by 33 CFR Part 330 (Nationwide Permits), an individual section 404 permit will be required for the discharge of dredged or fill material into waters of the United States. Discharges of dredged or fill material into waters of the United States done by or on behalf of any Federal agency, other than the Corps of Engineers, are subject to the authorization procedures of these regulations. Remedial actions involving the discharge of dredge and fill material into these areas shall meet the substantive requirements of this section and 40 CFR Part 230.	Appl	 Appl		See the preceding entry for Executive Order 11990 (first Floodplains/Wetlands Protection entry). Discharges of dredged and fill material not authorized by a NWP will be conducted in accordance with the substantive requirements of these regulations.	See preceding entries.

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs FOR REMEDIATION AREA 1 PHASE II

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	WETLANDS/FLOODPLAIN PROTECTION, continued					
Federal Water Pollution Control Act (a.k.a., Clean Water Act) Nationwide Permit (NWP) Program 33 CFR Part 330	The U.S. Army Corps of Engineers has authorized certain categories of activities involving the discharge of dredged and fill material into wetlands and waters of the United States under the NWP program. Activities involving the discharge of dredged and fill material will be conducted in accordance with the substantive requirements of applicable NWPs as required. Discharges not authorized by NWP will be conducted in accordance with the substantive requirements of 33 CFR Part 323 and 40 CFR Part 230.	✓	Appl	R&A	See preceding entries.	Following sections of the Sitewide Excavation Plan: 3.3.1 Implementation of Construction, Excavation, and Material Handling Activities 5.1.1 Natural Resource Impacts 5.1.3 Surface Water Pathway
Federal Water Pollution Control Act (a.k.a., Clean Water Act) Nationwide Permit Program 33 U.S.C. §1341(a)(1), (d) 33 CFR §330.1(c)	An activity is authorized under an Nationwide Permit (NWP) only if that activity and the permittee satisfy all of the individual NWP's terms and conditions. Potentially applicable NWPs include: • Nationwide Permit #38 — Cleanup of Hazardous and Toxic Waste - This permit authorizes specific activities required to affect the containment, stabilization or removal of hazardous or toxic waste materials that are performed, ordered, or sponsored by a government agency with established legal or regulatory authority provided the permittee notifies the district engineer. - For discharges in special aquatic sites, including wetlands, the notification must include a delineation of affected special aquatic sites, including wetlands. - This nationwide permit does not authorize the establishment of new disposal sites or the expansion of existing sites used for the disposal of hazardous or toxic waste. • Nationwide Permit #26 — Headwaters and Isolated Waters Discharges - The discharge does not cause the loss of more than 10 acres of waters of the United States. - The permittee notifies the district engineer if the discharge would cause the loss of waters of the United States greater than one acre. - For discharges in special aquatic sites, including wetlands, the notification must also include a delineation of affected special aquatic sites, including wetlands. - The discharge, including all attendant features, both temporary and permanent, is part of a single and complete project.	Appl	Appl	R&A	See preceding entry for Executive Order 11990 (first Floodplains/Wetlands Protection entry).	January 17, 1992 letter from Donald R. Schregardus, Director of the OEPA, to the U.S. Army Corps of Engineers, "401 Certification — Grant," the OEPA conditionally certified that projects authorized by NWP #s 38 and 26 will comply with the applicable provisions of the Federal Water Pollution Control Act.

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs FOR REMEDIATION AREA 1 PHASE II

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	WETLANDS/FLOODPLAIN PROTECTION, continued					
Federal Water Pollution Control Act (a.k.a., Clean Water Act) Nationwide Permit Program Section B(26) to Appendix A of 33 CFR Part 330	Discharges of dredged or fill material into headwaters and isolated waters [under Nationwide Permit # 26] are approved provided: • The discharge does not cause the loss of more than 10 acres of waters of the United States. • The permittee notifies the district engineer if the discharge would cause the loss of waters of the United States greater than one acre. • For discharges in special aquatic sites, including wetlands, the notification must also include a delineation of affected special aquatic sites, including wetlands. • The discharge, including all attendant features, both temporary and permanent, is part of a single and complete project.	√	√	√	See preceding and following entries.	See preceding and following entries.
Federal Water Pollution Control Act (a.k.a., Clean Water Act) Nationwide Permit Program 33 CFR §330.4 (c)(1) Ohio Section 401 State Water Quality Certifications OAC 3745-32-02	Section 401 State Water Quality Certification pursuant to Section 401 of the Clean Water Act, or waiver thereof, is required to prior to issuance or reissuance of individual or nationwide permits authorizing (dredge and fill) activities which may result in a discharge into waters of the United States. State Water Quality Certification is granted provided: 1. The discharge does not prevent or interfere with the attainment or maintenance of applicable water quality standards; and 2. The discharge does not result in a violation of any applicable provisions of the Federal Water Pollution Control Act (a.k.a., Clean Water Act).	Appl	Appl		See preceding and following entries.	January 17, 1992 letter from Donald R. Schregardus, Director of the OEPA, to the U.S. Army Corps of Engineers, "401 Certification — Grant," the OEPA conditionally certified that projects authorized by the NWP #s 38 and 26 (see previous entry) will comply with the applicable provisions of the Federal Water Pollution Control Act.
Federal Water Pollution Control Act (a.k.a., Clean Water Act) Nationwide Permit Program Section C of Appendix A to 33 CFR Part 330	In addition to the General Conditions, the following [Section 404 only] conditions apply only to activities that involve the discharge of dredge or fill material and must by followed in order for authorization of the nationwide permits to be valid: • No discharge of dredged or fill material may consist of unsuitable material (e.g., trash, debris, car bodies, etc.). And material discharged must be free from toxic pollutants in toxic amounts (see Section 307 of the Clean Water Act). • Discharges of dredged or fill material into waters of the United States must be minimized or avoided to the maximum extent practicable at the project site, unless the District Engineer has approved a compensation mitigation plan for the specific regulated activity.	√	√		See preceding entries.	The Natural Resources Restoration Plan (NRRP)

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs FOR REMEDIATION AREA 1 PHASE II

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	WETLANDS/FLOODPLAIN PROTECTION, continued					
Federal Water Pollution Control Act (a.k.a., Clean Water Act) Nationwide Permit Program Section C of Appendix A to 33 CFR Part 330	Factors that the District Engineer will consider when determining the acceptability of appropriate and practicable mitigation include, but are not limited to: • To be practicable, the mitigation must be available and capable of being done considering costs, existing technology, and logistics in light of overall project purposes. • To the extent appropriate, permittees should consider mitigation banking and other forms of mitigation including contribution to wetland trust funds, which contribute to the restoration, creation, replacement, enhancement, or preservation of wetlands. • Furthermore, examples of mitigation that may be appropriate and practicable include but are not limited to: reducing the size of the project; establishing buffer zones to protect aquatic resource values; and replacing the loss of aquatic resource values by creating, restoring, and enhancing similar functions and values. In addition, mitigation must address impacts and cannot be used to offset the acreage of wetland losses that would occur in order to meet the acreage limits of some of the nationwide permits.	√	√		See preceding entries.	The Natural Resources Restoration Plan (NRRP)
Federal Water Pollution Control Act (a.k.a., Clean Water Act) §404 (33 U.S.C. §1344) Section 404(b)(1) Guidelines for Specification of Disposal Sites for Dredged or Fill Material, Subpart B—Compliance With the Guidelines, Restrictions on Discharge 40 CFR §230.10	No discharge of dredged or fill material shall be permitted: • If there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as, the alternative does not have other significant adverse environmental consequences. • Unless appropriate and practicable steps have been taken which will minimize potential adverse impacts of the discharge on the aquatic ecosystem. No discharge of dredged or fill material shall be permitted if it: • Causes or contributes, after consideration of disposal site dilution and dispersion, to violations of any applicable state water quality standard. • Violates any applicable toxic effluent standard or prohibition under section 307 of the Clean Water Act. • Jeopardizes the continued existence of species listed as endangered or threatened under the Endangered Species Act of 1973, as amended, or results in likelihood of the destruction or adverse modification or a habitat which is determined to be a critical habitat under the Endangered Species Act of 1973, as amended.	Appl	√	√	See preceding entries.	Appendix H of the OU2 FS Report; Appendix J of the OU5 FS Report, and Appendix J of OU3 RI/FS.

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs FOR REMEDIATION AREA 1 PHASE II

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	DISCHARGE TO SURFACE WATER					
Pollution to Waters of the State ORC 6111.04	No person shall cause pollution or place or cause to be placed any sewage, industrial waste, or other wastes in a location where they cause pollution of any waters of the state. No person to whom a permit has been issued shall place or discharge, or cause to be placed or discharged, in any waters of the state any sewage, industrial waste, or other wastes in excess of the permissive discharges specified under such existing permit without first receiving a permit from the Director to do so. Pollution to waters of the state is prohibited.	Appl	Appl	R&A		FEMP Site NPDES Permit Number 1IO00004*ED, the FEMP Stormwater Pollution Prevention Plan (RM-0039), Section 4 of the Integrated Environmental Monitoring Plan (IEMP), and the following section of the Sitewide Excavation Plan: 5.1.3 Surface Water Pathway
Compliance with Ohio Water Pollution Control Requirements ORC 6111.07(A), (C)	Failure to comply with water pollution control requirements is prohibited.	√	Appl	Appl		See preceding.
Water Quality Standards, Criteria Applicable to All Waters OAC 3745-1-04	To every extent practical and possible, all surface waters of the State of Ohio shall be free from: • Suspended solids or other substances that enter the waters as a result of human activity that will form putrescent or otherwise objectionable sludge deposits • Floating debris, oil, scum and other floating materials entering the waters as a result of human activity in amounts sufficient to be unsightly or cause degradation • Materials entering the waters as a result of human activity producing color, odor or other conditions in such a degree as to create a nuisance • Substances entering the waters as a result of human activity in concentrations that are toxic or harmful to human, animal or aquatic life and/or are rapidly lethal in the mixing zone • Nutrients entering the waters in concentrations that create nuisance growths of aquatic weeds or algae	√	R&A	R&A		See preceding.

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs FOR REMEDIATION AREA 1 PHASE II

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	DISCHARGE TO SURFACE WATER, continued					
Water Quality Standards, Antidegradation Policy OAC 3745-1-05(A)&(B)	(A) Existing instream water uses as defined in OAC 3745-1-07 [subsequent entry] shall be maintained and protected. No further water quality degradation which would interfere with or become injurious to designated uses is allowable. (B) Waters in which existing water quality is better than the criteria prescribed in these rules and exceeds those levels necessary to support propagation of fish, shellfish and wildlife and recreation in and on the water shall be maintained and protected. ... Degradation of water quality shall not interfere or become injurious to existing or planned uses, and the Director shall require that ... feasible management or regulatory programs pursuant to Section 208 and 303 of the Act [Clean Water Act], 33 U.S.C. Sections 1288 and 1313, be applied to nonpoint sources.	✓	✓	Appl	Soil remedial action projects will ensure that existing instream water uses of the Great Miami River and Paddy's Run will be maintained as health protective.	See preceding.
Water Quality Standards, Great Miami River OAC 3745-1-21	Paddy's Run and the Great Miami River are designated as: • Warm water aquatic life habitat • Agricultural and industrial water supply • Primary contact recreation The Great Miami River between Ross Road (RM 95.7) to Taylorsville Dam (RM 92.6) is a state resource water, and RM 130 and 118 are public water supplies.	Appl	Appl	Appl	Discharges to the Great Miami River and Paddy's Run must not cause a violation of applicable numeric or narrative water quality standards for these designations. The FEMP effluent discharge pipe, located at River Mile (RM) 24.73 on the Great Miami River, is downstream of the state resource waters and public water supplies.	See preceding.
National Pollutant Discharge Elimination System 40 CFR §122.26(a)(l)(ii), 40 CFR §122.26(b)(14)(v), (x)	A discharge composed entirely of storm water associated with industrial activity is required to obtain a NPDES permit. These categories of facilities are considered to be engaging in "industrial activity": • Landfills, land application sites, and open dumps that receive or have received any industrial wastes (waste that is received from any of the facilities described under this subsection), including those that are subject to regulation under Subtitle D of RCRA; and • Construction activities including clearing, grading, and excavation that disturbs five acres or more of total land area.	Appl	Appl	Appl	Discharges of stormwater associated with industrial and/or construction activities are regulated in accordance with the existing FEMP NPDES Permit, and the FEMP Stormwater Pollution Prevention Plan.	See preceding.

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs FOR REMEDIATION AREA 1 PHASE II

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	DISCHARGE TO SURFACE WATER, continued					
Ohio NPDES Permits, Ohio NPDES Permits Required OAC 3745-33-02(A)	No person may discharge any pollutant or cause, permit, or allow a discharge of any pollutant [from a point source] without applying for and obtaining an Ohio NPDES permit in accordance w with the requirements of this Chapter, 3745-33.	√	√	√	See preceding and following entries.	FEMP Site NPDES Permit (Ohio EPA Number 1IO00004*ED), and the FEMP Stormwater Pollution Prevention Plan (RM-0039).
Ohio NPDES General Permits, Ohio NPDES Permit Required OAC 3745-38-02(A)	No person may discharge any pollutant or cause, permit, or allow a discharge of any pollutant from a point source without either applying for and obtaining an Ohio NPDES permit in accordance w with the requirements of Chapter 3745-33 of the Administrative Code [preceding entry], ... or have authorization to discharge under an Ohio NPDES general permit in accordance with the requirements of this chapter [3745-38]. NOTE: In September 1992, the FEMP applied for an individual stormwater permit to cover its industrial stormwater discharges to Paddy's Run. On the basis of the information provided in the original FEMP Stormwater Permit Application , Ohio EPA has chosen to regulate FEMP site industrial stormwater discharges under the individual permit process (OAC 3745-33, preceding entry), by incorporating stormwater monitoring requirements at Paddy's Run into the NPDES Permit. The site NPDES permit also addresses discharges of stormwater associated with construction activities by requiring a Stormwater Pollution Prevention Plan that defines the manner in which these discharges will be managed.	√	√	√	In accordance with the note at left, the general permitting process described in OAC 3745-38 is not applicable to the FEMP site stormwater discharges. Rather, these are regulated within the context of the existing FEMP NPDES Permit (Ohio EPA Number 1IO00004*ED) and the FEMP Stormwater Pollution Prevention Plan (RM-0039), both of which derive their regulatory basis from OAC 3745-33 (preceding entry).	See preceding entries.
Rules and Regulations of the Hamilton County Soil and Water Conservation District Governing Earthwork for Unincorporated Hamilton County, Ohio	Temporary and/or permanent erosion and sediment control features and devices shall be designed and constructed in general accordance with the State of Ohio Temporary Erosion Control Specifications. *Exempted* from these requirements are: • *any public work performed by or under control of any governmental agency*, provided such operations do not cause instability of any adjacent or contiguous property and substantially equivalent sediment control policies are applied [3.10 E]. • *operations involving process and stockpiling of soils or rock materials where controlled by other regulations*, provided such operations do not cause instability of any adjacent or contiguous property [3.10 H].	√	TBC	TBC		FEMP Site NPDES Permit (OEPA Number 1IO00004*ED), and the FEMP Stormwater Pollution Prevention Plan (RM-0039), and the following sections of the Sitewide Excavation Plan: 5.1.3 Surface Water Pathway App F Implementation of Construction

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs FOR REMEDIATION AREA 1 PHASE II

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	DISCHARGE TO SURFACE WATER, continued					
Federal Water Pollution Control Act (a.k.a., Clean Water Act) Subpart K—Best Management Practices (BMP) Programs 40 CFR §125.104	BMP programs shall be developed in accordance with good engineering practices and: 1) Be documented in narrative form and include any necessary plot plans, drawings or maps; 2) Establish specific objectives for the control of toxic and hazardous pollutants: (a) Each facility component or system shall be examined for its potential for causing a release of significant amounts of toxic or hazardous pollutants to waters of the United States due to equipment failure, improper operation, natural phenomena such as rain or snowfall, etc. (b) Where experience indicates a reasonable potential for equipment failure (e.g., a tank overflow or leakage), natural condition (e.g., precipitation), or other circumstances to result in significant amounts of toxic or hazardous pollutants reaching surface waters, the program should include a prediction of the direction, rate of flow and total quantity of toxic or hazardous pollutants which could be discharged from the facility as a result of each condition or circumstance; 3) Establish specific BMPs to meet the objectives identified in (2) above, addressing each component or system capable of causing a release of significant amounts of toxic or hazardous pollutants to the waters of the United States.		Appl	R&A	BMP requirements will be met by implementing FEMP's BMP Plan. The BMP Plan will be progressively updated to accommodate changing site activities during the conduct of CERCLA remedial actions.	Addressed as part of the selected remedy described in the OU5 ROD. Also see preceding entries.

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs FOR REMEDIATION AREA 1 PHASE II

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
GROUNDWATER PATHWAY						
GROUNDWATER PROTECTION						
Safe Drinking Water Act 42 U.S.C. §1424(e)	All Federal financially assisted projects constructed in the area of a sole source aquifer and its principal recharge zone will be subject to EPA's review to insure that these projects are designed and constructed so that they do not create a significant hazard to public health.	Appl	Appl	Appl	A notice in 53 FR 15876 (May 4, 1988) designated the Buried Valley Aquifer System of the Great Miami/ Little Miami River Basins of southwestern Ohio as a sole or principal source of drinking water. The Fernald site is located above this aquifer.	EPA and OEPA review of project submittals
WELLS — CONSTRUCTION						
Water Well Standards, Pumping Wells OAC 3745-9-08(C)	Pumps may only be primed with potable water.		Appl		Pertains to all well pumps that require priming.	The Sitewide CERCLA Quality Assurance Project Plan (SCQ), the Integrated Environmental Monitoring Plan (IEMP), and the individual project-specific plans for sampling.
Water Well Standards, Monitoring Well Maintenance and Modification OAC 3745-9-09(A) through (C), and (E) through (G)	Monitoring wells must be maintained or modified to avoid cross-contamination of groundwater.		Appl		Pertains to all groundwater wells and piezometers.	The Sitewide CERCLA Quality Assurance Project Plan (SCQ), the Integrated Environmental Monitoring Plan (IEMP), and the following section of the Sitewide Excavation Plan: F.6.3 Monitoring Well Preservation
WELLS — ABANDONMENT						
Water Well Standards, Abandonment of Test Holes and Wells OAC 3745-9-10	Upon completion of testing, a test hole shall be either completely filled with grout or such other material as will prevent contaminants from entering groundwater. If a well [or similar device] containing walls is not being used for obtaining groundwater or for determining the quality, quantity, or level of groundwater, it shall be completely filled with grout or other similar material as will prevent contaminants from entering groundwater, or maintained in strict accordance with all applicable requirements of OAC 3745-9-09.		Appl	Appl	After they are no longer needed, wells, peizometers and lysimeters are to be properly plugged and abandoned in accordance with these requirements.	The Sitewide CERCLA Quality Assurance Project Plan (SCQ), the Integrated Environmental Monitoring Plan (IEMP), and the following section of the Sitewide Excavation Plan: F.6.1 Plugging and Abandonment F.6.2 Monitoring Well Excavation

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs FOR REMEDIATION AREA 1 PHASE II

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
SOIL REMEDIATION						
	CLOSURE OF HAZARDOUS WASTE MANAGEMENT UNITS					
OEPA Closure Plan Review Guidance for RCRA Facilities (Interim Final) September 1, 1993	Federal Regulations of May 2, 1986 (50 FR 16422) and March 19, 1987 (52 FR 8704) modified the closure performance standard such that risk assessment, or what constitutes "decontamination" of a site, may be considered by EPA as a closure option. On December 8, 1988 (see OAC 3745-67-28), the OEPA adopted the equivalent of the EPA's March 19, 1987 regulations, clarifying that risk assessment may be a closure option. It is OEPA and its Division of Hazardous Waste Management (DHWM) practice to consider risk assessment/risk-based closure as a possible third option for closure for all types of units [hazardous waste management units (HWMUs) and solid waste management units (SWMUs)].		TBC	√	Risk-based closures are to be performed for HWMUs with media contamination as integrated with the CERCLA soil remediation activities (see following entry).	Risk-based soil cleanup levels, known as FRLs, are established in the RODs. Following sections of the Sitewide Excavation Plan: 2.1.1.1 Hazardous Waste Management Units 2.2.4 HWMU Closure 3.3.4.4 HWMU Closure 4.0 Location-Specific Excavation Approaches App F Implementation of Construction
RCRA/CERCLA Integrated Closure Director's Final Findings and Orders (June 4, 1996) Section V.1	The Respondent ... shall comply with the closure regulations contained in OAC rules 3745-66-11(A) and (B), 3745-66-11(C) as applicable, 3745-66-14, and 3745-66-16 through 3745-66-20 as applicable for the HWMUs [hazardous waste management units] listed in Attachment A [to these Orders].		√	√	Pertinent to closures of following HWMUs (see Table 2-1 of the Sitewide Excavation Plan, derived from the DF&O's Attachment A) during the CERCLA soil remediation activities: 41 Sludge Drying Beds (surface impoundment)	See subsequent entries in this table for those OAC rules determined by the RODs as ARARs. While OAC 3745-66-11 and -14 are presented in the next two entries, entries for 3745-66-16 through -20 for post-closure are addressed in the subsequent post-closure subsection of this table.

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs FOR REMEDIATION AREA 1 PHASE II

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	CLOSURE OF HAZARDOUS WASTE MANAGEMENT UNITS, continued					
RCRA/CERCLA Integrated Closure Director's Final Findings and Orders (June 4, 1996) Section V.1	The Respondent ... shall comply with the closure regulations contained in OAC rules 3745-66-11(A) and (B), 3745-66-11(C) as applicable, 3745-66-14, and 3745-66-16 through 3745-66-20 as applicable for the HWMUs [hazardous waste management units] listed in Attachment A [to these Orders].		✓	✓	Pertinent to closures of HWMUs listed in preceding entry during the CERCLA soil remediation activities.	See subsequent entries in this table for those OAC rules determined by the RODs as ARARs. While OAC 3745-66-11 and -14 are presented in the next two entries, entries for 3745-66-16 through -20 for post-closure are addressed in the subsequent post-closure subsection of this table.
Closure and Post-Closure Under Interim Standards Closure Performance Standard OAC 3745-66-11 [40 CFR §265.111]	The owner or operator shall close his facility or hazardous waste management unit (HWMU) in a manner that: (A) minimizes the need for further maintenance; (B) controls, minimizes, or eliminates, to the extent necessary to protect public health and the environment, post-closure escape of hazardous waste, hazardous constituents, leachate, contaminated run-off, or hazardous waste decomposition products to the ground or surface waters or to the atmosphere; and (C) complies with these closure requirements.	✓	Appl	Appl	Pertinent to closures of HWMUs during the CERCLA soil remediation activities; also cited in RCRA/CERCLA Integrated Closure DF&O @ V.1. **NOTE:** These requirements are the same as those for new hazardous waste facilities under OAC 3745-55-11 (40 CFR §264.111). **NOTE:** DOE intends, and anticipates being able, to clean (risk-based) close all identified HWMUs.	Following sections of the Sitewide Excavation Plan: 2.1.1.1 Hazardous Waste Management Units 2.2.4 HWMU Closure 3.3.4.4 HWMU Closure 4.0 Location-Specific Excavation Approaches App F Implementation of Construction
Closure and Post-Closure Under Interim Standards Disposal or Decontamination of Equipment, Structures and Soils OAC 3745-66-14 [40 CFR §265.114]	During the partial and final closure periods, all contaminated equipment, structures, and soils must be properly disposed of or decontaminated [to risk-based cleanup levels] [i.e., clean closed, have risk-based closure, or be closed in place], unless otherwise specified in: OAC 3745-67-28 Surface Impoundments: Closure and Post-Closure	✓	Appl	Appl	Pertinent to closure of HWMU #41 Sludge Drying Beds during the CERCLA soil remediation activities; also cited in RCRA/CERCLA Integrated Closure DF&O @ V.1. **NOTE:** These requirements are the same as those for new hazardous waste facilities under OAC 3745-55-14 (40 CFR §264.114), with corresponding cross-references presented therein.	Risk-based soil cleanup levels, known as FRLs, are established in the RODs. Also see preceding entry.

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs FOR REMEDIATION AREA 1 PHASE II

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	CLOSURE OF HAZARDOUS WASTE MANAGEMENT UNITS, continued					
Surface Impoundments: [Surface Impoundments] Closure and Post-Closure Care OAC 3745-67-28	At closure of a surface impoundment HWMU, the owner or operator must remove or decontaminate [to risk-based cleanup levels] all waste residues, contaminated waste containment system components (liners, etc.), contaminated subsoils, and structures and equipment contaminated with waste and leachate. If the owner or operator demonstrates that not all contaminated soils can be practically removed or decontaminated [to risk-based cleanup levels], he must close the HWMU and perform post-closure care in accordance with the closure and post-closure care requirements that apply to landfills under OAC 3745-66-10 to 3745-66-20 and OAC 3745-68-10 (40 CFR §264.310).		√	√	Pertinent to closure of surface impoundment HWMUs during the CERCLA soil remediation activities, as cited in the preceding entry. **NOTE:** These requirements are the same as those for new hazardous waste facilities under OAC 3745-56-28 (40 CFR §264.228).	See preceding.
Landfills, Incinerators, Thermal Treatment, Miscellaneous Units: Closure and Post-Closure OAC 3745-68-10(A) [40 CFR §265.310(a)]	At final closure of a HWMU as a landfill ... the owner or operator must cover the HWMU ... with a final cover designed and constructed to: • provide long-term minimization of migration of liquids through the closed HWMU; • function with minimum maintenance; • promote drainage and minimize erosion or abrasion of the cover; • accommodate settling and subsidence so that the cover's integrity is maintained; and • have a permeability less than or equal to the permeability of any bottom liner system or natural subsoil present.	√	R&A	√	Pertinent to HWMUs that are "closed in place" — i.e., all contaminated soils can not practically be removed or decontaminated [to risk-based cleanup levels] — during the CERCLA soil remediation process. **NOTE:** DOE intends, and anticipates being able, to clean (risk-based) close all identified HWMUs rather than close in-place (close as a landfill).	See preceding.

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs FOR REMEDIATION AREA 1 PHASE II

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	CLOSURE OF HAZARDOUS WASTE MANAGEMENT UNITS, continued					
RCRA/CERCLA Integrated Closure Director's Final Findings and Orders (June 4, 1996) Section V.2 in lieu of Closure and Post-Closure Under Interim Standards Closure Plan; Amendment of Closure Plan OAC 3745-66-12	The Respondent ... are hereby exempted from complying with OAC rule 3745-66-12 for the HWMUs identified in Attachment A of these Orders, provided that the Respondent: a. Submits the documents contained in Attachment C [of these Orders] to Ohio EPA in accordance with the dates established pursuant to the ACA [Amended Consent Agreement]. Within one week after submitting these documents to Ohio EPA, the Respondent shall submit a cross-reference index which contains pertinent page and section s identifications for each HWMU that is contained in the documents and said index shall be cumulative and reference all previous document locations. ... d. Implements the final remedies as reflected in the Records of Decision issued in accordance with the ACA.		✓	✓	Pertinent to closures of HWMUs listed in preceding entries (see Table 2-1 of the Sitewide Excavation Plan, derived from the DF&O's Attachment A) during the CERCLA soil remediation activities.	Section 3.0 of the Sitewide Excavation Plan

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs FOR REMEDIATION AREA 1 PHASE II

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	RADIONUCLIDE CONCENTRATIONS					
Radiation Protection of the Public and the Environment DOE Order 5400.5 Chapter I (4) and Chapter II (2)	An "as low as reasonably achievable (ALARA)" process is to be used in planning and carrying out all DOE activities that have the potential to cause radiation exposure to the public. ALARA requires judgement with respect to what is reasonably achievable. Factors that relate to societal, technological, economic, and other public policy considerations shall be evaluated to the extent practicable. Factors to be considered, at a minimum, include: • Maximum dose to members of the public; • Collective dose to the population; • Alternative processes, such as alternative treatment of discharge streams, operating methods, or controls; • Doses for each process alternative; • Cost for each of the technological alternatives; • Examination of the changes in cost among alternatives; and • Changes in societal impact associated with process alternatives (e.g., differential doses from various pathways). Except for meeting requirements of NEPA, qualitative analyses are acceptable, in most instances, for ALARA judgements, especially when the potential doses are well below the dose limit. The bases for these judgements should be documented. More detailed analyses should be considered if the decision might result in doses that approach the limit.	TBC	TBC		In addition to the evaluations conducted as part of the CERCLA selection of remedy process (the short- and long-term risk assessments of the Comprehensive Remedial Action Risk Evaluation (CRARE) within the feasibility studies (FSs)), documentation of "equivalent evaluations" for environmental ALARA are performed in accordance with the "FEMP Environmental ALARA Plan" and retained as part of the site and project records.	Addressed through the approved selected remedy in the RODs. An ALARA goal is set in the OU5 ROD for the total uranium FRL.
10 CFR Part 834 (PROPOSED)			TBC			
Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings, Subpart B—Standards for Cleanup of Land and Buildings Contaminated with Residual Radioactive Materials from Inactive Uranium Processing Sites 40 CFR §192.12(a)	Remedial actions shall be conducted so as to provide reasonable assurance that, as a result of residual radioactive materials, the concentration of radium-226 in land averaged over any area of 100 m^2 shall not exceed the background level by more than: • 5 pCi/g averaged over the first 15 cm of soil below the surface, and • 15 pCi/g, averaged over 15-cm-thick layers of soil more than 15 cm below the surface.	R&A	R&A	R&A	Met through the selection of FRLs based on risk assessment, followed by certification of cleanup.	The selected remedy in the OU2 and OU5 RODs established more stringent clean-up levels for radium-226 of 1.7 pCi/g, as opposed to 5.0 pCi/g above background.

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs FOR REMEDIATION AREA 1 PHASE II

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
Subpart C— Implementation 40 CFR §192.20	Compliance with this requirement should be shown through measurements performed within the accuracy of currently available types of field and laboratory instruments in conjunction with reasonable survey and sampling procedures.					
	RADIONUCLIDE CONCENTRATIONS, continued					
Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings, Subpart C— Implementation 40 CFR §192.21(f) and §192.22(b)	Where radionuclides other than radium-226 and its decay product are present in sufficient quantity and concentration to constitute a significant radiation hazard from residual radioactive materials, remedial actions shall, in addition to satisfying the standards of Subpart A in 40 CFR §192.02 and Subpart B in 40 CFR §192.12 (both listed above), reduce other residual radioactivity to levels that are ALARA.	R&A	R&A	R&A		The approved selected remedy in the OU5 ROD set an ALARA goal for the total uranium FRL.
Postclosure Standards for Uranium and Thorium Mill Tailings, Subpart D— Standards for the Management of Uranium Byproduct Materials Pursuant to Section 84 of the Atomic Energy Act of 1954, as Amended 40 CFR §192.32 (b)(2)	The requirements for the management of uranium byproduct materials after closure of a disposal area [40 CFR §192.32(b)(1)] shall not apply to any portion of a disposal site which contains a concentration of radium-226 in land, averaged over areas of 100 m^2, which, as a result of uranium byproduct material, does not exceed the background level by more than the limits specified in 40 CFR §192.12(a) (see above).	R&A	R&A	R&A		See preceding.
Management of Thorium Mill Tailings, Subpart E— Standards for the Management of Thorium Byproduct Materials Pursuant to Section 84 of the Atomic Energy Act of 1954, as Amended 40 CFR §192.40 - §192.42	The following are requirements for the management of thorium byproduct materials: • The provisions for the management of uranium byproduct material (40 CFR §192.32) shall apply to thorium byproduct material and: - Provisions applicable to the element uranium shall also apply to the element thorium - Provisions applicable to radon-222 shall also apply to radon-220 - Provisions applicable to radium-226 shall also apply to radium-228 With the concurrence of EPA, alternative provisions may be substituted for any of the above requirements provided the alternative provisions will provide at least an equivalent level of protection for human health and environment.	R&A	R&A	R&A		See preceding.

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs FOR REMEDIATION AREA 1 PHASE II

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	RADIONUCLIDE CONCENTRATIONS, continued					
Radiation Protection of the Public and the Environment, DOE Order 5400.5 Chapter IV (4)(a)	Guidelines for residual concentrations of radionuclides other than thorium and radium shall be derived from the basic dose limits by means of an environmental pathway analysis using specific property data where available. Procedures for these derivations are given in DOE/CH-8901. Residual concentrations of radioactive material in soil are defined as those in excess of background concentrations averaged over an area of 100 m^2.	TBC				Considered in the development of the selected remedy in the OU2 and OU5 RODs.
Radiation Protection of the Public and the Environment, DOE Order 5400.5 Chapter IV (4)(a)(1) 10 CFR Part 834 (PROPOSED)	If the average residual concentration of radionuclides in any surface or below- surface area less than or equal to 25 m^2 exceeds the limit or guideline by a factor of $(100/A)^{0.5}$ [where A is the area (in square meters) of the region in which the concentrations are elevated], limits for "hot spots" shall also be developed and applied. Procedures for calculating these hot spots limits, which depend on the extent of the elevated local concentrations, are given in DOE/CH-8901. In addition, reasonable efforts shall be made to remove any source of radionuclide that exceeds 30 times the appropriate limit in the soil, irrespective of the average concentration in the soil.	TBC	TBC			Considered in the development of the selected remedy in the OU2 and OU5 RODs.
Radiation Protection of the Public and the Environment, DOE Order 5400.5 Chapter IV (4)(a)(2)(3) 10 CFR Part 834 (PROPOSED)	The generic guidelines for residual concentrations of radium-226, radium-228, thorium-230, and thorium-232 are: • 5 pCi/g, averaged over the first 15 cm of soil below the surface; and • 15 pCi/g, averaged over 15-cm-thick layers of soil more than 15 cm below the surface. These guidelines take into account ingrowth of radium-226 from thorium-230 and of radium-228 from thorium-232, and assume secular equilibrium. If both thorium-230 and radium-226, or both thorium-232 and radium-228, are present and not in secular equilibrium, the appropriate guideline is applied as a limit for the radionuclide with the higher concentration. If other mixtures of radionuclides occur, the concentrations of individual radionuclides shall be reduced so that either the dose for the mixture will not exceed the basic dose limit or the sum of the ratios of the soil concentration of each radionuclide to the allowable limit for that radionuclide will not exceed 1. Explicit formulas for calculating residual concentrations guidelines for mixtures are given in DOE/CH-8901.	TBC	TBC		Included as it is more restrictive than the federal standard in 40 CFR §192, .02, .12(a), .20, .21(f), .22(b), .32(b)(2), .40-.42.	Considered in the development of the selected remedy in the OU2 and OU5 RODs.

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs FOR REMEDIATION AREA 1 PHASE II

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
RADIONUCLIDE CONCENTRATIONS, continued						
Guidelines for Residual Radioactive Material—Surface Contamination DOE Order 5400.5 Chapter IV (4)(d) 10 CFR Part 834 (PROPOSED)	These generic surface contamination guidelines are applicable to existing structures and equipment. These guidelines are generally consistent with standards of the NRC (1982) and functionally equivalent to Section 4, "Decontamination for Release for Unrestricted Use," of Regulatory Guide 1.86, but apply to nonreactor facilities. These limits apply to both interior equipment and building components that are potentially salvageable or recoverable scrap. If a building is demolished, the guidelines in paragraph IV (6)(a) are applicable to the resulting contamination in the ground.		TBC		Will be used for any process facility building or structures built and/or used for the remedial action, including the AWWT, soil staging, etc.	The operable unit closure reports identified in Section 7.4 of the Sitewide Excavation Plan.
LEAD CONCENTRATION						
Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities, OSWER Directive # 9355.4-12 (July 14, 1994)	EPA recommends using 400 ppm soil lead as a screening level for lead in soil for residential scenarios at CERCLA sites and at RCRA Corrective Action sites. Residential areas with soil lead below 400 ppm generally require no further action. Site-specific preliminary remediation goals (PRGs) at CERCLA sites and media cleanup standards at RCRA corrective action facilities for residential land use are described.	TBC	TBC			The selected remedy in the OU2 and OU5 RODs established this value as the lead FRL.
PCB CONCENTRATION						
Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution In Commerce, And Use Prohibitions, Subpart A—Applicability, Definitions 40 CFR §761.3	PCB materials which appear at concentrations less than 50 ppm are excluded from the PCB disposal requirements in this regulation.	R&A	√	R&A	Operable Unit 2 does not contain PCB materials which have a concentration greater than 50 ppm.	Following sections of the Sitewide Excavation Plan: 2.5.8 Special Materials 3.3.2.2 Special Materials F.4.1 Materials Which Require Special Handling

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs FOR REMEDIATION AREA 1 PHASE II

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	PCB CONCENTRATION, continued					
Subpart G— PCB Spill Cleanup Policy, Requirements for PCB Spill Cleanup 40 CFR §761.125(c)	PCBs at a concentration of greater than 50 ppm are subject to TSCA decontamination requirements in 40 CFR §761.120(b). Soil in restricted access areas contaminated by a PCB spill shall be cleaned to 25 ppm PCBs by weight [40 CFR §761.125(c)(3)(v)]. At such times as restricted access areas (other than outdoor electrical substations) are converted to another use, the spill site shall be cleaned up to the non-restricted access area requirements of 40 CFR §761.125(c)(4)(v). Soils in non-restricted access areas contaminated by a PCB spill shall be cleaned to 10 ppm PCBs by weight, provided that the soil is excavated to a minimum depth of 10 inches. The excavated soil will be replaced with clean soil (i.e., containing less than 1 ppm PCBs by weight), and the spill site will be restored (e.g., replacement of turf) [40 CFR §761.125(c)(4)(v)].		TBC	TBC	Soil containing PCBs will be excavated as necessary to attain FRLs; soil concentrations are expected to be less than 50 ppm by weight.	The OU5 ROD established FRLs for the PCBs Arochlor-1254 and Arochlor-1260 as 0.13 mg/kg (ppm by weight).
Subpart G— PCB Spill Cleanup Policy, Sampling Requirements 40 CFR §761.130	Criteria that the EPA uses to determine the adequacy of the cleanup of spills resulting from the release of regulated PCB materials at concentrations of ≥50 ppm by weight. Applies to spills which occur after May 4, 1987.			TBC	Applies to spills of regulated PCB materials (i.e., those that have a concentration ≥50 ppm by weight) that occurred after May 4, 1987.	See preceding.
	CERTIFICATION OF CLEANUP					
Methods for Evaluating the Attainment of Cleanup Standards, Volume 1: Soils and Solid Media EPA 230/02-89-042 NTIS PB89-234959 February 1989	This EPA guidance document describes methods for testing whether soil chemical concentrations at a site are statistically below a cleanup standard or ARAR. If it can be reasonably concluded that the remaining soil or treated soil at a site has concentrations that are statistically less than relevant cleanup standards then the site can be judged protective of human health and the environment.	TBC	√			Following sections of the Sitewide Excavation Plan: 2.2.2 Certifying FRL Attainment 3.4 Certification App G Certification Design Rationale

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs FOR REMEDIATION AREA 1 PHASE II

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	CERTIFICATION OF CLEANUP, continued					
RCRA/CERCLA Integrated Closure Director's Final Findings and Orders (June 4, 1996) Section V.4 in lieu of Closure and Post-Closure Under Interim Standards Certification of Closure OAC 3745-66-15	For the HWMUs identified in Attachment A of these Orders, the Respondent ... are hereby exempted from complying with OAC rule 3745-66-15 provided that they submit Remedial Action Reports for the HWMUs contained in operable units 1, 3, and 5 within sixty (60) days from completion of remedial activities at each operable unit, which is determined by the U.S. EPA, in accordance with CERCLA. These Remedial Action Reports shall certify that the HWMUs contained in operable units 1 and 3 have been closed, and that the environmental media in operable unit 5 has been managed, in accordance with the final remedies contained in the Records of Decision and in accordance with the Director's closure performance standards. Attachment C [of these Orders] summarizes the documents that will be provided during remediation process. These CERCLA documents contain the substantive requirements of the RCRA and Ohio hazardous waste closure regulations.		√	√	Pertinent to closures of HWMUs listed in preceding entries (from Table 2-1 of the Sitewide Excavation Plan, derived from the DF&O's Attachment A) during the CERCLA soil remediation activities.	Following sections of the Sitewide Excavation Plan: 3.4.6 Certification Report 7.3 Certification Report 7.4 Other Related Future Documents

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs FOR REMEDIATION AREA 1 PHASE II

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
IMPACTED MATERIAL MANAGEMENT						
	DEFINITIONS & GENERAL FACILITY STANDARDS					
Resource, Conservation, and Recovery Act 42 U.S.C. §6903 (27)	Solid waste means any garbage, refuse, sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations and from community activities, but does not include source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954.	Appl	√	√		Following sections of the Sitewide Excavation Plan: 3.0 General Implementation Approach App F Implementation of Construction
Solid Waste and Infectious Waste Regulations, Definitions OAC 3745-27-01 (B)(40)	Solid wastes means such unwanted residual solid or semisolid material as results from industrial, commercial, agricultural, and community operations, *excluding earth or material from construction, mining, or demolition operations, or other waste materials of the type that would normally be included in demolition debris, nontoxic flyash, spent nontoxic foundry sand, and slag and other substances that are not harmful or inimical to public health*, and includes, but is not limited to, garbage, tires, combustible and noncombustible material, street dirt, and debris. Solid waste does not include any material that is an infectious waste or a hazardous waste. For the purpose of this definition, "semisolid material" does not contain liquids which can be readily released under normal climatic conditions, as determined by method 9095 (paint filter liquids test) in SW-846: "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods".	Appl	√	√		See preceding.
Solid Waste and Infectious Waste Regulations, Definitions OAC 3745-27-01 (B)(15) OAC 3745-27-30 (A), (E), (H) ORC 3734.021 (A)(1)(c), (d)	Infectious waste is defined by nine categories of waste including human blood specimens and blood products, sharp wastes used in the treatment or inoculation of human beings, and any other waste materials generated in the diagnosis, treatment, or immunization of human beings. A generator who places all sharp infectious wastes and all unused hypodermic needles, syringes, and scalpel blades into a "SHARPS" container before they are transported and who generates less than 50 lbs. of infectious wastes each month and does not hold a certificate of registration as a generator of infectious wastes may transport and dispose of infectious wastes in the same manner as solid wastes. Treated infectious wastes can be transported and disposed in the same manner as noninfectious waste. Infectious waste that is also radioactive shall be managed in accordance with applicable Ohio Department of Health and U.S. Nuclear Regulatory Commission regulations.	Appl	√			See preceding.

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs FOR REMEDIATION AREA 1 PHASE II

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	DEFINITIONS & GENERAL FACILITY STANDARDS, continued					
Identification and Listing of Hazardous Waste, Definition of Hazardous Waste OAC 3745-51-03(A) [Identification and Listing of Hazardous Waste, Subpart A—General, Definition of Hazardous Waste 40 CFR §261.3(a)]	A solid waste is a hazardous waste, if: (1) it is not excluded from regulation as a hazardous waste under OAC 3745-51-04(B) [40 CFR §261.4(b)]; and (2)(a) it exhibits any of the characteristics of hazardous waste identified in OAC 3745-51-20 to 3745-51-24, with certain exceptions noted therein; or (2)(b) it is listed as hazardous waste in OAC 3745-51-31 to 3745-51-33 [40 CFR §§ 261.30 - 261.35]; or (2)(c) it is a mixture of solid and hazardous wastes; (2)(d) it is a mixture of hazardous wastes as defined in OAC 3745-51-03(A)(2)(a) to 3745-51-03(A)(2)(c) [three previous bullets in this entry] and source material, special nuclear material, or by product material, as defined by the Atomic Energy Act of 1954, as amended, 42 U.S.C. 2011 et seq., or other radionuclides. However, only the hazardous components of the mixture are subject to regulation for purposes of this [OAC 3745-51] chapter.	Appl	✓	✓		See preceding.
Identification and Listing of Hazardous Waste, Exclusions OAC 3745-51-04(B)(4) [Identification and Listing of Hazardous Waste, Subpart A—General, Exclusions 40 CFR §261.4(b)(4)]	The following are not hazardous wastes: fly ash waste, bottom ash waste, slag waste, and flue gas emission control waste generated primarily from the combustion of coal or other fossil fuels.	Appl	✓	✓		See preceding.

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs FOR REMEDIATION AREA 1 PHASE II

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	DEFINITIONS & GENERAL FACILITY STANDARDS, continued					
Identification and Listing of Hazardous Wastes, Requirements for Recyclable Materials OAC 3745-51-06(A)(3) [40 CFR §261.6]	The following recyclable materials are not subject to regulation under rules 3745-50-40 to 3745-50-62 or Chapters 3745-52 to 3745-57 and 3745-65 to 3745-69 of the Ohio Administrative Code [Parts 262 through 266 or 268, 270, or 124 of 40 CFR], and are not subject to the notification requirements of Chapter 3734 of the Ohio Revised Code [Section 3010 of RCRA]: (b) used batteries (or used battery cells) returned to a battery manufacturer for regeneration; (c) used oil that exhibits one or more of the characteristics of hazardous waste but is recycled in some other manner than being burned for energy recovery; (d) scrap metal.	√	√	Appl	Pertinent to remediation generated materials. Recycling of remediation generated materials may be conducted.	Operable Unit 3 Integrated RD/RA Work Plan
Termination of Operating Licenses for Nuclear Reactors Section C.4 Decontamination for Release for Unrestricted Use U.S. Nuclear Regulatory Commission Regulatory Guide 1.86 (June 1974)	A reasonable effort shall be made to eliminate residual surface radiological contamination and to achieve the acceptable surface contamination levels stated in this guide.	√	√	TBC	Pertinent to releasing to off-site any potentially radiologically-contaminated materials. Radiation surveys will be performed prior to releasing any potentially radiologically- contaminated materials off-site to demonstrate compliance with the surface contamination levels stated in this guide.	Operable Unit 1 Design Criteria Package
Identification and Listing of Hazardous Waste, Subpart A—General, Definition of Hazardous Waste 40 CFR §261.3	Debris means solid material exceeding a 60-mm particle size that is intended for disposal and that is a manufactured object, plant or animal matter, or natural geologic material.	√	Appl	Appl	Applicable to hazardous debris that will be disposed of off-site.	Operable Unit 1 Design Criteria Package, and following sections of the Sitewide Excavation Plan: 1.3.2.4 Remediation Debris 2.5.10 Off-Site Shipments F.5.2 Off-Site Di[illegible]al

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs FOR REMEDIATION AREA 1 PHASE II

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	DEFINITIONS & GENERAL FACILITY STANDARDS, continued					
Land Disposal Restrictions, Subpart A—General, Definitions Applicable to This Part 40 CFR §268.2	Hazardous debris means debris that contains a listed hazardous waste, or that exhibits a characteristic of hazardous waste.	√	Appl	Appl	"contains a listed hazardous waste" portion is not applicable to on-property disposal within a CAMU under the CAMU Rule as invoked under the OU5 ROD.	See preceding.
Hazardous Waste Regulations Contained-In Policy 58 FR 48092 (September 14, 1993) Proposed rule. 58 FR 59976 (November 12, 1993) Notice to extend comment. 59 FR 10778 (March 8, 1993) Clarification, partial withdrawal.	Hazardous soil means soil that contains RCRA hazardous waste(s) listed in Subpart D of 40 CFR Part 261, or that exhibits one or more of the characteristics of a hazardous waste as defined in Subpart C of 40 CFR Part 261. This proposed rule recommends contained-in determinations for hazardous debris, hazardous soil and other environmental media. Any person may petition the Regional Administrator to exclude, under 261.3(f)(2) or 261.3(g) of this chapter, hazardous debris and hazardous soil or other environmental media, including but not limited to groundwater, surface water, and sediment, from regulation as hazardous waste. The petition for a contained-in determination must include information sufficient to demonstrate that specific constituent concentrations in the hazardous debris, hazardous soil, or other environmental media to be excluded do not pose a hazard to human health and the environment at that site. (Such a petition is not necessary for remedial actions conducted pursuant to RCRA or CERCLA authorities provided that a similar determination is made by the Regional Administrator based on substantially equivalent information including public notice and comment requirements).		TBC	TBC	Will be considered for managing treated soil that is contaminated with RCRA waste.	Addressed in the selected remedy in the OU5 ROD. Following sections of the Sitewide Excavation Plan: 3.3 Remedial Action App F Implementation of Construction
Ohio Petroleum Contaminated Soil Policy OEPA Policy PP.01-03-200	The basis of the "contained in" policy is that environmental media, such as soil or groundwater, are not considered to be waste material. Because they are not a solid waste, the mixture rule, as set forth in OAC 3745-51-03, does not apply when they become contaminated with a listed hazardous waste but only contains the waste. The result of this policy is that if the waste constituents can be removed, the soil is no longer considered to contain a hazardous waste. Therefore, since soil is not a waste material it does not have to be de-listed in order for it to be used for its intended purpose. However, as long as the soil contains the waste material, it must be managed as a hazardous waste. If this concept is applied to petroleum-contaminated soil, the soil containing a petroleum hydrocarbon would not need to be managed as a solid waste if the contaminants were removed.	TBC	TBC		Allows for treated/ clean soil to be used as backfill. Thus, all soil below FRLs can be backfilled as clean soil.	See preceding.

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs FOR REMEDIATION AREA 1 PHASE II

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	DEFINITIONS & GENERAL FACILITY STANDARDS, continued					
Hazardous Waste Management System: General, Subpart B—Definitions 40 CFR §260.10	Remediation waste means all solid and hazardous waste, and all media (including groundwater, surface water, soils, and sediments) and debris, which contain listed hazardous wastes or which themselves exhibit a hazardous waste characteristic, that are managed for the purpose of implementing corrective action requirements under 40 CFR §264.101 and RCRA section 3008(h). For a given facility, remediation wastes may originate only from within the facility boundary, but may include waste managed in implementing RCRA sections 3004(v) or 3008(h) for releases beyond the facility boundary.	R&A	√	√	Under the Consent Agreement as amended in 1991 (a.k.a., the ACA), remediation at the FEMP is conducted under the authorities of CERCLA as well as RCRA sections 3004(v) and 3008(h).	Following secctions of the Sitewide Excavation Plan: 1.3.2.1 Soil and Sediment 1.3.2.6 Corrective Action Management Unit Rule 3.3.4.1 WAC Attainment
CERCLA Compliance with Other Laws Manual Section 2.7	Placement/disposal of waste does not occur under the following circumstances: • waste is consolidated within a unit (including an area of contamination that can be viewed as a single unit); • waste is capped in place, including grading prior to capping; • waste is treated in situ; and • waste is processed within the unit in order to improve its structural stability for closure or for movement of equipment over the area.	TBC	√	TBC	See following entry on the Corrective Action Management Unit.	See following entry.

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs FOR REMEDIATION AREA 1 PHASE II

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	DEFINITIONS & GENERAL FACILITY STANDARDS, continued					
Corrective Action Management Unit Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities, Subpart S- 40 CFR §264.552 (58 FR 865829, February 16, 1993)	For the purpose of implementing remedies under Sec. 264.101 or RCRA Section 3008(h), the EPA Regional Administrator may designate an area at the facility as a corrective action management unit (CAMU). One or more CAMUs may be designated at a facility under the following conditions: 1) Emplacement of remediation wastes into or within a CAMU does not constitute land disposal of hazardous wastes. 2) Consolidation or emplacement of remediation wastes into or within a CAMU does not constitute creation of a unit subject to minimum technology requirements. 3) The CAMU shall facilitate the implementation of reliable, effective, protective, and cost-effective remedies. 4) Waste management activities associated with the CAMU shall not create unacceptable risks to humans or to the environment resulting from exposure to the wastes. 5) The CAMU shall include uncontaminated areas of the facility only if including such areas for the purpose of managing remediation waste is more protective than management of such wastes at contaminated areas of the facility. 6) Areas within the CAMU, where wastes remain in place after closure of the CAMU, shall be managed and contained so as to minimize future releases, to the extent practicable. 7) The CAMU shall expedite the timing of remedial activity implementation, when appropriate and applicable. 8) The CAMU shall enable the use, when appropriate, of treatment technologies (including innovative technologies) to enhance the long-term effectiveness of remedial actions by reducing the toxicity, mobility, or volume of wastes that will remain in place after closure of the CAMU. 9) The CAMU shall, to the extent practicable, minimize the land area of the facility upon which wastes will remain in place after closure of the CAMU. The owner/operator shall provide sufficient information to enable the Regional Administrator to designate a CAMU in accordance with the criteria in Sec. 264.552. Note: RCRA regulated units (HWMUs) within a CAMU are fully subject to RCRA closure regulations.	R&A	Appl	R&A	Per the selected remedy in the OU5 ROD: • the FEMP site (bounded by its property boundaries) is designated as a CAMU; • consolidation or management of on-site remediation wastes into or within the CAMU does not constitute creation of a unit subject to minimum technology requirements (MTRs) [OAC 3745-68-101 and 40 CFR §265.301(a)] and does not invoke land disposal restrictions (LDRs)[OAC 3745-59 and 40 CFR§§268.40 through .44].	Section 9.1.8 of the OU5 ROD.

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs FOR REMEDIATION AREA 1 PHASE II

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	DEFINITIONS & GENERAL FACILITY STANDARDS, continued					
Generator Standards, Hazardous Waste Determination OAC 3745-52-11(A) through (F) [Standards Applicable to Generators of Hazardous Waste, Subpart A—General, Hazardous Waste Determination 40 CFR §262.11]	A person who generates a solid waste must determine if that waste is a hazardous waste using the following method: 1) First determine if the waste is excluded from regulation (not a solid waste) under OAC 3745-51-04 (40 CFR §261.4).	✓	R&A	R&A		Section 3.3.2 of the Sitewide Excavation Plan.
	2) If the waste is not excluded from regulation, then determine if the waste is listed as a waste ("listed waste") in OAC 3745-51-30 to 3745-51-33 (Subpart D of 40 CFR Part 261).				Not pertinent for on-site disposal because of the CAMU rule (see preceding entry); pertinent for off-site treatment or disposal.	See preceding entry, and following sections of the Sitewide Excavation Plan: 2.5.10 Off-Site Shipments F.5.2 Off-Site Disposal
	3) For purposes of complying with OAC 3745-59 (40 CFR Part 268), or if the waste is not a "listed waste" per step 2 above, then determine if the waste is a "characteristic waste" as identified in OAC 3745-51-20 through 3745-51-24 (Subpart C of 40 CFR Part 261), by either (a) testing the waste using appropriate methods, or (b) applying knowledge of the hazardous characteristic of the waste in light of the materials or processes used ("process knowledge").				Per the RODs, pertinent only to the following areas: In OU2: approx. 300 cubic yards of lead-containing soil in the South Field Firing Range. In OU5: 1) Abandoned sump west of Pilot Plant; 2) Area between KC-2 Warehouse and RR tracks; 3) Trap Range; 4) Paddy's Run streambank fill materials west of OU4's Silos 1-4; 5) Scrap Metal Pile area; and 6) Area north of maintenance building.	Sections 7.4 (@ p. 7-5), 9.1 (@ p. 9-2), and 10.2.2 (@ p. 10-4) of the OU2 ROD; Section 9.1.1 (@ p. 9-6) and Table 9-1 of the OU5 ROD

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs FOR REMEDIATION AREA 1 PHASE II

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	DEFINITIONS & GENERAL FACILITY STANDARDS, continued					
Interim [Status Hazardous Waste Facility] Standards —General Provisions, General Provisions OAC 3745-65-13 through -16 [Interim Status Hazardous Waste Facility Standards, Subpart B—General Facility Standards 40 CFR §§265.13 through .16]	Owners/operators of a facility must obtain chemical and physical analyses of a representative sample of each hazardous or nonhazardous waste to be treated, stored or disposed of at the facility prior to treatment, storage or disposal. At a minimum, the analysis must contain all the information which must be known to treat, store or dispose of the waste, and may include using existing published or documented data on the waste or on waste generated from similar processes ("process knowledge") [OAC 3745-65-13].	√	R&A	R&A	Pertinent to management of hazardous waste.	Following sections of the Sitewide Excavation Plan: 3.3.2 Impacted Materials Handling and Tracking 4.0 Location-Specific Excavation Approaches F.5 Excavated Material Management
	The facility owner/operator must prevent the unknowing entry, and minimize the possibility of unauthorized entry, to the active portion of the facility unless certain conditions apply [OAC 3745-65-14].				Controls which limit access to the FEMP will remain in place throughout remediation activities.	F.2.1 Establishing Excavation Boundaries and Access Controls
	The facility operator must maintain and inspect all monitoring equipment, safety and emergency equipment, security devices, and operating and structural equipment that are important to preventing human health hazards. The frequency of inspection may vary by item, and should be based on the rate of possible deterioration of the equipment/item and the probability of an environmental or human health incident if the deterioration, malfunction, or operator error goes undetected [OAC 3745-65-15]. The facility operator must train personnel for procedures relevant to the positions in which they are employed [OAC 3745-65-16].					F.8 Remediation Maintenance Activities
Hazardous Waste Facility Environmental Impact ARC 734.05(D)(6)(c)	A hazardous waste facility installation and operation permit shall not be approved unless it is proven that the facility represents the minimum adverse environmental impact, considering the state of available technology, the nature and economics of various alternatives and other pertinent considerations	√	Appl	√	**NOTE:** Incorrectly cited in RODs as OAC 3745.05(D)(6)(c).	Appendix H of OU2 FS, Appendix J of OU5 FS, and Appendix J of OU3 RI/FS.

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs FOR REMEDIATION AREA 1 PHASE II

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	DEFINITIONS & GENERAL FACILITY STANDARDS, continued					
Hazardous Waste Facility Minimum Risk ORC 3734.05(D)(6)(d)	A hazardous waste facility installation and operation permit shall not be approved unless it is proven that the facility represents the minimum risk of all the following: 1) contamination of groundwater and surface water; 2) fires or explosions from treatment, storage, or disposal methods; 3) accidents during transportation; 4) impact to public health and safety; 5) air pollution; and 6) soil contamination.	√	Appl	√	**NOTE:** Incorrectly cited in RODs as OAC 3745.05(D)(6)(d).	OU2, OU5, and OU3 FS Reports and RODs. Also, see preceding.
Interim [Status Hazardous Waste Facility] Standards—General Provisions, Preparedness and Prevention OAC 3745-65-31 through -35, and -37 [Interim Status Hazardous Waste Facility Standards, Subpart C—Preparedness and Prevention 40 CFR §§265.31 through .35, and .37]	TSD facility operators must design, construct, maintain and operate facilities to minimize the possibility of fire, explosion or any unplanned sudden or non-sudden release of hazardous waste to air, soil, or surface water which might threaten human health or the environment.	√	R&A	R&A		See two preceding entries. For waste that is dispositioned for off-site disposal, see the Operable Unit 1 Design Criteria Package.

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs FOR REMEDIATION AREA 1 PHASE II

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	DEFINITIONS & GENERAL FACILITY STANDARDS, continued					
Interim [Status Hazardous Waste Facility] Standards—General Provisions, Contingency Plan and Emergency Procedures OAC 3745-65-51, -52, -55 and -56 [Interim Status Hazardous Waste Facility Standards, Subpart D—Contingency Plan and Emergency Procedures 40 CFR §265.51, .52, .55 and .56]	Each facility operator must have a contingency plan designed to minimize hazards to human health and the environment due to fires, explosions, or any unplanned releases of hazardous waste constituents to air, soil or surface/groundwater.	√	R&A	R&A	Pertinent to on-site facilities that treat, store, or dispose of hazardous waste.	FEMP Emergency Plan (PL-3020); all HWMUs identified in Table 2-1 of the Sitewide Excavation Plan (and the subset identified previously in this table) are addressed in Section G: Contingency Plan of the RCRA Part B Permit Application. Also, see three preceding entries. For waste that is dispositioned for off-site disposal, see the Operable Unit 1 Design Criteria Package.
Hazardous Waste Incinerators [and Miscellaneous Units], Environmental Performance Standards OAC 3745-57-91 and -92 [Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities, Subpart X—Miscellaneous Units, 40 CFR §§264.601 through .603]	Prevention of any release that may have adverse effects on human health or the environment includes, but is not limited to: A. Migration of waste constituents in the groundwater or subsurface environment. B. Migration of waste constituents in surface water, or wetlands or on the soil surface. C. Migration of waste constituents in the air. Monitoring, tests, analytical data, inspections, response, and reporting procedures and frequencies must ensure compliance with pertinent portions of the OAC.	√	R&A	√	Pertinent to on-site facilities that treat, store, or dispose of hazardous waste in miscellaneous units unless the CAMU Rule is applied.	See preceding.

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs FOR REMEDIATION AREA 1 PHASE II

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	DEFINITIONS & GENERAL FACILITY STANDARDS, continued					
Radioactive Waste Management DOE Order 5820.2A Chapter III (3)(d)	Low-level waste shall be characterized with sufficient accuracy to permit proper segregation, treatment, storage, and disposal. This characterization shall ensure that, upon generation after processing, the actual physical and chemical characteristics and major radionuclide content are recorded and known during all stages of the waste management process. Waste characterization data shall be recorded on a waste manifest and shall include: • the physical and chemical characteristics of the waste; • volume of the waste (total of waste and any solidification or absorbent media); • weight of the waste (total of waste and any solidification or absorbent media); • major radionuclides and their concentrations; and • packaging date, package weight, and external volume.	TBC	√	TBC	The CERCLA RI/FS process established the nature and extent of contamination at the FEMP. During excavation, monitoring will be performed in accordance with of the Sitewide Excavation Plan and individual IRDPs, and results will be documented in order to determine if impacted material meets the OSDF WACs or offsite WACs. These sources of characterization information (RI/FS sampling, pre-design investigations, FRL attainment, WAC attainment) will provide the required manifest information.	Addressed throughout the CERCLA RI/FS and selection of remedy process, culminated in the OU2, OU5 and OU3 RODs; OSDF Impacted Materials Placement Plan; following section of the Sitewide Excavation Plan: 3.3.2 Impacted Materials Handling and Tracking

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs FOR REMEDIATION AREA 1 PHASE II

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	DEFINITIONS & GENERAL FACILITY STANDARDS, continued					
Waste Treatment DOE Order 5820.2A Chapter III (3)(f)	Waste treatment techniques such as incineration, shredding, and compaction to reduce volume and provide more stable waste forms shall be implemented as necessary to meet performance requirements. Use of waste treatment techniques to increase the life of the disposal facility and improve the long-term facility performance, by improved site stability and reduction of infiltrating water, is required to the extent it is cost effective. The development of large scale waste treatment facilities shall be supported by the appropriate National Environmental Policy Act documentation. Operation of waste treatment facilities shall be supported by adequate documentation.	TBC	TBC	TBC	Based upon CERCLA RI/FS data, the majority of the impacted material from OU2, OU5 & OU3 will meet the OSDF WACs and thus the performance objectives of the OSDF & DOE Order 5820.2A without treatment. This has been demonstrated through the modeling performed in the FSs to establish the OSDF WACs. Two categories of impacted materials may need to be treated before disposal. Lead-contaminated trap range soil, if toxicity characteristic hazardous, will be treated to the extent necessary to remove the toxicity characteristic that causes it to be regulated as hazardous. Physical sizing & treatment as per the OSDF Impacted Material Placement Plan will be conducted as needed on debris for proper waste placement and stability within the OSDF.	Addressed throughout the CERCLA RI/FS and selection of remedy process, culminated in the OU2, OU5 and OU3 RODs; OSDF Impacted Materials Placement Plan; following sections of the Sitewide Excavation Plan: 1.3.2.7 RCRA Characteristic Waste Disposal 2.1.1.3 Characteristically Hazardous Waste 3.3.2 Impacted Materials Handling and Tracking F.5 Excavated Material Management

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs FOR REMEDIATION AREA 1 PHASE II

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	DEFINITIONS & GENERAL FACILITY STANDARDS, continued					
Radioactive Waste Management DOE Order 5820.2A Chapter III (3)(g)	The volume of waste and number of shipments of low-level wastes shall be minimized and the shipments will be conducted based on plans developed by field organizations. Generators shall provide an annual forecast in the third quarter of the fiscal year to the field organizations managing the off-site disposal facility to which the waste is to be shipped. Generators must receive advance approval from the receiving facility and shall certify prior to shipment that waste meets the receiving facility waste acceptance criteria. The certification program shall be auditable and able to withstand independent review.	TBC	TBC	TBC	The volume of impacted material to be disposed onsite in the OSDF will be minimized through a number of programs. First, extensive sampling has been performed during the CERCLA RI/FS process and the extent of excavation has been established using this data. Combined with the sampling/monitoring that will be performed during excavation in accordance with Section 3.3 of the Sitewide Excavation Plan and individual IRDPs, this will confirm that only impacted materials are excavated and sent to disposal. Compliance with the FEMP Pollution Prevention and Waste Minimization Awareness Plan will minimize the amount of low-level waste (i.e., equipment and personal protective equipment) generated during remediation.	FEMP Pollution Prevention and Waste Minimization Awareness Plan; also see preceding.

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs FOR REMEDIATION AREA 1 PHASE II

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	DEFINITIONS & GENERAL FACILITY STANDARDS, continued					
Control of Residual Radioactive Material DOE Order 5400.5 Chapter IV (6)(b) 10 CFR Part 834 (PROPOSED)	Interim storage must provide: 1) Control and stabilization features shall be designed to provide, to the extent reasonably achievable, an effective life of 50 years with a minimum life of at least 25 years. 2) Controls shall be designed such that radon-222 concentrations in the atmosphere above facility surfaces or openings in addition to background levels, will not exceed: (a) 100 pCi/L at any given point; (b) An annual average concentration of 30 pCi/L over the facility site; and (c) An annual average concentration of 3 pCi/L at or above any location outside the facility site. (d) Flux rates from the storage of radon producing wastes shall not exceed 20 pCi/m^2/sec, as required by 40 CFR Part 61.	✓	TBC		The selected remedies are for a permanent remedy, not for interim storage; any short-term management of impacted material to be employed is to facilitate the permanent remedy.	Addressed through the approved selected remedy in the OU2 and OU5 RODs, associated remedial design documents (i.e., IRDPs).
	3) Controls shall be designed such that concentrations of radionuclides in the groundwater and quantities of residual radioactive material will not exceed applicable federal or state standards.					Section 5.0 of the Sitewide Excavation Plan, for environmental controls to be implemented during remediation.
	4) Access to a property and use of on-site material contaminated by residual radioactive material should be controlled through appropriate administrative and physical controls such as those described in 40 CFR Part 192. These control features should be designed to provide, to the extent reasonable, an effective life of at least 25 years.					Section 3.0 and Appendix F of the Sitewide Excavation Plan and IRDPs, for access controls to be implemented during remediation.

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs FOR REMEDIATION AREA 1 PHASE II

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	MANAGEMENT OF LOW-LEVEL RADIOACTIVE MATERIAL					
Low-level Radioactive Waste Generation DOE Order 5820.2A Chapter III (3)(c)	Technical and administrative controls shall be directed to reducing the gross volume of waste generated and/or the amount of radioactivity requiring disposal. Waste reduction efforts shall include consideration of process modification, process optimization, materials substitution, and decontamination. All DOE low-level waste generators shall establish auditable programs to assure that the amount of low-level waste generated and/or shipped for disposal is minimized. Each DOE low-level waste generator shall separate uncontaminated waste from low-level waste to facilitate cost-effective treatment and disposal. Each DOE low-level waste generator preparing a design for a new process or process change shall incorporate principles into the design that will minimize the generation of low-level waste.	TBC	TBC	TBC	Implementation of the FEMP Pollution Prevention and Waste Minimization Awareness Plan will confirm that all newly generated waste is minimized during remediation. Additionally, excavation controls such as rapid test methodology and additional laboratory sampling will be implemented to confirm that only impacted material with contamination that is potentially above the FRLs is being excavated and sent to disposal. Physical sampling of the impacted materials and/or rapid test method methodology will also confirm that only material that exceeds the OSDF WAC is sent offsite for disposal.	Addressed throughout the CERCLA RI/FS and selection of remedy process, culminated in the OU2, OU5 and OU3 RODs; also, FEMP Pollution Prevention and Waste Minimization Awareness Plan.
	MANAGEMENT OF HAZARDOUS REMEDIATION WASTE					
Identification and Listing of Hazardous Waste, Residues of Hazardous Waste in Empty Containers OAC 3745-51-07(A) &(B) [Identification and Listing of Hazardous Waste, Subpart A—General, Residues of Hazardous Waste in Empty Containers 40 CFR §261.7]	Any hazardous waste remaining in either an empty container or an inner liner removed from an empty container is not subject to regulation under 40 CFR Parts 261 through 265 (RCRA requirements). A container is empty if: 1) All wastes have been removed that can be removed using the practices commonly employed to remove materials from that type of container (e.g., pouring, pumping, and aspirating); and 2) No more than 2.5 cm (1 inch) of residue remains on bottom of the container or inner liner; or 3) No more than 3 percent by weight of the total capacity of the container remains in the container or inner liner if the container is less than or equal to 110 gal. in size, or no more than 0.3 percent by weight of the total capacity of the container remains in the container or inner liner if the container is greater than 110 gal. in size.	√	R&A	Appl	Pertinent when containerizing: soil contaminated by RCRA waste; any treatment residues exhibiting RCRA characteristics including advanced wastewater treatment (AWWT) sludges and soil decontamination residues.	Following sections of the Sitewide Excavation Plan: 2.5.8 Special Materials 3.3.2.2 Special Materials App F Implementation of Construction

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs FOR REMEDIATION AREA 1 PHASE II

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	MANAGEMENT OF HAZARDOUS REMEDIATION WASTE, continued					
Closure and Post-Closure Under Interim Standards, Condition of Containers OAC 3745-66-71 Compatibility of Containers OAC 3745-66-72 Management of Containers OAC 3745-66-73 Inspections OAC 3745-66-74 Special Requirements for Ignitable or Reactive Waste OAC 3745-66-76 Special Requirements for Incompatible Wastes OAC 3745-66-77 [Interim Status Standards, Subpart I—Use & Management of Containers, 40 CFR §§265.171 through .174, .176 and .177]	If a container holding hazardous waste is not in good condition (e.g., severe rusting, apparent structural defects) or begins to leak, the owner or operator must transfer the hazardous waste from this container to a container that is in good condition or manage the waste in some other way that complies with this requirement.	√	R&A	Appl	Pertinent to handling containers holding environmental media contaminated with RCRA waste.	See preceding.

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs FOR REMEDIATION AREA 1 PHASE II

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	MANAGEMENT OF HAZARDOUS REMEDIATION WASTE, continued					
[New Facilities] Corrective Action, Closure and Post-Closure Requirements Containment OAC 3745-55-75 [Interim Status Hazardous Waste Facility Standards, Subpart I—Use & Management of Containers 40 CFR §§265.175(a) through (c)]	A containment system for RCRA container storage areas must be designed and operated to provide: 1) A sufficiently impervious base, which is sloped to collect any leaking liquids. 2) Sufficient capacity to contain liquids. 3) Prevention of run-on into the containment system. 4) A sump to prevent overflow of the collection system. Storage areas for containers holding only wastes that do not contain free liquids need not have a containment system, provided that: 1) The storage area is sloped or is otherwise designed and operated to drain and remove liquid resulting from precipitation, or 2) The containers are elevated or are otherwise protected from contact with accumulated liquid.	√	R&A	Appl	Pertinent to handling soil contaminated with RCRA listed or characteristic hazardous waste. A Part B Permit Application for RCRA storage has been submitted to the OEPA.	See preceding.
[New Facilities] Surface Impoundments, Waste Piles, and Tanks [Waste Piles] Design and Operating Requirements OAC 3745-56-51(A) through (F)	A waste pile used to store or treat hazardous waste must have: 1) A liner that is designed, constructed, and installed to prevent any migration of waste out of the pile into the adjacent subsurface soil or groundwater or surface water at any time during the active life (including the closure period) of the waste pile, and 2) A leachate collection and removal system immediately above the liner that is designed, constructed, maintained, and operated to collect and remove leachate from the pile.	√	R&A	√	Pertinent to on-site hazardous waste piles used for longer than 90 days unless the CAMU Rule is applied.	Addressed through remedial design documents (IRDPs).
	The owner/operator must design, construct, operate, and maintain a run-on control system capable of preventing flow onto the active portion of the pile during peak discharge from at least a 25-yr storm and manage a runoff management system to collect and control at least the water volume resulting from a 24-hr, 25-yr storm.	√	R&A	√		
	If the pile contains any particulate matter which may be subject to wind dispersal, the owner or operator must cover or otherwise manage the pile to control wind dispersal.	√	R&A	√		FEMP Fugitive Dust Control BAT Determination, Fugitive Dust Control Requirements (RM-0047), and Section 5.1.2.2 and Appendix F of the Sitewide Excavation Plan

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs FOR REMEDIATION AREA 1 PHASE II

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
Monitoring and Inspection OAC 3745-56-54(A) and (B)	During construction or installation, liners and cover systems must be inspected for uniformity, damage, and imperfections.	√	R&A	√		
	Collection and holding facilities associated with run-on and runoff control system must be inspected weekly and be emptied or otherwise managed expeditiously after storms to maintain design capacity of the system.	√	R&A	√		FEMP Stormwater Pollution Prevention Plan (RM-0039), and Appendix F of the Sitewide Excavation Plan
Special Requirements for Ignitable or Reactive Waste OAC 3745-56-56(A) and (B) Special Requirements for Incompatible Wastes OAC 3745-56-57(A), (B) and (C) [Subpart L—Waste Piles, 40 CFR §§264.251 through .259]	Ignitable, reactive, or incompatible waste must not be added to a waste pile, unless specified in OAC 3745-56-56(A) and (B) or 57(A), (B) and (C).	√	R&A	√	The CERCLA RIs did not find evidence of ignitive or reactive material on-site. Impacted and non-impacted materials management will be segregated and managed in separate piles, based upon intended disposition (waste acceptance criteria).	Following sections of the Sitewide Excavation Plan: 3.3.2 Impacted Materials Handling and Tracking 4.0 Location-Specific Excavation Approaches F.5 Excavated Material Management
Temporary Units Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities, Subpart S- 40 CFR §264.553 (a), (b) (58 FR 865829, February 16, 1993)	For temporary tanks and container storage areas used for treatment or storage of remediation wastes during remedial activities, the Regional Administrator may determine that a design, operating, or closure standard applicable to such units may be replaced by alternative requirements which are protective of human health and the environment. Any temporary unit to which alternative requirements are applied shall be: • located within the facility boundary; and • used solely for treatment or storage of remediation wastes.	R&A	√	R&A	Pertinent to short-term management/storage of impacted materials during the CERCLA soil remediation activities.	Appendix F of the Sitewide Excavation Plan

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs FOR REMEDIATION AREA 1 PHASE II

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	MANAGEMENT OF HAZARDOUS REMEDIATION WASTE, continued					
Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities, Subpart DD—Containment Building 40 CFR §§264.1100 through .1102 57 FR 37194 (August 18, 1992)	The owner or operator is not subject to the definition of land disposal in RCRA Section 3004(k) provided that the unit: 1) Is a completely enclosed, self-supporting structure that is designed and constructed of synthetic materials of sufficient strength and thickness to support themselves, the waste contents, and any personnel and heavy equipment that operate within the unit, and to prevent failure due to pressure gradients, settlement, compression, or uplift, physical contact with the hazardous wastes to which they are exposed, climatic conditions, and the stresses of daily operation, including the movement of heavy equipment within the unit and contact of such equipment with containment walls; 2) Has a primary barrier for management of solids, in addition to a liquid collection system and secondary containment for management of liquids. 3) Has controls sufficient to prevent fugitive dust emissions to meet the no visible emission standard in Sec. 264.1101(c)(1)(iv); and 4) Is designed and operated to ensure containment and prevent the tracking of materials from the unit by personnel or equipment. At closure, the owner or operator must remove or decontaminate all waste residues, contaminated containment system components, contaminated subsoil, and structures and equipment contaminated with waste and leachate, and handle them as a hazardous waste.	√	R&A	R&A	Pertinent to excavated RCRA hazardous soil and sediment that may require short-term management/ storage during the CERCLA soil remediation activities. NO CONTAINMENT BUILDINGS ARE ANTICIPATED.	Following sections of the Sitewide Excavation Plan: 3.3.2 Impacted Materials Handling and Tracking 4.0 Location-Specific Excavation Approaches F.5 Excavated Material Management

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs FOR REMEDIATION AREA 1 PHASE II

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	MANAGEMENT OF HAZARDOUS REMEDIATION WASTE, continued					
Procedures for Planning and Implementing Offsite Response Actions ("The CERCLA Offsite Rule") 40 CFR §300.400	Materials from remediation of a CERCLA site ("CERCLA waste") may only be transferred to offsite facilities that are in compliance with Resource Conservation and Recovery Act (RCRA), Toxic Substances Control Act (TSCA), or other applicable federal and state requirements. Only U.S. EPA has the authority to determine whether the facility in question meets the acceptability criteria and is acceptable for receiving CERCLA waste from offsite. A determination of acceptability for a potential receiving facility is to be made in advance (prior to initiating transportation offsite, and optimally prior to making offsite treatment/ storage/disposal contract arrangements). Materials covered under this rule ("CERCLA waste") are any hazardous substance, pollutant, or contaminant as defined under CERCLA sections 101(14) and 101(33). Samples of waste sent to a laboratory for characterization are exempt from the rule, as are certain treatability study waste. The receiving facility must meet compliance and release criteria presented therein. Facility is defined as the receiving unit(s) that directly stores, treats, or disposes of the CERCLA waste. Non-receiving units at the facility need not be in compliance in order for the U.S. EPA to determine that the receiving unit meets acceptance criteria. U.S. EPA may deem a facility acceptable even if certain minor violations have occurred at the facility. If a facility does not meet the criteria for receiving CERCLA wastes, the rule presents notification, determination, appeal/review and reinstatement procedures.	✓	✓	Appl	Pertinent to preparation of materials for off-site disposition.	Operable Unit 1 Design Criteria Package, and following sections of the Sitewide Excavation Plan: 2.5.10 Off-Site Shipments F.5.2 Off-Site Disposal
[Hazardous Waste] Generator Standards OAC 3745-52-20 through -23, and -30 through -33 [40 CFR §§262.20 through .23, and .30 through .33]	Before transporting hazardous waste or offering hazardous waste for transportation off-site ("pre-transport"), for either treatment or disposal, general requirements for the generator, require a manifest [OAC 3745-52-20 through -23], in accordance with the requirements specified therein. Pre-transport requirements also include appropriate packaging [OAC 3745-52-30], labeling [OAC 3745-52-31], marking [OAC 3745-52-32], and placarding [OAC 3745-52-33], in accordance with the requirements specified therein.	✓	Appl	Appl	Pertinent to preparation of RCRA hazardous waste for off-site treatment and/or disposal.	See preceding.

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs FOR REMEDIATION AREA 1 PHASE II

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	MANAGEMENT OF HAZARDOUS REMEDIATION WASTE, continued					
Implementation of the United Nations Recommendations, International Maritime Dangerous Goods Code, and the International Civil Aviation Organization's Technical Instructions 59 FR 67390 (December 29, 1994) as amended by 60 FR 26796 (May 18, 1995)	These rules (final rule was effective October 1, 1995) comprehensively revise the Hazardous Materials Regulations (HMR), 49 CFR Parts 171-173, 177, and 178, with respect to hazard communication, classification, and packaging requirements based on United Nations recommendations.	√	√	Appl	These Hazardous Materials Regulations are requirements embedded in both the state (OAC) and federal (CFR) regulations in both the generator standards (preceding entry) and the transporter standards (subsequent entry).	See preceding generator standards entry and subsequent transporter standards entry.
[Hazardous Waste] Land Disposal Restrictions OAC 3745-59 [Land Disposal Restrictions, Subpart D—Treatment Standards 40 CFR §§268.40 through .44]	A restricted hazardous waste may be land disposed only if: 1) An extract of the waste or of the treatment residue of the waste does not exceed the value shown in 40 CFR §268.41. 2) It is treated using a technology specified in 40 CFR §268.42(a) or an equivalent treatment method. 3) The constituent concentrations in the waste or treatment residue of the waste do not exceed the value shown in 40 CFR §268.43.	√	Appl	Appl	Not applicable to on-property disposal within a CAMU under the CAMU Rule as invoked under the OU5 ROD. Applicable to those RCRA hazardous wastes that will be disposed of off-site.	See three preceding entries.
Land Disposal Restrictions, Subpart D—Treatment Standards, Treatment Standards Expressed as Concentrations in Waste Extract 40 CFR §268.41	The maximum concentration of lead (5.0 mg/L) may not be exceeded whether it is the extract of a waste or waste treatment residual.	R&A	Appl		Not applicable to on-property disposal within a CAMU under the CAMU Rule as invoked under the OU5 ROD. Applicable to those RCRA hazardous wastes that will be disposed of off-site.	See four preceding entries.

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs FOR REMEDIATION AREA 1 PHASE II

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
MANAGEMENT OF HAZARDOUS REMEDIATION WASTE, continued						
Land Disposal Restrictions, Subpart D—Treatment Standards, Contaminated Debris 40 CFR §268.45	Hazardous debris must be treated before land disposal unless the EPA determines that the debris is no longer contaminated with hazardous waste or the debris is treated to the waste-specific treatment standard for the waste contaminating the debris. Provided the debris does not exhibit a RCRA characteristic it is not subject to regulation under 40 CFR 260, 261 to 266, 268, or 270 if: 1) The hazardous debris has been treated using one of the required extraction or destruction technologies specified in 40 CFR §268.45; or 2) The debris, considering the extent of contamination, is determined to no longer be contaminated with hazardous waste.	√	Appl	Appl	Not applicable to on-property disposal within a CAMU under the CAMU Rule as invoked under the OU5 ROD. Applicable to those RCRA hazardous wastes that will be disposed of off-site.	See five preceding entries.
[Hazardous Waste] Transporter Standards OAC 3745-53-20 through -22, -30 and -31 [40 CFR §§263.20 through .22, .30 and .31]	General requirements for the transporter during transportation of hazardous waste for off-site treatment and/or disposal require acceptance and handling of hazardous waste and use of the manifest system [OAC 3745-53-20], compliance with the manifest [OAC 3745-53-21], and recordkeeping [OAC 3745-53-22], in accordance with the requirements specified therein. Appropriate response actions must be taken for any hazardous waste discharge during transportation [OAC 3745-53-30 and -31], in accordance with the requirements specified therein.	√	Appl	Appl	Pertinent to transportation of RCRA hazardous wastes (and mixed wastes) for off-site treatment and/or disposal.	See six preceding entries.
MANAGEMENT OF PCB-TAINTED MATERIAL						
Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution In Commerce, And Use Prohibitions, Subpart D—Storage and Disposal, Disposal Requirements 40 CFR §761.60(a)(4)	Any nonliquid PCBs at concentrations 50 ppm or greater in the form of contaminated soil, rags, or other debris shall be disposed of in an incinerator which complies with 40 CFR §761.70, or in a chemical waste landfill which complies with 40 CFR §761.75.		Appl	Appl	Pertinent if soil or other material containing PCBs above 50 ppm is excavated. PCBs were detected in soil beneath the Fire Training Facility.	Following sections of the Sitewide Excavation Plan: 3.3.2 Impacted Materials Handling and Tracking 4.0 Location-Specific Excavation Approaches F.5 Excavated Material Management

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs FOR REMEDIATION AREA 1 PHASE II

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	MANAGEMENT OF PCB-TAINTED MATERIAL, continued					
Subpart D—[PCB] Storage and Disposal, Disposal Requirements 40 CFR §761.60(e)	Any person who is required to incinerate PCBs or PCB items under this subpart and who can demonstrate that an alternate method of destroying PCBs or PCB items can achieve a level of performance equivalent to the requirements under 40 CFR §761.70 may submit a written request to either the Regional Administrator or the Director, Exposure Evaluation Division, for an exemption from the incineration requirements of 40 CFR §§ 761.70 or 761.60. The applicant must show that the alternate method of destroying PCBs will not present an unreasonable risk of injury to health or the environment.		Appl	Appl	Pertinent only if PCB contaminated soil is greater than 50 ppm and is treated on-property using a method besides incineration. DOE neither currently anticipates any such material nor on-property treatment for any such material under the soil remediation projects.	See preceding entry, plus following sections of the Sitewide Excavation Plan: 2.5.10 Off-Site Shipments F.5.2 Off-Site Disposal
Subpart D—[PCB] Storage and Disposal, Storage for Disposal 40 CFR §761.65	This section applies to the design of storage areas to be used for later disposal of PCBs at concentrations of 50 ppm or greater.		Appl	Appl	Pertinent to storage of PCB-contaminated material at 50 ppm or greater. DOE does not currently anticipate any such material under the soil remediation projects.	See two preceding entries.

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs FOR REMEDIATION AREA 1 PHASE II

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
POST-CLOSURE						
	DESCRIPTION OF POST-CLOSURE CARE					
[New Facilities Hazardous Waste] Surface Impoundments, Waste Piles, and Tanks, [Waste Piles] Post-Closure OAC 3745-56-58(B) [Subpart L—Waste Piles, 40 CFR §§264.251 through .259]	If, after removing or decontaminating all residues and making all reasonable effort to effect removal or decontamination of contaminated components, subsoil, structures and equipment, the owner/operator finds that not all contaminated subsoil can be practically removed or decontaminated, he must close the unit/facility and perform post-closure care in accordance with OAC 3745-57-10. NOTE: If clean (or risk-based) closure is performed, then post-closure care is not required.	√	R&A		Only pertinent to those units where risk-based FRLs are not met. DOE intends, and anticipates being able, to clean (risk-based) close all identified HWMUs.	Currently addressed in the OSDF Post-closure Care and Inspection Plan (20100-PL-010), which notes in its Prologue that it can be revised at a later date to expand the scope of coverage to encompass the entire FEMP site as needed. Will also be addressed in the Certification Report and Remedial Action Report — see following sections of the Sitewide Excavation Plan: 1.4.2 Related Documents 3.4.6 Certification Report 7.3 Certification Report 7.4 Other Related Future Documents
[New Facilities Hazardous Waste] Incinerators [and Miscellaneous Units], [Miscellaneous Units] Environmental Performance Standards OAC 3745-57-93 [Subpart X—Miscellaneous Units, 40 CFR §§264.601 through .603]	If a treatment or storage miscellaneous unit has contaminated soil or groundwater that cannot be completely removed or decontaminated during closure, the unit must also meet the requirements of OAC 3745-57-91 during the post-closure care period. The post-closure plan under OAC 3745-55-18 must specify the procedures that will be used to satisfy this requirement. A miscellaneous unit that is a disposal unit must be maintained in a manner that complies with OAC 3745-57-91 during the post-closure care period. NOTE: If clean (or risk-based) closure is performed, then post-closure care is not required.	√	R&A		Only pertinent to those units where risk-based FRLs are not met. DOE intends, and anticipates being able, to clean (risk-based) close all identified HWMUs.	See preceding.

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs FOR REMEDIATION AREA 1 PHASE II

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	DESCRIPTION OF POST-CLOSURE CARE, continued					
Closure and Post-Closure Under Interim Standards, Post-closure Care and Use of Property OAC 3745-66-17(A) [40 CFR §265.117(a)(2)]	Post-closure care of hazardous waste management units must begin after completion of closure of the unit and continue for 30 years after that date unless shortened by the Director [of the OEPA, a.k.a. the Ohio Director of Environmental Protection] in accordance with OAC 3745-66-18(G) (40 CFR §117(a)(2)). NOTE: If clean (or risk-based) closure is performed, then post-closure care is not required.	✓	Appl		NOTE: Identified in the OU5 ROD as applicable only to existing hazardous waste management units (HWMUs); also cited in RCRA/CERCLA Integrated Closure DF&O @ V.1. Only pertinent to those units where risk-based FRLs are not met. DOE intends, and anticipates being able, to clean (risk-based) close all identified HWMUs.	See preceding.
Closure and Post-Closure Under Interim Standards, Post-closure Care and Use of Property OAC 3745-66-17(A)(1) [40 CFR §265.117(a)(1)]	Post-closure care...must consist of at least the following: • monitoring and reporting; and • maintenance and monitoring of waste containment systems. NOTE: If clean (or risk-based) closure is performed, then post-closure care is not required.	✓	✓	✓	Cited in the RCRA/CERCLA Integrated Closure DF&O @ V.1. Only pertinent to those units where risk-based FRLs are not met. DOE intends, and anticipates being able, to clean (risk-based) close all identified HWMUs.	See preceding.
Closure and Post-Closure Under Interim Standards, Post-closure Plan; Amendment of Plan OAC 3745-66-18(A)&(C)	The owner of a hazardous waste disposal unit shall have a written post-closure plan, which shall identify the activities that will be carried on after closure of each unit and the frequency of those activities, and include at least: • a description of the planned monitoring activities and frequencies at which they will be performed; • a description of the planned maintenance activities and frequencies at which they will be performed, to ensure (a) the integrity of the cap and final cover or other containment systems, and (b) the functioning of the monitoring equipment; and • the name, address and telephone number of the person or office to contact about the hazardous waste disposal unit or facility during the post-closure period. NOTE: If clean (or risk-based) closure is performed, then post-closure care is not required.	✓	✓	✓	Cited in the RCRA/CERCLA Integrated Closure DF&O @ V.1. Only pertinent to those units where risk-based FRLs are not met. DOE intends, and anticipates being able, to clean (risk-based) close all identified HWMUs.	See preceding.

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs FOR REMEDIATION AREA 1 PHASE II

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	MODIFICATIONS TO POST-CLOSURE CARE PLAN OR PERIOD					
Closure and Post-Closure Under Interim Standards, Post-closure Plan; Amendment of Plan OAC 3745-66-18(D)	The owner may amend the post-closure plan any time during the active life of the facility or during the post-closure period. NOTE: If clean (or risk-based) closure is performed, then post-closure care is not required.	√	√	√	Cited in the RCRA/CERCLA Integrated Closure DF&O @ V.1. Only pertinent to those units where risk-based FRLs are not met. DOE intends, and anticipates being able, to clean (risk-based) close all identified HWMUs.	Currently addressed in the OSDF Post-closure Care and Inspection Plan (20100-PL-010), which notes in its Prologue that it can be revised at a later date to expand the scope of coverage to encompass the entire FEMP site as needed.
Closure and Post-Closure Under Interim Standards, Post-closure Plan; Amendment of Plan OAC 3745-66-18(G)	The post-closure plan and length of the post-closure period may be modified any time prior to the end of the post-closure care period. A modification of the post-closure plan may include, where appropriate, the temporary suspension rather than permanent deletion of one or more post-closure care requirements. At the end of the specified period of suspension, the Director [of the OEPA, a.k.a. the Ohio Director of Environmental Protection] would then determine whether the requirements should be permanently discontinued or reinstated to prevent threats to human health and the environment. NOTE: If clean (or risk-based) closure is performed, then post-closure care is not required.	√	√	√	Cited in the RCRA/CERCLA Integrated Closure DF&O @ V.1. Only pertinent to those units where risk-based FRLs are not met. DOE intends, and anticipates being able, to clean (risk-based) close all identified HWMUs.	See preceding.
	PROPERTY USE RESTRICTIONS					
Closure and Post-Closure Under Interim Standards, Post-closure Care and Use of Property OAC 3745-66-17® [40 CFR §265.117(c)]	Post-closure use of property on or in which hazardous waste remain after partial or final closure must never be allowed to disturb the integrity of the final cover, liner(s), or any other component of the containment system, or the function of the facility's monitoring systems, unless the Director [of the OEPA, a.k.a. the Ohio Director of Environmental Protection] approves otherwise. NOTE: If clean (or risk-based) closure is performed, then post-closure care is not required.	√	Appl	√	NOTE: Identified in the OU5 ROD as applicable only to existing hazardous waste management units (HWMUs); also cited in RCRA/CERCLA Integrated Closure DF&O @ V.1. DOE intends, and anticipates being able, to clean (risk-based) close all identified HWMUs.	Currently addressed in the OSDF Post-closure Care and Inspection Plan (20100-PL-010), which notes in its Prologue that it can be revised at a later date to expand the scope of coverage to encompass the entire FEMP site as needed.
Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings Subpart A— 40 CFR §192.02(a)	Controls of residual radioactive materials from inactive uranium processing sites shall be designed to be effective for up to 1,000 years, to the extent reasonably achievable, and in any case, for at least 200 years, and provide protection of groundwater.	R&A	R&A		Most pertinent to the design and closure of the On-Site Disposal Facility.	Addressed by selected remedies of OU2 and OU5 RODs in establishment of FRLs.

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs FOR REMEDIATION AREA 1 PHASE II

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	PROPERTY USE RESTRICTIONS, continued					
Long-Term Management of Residual Radioactive Material DOE Order 5400.5 Chapter IV (6)(d) 10 CFR Part 834 (PROPOSED)	Controls of residual radioactive materials from inactive uranium processing sites shall be designed to be effective for up to 1,000 years, to the extent reasonably achievable, and in any case, for at least 200 years, and provide protection of groundwater.		TBC			Addressed by selected remedies of OU2 and OU5 RODs in establishment of FRLs.
	For long-term management of uranium, thorium, and their decay products, access to a property and use of on-site materials contaminated by residual radioactive material should be controlled through appropriate administrative and physical controls such as those described in 40 CFR 192. These controls should be designed to be effective to the extent reasonable for at least 200 years.	TBC	TBC			
Control of Residual Radioactive Material Above the Guidelines DOE Order 5400.5 Chapter IV (6)	Residual radioactive material with concentrations above the generic guidelines (see chemical-specific requirements) shall be managed in accordance with Chapter II, Requirements for Radiation Protection of the Public and the Environment, and operational and control requirements.	TBC	√			See preceding.
Supplemental Limits and Exceptions for Residual Radioactive Material DOE Order 5400.5 Chapter IV (7)	If special specific property circumstances indicate that the concentration guidelines or authorized limits are not appropriate, supplemental limits or an exception may be requested to those guidelines or limits.	TBC	√			See preceding.
Release of Property DOE Order 5400.5 Chapter II (5)	Real property (land and structures), personal property, materials, and equipment shall be released if the concentration of radioactivity is within the limits of residual radioactive contamination.	TBC	√			See preceding.

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TABLE A-2 (Continued)
PERTINENT ARARs AND TBCs FOR REMEDIATION AREA 1 PHASE II

Citation	Requirement	OU2 ROD	OU5 ROD	OU3 ROD	Remarks	Cross-Reference
	POST-CLOSURE NOTICE/SURVEY PLAT					
Closure and Post-Closure Under Interim Standards, Survey Plat OAC 3745-66-16	The owner shall submit -- to the local zoning authority, or the authority with jurisdiction over local land use, and to the Director [of the OEPA, a.k.a. the Ohio Director of Environmental Protection] -- a survey plat, prepared and certified by a professional land surveyor, indicating the location and dimensions of landfill cells or other hazardous waste disposal units with respect to permanently surveyed benchmarks. The plat must contain a note, prominently displayed, which states the owner's obligation to restrict disturbance of the hazardous waste disposal unit in accordance with OAC 3745-66-17(C).	✓	✓	✓	Cited in the RCRA/CERCLA Integrated Closure DF&O @ V.1.	Currently addressed in the OSDF Post-closure Care and Inspection Plan (20100-PL-010), which notes in its Prologue that it can be revised at a later date to expand the scope of coverage to encompass the entire FEMP site as needed.
Closure and Post-Closure Under Interim Standards, Post-closure Notices OAC 3745-66-19(A)	The owner shall submit -- to the local zoning authority, or the authority with jurisdiction over local land use, and to the Director [of the OEPA, a.k.a. the Ohio Director of Environmental Protection] -- a record of the type, location, and quantity of hazardous waste disposed of within each cell or disposal unit of the facility.	✓	✓	✓	Cited in the RCRA/CERCLA Integrated Closure DF&O @ V.1.	See preceding.
	DEED NOTATION					
Closure and Post-Closure Under Interim Standards, Post-closure Notices OAC 3745-66-19(B)	The owner shall record, in accordance with state law, a notation on the deed of the facility property, or on some other instrument which is normally examined during title search, that will notify in perpetuity the potential purchasers of the property that: • the land has been used to manage hazardous wastes; • its use is restricted under the Ohio Administrative Code closure and post-closure rules; and • a survey plat and record of the type, location, and quantity of hazardous wastes disposed of within each cell or hazardous waste unit of the facility as required by OAC 3745-66-16 and OAC 3745-66-19(A) have been filed with the local zoning authority or the authority with jurisdiction over local land use and the Director [of the OEPA, a.k.a. the Ohio Director of Environmental Protection].	✓	✓	✓	Cited in the RCRA/CERCLA Integrated Closure DF&O @ V.1.	Currently addressed in the OSDF Post-closure Care and Inspection Plan (20100-PL-010), which notes in its Prologue that it can be revised at a later date to expand the scope of coverage to encompass the entire FEMP site as needed. Will also be addressed in the NRRP.
Closure and Post-Closure Under Interim Standards, Post-closure Notices OAC 3745-66-19[illegible]	If the owner or any subsequent owner of the land upon which a hazardous waste disposal unit was located wishes to remove hazardous wastes and hazardous waste residues in satisfaction of the criteria in OAC 3745-66-17(C), the owner may request that the Director [of the OEPA, a.k.a. the Ohio Director of Environmental Protection] approve either: • the removal of the notation on the deed to the facility property or other instrument normally examined during title search; or • the addition of a notation to the deed or instrument indicating the removal of the hazardous waste.	✓	✓	✓	Cited in the RCRA/CERCLA Integrated Closure DF&O @ V.1.	See preceding.

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APPENDIX B
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	Figure B-2 Removal Action 14 Excavation Areas
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B-3	Letter Report for Predesign Investigation for Total Uranium in the Sewage Treatment Plant (STP) Area (DOE 1997)
B-4	Letter Report for Lead Delineation in the A1PII Trap Range (DOE 1997)
B-5	Letter Report for the Predesign Investigation of Technetium-99 in Soil in the Sewage Treatment Plant Area (DOE 1997)
B-6	Letter Report for Perched Water Sampling at the Sewage Treatment Plant (DOE 1997)
B-7	Letter Report for Area 1 Phase II Field Sampling of Miscellaneous Areas (DOE 1997)
B-8	Letter Report for the Predesign Investigation Survey of Surface Soils (DOE 1997)
B-9	Leachability Studies and Kriging Methods Used to Develop Estimated Limits of Excavation

APPENDIX B INVESTIGATION DATA

Appendix B contains analytical data, figures, letter reports, and a discussion of leachability testing and modeling. The documents enclosed support the conclusions about current environmnetal conditions and remedial alternatives.

APPENDIX B-1

TABLES

A1PII IMPLEM' 'ATION PLAN
APPENDIX . .'ABLE B-1

This table presents the data associated with sampling conducted in support of Waste Management Activities.

Waste Mgmt Project Number	Data Sampled	Release	Sample ID	Parameter	Results	UNITS
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-1	ALPHA	1500	pCi/g
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-1	BETA	5500	pCi/g
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-3	ALPHA	370	pCi/g
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-3	BETA	2900	pCi/g
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-4	ALPHA	470	pCi/g
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-4	BETA	2400	pCi/g
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-5	ALPHA	1400	pCi/g
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-5	BETA	5800	pCi/g
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-2	ALPHA	1500	pCi/g
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-2	BETA	9100	pCi/g
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-1	MOISTURE	41.32	wt %
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-1	LIQUIDS	ABSENT	PRESENT/ABSENT
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-1	% LIQUIDS	NR	PERCENT
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-2	MOISTURE	70.78	wt %
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-2	LIQUIDS	ABSENT	PRESENT/ABSENT
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-2	% LIQUIDS	NR	PERCENT
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-3	MOISTURE	33.50	wt %
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-3	LIQUIDS	ABSENT	PRESENT/ABSENT
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-3	% LIQUIDS	NR	PERCENT
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-5	MOISTURE	26.69	wt %
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-5	LIQUIDS	ABSENT	PRESENT/ABSENT
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-5	% LIQUIDS	NR	PERCENT
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-4	MOISTURE	31.00	wt %
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-4	LIQUIDS	ABSENT	PRESENT/ABSENT
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-4	% LIQUIDS	NR	PERCENT
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-1	VINYL CHLORIDE	50	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-1	1,1-DICHLOROETHYLENE	25	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-1	2-BUTANONE	50	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-1	CHLOROFORM	25	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-1	1,2-DICHLOROETHANE	25	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-1	CARBON TETRACHLORIDE	25	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-1	BENZENE	25	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-1	TRICHLOROETHYLENE	25	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-1	TETRACHLOROETHYLENE	25	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-1	CHLOROBENZENE	25	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-1	SILVER	50.0	ug/L

A1PII IMPLEMENTATION PLAN
APPENDIX B TABLE B-1

Waste Mgmt Project Number	Data Sampled	Release	Sample ID	Parameter	Results	UNITS
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-1	ARSENIC	708	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-1	BARIUM	519	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-1	CADMIUM	148	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-1	CHROMIUM	51.7	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-1	LEAD	245	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-1	SELENIUM	455	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-1	MERCURY	0.50	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-2	VINYL CHLORIDE	50	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-2	1,1-DICHLOROETHYLENE	25	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-2	2-BUTANONE	50	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-2	CHLOROFORM	25	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-2	1,2-DICHLOROETHANE	25	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-2	CARBON TETRACHLORIDE	25	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-2	BENZENE	25	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-2	TRICHLOROETHYLENE	25	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-2	TETRACHLOROETHYLENE	25	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-2	CHLOROBENZENE	25	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-2	SILVER	50.0	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-2	ARSENIC	641	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-2	BARIUM	202	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-2	CADMIUM	48.2	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-2	CHROMIUM	20.0	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-2	LEAD	245	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-2	SELENIUM	455	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-2	MERCURY	0.50	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-3	VINYL CHLORIDE	50	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-3	1,1-DICHLOROETHYLENE	25	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-3	2-BUTANONE	50	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-3	CHLOROFORM	25	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-3	1,2-DICHLOROETHANE	25	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-3	CARBON TETRACHLORIDE	25	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-3	BENZENE	25	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-3	TRICHLOROETHYLENE	25	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-3	TETRACHLOROETHYLENE	25	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-3	CHLOROBENZENE	25	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-3	SILVER	50.0	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-3	ARSENIC	590	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-3	BARIUM	420	ug/L

Waste Mgmt Project Number	Data Sampled	Release	Sample ID	Parameter	Results	UNITS
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-3	CADMIUM	72.3	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-3	CHROMIUM	20.0	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-3	LEAD	245	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-3	SELENIUM	455	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-3	MERCURY	0.50	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-4	VINYL CHLORIDE	50	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-4	1,1-DICHLOROETHYLENE	25	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-4	2-BUTANONE	50	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-4	CHLOROFORM	25	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-4	1,2-DICHLOROETHANE	25	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-4	CARBON TETRACHLORIDE	25	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-4	BENZENE	25	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-4	TRICHLOROETHYLENE	25	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-4	TETRACHLOROETHYLENE	25	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-4	CHLOROBENZENE	25	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-4	SILVER	50.0	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-4	ARSENIC	784	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-4	BARIUM	286	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-4	CADMIUM	26.7	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-4	CHROMIUM	20.0	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-4	LEAD	245	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-4	SELENIUM	455	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-4	MERCURY	0.50	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-5	VINYL CHLORIDE	50	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-5	1,1-DICHLOROETHYLENE	25	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-5	2-BUTANONE	50	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-5	CHLOROFORM	25	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-5	1,2-DICHLOROETHANE	25	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-5	CARBON TETRACHLORIDE	25	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-5	BENZENE	25	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-5	TRICHLOROETHYLENE	25	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-5	TETRACHLOROETHYLENE	25	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-5	CHLOROBENZENE	25	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-5	SILVER	50.0	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-5	ARSENIC	610	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-5	BARIUM	316	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-5	CADMIUM	31.3	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-5	CHROMIUM	20.0	ug/L

A1PII IMPLEMENTATION PLAN
APPENDIX B TABLE B-1

Waste Mgmt Project Number	Data Sampled	Release	Sample ID	Parameter	Results	UNITS
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-5	LEAD	245	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-5	SELENIUM	455	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-5	MERCURY	0.50	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-TB	VINYL CHLORIDE	50	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-TB	1,1-DICHLOROETHYLENE	25	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-TB	2-BUTANONE	50	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-TB	CHLOROFORM	25	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-TB	1,2-DICHLOROETHANE	25	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-TB	CARBON TETRACHLORIDE	25	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-TB	BENZENE	25	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-TB	TRICHLOROETHYLENE	25	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-TB	TETRACHLOROETHYLENE	25	ug/L
95-1150 NTS CONFIRMATORY	9/21/95	1000008521	95-1150-TB	CHLOROBENZENE	25	ug/L

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A1PII IMPLEM ATION PLAN
APPENDIX B TABLE B-1

This table presents the data associated with sampling conducted in the Sludge Drying Beds as part of Part B of the Comparability Study. The locations are all within the Sludge Drying Beds confirming that the Sludge is above WAC.

Sample ID	Location ID	Sample Date	Depth (inches)	Northing	Easting	Parameter	Result	Qualifier	Units
PBC-18-1	PBC-18-1	14-May-97	0 - 4	480061.6	1351774	Radium-226	2.1	NV	pCi/g
PBC-18-1	PBC-18-1	14-May-97	0 - 4	480061.6	1351774	Thorium-232	4.8	NV	pCi/g
PBC-18-1	PBC-18-1	14-May-97	0 - 4	480061.6	1351774	Uranium, Total	1400	NV	mg/kg
PBC-18-1	PBC-18-1	14-May-97	0 - 4	480061.6	1351774	Uranium, Total	1240	NV	mg/kg
PBC-18-1	PBC-18-1	14-May-97	0 - 4	480061.6	1351774	Uranium, Total	1300	NV	mg/kg
PBC-18-1	PBC-18-1	14-May-97	0 - 4	480061.6	1351774	Uranium, Total	1260	NV	mg/kg
PBC-18-2	PBC-18-2	14-May-97	0 - 4	480065.5	1351775	Radium-226	2.3	NV	pCi/g
PBC-18-2	PBC-18-2	14-May-97	0 - 4	480065.5	1351775	Thorium-232	2.5	NV	pCi/g
PBC-18-2	PBC-18-2	14-May-97	0 - 4	480065.5	1351775	Uranium, Total	350	NV	mg/kg
PBC-18-2	PBC-18-2	14-May-97	0 - 4	480065.5	1351775	Uranium, Total	670	NV	mg/kg
PBC-18-2	PBC-18-2	14-May-97	0 - 4	480065.5	1351775	Uranium, Total	610	NV	mg/kg
PBC-18-2	PBC-18-2	14-May-97	0 - 4	480065.5	1351775	Uranium, Total	610	NV	mg/kg
PBC-18-3	PBC-18-3	14-May-97	0 - 4	480061.3	1351778	Radium-226	2.4	NV	pCi/g
PBC-18-3	PBC-18-3	14-May-97	0 - 4	480061.3	1351778	Thorium-232	2.9	NV	pCi/g
PBC-18-3	PBC-18-3	14-May-97	0 - 4	480061.3	1351778	Uranium, Total	550	NV	mg/kg
PBC-18-3	PBC-18-3	14-May-97	0 - 4	480061.3	1351778	Uranium, Total	680	NV	mg/kg
PBC-18-3	PBC-18-3	14-May-97	0 - 4	480061.3	1351778	Uranium, Total	750	NV	mg/kg
PBC-18-3	PBC-18-3	14-May-97	0 - 4	480061.3	1351778	Uranium, Total	670	NV	mg/kg
PBC-18-4	PBC-18-4	14-May-97	0 - 4	480057.9	1351774	Radium-226	2	NV	pCi/L
PBC-18-4	PBC-18-4	14-May-97	0 - 4	480057.9	1351774	Thorium-232	3	NV	pCi/L
PBC-18-4	PBC-18-4	14-May-97	0 - 4	480057.9	1351774	Uranium, Total	520	NV	mg/kg
PBC-18-4	PBC-18-4	14-May-97	0 - 4	480057.9	1351774	Uranium, Total	710	NV	mg/kg
PBC-18-4	PBC-18-4	14-May-97	0 - 4	480057.9	1351774	Uranium, Total	640	NV	mg/kg
PBC-18-4	PBC-18-4	14-May-97	0 - 4	480057.9	1351774	Uranium, Total	660	NV	mg/kg
PBC-18-5	PBC-18-5	14-May-97	0 - 4	480062.2	1351771	Radium-226	2.7	NV	pCi/g
PBC-18-5	PBC-18-5	14-May-97	0 - 4	480062.2	1351771	Thorium-232	5.4	NV	pCi/g
PBC-18-5	PBC-18-5	14-May-97	0 - 4	480062.2	1351771	Uranium, Total	1600	NV	mg/kg
PBC-18-5	PBC-18-5	14-May-97	0 - 4	480062.2	1351771	Uranium, Total	1390	NV	mg/kg
PBC-18-5	PBC-18-5	14-May-97	0 - 4	480062.2	1351771	Uranium, Total	1500	NV	mg/kg
PBC-18-5	PBC-18-5	14-May-97	0 - 4	480062.2	1351771	Uranium, Total	1520	NV	mg/kg

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2043 ~~1093~~

A1PII IMPLEMENTATION PLAN
APPENDIX B TABLE B-1

Sample ID	Location ID	Sample Date	Depth (inches)	Northing	Easting	Parameter	Result	Qualifier	Units
PBC-18-6	PBC-18-6	14-May-97	0 - 4	480071.4	1351775	Radium-226	2.1	NV	pCi/g
PBC-18-6	PBC-18-6	14-May-97	0 - 4	480071.4	1351775	Thorium-232	3.1	NV	pCi/g
PBC-18-6	PBC-18-6	14-May-97	0 - 4	480071.4	1351775	Uranium, Total	750	NV	mg/kg
PBC-18-6	PBC-18-6	14-May-97	0 - 4	480071.4	1351775	Uranium, Total	650	NV	mg/kg
PBC-18-6	PBC-18-6	14-May-97	0 - 4	480071.4	1351775	Uranium, Total	810	NV	mg/kg
PBC-18-6	PBC-18-6	14-May-97	0 - 4	480071.4	1351775	Uranium, Total	750	NV	mg/kg
PBC-18-7	PBC-18-7	14-May-97	0 - 4	480068.9	1351781	Radium-226	2.7	NV	pCi/g
PBC-18-7	PBC-18-7	14-May-97	0 - 4	480068.9	1351781	Thorium-232	3.8	NV	pCi/g
PBC-18-7	PBC-18-7	14-May-97	0 - 4	480068.9	1351781	Uranium, Total	1950	NV	mg/kg
PBC-18-7	PBC-18-7	14-May-97	0 - 4	480068.9	1351781	Uranium, Total	1700	NV	mg/kg
PBC-18-7	PBC-18-7	14-May-97	0 - 4	480068.9	1351781	Uranium, Total	1960	NV	mg/kg
PBC-18-7	PBC-18-7	14-May-97	0 - 4	480068.9	1351781	Uranium, Total	1800	NV	mg/kg
PBC-18-8	PBC-18-8	14-May-97	0 - 4	480063.7	1351784	Radium-226	3.2	NV	pCi/g
PBC-18-8	PBC-18-8	14-May-97	0 - 4	480063.7	1351784	Thorium-232	6.4	NV	pCi/g
PBC-18-8	PBC-18-8	14-May-97	0 - 4	480063.7	1351784	Uranium, Total	1500	NV	mg/kg
PBC-18-8	PBC-18-8	14-May-97	0 - 4	480063.7	1351784	Uranium, Total	1700	NV	mg/kg
PBC-18-8	PBC-18-8	14-May-97	0 - 4	480063.7	1351784	Uranium, Total	1730	NV	mg/kg
PBC-18-8	PBC-18-8	14-May-97	0 - 4	480063.7	1351784	Uranium, Total	1480	NV	mg/kg
PBC-18-9	PBC-18-9	14-May-97	0 - 4	480057.6	1351783	Radium-226	2.1	NV	pCi/g
PBC-18-9	PBC-18-9	14-May-97	0 - 4	480057.6	1351783	Thorium-232	3.2	NV	pCi/g
PBC-18-9	PBC-18-9	14-May-97	0 - 4	480057.6	1351783	Uranium, Total	570	NV	mg/kg
PBC-18-9	PBC-18-9	14-May-97	0 - 4	480057.6	1351783	Uranium, Total	880	NV	mg/kg
PBC-18-9	PBC-18-9	14-May-97	0 - 4	480057.6	1351783	Uranium, Total	720	NV	mg/kg
PBC-18-9	PBC-18-9	14-May-97	0 - 4	480057.6	1351783	Uranium, Total	860	NV	mg/kg
PBC-18-10	PBC-18-10	14-May-97	0 - 4	480053.2	1351779	Radium-226	2.8	NV	pCi/g
PBC-18-10	PBC-18-10	14-May-97	0 - 4	480053.2	1351779	Thorium-232	3.7	NV	pCi/g
PBC-18-10	PBC-18-10	14-May-97	0 - 4	480053.2	1351779	Uranium, Total	740	NV	mg/kg
PBC-18-10	PBC-18-10	14-May-97	0 - 4	480053.2	1351779	Uranium, Total	890	NV	mg/kg
PBC-18-10	PBC-18-10	14-May-97	0 - 4	480053.2	1351779	Uranium, Total	850	NV	mg/kg
PBC-18-10	PBC-18-10	14-May-97	0 - 4	480053.2	1351779	Uranium, Total	760	NV	mg/kg
PBC-18-11	PBC-18-11	14-May-97	0 - 4	480051.9	1351774	Cesium-137	2.2	NV	pCi/g
PBC-18-11	PBC-18-11	14-May-97	0 - 4	480051.9	1351774	Radium-226	6.2	NV	pCi/g
PBC-18-11	PBC-18-11	14-May-97	0 - 4	480051.9	1351774	Thorium-232	9	NV	pCi/g

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A1PII IMPLEM ATION PLAN
APPENDIX ABLE B-1

Sample ID	Location ID	Sample Date	Depth (inches)	Northing	Easting	Parameter	Result	Qualifier	Units
PBC-18-11	PBC-18-11	14-May-97	0 - 4	480051.9	1351774	Uranium, Total	1600	NV	mg/kg
PBC-18-11	PBC-18-11	14-May-97	0 - 4	480051.9	1351774	Uranium, Total	2000	NV	mg/kg
PBC-18-11	PBC-18-11	14-May-97	0 - 4	480051.9	1351774	Uranium, Total	1760	NV	mg/kg
PBC-18-11	PBC-18-11	14-May-97	0 - 4	480051.9	1351774	Uranium, Total	1460	NV	mg/kg
PBC-18-12	PBC-18-12	14-May-97	0 - 4	480054.4	1351768	Radium-226	3.8	NV	pCi/g
PBC-18-12	PBC-18-12	14-May-97	0 - 4	480054.4	1351768	Thorium-232	6.9	NV	pCi/g
PBC-18-12	PBC-18-12	14-May-97	0 - 4	480054.4	1351768	Uranium, Total	1500	NV	mg/kg
PBC-18-12	PBC-18-12	14-May-97	0 - 4	480054.4	1351768	Uranium, Total	1400	NV	mg/kg
PBC-18-12	PBC-18-12	14-May-97	0 - 4	480054.4	1351768	Uranium, Total	1700	NV	mg/kg
PBC-18-12	PBC-18-12	14-May-97	0 - 4	480054.4	1351768	Uranium, Total	1550	NV	mg/kg
PBC-18-13	PBC-18-13	14-May-97	0 - 4	480059.5	1351765	Radium-226	3.1	NV	pCi/g
PBC-18-13	PBC-18-13	14-May-97	0 - 4	480059.5	1351765	Thorium-232	7.8	NV	pCi/g
PBC-18-13	PBC-18-13	14-May-97	0 - 4	480059.5	1351765	Uranium, Total	2200	NV	mg/kg
PBC-18-13	PBC-18-13	14-May-97	0 - 4	480059.5	1351765	Uranium, Total	2000	NV	mg/kg
PBC-18-13	PBC-18-13	14-May-97	0 - 4	480059.5	1351765	Uranium, Total	1930	NV	mg/kg
PBC-18-13	PBC-18-13	14-May-97	0 - 4	480059.5	1351765	Uranium, Total	1870	NV	mg/kg
PBC-18-14	PBC-18-14	14-May-97	0 - 4	480065.6	1351765	Radium-226	2.7	NV	pCi/g
PBC-18-14	PBC-18-14	14-May-97	0 - 4	480065.6	1351765	Thorium-232	4.5	NV	pCi/g
PBC-18-14	PBC-18-14	14-May-97	0 - 4	480065.6	1351765	Uranium, Total	810	NV	mg/kg
PBC-18-14	PBC-18-14	14-May-97	0 - 4	480065.6	1351765	Uranium, Total	1100	NV	mg/kg
PBC-18-14	PBC-18-14	14-May-97	0 - 4	480065.6	1351765	Uranium, Total	890	NV	mg/kg
PBC-18-14	PBC-18-14	14-May-97	0 - 4	480065.6	1351765	Uranium, Total	930	NV	mg/kg
PBC-18-15	PBC-18-15	14-May-97	0 - 4	480070.4	1351769	Radium-226	2.9	NV	pCi/g
PBC-18-15	PBC-18-15	14-May-97	0 - 4	480070.4	1351769	Thorium-232	3.8	NV	pCi/g
PBC-18-15	PBC-18-15	14-May-97	0 - 4	480070.4	1351769	Uranium, Total	860	NV	mg/kg
PBC-18-15	PBC-18-15	14-May-97	0 - 4	480070.4	1351769	Uranium, Total	980	NV	mg/kg
PBC-18-15	PBC-18-15	14-May-97	0 - 4	480070.4	1351769	Uranium, Total	850	NV	mg/kg
PBC-18-15	PBC-18-15	14-May-97	0 - 4	480070.4	1351769	Uranium, Total	780	NV	mg/kg
PBC-18-16	PBC-18-16	14-May-97	0 - 4	480062.2	1351771	Radium-226	3.2	NV	pCi/g
PBC-18-16	PBC-18-16	14-May-97	0 - 4	480062.2	1351771	Thorium-232	6.3	NV	pCi/g
PBC-18-16	PBC-18-16	14-May-97	0 - 4	480062.2	1351771	Uranium, Total	1300	NV	mg/kg
PBC-18-16	PBC-18-16	14-May-97	0 - 4	480062.2	1351771	Uranium, Total	1700	NV	mg/kg
PBC-18-16	PBC-18-16	14-May-97	0 - 4	480062.2	1351771	Uranium, Total	1480	NV	mg/kg

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A1PII IMPLEMENTATION PLAN
APPENDIX B TABLE B-1

Sample ID	Location ID	Sample Date	Depth (inches)	Northing	Easting	Parameter	Result	Qualifier	Units
PBC-18-16	PBC-18-16	14-May-97	0 - 4	480062.2	1351771	Uranium, Total	1380	NV	mg/kg
PBC-19-2	PBC-19-2	14-May-97	0 - 4	480077.8	1351776	Radium-226	2.3	NV	pCi/g
PBC-19-2	PBC-19-2	14-May-97	0 - 4	480077.8	1351776	Thorium-232	2.7	NV	pCi/g
PBC-19-2	PBC-19-2	14-May-97	0 - 4	480077.8	1351776	Uranium, Total	590	NV	mg/kg
PBC-19-2	PBC-19-2	14-May-97	0 - 4	480077.8	1351776	Uranium, Total	670	NV	mg/kg
PBC-19-2	PBC-19-2	14-May-97	0 - 4	480077.8	1351776	Uranium, Total	590	NV	mg/kg
PBC-19-2	PBC-19-2	14-May-97	0 - 4	480077.8	1351776	Uranium, Total	560	NV	mg/kg
PBC-19-3	PBC-19-3	14-May-97	0 - 4	480082.4	1351773	Thorium-232	3	NV	pCi/g
PBC-19-3	PBC-19-3	14-May-97	0 - 4	480082.4	1351773	Uranium, Total	1500	NV	mg/kg
PBC-19-3	PBC-19-3	14-May-97	0 - 4	480082.4	1351773	Uranium, Total	1800	NV	mg/kg
PBC-19-3	PBC-19-3	14-May-97	0 - 4	480082.4	1351773	Uranium, Total	2040	NV	mg/kg
PBC-19-3	PBC-19-3	14-May-97	0 - 4	480082.4	1351773	Uranium, Total	1780	NV	mg/kg
PBC-19-4	PBC-19-4	14-May-97	0 - 4	480085.8	1351777	Radium-226	2.1	NV	pCi/g
PBC-19-4	PBC-19-4	14-May-97	0 - 4	480085.8	1351777	Thorium-232	3.4	NV	pCi/g
PBC-19-4	PBC-19-4	14-May-97	0 - 4	480085.8	1351777	Uranium, Total	800	NV	mg/kg
PBC-19-4	PBC-19-4	14-May-97	0 - 4	480085.8	1351777	Uranium, Total	860	NV	mg/kg
PBC-19-4	PBC-19-4	14-May-97	0 - 4	480085.8	1351777	Uranium, Total	730	NV	mg/kg
PBC-19-4	PBC-19-4	14-May-97	0 - 4	480085.8	1351777	Uranium, Total	790	NV	mg/kg
PBC-19-5	PBC-19-5	14-May-97	0 - 4	480081.5	1351776	Radium-226	2.5	NV	pCi/g
PBC-19-5	PBC-19-5	14-May-97	0 - 4	480081.5	1351776	Thorium-232	4.7	NV	pCi/g
PBC-19-5	PBC-19-5	14-May-97	0 - 4	480081.5	1351776	Uranium, Total	590	NV	mg/kg
PBC-19-5	PBC-19-5	14-May-97	0 - 4	480081.5	1351776	Uranium, Total	870	NV	mg/kg
PBC-19-5	PBC-19-5	14-May-97	0 - 4	480081.5	1351776	Uranium, Total	570	NV	mg/kg
PBC-19-5	PBC-19-5	14-May-97	0 - 4	480081.5	1351776	Uranium, Total	680	NV	mg/kg
PBC-19-6	PBC-19-6	14-May-97	0 - 4	480072.1	1351776	Radium-226	2.1	NV	pCi/g
PBC-19-6	PBC-19-6	14-May-97	0 - 4	480072.1	1351776	Thorium-232	2.2	NV	pCi/g
PBC-19-6	PBC-19-6	14-May-97	0 - 4	480072.1	1351776	Uranium, Total	460	NV	mg/kg
PBC-19-6	PBC-19-6	14-May-97	0 - 4	480072.1	1351776	Uranium, Total	530	NV	mg/kg
PBC-19-6	PBC-19-6	14-May-97	0 - 4	480072.1	1351776	Uranium, Total	580	NV	mg/kg
PBC-19-6	PBC-19-6	14-May-97	0 - 4	480072.1	1351776	Uranium, Total	410	NV	mg/kg
PBC-19-7	PBC-19-7	14-May-97	0 - 4	480074.6	1351770	Radium-226	2.2	NV	pCi/g
PBC-19-7	PBC-19-7	14-May-97	0 - 4	480074.6	1351770	Thorium-232	2.3	NV	pCi/g
PBC-19-7	PBC-19-7	14-May-97	0 - 4	480074.6	1351770	Uranium, Total	500	NV	mg/kg

Sample ID	Location ID	Sample Date	Depth (inches)	Northing	Easting	Parameter	Result	Qualifier	Units
PBC-19-7	PBC-19-7	14-May-97	0 - 4	480074.6	1351770	Uranium, Total	640	NV	mg/kg
PBC-19-7	PBC-19-7	14-May-97	0 - 4	480074.6	1351770	Uranium, Total	600	NV	mg/kg
PBC-19-7	PBC-19-7	14-May-97	0 - 4	480074.6	1351770	Uranium, Total	520	NV	mg/kg
PBC-19-8	PBC-19-8	14-May-97	0 - 4	480079.9	1351767	Radium-226	2.6	NV	pCi/g
PBC-19-8	PBC-19-8	14-May-97	0 - 4	480079.9	1351767	Thorium-232	6.2	NV	pCi/g
PBC-19-8	PBC-19-8	14-May-97	0 - 4	480079.9	1351767	Uranium, Total	1000	NV	mg/kg
PBC-19-8	PBC-19-8	14-May-97	0 - 4	480079.9	1351767	Uranium, Total	1600	NV	mg/kg
PBC-19-8	PBC-19-8	14-May-97	0 - 4	480079.9	1351767	Uranium, Total	1360	NV	mg/kg
PBC-19-8	PBC-19-8	14-May-97	0 - 4	480079.9	1351767	Uranium, Total	1220	NV	mg/kg
PBC-19-9	PBC-19-9	14-May-97	0 - 4	480085.8	1351767	Radium-226	1.9	NV	pCi/g
PBC-19-9	PBC-19-9	14-May-97	0 - 4	480085.8	1351767	Thorium-232	4.3	NV	pCi/g
PBC-19-9	PBC-19-9	14-May-97	0 - 4	480085.8	1351767	Uranium, Total	840	NV	mg/kg
PBC-19-9	PBC-19-9	14-May-97	0 - 4	480085.8	1351767	Uranium, Total	1000	NV	mg/kg
PBC-19-9	PBC-19-9	14-May-97	0 - 4	480085.8	1351767	Uranium, Total	990	NV	mg/kg
PBC-19-9	PBC-19-9	14-May-97	0 - 4	480085.8	1351767	Uranium, Total	770	NV	mg/kg
PBC-19-10	PBC-19-10	14-May-97	0 - 4	480090.1	1351771	Radium-226	2	NV	pCi/g
PBC-19-10	PBC-19-10	14-May-97	0 - 4	480090.1	1351771	Thorium-232	3.1	NV	pCi/g
PBC-19-10	PBC-19-10	14-May-97	0 - 4	480090.1	1351771	Uranium, Total	500	NV	mg/kg
PBC-19-10	PBC-19-10	14-May-97	0 - 4	480090.1	1351771	Uranium, Total	620	NV	mg/kg
PBC-19-10	PBC-19-10	14-May-97	0 - 4	480090.1	1351771	Uranium, Total	630	NV	mg/kg
PBC-19-10	PBC-19-10	14-May-97	0 - 4	480090.1	1351771	Uranium, Total	560	NV	mg/kg
PBC-19-11	PBC-19-11	14-May-97	0 - 4	480091.6	1351777	Radium-226	2.4	NV	pCi/g
PBC-19-11	PBC-19-11	14-May-97	0 - 4	480091.6	1351777	Thorium-232	4.2	NV	pCi/g
PBC-19-11	PBC-19-11	14-May-97	0 - 4	480091.6	1351777	Uranium, Total	600	NV	mg/kg
PBC-19-11	PBC-19-11	14-May-97	0 - 4	480091.6	1351777	Uranium, Total	670	NV	mg/kg
PBC-19-11	PBC-19-11	14-May-97	0 - 4	480091.6	1351777	Uranium, Total	630	NV	mg/kg
PBC-19-11	PBC-19-11	14-May-97	0 - 4	480091.6	1351777	Uranium, Total	570	NV	mg/kg
PBC-19-12	PBC-19-12	14-May-97	0 - 4	480089.2	1351783	Thorium-232	3.1	NV	pCi/g
PBC-19-12	PBC-19-12	14-May-97	0 - 4	480089.2	1351783	Uranium, Total	440	NV	mg/kg
PBC-19-12	PBC-19-12	14-May-97	0 - 4	480089.2	1351783	Uranium, Total	480	NV	mg/kg
PBC-19-12	PBC-19-12	14-May-97	0 - 4	480089.2	1351783	Uranium, Total	480	NV	mg/kg
PBC-19-12	PBC-19-12	14-May-97	0 - 4	480089.2	1351783	Uranium, Total	390	NV	mg/kg
PBC-19-13	PBC-19-13	14-May-97	0 - 4	480084	1351786	Thorium-232	2.8	NV	pCi/g

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A1PII IMPLEMENTATION PLAN
APPENDIX B TABLE B-1

Sample ID	Location ID	Sample Date	Depth (inches)	Northing	Easting	Parameter	Result	Qualifier	Units
PBC-19-13	PBC-19-13	14-May-97	0 - 4	480084	1351786	Uranium, Total	340	NV	mg/kg
PBC-19-13	PBC-19-13	14-May-97	0 - 4	480084	1351786	Uranium, Total	630	NV	mg/kg
PBC-19-13	PBC-19-13	14-May-97	0 - 4	480084	1351786	Uranium, Total	610	NV	mg/kg
PBC-19-13	PBC-19-13	14-May-97	0 - 4	480084	1351786	Uranium, Total	500	NV	mg/kg
PBC-19-14	PBC-19-14	14-May-97	0 - 4	480077.8	1351785	Radium-226	3.7	NV	pCi/g
PBC-19-14	PBC-19-14	14-May-97	0 - 4	480077.8	1351785	Thorium-232	2.7	NV	pCi/g
PBC-19-14	PBC-19-14	14-May-97	0 - 4	480077.8	1351785	Uranium, Total	880	NV	mg/kg
PBC-19-14	PBC-19-14	14-May-97	0 - 4	480077.8	1351785	Uranium, Total	860	NV	mg/kg
PBC-19-14	PBC-19-14	14-May-97	0 - 4	480077.8	1351785	Uranium, Total	900	NV	mg/kg
PBC-19-14	PBC-19-14	14-May-97	0 - 4	480077.8	1351785	Uranium, Total	730	NV	mg/kg
PBC-19-15	PBC-19-15	14-May-97	0 - 4	480073.3	1351781	Radium-226	2.2	NV	pCi/g
PBC-19-15	PBC-19-15	14-May-97	0 - 4	480073.3	1351781	Thorium-232	2	NV	pCi/g
PBC-19-15	PBC-19-15	14-May-97	0 - 4	480073.3	1351781	Uranium, Total	900	NV	mg/kg
PBC-19-15	PBC-19-15	14-May-97	0 - 4	480073.3	1351781	Uranium, Total	890	NV	mg/kg
PBC-19-15	PBC-19-15	14-May-97	0 - 4	480073.3	1351781	Uranium, Total	940	NV	mg/kg
PBC-19-15	PBC-19-15	14-May-97	0 - 4	480073.3	1351781	Uranium, Total	750	NV	mg/kg
PBC-19-16	PBC-19-16	14-May-97	0 - 4	480089.2	1351783	Thorium-232	4.1	NV	pCi/g
PBC-19-16	PBC-19-16	14-May-97	0 - 4	480089.2	1351783	Uranium, Total	500	NV	mg/kg
PBC-19-16	PBC-19-16	14-May-97	0 - 4	480089.2	1351783	Uranium, Total	610	NV	mg/kg
PBC-19-16	PBC-19-16	14-May-97	0 - 4	480089.2	1351783	Uranium, Total	480	NV	mg/kg
PBC-19-16	PBC-19-16	14-May-97	0 - 4	480089.2	1351783	Uranium, Total	340	NV	mg/kg

This table presents all the Removal Action 14 radiological data.

Sample ID	Location	Top Depth (ft)	Bot. Depth (ft)	Northing	Easting	Parameter	Result	Qualifier	Units
102401	STP-PT-4	0	0.33	479877.414	1351570.986	Cesium-137	0.628	-	pCi/g
102401	STP-PT-4	0	0.33	479877.414	1351570.986	Protactinium-231	1.2	U	pCi/g
102401	STP-PT-4	0	0.33	479877.414	1351570.986	Radium-224	1.027	-	pCi/g
102401	STP-PT-4	0	0.33	479877.414	1351570.986	Radium-226	0.96	-	pCi/g
102401	STP-PT-4	0	0.33	479877.414	1351570.986	Radium-228	1.22	-	pCi/g
102401	STP-PT-4	0	0.33	479877.414	1351570.986	Ruthenium-106	1	U	pCi/g
102401	STP-PT-4	0	0.33	479877.414	1351570.986	Thorium-230	6.9	U	pCi/g
102401	STP-PT-4	0	0.33	479877.414	1351570.986	Thorium-234	10.6	-	pCi/g
102401	STP-PT-4	0	0.33	479877.414	1351570.986	Uranium, Total	39.5	-	mg/kg
102401	STP-PT-4	0	0.33	479877.414	1351570.986	Uranium-235/236	0.56	-	pCi/g
102402	STP-PT-5	0	0.33	479877.415	1351660.986	Cesium-137	0.6465	-	pCi/g
102402	STP-PT-5	0	0.33	479877.415	1351660.986	Protactinium-231	1.3	U	pCi/g
102402	STP-PT-5	0	0.33	479877.415	1351660.986	Radium-224	1.014	-	pCi/g
102402	STP-PT-5	0	0.33	479877.415	1351660.986	Radium-226	1	-	pCi/g
102402	STP-PT-5	0	0.33	479877.415	1351660.986	Radium-228	1.12	-	pCi/g
102402	STP-PT-5	0	0.33	479877.415	1351660.986	Ruthenium-106	1	U	pCi/g
102402	STP-PT-5	0	0.33	479877.415	1351660.986	Thorium-230	8.7	U	pCi/g
102402	STP-PT-5	0	0.33	479877.415	1351660.986	Thorium-234	10.8	-	pCi/g
102402	STP-PT-5	0	0.33	479877.415	1351660.986	Uranium, Total	39.5	-	mg/kg
102402	STP-PT-5	0	0.33	479877.415	1351660.986	Uranium-235/236	0.78	-	pCi/g
102403	STP-PT-3	0	0.33	479956.412	1351396.986	Cesium-137	0.5484	-	pCi/g
102403	STP-PT-3	0	0.33	479956.412	1351396.986	Protactinium-231	5.04	-	pCi/g
102403	STP-PT-3	0	0.33	479956.412	1351396.986	Radium-224	1.266	-	pCi/g
102403	STP-PT-3	0	0.33	479956.412	1351396.986	Radium-226	27.6	-	pCi/g
102403	STP-PT-3	0	0.33	479956.412	1351396.986	Radium-228	1.36	-	pCi/g
102403	STP-PT-3	0	0.33	479956.412	1351396.986	Ruthenium-106	1.3	U	pCi/g
102403	STP-PT-3	0	0.33	479956.412	1351396.986	Thorium-230	108	-	pCi/g
102403	STP-PT-3	0	0.33	479956.412	1351396.986	Thorium-234	35.8	-	pCi/g
102403	STP-PT-3	0	0.33	479956.412	1351396.986	Uranium, Total	122	-	mg/kg
102403	STP-PT-3	0	0.33	479956.412	1351396.986	Uranium-235/236	3.2	-	pCi/g
102404	STP-PT-15	0	0.33	479963.412	1351393.986	Cesium-137	0.681	-	pCi/g

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Sample ID	Location	Top Depth (ft)	Bot. Depth (ft)	Northing	Easting	Parameter	Result	Qualifier	Units
102404	STP-PT-15	0	0.33	479963.412	1351393.986	Protactinium-231	3.9	U	pCi/g
102404	STP-PT-15	0	0.33	479963.412	1351393.986	Radium-224	1.22	-	pCi/g
102404	STP-PT-15	0	0.33	479963.412	1351393.986	Radium-226	18.5	-	pCi/g
102404	STP-PT-15	0	0.33	479963.412	1351393.986	Radium-228	1.37	-	pCi/g
102404	STP-PT-15	0	0.33	479963.412	1351393.986	Ruthenium-106	1	U	pCi/g
102404	STP-PT-15	0	0.33	479963.412	1351393.986	Thorium-230	67.6	-	pCi/g
102404	STP-PT-15	0	0.33	479963.412	1351393.986	Thorium-234	29.4	-	pCi/g
102404	STP-PT-15	0	0.33	479963.412	1351393.986	Uranium, Total	117	-	mg/kg
102404	STP-PT-15	0	0.33	479963.412	1351393.986	Uranium-235/236	3	-	pCi/g
102405	STP-PT-21	0	0.33	480108.415	1351455.984	Cesium-137	0.2	U	pCi/g
102405	STP-PT-21	0	0.33	480108.415	1351455.984	Protactinium-231	3.1	U	pCi/g
102405	STP-PT-21	0	0.33	480108.415	1351455.984	Radium-224	1.452	-	pCi/g
102405	STP-PT-21	0	0.33	480108.415	1351455.984	Radium-226	1.13	-	pCi/g
102405	STP-PT-21	0	0.33	480108.415	1351455.984	Radium-228	1.53	-	pCi/g
102405	STP-PT-21	0	0.33	480108.415	1351455.984	Ruthenium-106	1	U	pCi/g
102405	STP-PT-21	0	0.33	480108.415	1351455.984	Thorium-230	15	U	pCi/g
102405	STP-PT-21	0	0.33	480108.415	1351455.984	Thorium-234	83.5	-	pCi/g
102405	STP-PT-21	0	0.33	480108.415	1351455.984	Uranium, Total	267	-	mg/kg
102405	STP-PT-21	0	0.33	480108.415	1351455.984	Uranium-235/236	4.35	-	pCi/g
102406	STP-PT-17	0	0.33	480152.415	1351455.984	Cesium-137	0.5742	-	pCi/g
102406	STP-PT-17	0	0.33	480152.415	1351455.984	Protactinium-231	4	U	pCi/g
102406	STP-PT-17	0	0.33	480152.415	1351455.984	Radium-224	5.015	-	pCi/g
102406	STP-PT-17	0	0.33	480152.415	1351455.984	Radium-226	2	-	pCi/g
102406	STP-PT-17	0	0.33	480152.415	1351455.984	Radium-228	6.43	-	pCi/g
102406	STP-PT-17	0	0.33	480152.415	1351455.984	Ruthenium-106	1.1	U	pCi/g
102406	STP-PT-17	0	0.33	480152.415	1351455.984	Thorium-230	20	U	pCi/g
102406	STP-PT-17	0	0.33	480152.415	1351455.984	Thorium-234	111	-	pCi/g
102406	STP-PT-17	0	0.33	480152.415	1351455.984	Uranium, Total	420	-	mg/kg
102406	STP-PT-17	0	0.33	480152.415	1351455.984	Uranium-235/236	7.41	-	pCi/g
102407	STP-PT-14	0	0.33	480157.415	1351456.984	Cesium-137	0.683	-	pCi/g
102407	STP-PT-14	0	0.33	480157.415	1351456.984	Protactinium-231	3.7	U	pCi/g
102407	STP-PT-14	0	0.33	480157.415	1351456.984	Radium-224	3.831	-	pCi/g
102407	STP-PT-14	0	0.33	480157.415	1351456.984	Radium-226	1.57	-	pCi/g
102407	STP-PT-14	0	0.33	480157.415	1351456.984	Radium-228	5.05	-	pCi/g

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Sample ID	Location	Top Depth (ft)	Bot. Depth (ft)	Northing	Easting	Parameter	Result	Qualifier	Units
102407	STP-PT-14	0	0.33	480157.415	1351456.984	Ruthenium-106	1	U	pCi/g
102407	STP-PT-14	0	0.33	480157.415	1351456.984	Thorium-230	19	U	pCi/g
102407	STP-PT-14	0	0.33	480157.415	1351456.984	Thorium-234	109	-	pCi/g
102407	STP-PT-14	0	0.33	480157.415	1351456.984	Uranium, Total	344	-	mg/kg
102407	STP-PT-14	0	0.33	480157.415	1351456.984	Uranium-235/236	5.73	-	pCi/g
102408	STP-PT-20	0	0.33	480213.416	1351462.983	Cesium-137	0.6622	-	pCi/g
102408	STP-PT-20	0	0.33	480213.416	1351462.983	Protactinium-231	3.5	U	pCi/g
102408	STP-PT-20	0	0.33	480213.416	1351462.983	Radium-224	1.65	-	pCi/g
102408	STP-PT-20	0	0.33	480213.416	1351462.983	Radium-226	1.17	-	pCi/g
102408	STP-PT-20	0	0.33	480213.416	1351462.983	Radium-228	1.73	-	pCi/g
102408	STP-PT-20	0	0.33	480213.416	1351462.983	Ruthenium-106	1	U	pCi/g
102408	STP-PT-20	0	0.33	480213.416	1351462.983	Thorium-230	16	U	pCi/g
102408	STP-PT-20	0	0.33	480213.416	1351462.983	Thorium-234	62.5	-	pCi/g
102408	STP-PT-20	0	0.33	480213.416	1351462.983	Uranium, Total	208	-	mg/kg
102408	STP-PT-20	0	0.33	480213.416	1351462.983	Uranium-235/236	3.6	-	pCi/g
102409	STP-PT-8	0	0.33	480250.416	1351464.982	Cesium-137	0.2916	-	pCi/g
102409	STP-PT-8	0	0.33	480250.416	1351464.982	Protactinium-231	2.4	U	pCi/g
102409	STP-PT-8	0	0.33	480250.416	1351464.982	Radium-224	1.211	-	pCi/g
102409	STP-PT-8	0	0.33	480250.416	1351464.982	Radium-226	0.94	-	pCi/g
102409	STP-PT-8	0	0.33	480250.416	1351464.982	Radium-228	1.26	-	pCi/g
102409	STP-PT-8	0	0.33	480250.416	1351464.982	Ruthenium-106	1	U	pCi/g
102409	STP-PT-8	0	0.33	480250.416	1351464.982	Thorium-230	10	U	pCi/g
102409	STP-PT-8	0	0.33	480250.416	1351464.982	Thorium-234	15.3	-	pCi/g
102409	STP-PT-8	0	0.33	480250.416	1351464.982	Uranium, Total	57.5	-	mg/kg
102409	STP-PT-8	0	0.33	480250.416	1351464.982	Uranium-235/236	1.05	-	pCi/g
102410	STP-PT-2	0	0.5	480208.416	1351533.983	Cesium-137	0.7122	-	pCi/g
102410	STP-PT-2	0	0.5	480208.416	1351533.983	Protactinium-231	9	U	pCi/g
102410	STP-PT-2	0	0.5	480208.416	1351533.983	Radium-224	5.357	-	pCi/g
102410	STP-PT-2	0	0.5	480208.416	1351533.983	Radium-226	4.45	-	pCi/g
102410	STP-PT-2	0	0.5	480208.416	1351533.983	Radium-228	5.13	-	pCi/g
102410	STP-PT-2	0	0.5	480208.416	1351533.983	Ruthenium-106	3.1	U	pCi/g
102410	STP-PT-2	0	0.5	480208.416	1351533.983	Thorium-230	64	U	pCi/g
102410	STP-PT-2	0	0.5	480208.416	1351533.983	Thorium-234	2289	-	pCi/g
102410	STP-PT-2	0	0.5	480208.416	1351533.983	Uranium, Total	7572	-	mg/kg

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Sample ID	Location	Top Depth (ft)	Bot. Depth (ft)	Northing	Easting	Parameter	Result	Qualifier	Units
102410	STP-PT-2	0	0.5	480208.416	1351533.983	Uranium-235/236	145	-	pCi/g
102411	STP-PT-7	0	0.5	480209.416	1351531.983	Cesium-137	0.3924	-	pCi/g
102411	STP-PT-7	0	0.5	480209.416	1351531.983	Protactinium-231	4.5	U	pCi/g
102411	STP-PT-7	0	0.5	480209.416	1351531.983	Radium-224	2.991	-	pCi/g
102411	STP-PT-7	0	0.5	480209.416	1351531.983	Radium-226	1.92	-	pCi/g
102411	STP-PT-7	0	0.5	480209.416	1351531.983	Radium-228	3.11	-	pCi/g
102411	STP-PT-7	0	0.5	480209.416	1351531.983	Ruthenium-106	1.5	U	pCi/g
102411	STP-PT-7	0	0.5	480209.416	1351531.983	Thorium-230	36	U	pCi/g
102411	STP-PT-7	0	0.5	480209.416	1351531.983	Thorium-234	456	-	pCi/g
102411	STP-PT-7	0	0.5	480209.416	1351531.983	Uranium, Total	1515	-	mg/kg
102411	STP-PT-7	0	0.5	480209.416	1351531.983	Uranium-235/236	27.9	-	pCi/g
102412	STP-PT-10	0	0.5	480209.417	1351534.983	Cesium-137	0.56	-	pCi/g
102412	STP-PT-10	0	0.5	480209.417	1351534.983	Protactinium-231	6.6	U	pCi/g
102412	STP-PT-10	0	0.5	480209.417	1351534.983	Radium-224	3.872	-	pCi/g
102412	STP-PT-10	0	0.5	480209.417	1351534.983	Radium-226	2.91	-	pCi/g
102412	STP-PT-10	0	0.5	480209.417	1351534.983	Radium-228	3.82	-	pCi/g
102412	STP-PT-10	0	0.5	480209.417	1351534.983	Ruthenium-106	2.2	U	pCi/g
102412	STP-PT-10	0	0.5	480209.417	1351534.983	Thorium-230	53	U	pCi/g
102412	STP-PT-10	0	0.5	480209.417	1351534.983	Thorium-234	1234	-	pCi/g
102412	STP-PT-10	0	0.5	480209.417	1351534.983	Uranium, Total	3623	-	mg/kg
102412	STP-PT-10	0	0.5	480209.417	1351534.983	Uranium-235/236	67.9	-	pCi/g
102413	STP-PT-6	0	0.33	479875.417	1351818.986	Cesium-137	0.2	U	pCi/g
102413	STP-PT-6	0	0.33	479875.417	1351818.986	Protactinium-231	0.7	U	pCi/g
102413	STP-PT-6	0	0.33	479875.417	1351818.986	Radium-224	0.3133	-	pCi/g
102413	STP-PT-6	0	0.33	479875.417	1351818.986	Radium-226	0.73	-	pCi/g
102413	STP-PT-6	0	0.33	479875.417	1351818.986	Radium-228	0.5	U	pCi/g
102413	STP-PT-6	0	0.33	479875.417	1351818.986	Ruthenium-106	1	U	pCi/g
102413	STP-PT-6	0	0.33	479875.417	1351818.986	Thorium-230	3.8	U	pCi/g
102413	STP-PT-6	0	0.33	479875.417	1351818.986	Thorium-234	2.05	-	pCi/g
102413	STP-PT-6	0	0.33	479875.417	1351818.986	Uranium, Total	7.26	-	mg/kg
102413	STP-PT-6	0	0.33	479875.417	1351818.986	Uranium-235/236	0.1	U	pCi/g
102414	STP-PT-18	0	0.33	479755.411	1351405.988	Cesium-137	0.745	-	pCi/g
102414	STP-PT-18	0	0.33	479755.411	1351405.988	Protactinium-231	2.8	U	pCi/g
102414	STP-PT-18	0	0.33	479755.411	1351405.988	Radium-224	1.052	-	pCi/g

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Sample ID	Location	Top Depth (ft)	Bot. Depth (ft)	Northing	Easting	Parameter	Result	Qualifier	Units
102414	STP-PT-18	0	0.33	479755.411	1351405.988	Radium-226	5.61	-	pCi/g
102414	STP-PT-18	0	0.33	479755.411	1351405.988	Radium-228	1.15	-	pCi/g
102414	STP-PT-18	0	0.33	479755.411	1351405.988	Ruthenium-106	1	U	pCi/g
102414	STP-PT-18	0	0.33	479755.411	1351405.988	Thorium-230	28	-	pCi/g
102414	STP-PT-18	0	0.33	479755.411	1351405.988	Thorium-234	13.6	-	pCi/g
102414	STP-PT-18	0	0.33	479755.411	1351405.988	Uranium, Total	51.5	-	mg/kg
102414	STP-PT-18	0	0.33	479755.411	1351405.988	Uranium-235/236	1.07	-	pCi/g
102415	STP-PT-1	0	0.33	479749.41	1351404.988	Cesium-137	0.5454	-	pCi/g
102415	STP-PT-1	0	0.33	479749.41	1351404.988	Protactinium-231	3.6	U	pCi/g
102415	STP-PT-1	0	0.33	479749.41	1351404.988	Radium-224	1.337	-	pCi/g
102415	STP-PT-1	0	0.33	479749.41	1351404.988	Radium-226	10.3	-	pCi/g
102415	STP-PT-1	0	0.33	479749.41	1351404.988	Radium-228	1.05	-	pCi/g
102415	STP-PT-1	0	0.33	479749.41	1351404.988	Ruthenium-106	1	U	pCi/g
102415	STP-PT-1	0	0.33	479749.41	1351404.988	Thorium-230	48.9	-	pCi/g
102415	STP-PT-1	0	0.33	479749.41	1351404.988	Thorium-234	17.8	-	pCi/g
102415	STP-PT-1	0	0.33	479749.41	1351404.988	Uranium, Total	64.3	-	mg/kg
102415	STP-PT-1	0	0.33	479749.41	1351404.988	Uranium-235/236	1.55	-	pCi/g
102416	STP-PT-16	0	0.33	480247.413	1351187.983	Cesium-137	0.7423	-	pCi/g
102416	STP-PT-16	0	0.33	480247.413	1351187.983	Protactinium-231	1.3	U	pCi/g
102416	STP-PT-16	0	0.33	480247.413	1351187.983	Radium-224	1.207	-	pCi/g
102416	STP-PT-16	0	0.33	480247.413	1351187.983	Radium-226	0.92	-	pCi/g
102416	STP-PT-16	0	0.33	480247.413	1351187.983	Radium-228	1.4	-	pCi/g
102416	STP-PT-16	0	0.33	480247.413	1351187.983	Ruthenium-106	1	U	pCi/g
102416	STP-PT-16	0	0.33	480247.413	1351187.983	Thorium-230	9.3	U	pCi/g
102416	STP-PT-16	0	0.33	480247.413	1351187.983	Thorium-234	21.3	-	pCi/g
102416	STP-PT-16	0	0.33	480247.413	1351187.983	Uranium, Total	81.4	-	mg/kg
102416	STP-PT-16	0	0.33	480247.413	1351187.983	Uranium-235/236	1.44	-	pCi/g
102417	STP-PT-13	0	0.33	480458.416	1351333.98	Cesium-137	0.7834	-	pCi/g
102417	STP-PT-13	0	0.33	480458.416	1351333.98	Protactinium-231	1.5	U	pCi/g
102417	STP-PT-13	0	0.33	480458.416	1351333.98	Radium-224	1.186	-	pCi/g
102417	STP-PT-13	0	0.33	480458.416	1351333.98	Radium-226	1	-	pCi/g
102417	STP-PT-13	0	0.33	480458.416	1351333.98	Radium-228	1.35	-	pCi/g
102417	STP-PT-13	0	0.33	480458.416	1351333.98	Ruthenium-106	1	U	pCi/g
102417	STP-PT-13	0	0.33	480458.416	1351333.98	Thorium-230	10	U	pCi/g

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A1PII IMPLEMENTATION PLAN
APPENDIX B TABLE B-2

Sample ID	Location	Top Depth (ft)	Bot. Depth (ft)	Northing	Easting	Parameter	Result	Qualifier	Units
102417	STP-PT-13	0	0.33	480458.416	1351333.98	Thorium-234	20.9	-	pCi/g
102417	STP-PT-13	0	0.33	480458.416	1351333.98	Uranium, Total	70.9	-	mg/kg
102417	STP-PT-13	0	0.33	480458.416	1351333.98	Uranium-235/236	1.08	-	pCi/g
102418	STP-PT-19	0	0.33	480243.416	1351499.982	Cesium-137	0.7608	-	pCi/g
102418	STP-PT-19	0	0.33	480243.416	1351499.982	Protactinium-231	1.5	U	pCi/g
102418	STP-PT-19	0	0.33	480243.416	1351499.982	Radium-224	1.458	-	pCi/g
102418	STP-PT-19	0	0.33	480243.416	1351499.982	Radium-226	1.23	-	pCi/g
102418	STP-PT-19	0	0.33	480243.416	1351499.982	Radium-228	1.73	-	pCi/g
102418	STP-PT-19	0	0.33	480243.416	1351499.982	Ruthenium-106	1	U	pCi/g
102418	STP-PT-19	0	0.33	480243.416	1351499.982	Thorium-230	12	U	pCi/g
102418	STP-PT-19	0	0.33	480243.416	1351499.982	Thorium-234	73.5	-	pCi/g
102418	STP-PT-19	0	0.33	480243.416	1351499.982	Uranium, Total	247	-	mg/kg
102418	STP-PT-19	0	0.33	480243.416	1351499.982	Uranium-235/236	4.04	-	pCi/g
102419	STP-PT-12	0	0.33	480366.42	1351678.98	Cesium-137	0.8016	-	pCi/g
102419	STP-PT-12	0	0.33	480366.42	1351678.98	Protactinium-231	2.9	U	pCi/g
102419	STP-PT-12	0	0.33	480366.42	1351678.98	Radium-224	1.583	-	pCi/g
102419	STP-PT-12	0	0.33	480366.42	1351678.98	Radium-226	1.05	-	pCi/g
102419	STP-PT-12	0	0.33	480366.42	1351678.98	Radium-228	1.68	-	pCi/g
102419	STP-PT-12	0	0.33	480366.42	1351678.98	Ruthenium-106	1	U	pCi/g
102419	STP-PT-12	0	0.33	480366.42	1351678.98	Thorium-230	13	U	pCi/g
102419	STP-PT-12	0	0.33	480366.42	1351678.98	Thorium-234	33.4	U	pCi/g
102419	STP-PT-12	0	0.33	480366.42	1351678.98	Uranium, Total	134	U	mg/kg
102419	STP-PT-12	0	0.33	480366.42	1351678.98	Uranium-235/236	2.65	-	pCi/g
102420	STP-PT-9	0	0.33	480225.417	1351538.983	Cesium-137	0.7104	-	pCi/g
102420	STP-PT-9	0	0.33	480225.417	1351538.983	Protactinium-231	3.4	U	pCi/g
102420	STP-PT-9	0	0.33	480225.417	1351538.983	Radium-224	2.096	-	pCi/g
102420	STP-PT-9	0	0.33	480225.417	1351538.983	Radium-226	1.11	-	pCi/g
102420	STP-PT-9	0	0.33	480225.417	1351538.983	Radium-228	1.98	-	pCi/g
102420	STP-PT-9	0	0.33	480225.417	1351538.983	Ruthenium-106	1	U	pCi/g
102420	STP-PT-9	0	0.33	480225.417	1351538.983	Thorium-230	17	U	pCi/g
102420	STP-PT-9	0	0.33	480225.417	1351538.983	Thorium-234	86.2	-	pCi/g
102420	STP-PT-9	0	0.33	480225.417	1351538.983	Uranium, Total	278	-	mg/kg
102420	STP-PT-9	0	0.33	480225.417	1351538.983	Uranium-235/236	4.74	-	pCi/g
102421	STP-PT-11	0	0.33	480376.422	1351853.98	Cesium-137	1.199	-	pCi/g

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Sample ID	Location	Top Depth (ft)	Bot. Depth (ft)	Northing	Easting	Parameter	Result	Qualifier	Units
102421	STP-PT-11	0	0.33	480376.422	1351853.98	Protactinium-231	1.4	U	pCi/g
102421	STP-PT-11	0	0.33	480376.422	1351853.98	Radium-224	1.369	-	pCi/g
102421	STP-PT-11	0	0.33	480376.422	1351853.98	Radium-226	1.11	-	pCi/g
102421	STP-PT-11	0	0.33	480376.422	1351853.98	Radium-228	1.47	-	pCi/g
102421	STP-PT-11	0	0.33	480376.422	1351853.98	Ruthenium-106	1	U	pCi/g
102421	STP-PT-11	0	0.33	480376.422	1351853.98	Thorium-230	9.6	U	pCi/g
102421	STP-PT-11	0	0.33	480376.422	1351853.98	Thorium-234	36.9	-	pCi/g
102421	STP-PT-11	0	0.33	480376.422	1351853.98	Uranium, Total	138	-	mg/kg
102421	STP-PT-11	0	0.33	480376.422	1351853.98	Uranium-235/236	2.27	-	pCi/g
103501	ASI-1	0	0.17	480241.3982	1351573.39	Radium-226	1.57	NV	pCi/g
103501	ASI-1	0	0.17	480241.3982	1351573.39	Radium-228	1.79	NV	pCi/g
103501	ASI-1	0	0.17	480241.3982	1351573.39	Thorium, Total	13.680329	NV	pCi/g
103501	ASI-1	0	0.17	480241.3982	1351573.39	Thorium-228	1.6	NV	pCi/g
103501	ASI-1	0	0.17	480241.3982	1351573.39	Thorium-230	2.7	NV	pCi/g
103501	ASI-1	0	0.17	480241.3982	1351573.39	Thorium-232	1.5	NV	pCi/g
103501	ASI-1	0	0.17	480241.3982	1351573.39	Uranium, Total	131.6	NV	mg/kg
103501	ASI-1	0	0.17	480241.3982	1351573.39	Uranium-234	71.28	NV	pCi/g
103501	ASI-1	0	0.17	480241.3982	1351573.39	Uranium-235/236	2.66	NV	pCi/g
103501	ASI-1	0	0.17	480241.3982	1351573.39	Uranium-238	69.92	NV	pCi/g
103503	ASI-1	0	0.17	480241.3982	1351573.39	Uranium, Total	247	NV	mg/kg
103504	ASI-1	0.17	0.33	480241.3982	1351573.39	Radium-226	1.64	NV	pCi/g
103504	ASI-1	0.17	0.33	480241.3982	1351573.39	Radium-228	1.77	NV	pCi/g
103504	ASI-1	0.17	0.33	480241.3982	1351573.39	Thorium, Total	15.504658	NV	pCi/g
103504	ASI-1	0.17	0.33	480241.3982	1351573.39	Thorium-228	1.9	NV	pCi/g
103504	ASI-1	0.17	0.33	480241.3982	1351573.39	Thorium-230	8.6	NV	pCi/g
103504	ASI-1	0.17	0.33	480241.3982	1351573.39	Thorium-232	1.7	NV	pCi/g
103504	ASI-1	0.17	0.33	480241.3982	1351573.39	Uranium, Total	118.8	NV	mg/kg
103504	ASI-1	0.17	0.33	480241.3982	1351573.39	Uranium-234	75.24	NV	pCi/g
103504	ASI-1	0.17	0.33	480241.3982	1351573.39	Uranium-235/236	3.07	NV	pCi/g
103504	ASI-1	0.17	0.33	480241.3982	1351573.39	Uranium-238	75.8	NV	pCi/g
103506	ASI-1	0.17	0.33	480241.3982	1351573.39	Uranium, Total	245	NV	mg/kg
103507	ASI-1	0.33	0.5	480241.3982	1351573.39	Radium-226	1.55	NV	pCi/g
103507	ASI-1	0.33	0.5	480241.3982	1351573.39	Radium-228	1.58	NV	pCi/g
103507	ASI-1	0.33	0.5	480241.3982	1351573.39	Thorium, Total	7.8433732	NV	pCi/g

A1PII IMPLEMENTATION PLAN
APPENDIX B TABLE B-2

Sample ID	Location	Top Depth (ft)	Bot. Depth (ft)	Northing	Easting	Parameter	Result	Qualifier	Units
103507	ASI-1	0.33	0.5	480241.3982	1351573.39	Thorium-228	0.81	NV	pCi/g
103507	ASI-1	0.33	0.5	480241.3982	1351573.39	Thorium-230	1.5	NV	pCi/g
103507	ASI-1	0.33	0.5	480241.3982	1351573.39	Thorium-232	0.86	NV	pCi/g
103507	ASI-1	0.33	0.5	480241.3982	1351573.39	Uranium, Total	57.4	NV	mg/kg
103507	ASI-1	0.33	0.5	480241.3982	1351573.39	Uranium-234	35.91	NV	pCi/g
103507	ASI-1	0.33	0.5	480241.3982	1351573.39	Uranium-235/236	1.89	NV	pCi/g
103507	ASI-1	0.33	0.5	480241.3982	1351573.39	Uranium-238	34.61	NV	pCi/g
103509	ASI-1	0.33	0.5	480241.3982	1351573.39	Uranium, Total	73	NV	mg/kg
103510	ASI-1	0.5	1	480241.3982	1351573.39	Radium-226	1.49	NV	pCi/g
103510	ASI-1	0.5	1	480241.3982	1351573.39	Radium-228	1.32	NV	pCi/g
103510	ASI-1	0.5	1	480241.3982	1351573.39	Thorium, Total	13.680223	NV	pCi/g
103510	ASI-1	0.5	1	480241.3982	1351573.39	Thorium-228	1.3	NV	pCi/g
103510	ASI-1	0.5	1	480241.3982	1351573.39	Thorium-230	1.3	NV	pCi/g
103510	ASI-1	0.5	1	480241.3982	1351573.39	Thorium-232	1.5	NV	pCi/g
103510	ASI-1	0.5	1	480241.3982	1351573.39	Uranium, Total	6.53	NV	mg/kg
103510	ASI-1	0.5	1	480241.3982	1351573.39	Uranium-234	1.63	NV	pCi/g
103510	ASI-1	0.5	1	480241.3982	1351573.39	Uranium-235/236	0.09	NV	pCi/g
103510	ASI-1	0.5	1	480241.3982	1351573.39	Uranium-238	1.7	NV	pCi/g
103512	ASI-1	0.5	1	480241.3982	1351573.39	Uranium, Total	11	UNV	mg/kg
103513	ASI-1	1	1.5	480241.3982	1351573.39	Radium-226	1.68	NV	pCi/g
103513	ASI-1	1	1.5	480241.3982	1351573.39	Radium-228	1.48	NV	pCi/g
103513	ASI-1	1	1.5	480241.3982	1351573.39	Thorium, Total	8.664233	NV	pCi/g
103513	ASI-1	1	1.5	480241.3982	1351573.39	Thorium-228	1.3	NV	pCi/g
103513	ASI-1	1	1.5	480241.3982	1351573.39	Thorium-230	1.5	NV	pCi/g
103513	ASI-1	1	1.5	480241.3982	1351573.39	Thorium-232	0.95	NV	pCi/g
103513	ASI-1	1	1.5	480241.3982	1351573.39	Uranium, Total	2.72	NV	mg/kg
103513	ASI-1	1	1.5	480241.3982	1351573.39	Uranium-234	1.09	NV	pCi/g
103513	ASI-1	1	1.5	480241.3982	1351573.39	Uranium-238	1.48	NV	pCi/g
103515	ASI-1	1	1.5	480241.3982	1351573.39	Uranium, Total	11	UNV	mg/kg
103516	ASI-2	0	0.17	480297.2091	1351574.93	Uranium, Total	225	NV	mg/kg
103517	ASI-2	0	0.17	480297.2091	1351574.93	Radium-226	1.52	NV	pCi/g
103517	ASI-2	0	0.17	480297.2091	1351574.93	Radium-228	1.64	NV	pCi/g
103517	ASI-2	0	0.17	480297.2091	1351574.93	Thorium, Total	10.944216	NV	pCi/g
103517	ASI-2	0	0.17	480297.2091	1351574.93	Thorium-228	1	NV	pCi/g

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Sample ID	Location	Top Depth (ft)	Bot. Depth (ft)	Northing	Easting	Parameter	Result	Qualifier	Units
103517	ASI-2	0	0.17	480297.2091	1351574.93	Thorium-230	1.9	NV	pCi/g
103517	ASI-2	0	0.17	480297.2091	1351574.93	Thorium-232	1.2	NV	pCi/g
103517	ASI-2	0	0.17	480297.2091	1351574.93	Uranium, Total	115.2	NV	mg/kg
103517	ASI-2	0	0.17	480297.2091	1351574.93	Uranium-234	60.4	NV	pCi/g
103517	ASI-2	0	0.17	480297.2091	1351574.93	Uranium-235/236	2.6	NV	pCi/g
103517	ASI-2	0	0.17	480297.2091	1351574.93	Uranium-238	62.1	NV	pCi/g
103518	ASI-2	0.17	0.33	480297.2091	1351574.93	Radium-226	1.45	NV	pCi/g
103518	ASI-2	0.17	0.33	480297.2091	1351574.93	Radium-228	1.69	NV	pCi/g
103518	ASI-2	0.17	0.33	480297.2091	1351574.93	Thorium, Total	9.1201806	NV	pCi/g
103518	ASI-2	0.17	0.33	480297.2091	1351574.93	Thorium-228	0.83	NV	pCi/g
103518	ASI-2	0.17	0.33	480297.2091	1351574.93	Thorium-230	1.6	NV	pCi/g
103518	ASI-2	0.17	0.33	480297.2091	1351574.93	Thorium-232	1	NV	pCi/g
103518	ASI-2	0.17	0.33	480297.2091	1351574.93	Uranium, Total	100.4	NV	mg/kg
103518	ASI-2	0.17	0.33	480297.2091	1351574.93	Uranium-234	50.1	NV	pCi/g
103518	ASI-2	0.17	0.33	480297.2091	1351574.93	Uranium-235/236	2.4	NV	pCi/g
103518	ASI-2	0.17	0.33	480297.2091	1351574.93	Uranium-238	49.4	NV	pCi/g
103519	ASI-2	0.17	0.33	480297.2091	1351574.93	Uranium, Total	202	NV	mg/kg
103520	ASI-2	0.33	0.5	480297.2091	1351574.93	Radium-226	1.43	NV	pCi/g
103520	ASI-2	0.33	0.5	480297.2091	1351574.93	Radium-228	1.38	NV	pCi/g
103520	ASI-2	0.33	0.5	480297.2091	1351574.93	Thorium, Total	12.768238	NV	pCi/g
103520	ASI-2	0.33	0.5	480297.2091	1351574.93	Thorium-228	1.3	NV	pCi/g
103520	ASI-2	0.33	0.5	480297.2091	1351574.93	Thorium-230	1.6	NV	pCi/g
103520	ASI-2	0.33	0.5	480297.2091	1351574.93	Thorium-232	1.4	NV	pCi/g
103520	ASI-2	0.33	0.5	480297.2091	1351574.93	Uranium, Total	37.9	NV	mg/kg
103520	ASI-2	0.33	0.5	480297.2091	1351574.93	Uranium-234	19.3	NV	pCi/g
103520	ASI-2	0.33	0.5	480297.2091	1351574.93	Uranium-235/236	1.3	NV	pCi/g
103520	ASI-2	0.33	0.5	480297.2091	1351574.93	Uranium-238	18.3	NV	pCi/g
103521	ASI-2	0.33	0.5	480297.2091	1351574.93	Uranium, Total	78	NV	mg/kg
103522	ASI-2	0.5	1	480297.2091	1351574.93	Radium-226	1.38	NV	pCi/g
103522	ASI-2	0.5	1	480297.2091	1351574.93	Radium-228	1.31	NV	pCi/g
103522	ASI-2	0.5	1	480297.2091	1351574.93	Thorium, Total	10.944141	NV	pCi/g
103522	ASI-2	0.5	1	480297.2091	1351574.93	Thorium-228	0.8	NV	pCi/g
103522	ASI-2	0.5	1	480297.2091	1351574.93	Thorium-230	0.87	NV	pCi/g
103522	ASI-2	0.5	1	480297.2091	1351574.93	Thorium-232	1.2	NV	pCi/g

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A1PII IMPLEMENTATION PLAN
APPENDIX B TABLE B-2

Sample ID	Location	Top Depth (ft)	Bot. Depth (ft)	Northing	Easting	Parameter	Result	Qualifier	Units
103522	ASI-2	0.5	1	480297.2091	1351574.93	Uranium, Total	39.7	NV	mg/kg
103522	ASI-2	0.5	1	480297.2091	1351574.93	Uranium-234	2.3	NV	pCi/g
103522	ASI-2	0.5	1	480297.2091	1351574.93	Uranium-235/236	0.16	NV	pCi/g
103522	ASI-2	0.5	1	480297.2091	1351574.93	Uranium-238	2.3	NV	pCi/g
103523	ASI-2	0.5	1	480297.2091	1351574.93	Uranium, Total	11	UNV	mg/kg
103524	ASI-2	1	1.5	480297.2091	1351574.93	Radium-226	1.64	NV	pCi/g
103524	ASI-2	1	1.5	480297.2091	1351574.93	Radium-228	1.46	NV	pCi/g
103524	ASI-2	1	1.5	480297.2091	1351574.93	Thorium, Total	9.1201989	NV	pCi/g
103524	ASI-2	1	1.5	480297.2091	1351574.93	Thorium-228	0.98	NV	pCi/g
103524	ASI-2	1	1.5	480297.2091	1351574.93	Thorium-230	1.6	NV	pCi/g
103524	ASI-2	1	1.5	480297.2091	1351574.93	Thorium-232	1	NV	pCi/g
103524	ASI-2	1	1.5	480297.2091	1351574.93	Uranium, Total	28.8	NV	mg/kg
103524	ASI-2	1	1.5	480297.2091	1351574.93	Uranium-234	1.5	NV	pCi/g
103524	ASI-2	1	1.5	480297.2091	1351574.93	Uranium-235/236	0.12	NV	pCi/g
103524	ASI-2	1	1.5	480297.2091	1351574.93	Uranium-238	1.4	NV	pCi/g
103525	ASI-2	1	1.5	480297.2091	1351574.93	Uranium, Total	11	UNV	mg/kg
103532	ASI-3	0	0.17	480121.5156	1351424.834	Radium-226	1.24	NV	pCi/g
103532	ASI-3	0	0.17	480121.5156	1351424.834	Radium-228	1.27	NV	pCi/g
103532	ASI-3	0	0.17	480121.5156	1351424.834	Thorium, Total	6.2017684	NV	pCi/g
103532	ASI-3	0	0.17	480121.5156	1351424.834	Thorium-228	0.73	NV	pCi/g
103532	ASI-3	0	0.17	480121.5156	1351424.834	Thorium-230	1.6	NV	pCi/g
103532	ASI-3	0	0.17	480121.5156	1351424.834	Thorium-232	0.68	NV	pCi/g
103532	ASI-3	0	0.17	480121.5156	1351424.834	Uranium, Total	83.5	NV	mg/kg
103532	ASI-3	0	0.17	480121.5156	1351424.834	Uranium-234	35.9	NV	pCi/g
103532	ASI-3	0	0.17	480121.5156	1351424.834	Uranium-235/236	1.96	NV	pCi/g
103532	ASI-3	0	0.17	480121.5156	1351424.834	Uranium-238	36.7	NV	pCi/g
103535	ASI-3	0.17	0.33	480121.5156	1351424.834	Uranium, Total	118	NV	mg/kg
103536	ASI-3	0.17	0.33	480121.5156	1351424.834	Radium-226	1.85	NV	pCi/g
103536	ASI-3	0.17	0.33	480121.5156	1351424.834	Radium-228	1.63	NV	pCi/g
103536	ASI-3	0.17	0.33	480121.5156	1351424.834	Thorium, Total	5.6545586	NV	pCi/g
103536	ASI-3	0.17	0.33	480121.5156	1351424.834	Thorium-228	0.69	NV	pCi/g
103536	ASI-3	0.17	0.33	480121.5156	1351424.834	Thorium-230	1.5	NV	pCi/g
103536	ASI-3	0.17	0.33	480121.5156	1351424.834	Thorium-232	0.62	NV	pCi/g
103536	ASI-3	0.17	0.33	480121.5156	1351424.834	Uranium, Total	65.6	NV	kg

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Sample ID	Location	Top Depth (ft)	Bot. Depth (ft)	Northing	Easting	Parameter	Result	Qualifier	Units
103536	ASI-3	0.17	0.33	480121.5156	1351424.834	Uranium-234	27.4	NV	pCi/g
103536	ASI-3	0.17	0.33	480121.5156	1351424.834	Uranium-235/236	1.1	NV	pCi/g
103536	ASI-3	0.17	0.33	480121.5156	1351424.834	Uranium-238	28.1	NV	pCi/g
103538	ASI-3	0.17	0.33	480121.5156	1351424.834	Uranium, Total	85	NV	mg/kg
103539	ASI-3	0.33	0.5	480121.5156	1351424.834	Radium-226	1.72	NV	pCi/g
103539	ASI-3	0.33	0.5	480121.5156	1351424.834	Radium-228	1.64	NV	pCi/g
103539	ASI-3	0.33	0.5	480121.5156	1351424.834	Thorium, Total	10.032122	NV	pCi/g
103539	ASI-3	0.33	0.5	480121.5156	1351424.834	Thorium-228	0.39	NV	pCi/g
103539	ASI-3	0.33	0.5	480121.5156	1351424.834	Thorium-230	1.5	NV	pCi/g
103539	ASI-3	0.33	0.5	480121.5156	1351424.834	Thorium-232	1.1	NV	pCi/g
103539	ASI-3	0.33	0.5	480121.5156	1351424.834	Uranium, Total	49.4	NV	mg/kg
103539	ASI-3	0.33	0.5	480121.5156	1351424.834	Uranium-234	21.9	NV	pCi/g
103539	ASI-3	0.33	0.5	480121.5156	1351424.834	Uranium-235/236	1.36	NV	pCi/g
103539	ASI-3	0.33	0.5	480121.5156	1351424.834	Uranium-238	24.95	NV	pCi/g
103541	ASI-3	0.33	0.5	480121.5156	1351424.834	Uranium, Total	84	NV	mg/kg
103542	ASI-3	0.5	1	480121.5156	1351424.834	Radium-226	1.55	NV	pCi/g
103542	ASI-3	0.5	1	480121.5156	1351424.834	Radium-228	1.37	NV	pCi/g
103542	ASI-3	0.5	1	480121.5156	1351424.834	Thorium, Total	4.4688756	NV	pCi/g
103542	ASI-3	0.5	1	480121.5156	1351424.834	Thorium-228	0.27	NV	pCi/g
103542	ASI-3	0.5	1	480121.5156	1351424.834	Thorium-230	0.86	NV	pCi/g
103542	ASI-3	0.5	1	480121.5156	1351424.834	Thorium-232	0.49	NV	pCi/g
103542	ASI-3	0.5	1	480121.5156	1351424.834	Uranium, Total	38.7	NV	mg/kg
103542	ASI-3	0.5	1	480121.5156	1351424.834	Uranium-234	17.4	NV	pCi/g
103542	ASI-3	0.5	1	480121.5156	1351424.834	Uranium-235/236	0.92	NV	pCi/g
103542	ASI-3	0.5	1	480121.5156	1351424.834	Uranium-238	18.4	NV	pCi/g
103544	ASI-3	0.5	1	480121.5156	1351424.834	Uranium, Total	28	NV	mg/kg
103545	ASI-3	1	1.5	480121.5156	1351424.834	Radium-226	1.51	NV	pCi/g
103545	ASI-3	1	1.5	480121.5156	1351424.834	Radium-228	1.3	NV	pCi/g
103545	ASI-3	1	1.5	480121.5156	1351424.834	Thorium, Total	7.4785089	NV	pCi/g
103545	ASI-3	1	1.5	480121.5156	1351424.834	Thorium-228	0.49	NV	pCi/g
103545	ASI-3	1	1.5	480121.5156	1351424.834	Thorium-230	0.99	NV	pCi/g
103545	ASI-3	1	1.5	480121.5156	1351424.834	Thorium-232	0.82	NV	pCi/g
103545	ASI-3	1	1.5	480121.5156	1351424.834	Uranium, Total	25.2	NV	mg/kg
103545	ASI-3	1	1.5	480121.5156	1351424.834	Uranium-234	12.8	NV	pCi/g

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A1PII IMPLEMENTATION PLAN
APPENDIX B TABLE B-2

Sample ID	Location	Top Depth (ft)	Bot. Depth (ft)	Northing	Easting	Parameter	Result	Qualifier	Units
103545	ASI-3	1	1.5	480121.5156	1351424.834	Uranium-235/236	0.81	NV	pCi/g
103545	ASI-3	1	1.5	480121.5156	1351424.834	Uranium-238	12.7	NV	pCi/g
103547	ASI-3	1	1.5	480121.5156	1351424.834	Uranium, Total	34	NV	mg/kg
103548	ASI-4	0	0.17	480152.414	1351381.384	Radium-226	1.43	NV	pCi/g
103548	ASI-4	0	0.17	480152.414	1351381.384	Radium-228	1.32	NV	pCi/g
103548	ASI-4	0	0.17	480152.414	1351381.384	Thorium-228	1.2	NV	pCi/g
103548	ASI-4	0	0.17	480152.414	1351381.384	Thorium-230	1.7	NV	pCi/g
103548	ASI-4	0	0.17	480152.414	1351381.384	Thorium-232	1.3	NV	pCi/g
103548	ASI-4	0	0.17	480152.414	1351381.384	Uranium, Total	42.315643	NV	mg/kg
103548	ASI-4	0	0.17	480152.414	1351381.384	Uranium-234	13.38	NV	pCi/g
103548	ASI-4	0	0.17	480152.414	1351381.384	Uranium-235/236	0.69	NV	pCi/g
103548	ASI-4	0	0.17	480152.414	1351381.384	Uranium-238	14.11	NV	pCi/g
103550	ASI-3	0.17	0.33	480121.5156	1351424.834	Radium-226	1.43	NV	pCi/g
103550	ASI-3	0.17	0.33	480121.5156	1351424.834	Radium-228	1.23	NV	pCi/g
103550	ASI-3	0.17	0.33	480121.5156	1351424.834	Thorium, Total	9.1201842	NV	pCi/g
103550	ASI-3	0.17	0.33	480121.5156	1351424.834	Thorium-228	0.9	NV	pCi/g
103550	ASI-3	0.17	0.33	480121.5156	1351424.834	Thorium-230	1.5	NV	pCi/g
103550	ASI-3	0.17	0.33	480121.5156	1351424.834	Thorium-232	1	NV	pCi/g
103550	ASI-3	0.17	0.33	480121.5156	1351424.834	Uranium, Total	17.5	NV	mg/kg
103550	ASI-3	0.17	0.33	480121.5156	1351424.834	Uranium-234	9.12	NV	pCi/g
103550	ASI-3	0.17	0.33	480121.5156	1351424.834	Uranium-235/236	0.31	NV	pCi/g
103550	ASI-3	0.17	0.33	480121.5156	1351424.834	Uranium-238	9.4	NV	pCi/g
103551	ASI-4	0.17	0.33	480132.4157	1351366.336	Uranium, Total	30	NV	mg/kg
103552	ASI-4	0.33	0.5	480132.4157	1351366.336	Radium-226	1.55	NV	pCi/g
103552	ASI-4	0.33	0.5	480132.4157	1351366.336	Radium-228	1.17	NV	pCi/g
103552	ASI-4	0.33	0.5	480132.4157	1351366.336	Thorium, Total	10.032184	NV	pCi/g
103552	ASI-4	0.33	0.5	480132.4157	1351366.336	Thorium-228	0.9	NV	pCi/g
103552	ASI-4	0.33	0.5	480132.4157	1351366.336	Thorium-230	1.5	NV	pCi/g
103552	ASI-4	0.33	0.5	480132.4157	1351366.336	Thorium-232	1.1	NV	pCi/g
103552	ASI-4	0.33	0.5	480132.4157	1351366.336	Uranium, Total	7.8	NV	mg/kg
103552	ASI-4	0.33	0.5	480132.4157	1351366.336	Uranium-234	5.69	NV	pCi/g
103552	ASI-4	0.33	0.5	480132.4157	1351366.336	Uranium-235/236	0.22	NV	pCi/g
103552	ASI-4	0.33	0.5	480132.4157	1351366.336	Uranium-238	5.61	NV	pCi/g
103553	ASI-4	0.33	0.5	480132.4157	1351366.336	Uranium, Total	18	NV	/kg

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Sample ID	Location	Top Depth (ft)	Bot. Depth (ft)	Northing	Easting	Parameter	Result	Qualifier	Units
103554	ASI-4	0.5	1	480132.4157	1351366.336	Radium-226	1.57	NV	pCi/g
103554	ASI-4	0.5	1	480132.4157	1351366.336	Radium-228	1.34	NV	pCi/g
103554	ASI-4	0.5	1	480132.4157	1351366.336	Thorium, Total	13.680189	NV	pCi/g
103554	ASI-4	0.5	1	480132.4157	1351366.336	Thorium-228	1.1	NV	pCi/g
103554	ASI-4	0.5	1	480132.4157	1351366.336	Thorium-230	1.1	NV	pCi/g
103554	ASI-4	0.5	1	480132.4157	1351366.336	Thorium-232	1.5	NV	pCi/g
103554	ASI-4	0.5	1	480132.4157	1351366.336	Uranium, Total	4.11	NV	mg/kg
103554	ASI-4	0.5	1	480132.4157	1351366.336	Uranium-234	2.12	NV	pCi/g
103554	ASI-4	0.5	1	480132.4157	1351366.336	Uranium-235/236	0.12	NV	pCi/g
103554	ASI-4	0.5	1	480132.4157	1351366.336	Uranium-238	2.37	NV	pCi/g
103555	ASI-4	0.5	1	480132.4157	1351366.336	Uranium, Total	11	UNV	mg/kg
103556	ASI-4	1	1.5	480132.4157	1351366.336	Radium-226	1.54	NV	pCi/g
103556	ASI-4	1	1.5	480132.4157	1351366.336	Radium-228	1.38	NV	pCi/g
103556	ASI-4	1	1.5	480132.4157	1351366.336	Thorium, Total	11.856221	NV	pCi/g
103556	ASI-4	1	1.5	480132.4157	1351366.336	Thorium-228	1.2	NV	pCi/g
103556	ASI-4	1	1.5	480132.4157	1351366.336	Thorium-230	1.5	NV	pCi/g
103556	ASI-4	1	1.5	480132.4157	1351366.336	Thorium-232	1.3	NV	pCi/g
103556	ASI-4	1	1.5	480132.4157	1351366.336	Uranium, Total	4.19	NV	mg/kg
103556	ASI-4	1	1.5	480132.4157	1351366.336	Uranium-234	2.31	NV	pCi/g
103556	ASI-4	1	1.5	480132.4157	1351366.336	Uranium-235/236	0.14	NV	pCi/g
103556	ASI-4	1	1.5	480132.4157	1351366.336	Uranium-238	2.67	NV	pCi/g
103557	ASI-4	1	1.5	480132.4157	1351366.336	Uranium, Total	11	UNV	mg/kg
103558	ASI-5	0	0.17	480147.016	1351288.538	Radium-226	1.57	NV	pCi/g
103558	ASI-5	0	0.17	480147.016	1351288.538	Radium-228	1.66	NV	pCi/g
103558	ASI-5	0	0.17	480147.016	1351288.538	Thorium, Total	15.504327	NV	pCi/g
103558	ASI-5	0	0.17	480147.016	1351288.538	Thorium-228	1.3	NV	pCi/g
103558	ASI-5	0	0.17	480147.016	1351288.538	Thorium-230	3.4	NV	pCi/g
103558	ASI-5	0	0.17	480147.016	1351288.538	Thorium-232	1.7	NV	pCi/g
103558	ASI-5	0	0.17	480147.016	1351288.538	Uranium, Total	158	NV	mg/kg
103558	ASI-5	0	0.17	480147.016	1351288.538	Uranium-234	74.04	NV	pCi/g
103558	ASI-5	0	0.17	480147.016	1351288.538	Uranium-235/236	5.02	NV	pCi/g
103558	ASI-5	0	0.17	480147.016	1351288.538	Uranium-238	82.51	NV	pCi/g
103559	ASI-5	0	0.17	480147.016	1351288.538	Uranium, Total	244	NV	mg/kg
103560	ASI-5	0.17	0.33	480147.016	1351288.538	Radium-226	1.69	NV	pCi/g

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A1PII IMPLEMENTATION PLAN
APPENDIX B TABLE B-2

Sample ID	Location	Top Depth (ft)	Bot. Depth (ft)	Northing	Easting	Parameter	Result	Qualifier	Units
103560	ASI-5	0.17	0.33	480147.016	1351288.538	Radium-228	1.7	NV	pCi/g
103560	ASI-5	0.17	0.33	480147.016	1351288.538	Thorium, Total	12.768255	NV	pCi/g
103560	ASI-5	0.17	0.33	480147.016	1351288.538	Thorium-228	0.95	NV	pCi/g
103560	ASI-5	0.17	0.33	480147.016	1351288.538	Thorium-230	2.8	NV	pCi/g
103560	ASI-5	0.17	0.33	480147.016	1351288.538	Thorium-232	1.4	NV	pCi/g
103560	ASI-5	0.17	0.33	480147.016	1351288.538	Uranium, Total	147.6	NV	mg/kg
103560	ASI-5	0.17	0.33	480147.016	1351288.538	Uranium-234	73.52	NV	pCi/g
103560	ASI-5	0.17	0.33	480147.016	1351288.538	Uranium-235/236	4.31	NV	pCi/g
103560	ASI-5	0.17	0.33	480147.016	1351288.538	Uranium-238	76.45	NV	pCi/g
103561	ASI-5	0.17	0.33	480147.016	1351288.538	Uranium, Total	226	NV	mg/kg
103562	ASI-5	0.33	0.5	480147.016	1351288.538	Radium-226	1.5	NV	pCi/g
103562	ASI-5	0.33	0.5	480147.016	1351288.538	Radium-228	1.49	NV	pCi/g
103562	ASI-5	0.33	0.5	480147.016	1351288.538	Thorium, Total	16.416368	NV	pCi/g
103562	ASI-5	0.33	0.5	480147.016	1351288.538	Thorium-228	1.8	NV	pCi/g
103562	ASI-5	0.33	0.5	480147.016	1351288.538	Thorium-230	3	NV	pCi/g
103562	ASI-5	0.33	0.5	480147.016	1351288.538	Thorium-232	1.8	NV	pCi/g
103562	ASI-5	0.33	0.5	480147.016	1351288.538	Uranium, Total	135.6	NV	mg/kg
103562	ASI-5	0.33	0.5	480147.016	1351288.538	Uranium-234	67.17	NV	pCi/g
103562	ASI-5	0.33	0.5	480147.016	1351288.538	Uranium-235/236	3.62	NV	pCi/g
103562	ASI-5	0.33	0.5	480147.016	1351288.538	Uranium-238	67.61	NV	pCi/g
103563	ASI-5	0.33	0.5	480147.016	1351288.538	Uranium, Total	171	NV	mg/kg
103564	ASI-5	0.5	1	480147.016	1351288.538	Radium-226	1.49	NV	pCi/g
103564	ASI-5	0.5	1	480147.016	1351288.538	Radium-228	1.31	NV	pCi/g
103564	ASI-5	0.5	1	480147.016	1351288.538	Thorium, Total	8.8466231	NV	pCi/g
103564	ASI-5	0.5	1	480147.016	1351288.538	Thorium-228	1.3	NV	pCi/g
103564	ASI-5	0.5	1	480147.016	1351288.538	Thorium-230	1.3	NV	pCi/g
103564	ASI-5	0.5	1	480147.016	1351288.538	Thorium-232	0.97	NV	pCi/g
103564	ASI-5	0.5	1	480147.016	1351288.538	Uranium, Total	22.5	NV	mg/kg
103564	ASI-5	0.5	1	480147.016	1351288.538	Uranium-234	9.71	NV	pCi/g
103564	ASI-5	0.5	1	480147.016	1351288.538	Uranium-235/236	0.53	NV	pCi/g
103564	ASI-5	0.5	1	480147.016	1351288.538	Uranium-238	9.79	NV	pCi/g
103565	ASI-5	0.5	1	480147.016	1351288.538	Uranium, Total	34	NV	mg/kg
103566	ASI-5	1	1.5	480147.016	1351288.538	Radium-226	1.37	NV	pCi/g
103566	ASI-5	1	1.5	480147.016	1351288.538	Radium-228	1.3	NV	pCi/g

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Sample ID	Location	Top Depth (ft)	Bot. Depth (ft)	Northing	Easting	Parameter	Result	Qualifier	Units
103566	ASI-5	1	1.5	480147.016	1351288.538	Thorium, Total	10.032172	NV	pCi/g
103566	ASI-5	1	1.5	480147.016	1351288.538	Thorium-228	0.8	NV	pCi/g
103566	ASI-5	1	1.5	480147.016	1351288.538	Thorium-230	1.5	NV	pCi/g
103566	ASI-5	1	1.5	480147.016	1351288.538	Thorium-232	1.1	NV	pCi/g
103566	ASI-5	1	1.5	480147.016	1351288.538	Uranium, Total	3.78	NV	mg/kg
103566	ASI-5	1	1.5	480147.016	1351288.538	Uranium-234	2.49	NV	pCi/g
103566	ASI-5	1	1.5	480147.016	1351288.538	Uranium-235/236	0.12	NV	pCi/g
103566	ASI-5	1	1.5	480147.016	1351288.538	Uranium-238	2.45	NV	pCi/g
103567	ASI-5	1	1.5	480147.016	1351288.538	Uranium, Total	11	UNV	mg/kg
103569	ASI-6	0	0.17	480064.6147	1351414.134	Radium-226	0.959	NV	pCi/g
103569	ASI-6	0	0.17	480064.6147	1351414.134	Radium-228	1.25	NV	pCi/g
103569	ASI-6	0	0.17	480064.6147	1351414.134	Thorium, Total	17.328286	NV	pCi/g
103569	ASI-6	0	0.17	480064.6147	1351414.134	Thorium-228	0.96	NV	pCi/g
103569	ASI-6	0	0.17	480064.6147	1351414.134	Thorium-230	3.4	NV	pCi/g
103569	ASI-6	0	0.17	480064.6147	1351414.134	Thorium-232	1.9	NV	pCi/g
103569	ASI-6	0	0.17	480064.6147	1351414.134	Uranium, Total	181.6	NV	mg/kg
103569	ASI-6	0	0.17	480064.6147	1351414.134	Uranium-234	80.7	NV	pCi/g
103569	ASI-6	0	0.17	480064.6147	1351414.134	Uranium-235/236	3.8	NV	pCi/g
103569	ASI-6	0	0.17	480064.6147	1351414.134	Uranium-238	78.7	NV	pCi/g
103570	ASI-6	0	0.17	480064.6147	1351414.134	Uranium, Total	235	NV	mg/kg
103571	ASI-6	0.17	0.33	480064.6147	1351414.134	Radium-226	0.836	NV	pCi/g
103571	ASI-6	0.17	0.33	480064.6147	1351414.134	Radium-228	1.32	NV	pCi/g
103571	ASI-6	0.17	0.33	480064.6147	1351414.134	Thorium, Total	12.768231	NV	pCi/g
103571	ASI-6	0.17	0.33	480064.6147	1351414.134	Thorium-228	1.2	NV	pCi/g
103571	ASI-6	0.17	0.33	480064.6147	1351414.134	Thorium-230	1.7	NV	pCi/g
103571	ASI-6	0.17	0.33	480064.6147	1351414.134	Thorium-232	1.4	NV	pCi/g
103571	ASI-6	0.17	0.33	480064.6147	1351414.134	Uranium, Total	128.8	NV	mg/kg
103571	ASI-6	0.17	0.33	480064.6147	1351414.134	Uranium-234	53.4	NV	pCi/g
103571	ASI-6	0.17	0.33	480064.6147	1351414.134	Uranium-235/236	2.2	NV	pCi/g
103571	ASI-6	0.17	0.33	480064.6147	1351414.134	Uranium-238	54.5	NV	pCi/g
103572	ASI-6	0.17	0.33	480064.6147	1351414.134	Uranium, Total	164	NV	mg/kg
103573	ASI-6	0.33	0.5	480064.6147	1351414.134	Radium-226	0.91	NV	pCi/g
103573	ASI-6	0.33	0.5	480064.6147	1351414.134	Radium-228	1.17	NV	pCi/g
103573	ASI-6	0.33	0.5	480064.6147	1351414.134	Thorium, Total	10.032209	NV	pCi/g

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Sample ID	Location	Top Depth (ft)	Bot. Depth (ft)	Northing	Easting	Parameter	Result	Qualifier	Units
103573	ASI-6	0.33	0.5	480064.6147	1351414.134	Thorium-228	1.1	NV	pCi/g
103573	ASI-6	0.33	0.5	480064.6147	1351414.134	Thorium-230	1.5	NV	pCi/g
103573	ASI-6	0.33	0.5	480064.6147	1351414.134	Thorium-232	1.1	NV	pCi/g
103573	ASI-6	0.33	0.5	480064.6147	1351414.134	Uranium, Total	47.1	NV	mg/kg
103573	ASI-6	0.33	0.5	480064.6147	1351414.134	Uranium-234	23.4	NV	pCi/g
103573	ASI-6	0.33	0.5	480064.6147	1351414.134	Uranium-235/236	0.94	NV	pCi/g
103573	ASI-6	0.33	0.5	480064.6147	1351414.134	Uranium-238	24	NV	pCi/g
103574	ASI-6	0.33	0.5	480064.6147	1351414.134	Uranium, Total	61	NV	mg/kg
103575	ASI-6	0.5	1	480064.6147	1351414.134	Radium-226	0.806	NV	pCi/g
103575	ASI-6	0.5	1	480064.6147	1351414.134	Radium-228	0.969	NV	pCi/g
103575	ASI-6	0.5	1	480064.6147	1351414.134	Thorium, Total	10.944209	NV	pCi/g
103575	ASI-6	0.5	1	480064.6147	1351414.134	Thorium-228	1.1	NV	pCi/g
103575	ASI-6	0.5	1	480064.6147	1351414.134	Thorium-230	1.5	NV	pCi/g
103575	ASI-6	0.5	1	480064.6147	1351414.134	Thorium-232	1.2	NV	pCi/g
103575	ASI-6	0.5	1	480064.6147	1351414.134	Uranium, Total	103577	NV	mg/kg
103575	ASI-6	0.5	1	480064.6147	1351414.134	Uranium-234	3.37	NV	pCi/g
103575	ASI-6	0.5	1	480064.6147	1351414.134	Uranium-235/236	0.11	NV	pCi/g
103575	ASI-6	0.5	1	480064.6147	1351414.134	Uranium-238	3.1	NV	pCi/g
103576	ASI-6	0.5	1	480064.6147	1351414.134	Uranium, Total	20	NV	mg/kg
103577	ASI-6	1	1.5	480064.6147	1351414.134	Radium-226	0.807	NV	pCi/g
103577	ASI-6	1	1.5	480064.6147	1351414.134	Radium-228	1.1	NV	pCi/g
103577	ASI-6	1	1.5	480064.6147	1351414.134	Thorium-228	0.99	NV	pCi/g
103577	ASI-6	1	1.5	480064.6147	1351414.134	Thorium-230	1.4	NV	pCi/g
103577	ASI-6	1	1.5	480064.6147	1351414.134	Thorium-232	0.95	NV	pCi/g
103577	ASI-6	1	1.5	480064.6147	1351414.134	Uranium, Total	3.64	NV	mg/kg
103577	ASI-6	1	1.5	480064.6147	1351414.134	Uranium-234	1.3	NV	pCi/g
103577	ASI-6	1	1.5	480064.6147	1351414.134	Uranium-238	1.4	NV	pCi/g
103578	ASI-6	1	1.5	480064.6147	1351414.134	Uranium, Total	11	UNV	mg/kg
103579	ASI-7	0	0.17	480027.9141	1351420.634	Radium-226	0.854	NV	pCi/g
103579	ASI-7	0	0.17	480027.9141	1351420.634	Radium-228	1.32	NV	pCi/g
103579	ASI-7	0	0.17	480027.9141	1351420.634	Thorium, Total	14.59229	NV	pCi/g
103579	ASI-7	0	0.17	480027.9141	1351420.634	Thorium-228	1.4	NV	pCi/g
103579	ASI-7	0	0.17	480027.9141	1351420.634	Thorium-230	2.4	NV	pCi/g
103579	ASI-7	0	0.17	480027.9141	1351420.634	Thorium-232	1.6	NV	pCi/g

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Sample ID	Location	Top Depth (ft)	Bot. Depth (ft)	Northing	Easting	Parameter	Result	Qualifier	Units
103579	ASI-7	0	0.17	480027.9141	1351420.634	Uranium, Total	102	NV	mg/kg
103579	ASI-7	0	0.17	480027.9141	1351420.634	Uranium-234	50	NV	pCi/g
103579	ASI-7	0	0.17	480027.9141	1351420.634	Uranium-235/236	1.9	NV	pCi/g
103579	ASI-7	0	0.17	480027.9141	1351420.634	Uranium-238	49.1	NV	pCi/g
103580	ASI-7	0	0.17	480027.9141	1351420.634	Uranium, Total	144	NV	mg/kg
103581	ASI-7	0.17	0.33	480027.9141	1351420.634	Radium-226	0.915	NV	pCi/g
103581	ASI-7	0.17	0.33	480027.9141	1351420.634	Radium-228	1.38	NV	pCi/g
103581	ASI-7	0.17	0.33	480027.9141	1351420.634	Thorium, Total	12.768288	NV	pCi/g
103581	ASI-7	0.17	0.33	480027.9141	1351420.634	Thorium-228	1.3	NV	pCi/g
103581	ASI-7	0.17	0.33	480027.9141	1351420.634	Thorium-230	2.6	NV	pCi/g
103581	ASI-7	0.17	0.33	480027.9141	1351420.634	Thorium-232	1.4	NV	pCi/g
103581	ASI-7	0.17	0.33	480027.9141	1351420.634	Uranium, Total	97.6	NV	mg/kg
103581	ASI-7	0.17	0.33	480027.9141	1351420.634	Uranium-234	45.9	NV	pCi/g
103581	ASI-7	0.17	0.33	480027.9141	1351420.634	Uranium-235/236	2.9	NV	pCi/g
103581	ASI-7	0.17	0.33	480027.9141	1351420.634	Uranium-238	46.7	NV	pCi/g
103582	ASI-7	0.17	0.33	480027.9141	1351420.634	Uranium, Total	137	NV	mg/kg
103583	ASI-7	0.33	0.5	480027.9141	1351420.634	Radium-226	0.881	NV	pCi/g
103583	ASI-7	0.33	0.5	480027.9141	1351420.634	Radium-228	1.34	NV	pCi/g
103583	ASI-7	0.33	0.5	480027.9141	1351420.634	Thorium, Total	12.768288	NV	pCi/g
103583	ASI-7	0.33	0.5	480027.9141	1351420.634	Thorium-228	1.3	NV	pCi/g
103583	ASI-7	0.33	0.5	480027.9141	1351420.634	Thorium-230	2.6	NV	pCi/g
103583	ASI-7	0.33	0.5	480027.9141	1351420.634	Thorium-232	1.4	NV	pCi/g
103583	ASI-7	0.33	0.5	480027.9141	1351420.634	Uranium, Total	74.4	NV	mg/kg
103583	ASI-7	0.33	0.5	480027.9141	1351420.634	Uranium-234	37.6	NV	pCi/g
103583	ASI-7	0.33	0.5	480027.9141	1351420.634	Uranium-235/236	2	NV	pCi/g
103583	ASI-7	0.33	0.5	480027.9141	1351420.634	Uranium-238	38.1	NV	pCi/g
103584	ASI-7	0.33	0.5	480027.9141	1351420.634	Uranium, Total	90	NV	mg/kg
103585	ASI-7	0.5	1	480027.9141	1351420.634	Radium-226	0.948	NV	pCi/g
103585	ASI-7	0.5	1	480027.9141	1351420.634	Radium-228	1.08	NV	pCi/g
103585	ASI-7	0.5	1	480027.9141	1351420.634	Thorium, Total	13.680243	NV	pCi/g
103585	ASI-7	0.5	1	480027.9141	1351420.634	Thorium-228	1.3	NV	pCi/g
103585	ASI-7	0.5	1	480027.9141	1351420.634	Thorium-230	1.7	NV	pCi/g
103585	ASI-7	0.5	1	480027.9141	1351420.634	Thorium-232	1.5	NV	pCi/g
103585	ASI-7	0.5	1	480027.9141	1351420.634	Uranium, Total	14	NV	mg/kg

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A1PII IMPLEMENTATION PLAN
APPENDIX B TABLE B-2

Sample ID	Location	Top Depth (ft)	Bot. Depth (ft)	Northing	Easting	Parameter	Result	Qualifier	Units
103585	ASI-7	0.5	1	480027.9141	1351420.634	Uranium-234	6.23	NV	pCi/g
103585	ASI-7	0.5	1	480027.9141	1351420.634	Uranium-235/236	0.18	NV	pCi/g
103585	ASI-7	0.5	1	480027.9141	1351420.634	Uranium-238	5.6	NV	pCi/g
103586	ASI-7	0.5	1	480027.9141	1351420.634	Uranium, Total	20	NV	mg/kg
103587	ASI-7	1	1.5	480027.9141	1351420.634	Radium-226	0.798	NV	pCi/g
103587	ASI-7	1	1.5	480027.9141	1351420.634	Radium-228	1.03	NV	pCi/g
103587	ASI-7	1	1.5	480027.9141	1351420.634	Thorium, Total	16.416236	NV	pCi/g
103587	ASI-7	1	1.5	480027.9141	1351420.634	Thorium-228	1.2	NV	pCi/g
103587	ASI-7	1	1.5	480027.9141	1351420.634	Thorium-230	1.8	NV	pCi/g
103587	ASI-7	1	1.5	480027.9141	1351420.634	Thorium-232	1.8	NV	pCi/g
103587	ASI-7	1	1.5	480027.9141	1351420.634	Uranium, Total	5.27	NV	mg/kg
103587	ASI-7	1	1.5	480027.9141	1351420.634	Uranium-234	2.4	NV	pCi/g
103587	ASI-7	1	1.5	480027.9141	1351420.634	Uranium-235/236	0.15	NV	pCi/g
103587	ASI-7	1	1.5	480027.9141	1351420.634	Uranium-238	2.5	NV	pCi/g
103587	ASI-7	1	1.5	480027.9141	1351420.634	Uranium, Total	14	NV	mg/kg
103588	ASI-7	1	1.5	480027.9141	1351420.634	Radium-226	15.7	NV	pCi/g
103604	ASI-17	0	0.17	479894.014	1351573.986	Radium-228	1.04	NV	pCi/g
103604	ASI-17	0	0.17	479894.014	1351573.986	Thorium-228	2.82	NV	pCi/g
103604	ASI-17	0	0.17	479894.014	1351573.986	Thorium-230	47	NV	pCi/g
103604	ASI-17	0	0.17	479894.014	1351573.986	Thorium-232	0.96	NV	pCi/g
103604	ASI-17	0	0.17	479894.014	1351573.986	Uranium, Total	110.28432	NV	mg/kg
103604	ASI-17	0	0.17	479894.014	1351573.986	Uranium-234	36.6	NV	pCi/g
103604	ASI-17	0	0.17	479894.014	1351573.986	Uranium-235/236	1.63	NV	pCi/g
103604	ASI-17	0	0.17	479894.014	1351573.986	Uranium-238	36.8	NV	pCi/g
103604	ASI-17	0	0.17	479894.014	1351573.986	Radium-226	15.6	NV	pCi/g
103606	ASI-17	0.17	0.33	479894.014	1351573.986	Radium-228	0.998	NV	pCi/g
103606	ASI-17	0.17	0.33	479894.014	1351573.986	Thorium-228	2.96	NV	pCi/g
103606	ASI-17	0.17	0.33	479894.014	1351573.986	Thorium-230	46.7	NV	pCi/g
103606	ASI-17	0.17	0.33	479894.014	1351573.986	Thorium-232	1.04	NV	pCi/g
103606	ASI-17	0.17	0.33	479894.014	1351573.986	Uranium, Total	102.29497	NV	mg/kg
103606	ASI-17	0.17	0.33	479894.014	1351573.986	Uranium-234	37	NV	pCi/g
103606	ASI-17	0.17	0.33	479894.014	1351573.986	Uranium-235/236	1.73	NV	pCi/g
103606	ASI-17	0.17	0.33	479894.014	1351573.986	Uranium-238	34.1	NV	pCi/g
103606	ASI-17	0.17	0.33	479894.014	1351573.986	Radium-226	14.5	NV	[illegible]i/g
103608	ASI-17	0.33	0.5	479894.014	[illegible]51573.986				

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A1PII IMPLEM[illegible]ATION PLAN
APPENDIX [illegible]ABLE B-2

Sample ID	Location	Top Depth (ft)	Bot. Depth (ft)	Northing	Easting	Parameter	Result	Qualifier	Units
103608	ASI-17	0.33	0.5	479894.014	1351573.986	Radium-228	1.21	NV	pCi/g
103608	ASI-17	0.33	0.5	479894.014	1351573.986	Thorium-228	3.18	NV	pCi/g
103608	ASI-17	0.33	0.5	479894.014	1351573.986	Thorium-230	8.2	NV	pCi/g
103608	ASI-17	0.33	0.5	479894.014	1351573.986	Thorium-232	0.8	NV	pCi/g
103608	ASI-17	0.33	0.5	479894.014	1351573.986	Uranium, Total	72.21616	NV	mg/kg
103608	ASI-17	0.33	0.5	479894.014	1351573.986	Uranium-234	24	NV	pCi/g
103608	ASI-17	0.33	0.5	479894.014	1351573.986	Uranium-235/236	1.05	NV	pCi/g
103608	ASI-17	0.33	0.5	479894.014	1351573.986	Uranium-238	24.1	NV	pCi/g
103610	ASI-17	0.5	1	479894.014	1351573.986	Radium-226	4.1	NV	pCi/g
103610	ASI-17	0.5	1	479894.014	1351573.986	Radium-228	1.09	NV	pCi/g
103610	ASI-17	0.5	1	479894.014	1351573.986	Thorium-228	2.29	NV	pCi/g
103610	ASI-17	0.5	1	479894.014	1351573.986	Thorium-230	6.75	NV	pCi/g
103610	ASI-17	0.5	1	479894.014	1351573.986	Thorium-232	1.05	NV	pCi/g
103610	ASI-17	0.5	1	479894.014	1351573.986	Uranium, Total	25.163946	NV	mg/kg
103610	ASI-17	0.5	1	479894.014	1351573.986	Uranium-234	7.76	NV	pCi/g
103610	ASI-17	0.5	1	479894.014	1351573.986	Uranium-235/236	0.48	NV	pCi/g
103610	ASI-17	0.5	1	479894.014	1351573.986	Uranium-238	8.38	NV	pCi/g
103612	ASI-17	1	1.5	479894.014	1351573.986	Radium-226	1.16	NV	pCi/g
103612	ASI-17	1	1.5	479894.014	1351573.986	Radium-228	1.02	NV	pCi/g
103612	ASI-17	1	1.5	479894.014	1351573.986	Thorium-228	2.61	NV	pCi/g
103612	ASI-17	1	1.5	479894.014	1351573.986	Thorium-230	1.18	NV	pCi/g
103612	ASI-17	1	1.5	479894.014	1351573.986	Thorium-232	1.21	NV	pCi/g
103612	ASI-17	1	1.5	479894.014	1351573.986	Uranium, Total	4.6177584	NV	mg/kg
103612	ASI-17	1	1.5	479894.014	1351573.986	Uranium-234	1.32	NV	pCi/g
103612	ASI-17	1	1.5	479894.014	1351573.986	Uranium-235/236	0.1	UNV	pCi/g
103612	ASI-17	1	1.5	479894.014	1351573.986	Uranium-238	1.54	NV	pCi/g
103614	ASI-17	1.5	2	479894.014	1351573.986	Radium-226	1.32	NV	pCi/g
103614	ASI-17	1.5	2	479894.014	1351573.986	Radium-228	1.18	NV	pCi/g
103614	ASI-17	1.5	2	479894.014	1351573.986	Thorium-228	2.6	NV	pCi/g
103614	ASI-17	1.5	2	479894.014	1351573.986	Thorium-230	3.3	NV	pCi/g
103614	ASI-17	1.5	2	479894.014	1351573.986	Thorium-232	0.8	NV	pCi/g
103614	ASI-17	1.5	2	479894.014	1351573.986	Uranium, Total	86.678122	NV	mg/kg
103614	ASI-17	1.5	2	479894.014	1351573.986	Uranium-234	26	NV	pCi/g
103614	ASI-17	1.5	2	479894.014	1351573.986	Uranium-235/236	1.43	NV	pCi/g

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Sample ID	Location	Top Depth (ft)	Bot. Depth (ft)	Northing	Easting	Parameter	Result	Qualifier	Units
103614	ASI-17	1.5	2	479894.014	1351573.986	Uranium-238	28.9	NV	pCi/g
103620	ASI-18	0	0.17	479963.915	1351605.785	Radium-226	1.59	NV	pCi/g
103620	ASI-18	0	0.17	479963.915	1351605.785	Radium-228	0.823	NV	pCi/g
103620	ASI-18	0	0.17	479963.915	1351605.785	Thorium-228	2.16	NV	pCi/g
103620	ASI-18	0	0.17	479963.915	1351605.785	Thorium-230	3.42	NV	pCi/g
103620	ASI-18	0	0.17	479963.915	1351605.785	Thorium-232	1.09	NV	pCi/g
103620	ASI-18	0	0.17	479963.915	1351605.785	Uranium, Total	61.450177	NV	mg/kg
103620	ASI-18	0	0.17	479963.915	1351605.785	Uranium-234	19.2	NV	pCi/g
103620	ASI-18	0	0.17	479963.915	1351605.785	Uranium-235/236	0.94	NV	pCi/g
103620	ASI-18	0	0.17	479963.915	1351605.785	Uranium-238	20.5	NV	pCi/g
103622	ASI-18	0.17	0.33	479963.915	1351605.785	Radium-226	1.83	NV	pCi/g
103622	ASI-18	0.17	0.33	479963.915	1351605.785	Radium-228	0.966	NV	pCi/g
103622	ASI-18	0.17	0.33	479963.915	1351605.785	Thorium-228	2.51	NV	pCi/g
103622	ASI-18	0.17	0.33	479963.915	1351605.785	Thorium-230	2.62	NV	pCi/g
103622	ASI-18	0.17	0.33	479963.915	1351605.785	Thorium-232	1.02	NV	pCi/g
103622	ASI-18	0.17	0.33	479963.915	1351605.785	Uranium, Total	63.01696	NV	mg/kg
103622	ASI-18	0.17	0.33	479963.915	1351605.785	Uranium-234	19.1	NV	pCi/g
103622	ASI-18	0.17	0.33	479963.915	1351605.785	Uranium-235/236	1.11	NV	pCi/g
103622	ASI-18	0.17	0.33	479963.915	1351605.785	Uranium-238	21	NV	pCi/g
103624	ASI-18	0.33	0.5	479963.915	1351605.785	Radium-226	1.71	NV	pCi/g
103624	ASI-18	0.33	0.5	479963.915	1351605.785	Radium-228	0.86	NV	pCi/g
103624	ASI-18	0.33	0.5	479963.915	1351605.785	Thorium-228	2.33	NV	pCi/g
103624	ASI-18	0.33	0.5	479963.915	1351605.785	Thorium-230	2.68	NV	pCi/g
103624	ASI-18	0.33	0.5	479963.915	1351605.785	Thorium-232	0.72	NV	pCi/g
103624	ASI-18	0.33	0.5	479963.915	1351605.785	Uranium, Total	60.998554	NV	mg/kg
103624	ASI-18	0.33	0.5	479963.915	1351605.785	Uranium-234	19.8	NV	pCi/g
103624	ASI-18	0.33	0.5	479963.915	1351605.785	Uranium-235/236	1.25	NV	pCi/g
103624	ASI-18	0.33	0.5	479963.915	1351605.785	Uranium-238	20.3	NV	pCi/g
103626	ASI-18	0.5	1	479963.915	1351605.785	Radium-226	1.51	NV	pCi/g
103626	ASI-18	0.5	1	479963.915	1351605.785	Radium-228	1.1	NV	pCi/g
103626	ASI-18	0.5	1	479963.915	1351605.785	Thorium-228	2.08	NV	pCi/g
103626	ASI-18	0.5	1	479963.915	1351605.785	Thorium-230	1.61	NV	pCi/g
103626	ASI-18	0.5	1	479963.915	1351605.785	Thorium-232	0.8	NV	pCi/g
103626	ASI-18	0.5	1	479963.915	1351605.785	Uranium, Total	25.335273	NV	/kg

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Sample ID	Location	Top Depth (ft)	Bot. Depth (ft)	Northing	Easting	Parameter	Result	Qualifier	Units
103626	ASI-18	0.5	1	479963.915	1351605.785	Uranium-234	7.95	NV	pCi/g
103626	ASI-18	0.5	1	479963.915	1351605.785	Uranium-235/236	0.4	NV	pCi/g
103626	ASI-18	0.5	1	479963.915	1351605.785	Uranium-238	8.45	NV	pCi/g
103628	ASI-18	1	1.5	479963.915	1351605.785	Radium-226	1.1	NV	pCi/g
103628	ASI-18	1	1.5	479963.915	1351605.785	Radium-228	0.999	NV	pCi/g
103628	ASI-18	1	1.5	479963.915	1351605.785	Thorium-228	2.4	NV	pCi/g
103628	ASI-18	1	1.5	479963.915	1351605.785	Thorium-230	1.48	NV	pCi/g
103628	ASI-18	1	1.5	479963.915	1351605.785	Thorium-232	1.02	NV	pCi/g
103628	ASI-18	1	1.5	479963.915	1351605.785	Uranium, Total	5.9235441	NV	mg/kg
103628	ASI-18	1	1.5	479963.915	1351605.785	Uranium-234	1.64	NV	pCi/g
103628	ASI-18	1	1.5	479963.915	1351605.785	Uranium-235/236	0.13	NV	pCi/g
103628	ASI-18	1	1.5	479963.915	1351605.785	Uranium-238	1.97	NV	pCi/g
103630	ASI-18	1.5	2	479963.915	1351605.785	Radium-226	1.36	NV	pCi/g
103630	ASI-18	1.5	2	479963.915	1351605.785	Radium-228	1.39	NV	pCi/g
103630	ASI-18	1.5	2	479963.915	1351605.785	Thorium-228	2.82	NV	pCi/g
103630	ASI-18	1.5	2	479963.915	1351605.785	Thorium-230	1.76	NV	pCi/g
103630	ASI-18	1.5	2	479963.915	1351605.785	Thorium-232	1.03	NV	pCi/g
103630	ASI-18	1.5	2	479963.915	1351605.785	Uranium, Total	2.7586608	NV	mg/kg
103630	ASI-18	1.5	2	479963.915	1351605.785	Uranium-234	0.97	NV	pCi/g
103630	ASI-18	1.5	2	479963.915	1351605.785	Uranium-235/236	0.1	UNV	pCi/g
103630	ASI-18	1.5	2	479963.915	1351605.785	Uranium-238	0.92	NV	pCi/g
103637	ASI-14	0	0.17	479897.715	1351665.686	Radium-226	12.5	NV	pCi/g
103637	ASI-14	0	0.17	479897.715	1351665.686	Radium-228	1.08	NV	pCi/g
103637	ASI-14	0	0.17	479897.715	1351665.686	Thorium-228	2.13	NV	pCi/g
103637	ASI-14	0	0.17	479897.715	1351665.686	Thorium-230	33.2	NV	pCi/g
103637	ASI-14	0	0.17	479897.715	1351665.686	Thorium-232	1.22	NV	pCi/g
103637	ASI-14	0	0.17	479897.715	1351665.686	Uranium-234	31	NV	pCi/g
103637	ASI-14	0	0.17	479897.715	1351665.686	Uranium-235/236	1.25	NV	pCi/g
103637	ASI-14	0	0.17	479897.715	1351665.686	Uranium-238	31.5	NV	pCi/g
103639	ASI-14	0.17	0.33	479897.715	1351665.686	Radium-226	13.4	NV	pCi/g
103639	ASI-14	0.17	0.33	479897.715	1351665.686	Radium-228	1.13	NV	pCi/g
103639	ASI-14	0.17	0.33	479897.715	1351665.686	Thorium-228	2.15	NV	pCi/g
103639	ASI-14	0.17	0.33	479897.715	1351665.686	Thorium-230	25.6	NV	pCi/g
103639	ASI-14	0.17	0.33	479897.715	1351665.686	Thorium-232	0.67	NV	pCi/g

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A1PII IMPLEMENTATION PLAN
APPENDIX B TABLE B-2

Sample ID	Location	Top Depth (ft)	Bot. Depth (ft)	Northing	Easting	Parameter	Result	Qualifier	Units
103639	ASI-14	0.17	0.33	479897.715	1351665.686	Uranium-234	26	NV	pCi/g
103639	ASI-14	0.17	0.33	479897.715	1351665.686	Uranium-235/236	1.04	NV	pCi/g
103639	ASI-14	0.17	0.33	479897.715	1351665.686	Uranium-238	26	NV	pCi/g
103641	ASI-14	0.33	0.5	479897.715	1351665.686	Radium-226	15.4	NV	pCi/g
103641	ASI-14	0.33	0.5	479897.715	1351665.686	Radium-228	1.09	NV	pCi/g
103641	ASI-14	0.33	0.5	479897.715	1351665.686	Thorium-228	2.45	NV	pCi/g
103641	ASI-14	0.33	0.5	479897.715	1351665.686	Thorium-230	28.9	NV	pCi/g
103641	ASI-14	0.33	0.5	479897.715	1351665.686	Thorium-232	1.36	NV	pCi/g
103641	ASI-14	0.33	0.5	479897.715	1351665.686	Uranium, Total	65.845131	NV	mg/kg
103641	ASI-14	0.33	0.5	479897.715	1351665.686	Uranium-234	19.9	NV	pCi/g
103641	ASI-14	0.33	0.5	479897.715	1351665.686	Uranium-235/236	0.79	NV	pCi/g
103641	ASI-14	0.33	0.5	479897.715	1351665.686	Uranium-238	22	NV	pCi/g
103643	ASI-14	0.5	1	479897.715	1351665.686	Radium-226	3.84	NV	pCi/g
103643	ASI-14	0.5	1	479897.715	1351665.686	Radium-228	0.915	NV	pCi/g
103643	ASI-14	0.5	1	479897.715	1351665.686	Thorium-228	3.68	NV	pCi/g
103643	ASI-14	0.5	1	479897.715	1351665.686	Thorium-230	6.93	NV	pCi/g
103643	ASI-14	0.5	1	479897.715	1351665.686	Thorium-232	1.1	NV	pCi/g
103643	ASI-14	0.5	1	479897.715	1351665.686	Uranium, Total	32.659627	NV	mg/kg
103643	ASI-14	0.5	1	479897.715	1351665.686	Uranium-234	9.69	NV	pCi/g
103643	ASI-14	0.5	1	479897.715	1351665.686	Uranium-235/236	0.47	NV	pCi/g
103643	ASI-14	0.5	1	479897.715	1351665.686	Uranium-238	10.9	NV	pCi/g
103645	ASI-14	1	1.5	479897.715	1351665.686	Radium-226	1.37	NV	pCi/g
103645	ASI-14	1	1.5	479897.715	1351665.686	Radium-228	0.971	NV	pCi/g
103645	ASI-14	1	1.5	479897.715	1351665.686	Thorium-228	2.79	NV	pCi/g
103645	ASI-14	1	1.5	479897.715	1351665.686	Thorium-230	1.35	NV	pCi/g
103645	ASI-14	1	1.5	479897.715	1351665.686	Thorium-232	0.69	NV	pCi/g
103645	ASI-14	1	1.5	479897.715	1351665.686	Uranium, Total	12.83377	NV	mg/kg
103645	ASI-14	1	1.5	479897.715	1351665.686	Uranium-234	3.81	NV	pCi/g
103645	ASI-14	1	1.5	479897.715	1351665.686	Uranium-235/236	0.1	UNV	pCi/g
103645	ASI-14	1	1.5	479897.715	1351665.686	Uranium-238	4.28	NV	pCi/g
103647	ASI-14	1.5	2	479897.715	1351665.686	Radium-226	1.22	NV	pCi/g
103647	ASI-14	1.5	2	479897.715	1351665.686	Radium-228	1.11	NV	pCi/g
103647	ASI-14	1.5	2	479897.715	1351665.686	Thorium-228	3.25	NV	pCi/g
103647	ASI-14	1.5	2	479897.715	1351665.686	Thorium-230	1.77	NV	pCi/g

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Sample ID	Location	Top Depth (ft)	Bot. Depth (ft)	Northing	Easting	Parameter	Result	Qualifier	Units
103647	ASI-14	1.5	2	479897.715	1351665.686	Thorium-232	0.7	NV	pCi/g
103647	ASI-14	1.5	2	479897.715	1351665.686	Uranium, Total	4.7377001	NV	mg/kg
103647	ASI-14	1.5	2	479897.715	1351665.686	Uranium-234	1.64	NV	pCi/g
103647	ASI-14	1.5	2	479897.715	1351665.686	Uranium-235/236	0.1	UNV	pCi/g
103647	ASI-14	1.5	2	479897.715	1351665.686	Uranium-238	1.58	NV	pCi/g
103654	ASI-19	0	0.17	479988.014	1351529.085	Radium-226	1.26	NV	pCi/g
103654	ASI-19	0	0.17	479988.014	1351529.085	Radium-228	1.02	NV	pCi/g
103654	ASI-19	0	0.17	479988.014	1351529.085	Thorium-228	2.42	NV	pCi/g
103654	ASI-19	0	0.17	479988.014	1351529.085	Thorium-230	2.13	NV	pCi/g
103654	ASI-19	0	0.17	479988.014	1351529.085	Thorium-232	1.16	NV	pCi/g
103654	ASI-19	0	0.17	479988.014	1351529.085	Uranium, Total	17.207214	NV	mg/kg
103654	ASI-19	0	0.17	479988.014	1351529.085	Uranium-234	5.38	NV	pCi/g
103654	ASI-19	0	0.17	479988.014	1351529.085	Uranium-235/236	0.33	NV	pCi/g
103654	ASI-19	0	0.17	479988.014	1351529.085	Uranium-238	5.73	NV	pCi/g
103657	ASI-19	0.17	0.33	479988.014	1351529.085	Radium-226	1.39	NV	pCi/g
103657	ASI-19	0.17	0.33	479988.014	1351529.085	Radium-228	1.15	NV	pCi/g
103657	ASI-19	0.17	0.33	479988.014	1351529.085	Thorium-228	2.45	NV	pCi/g
103657	ASI-19	0.17	0.33	479988.014	1351529.085	Thorium-230	1.65	NV	pCi/g
103657	ASI-19	0.17	0.33	479988.014	1351529.085	Thorium-232	1.13	NV	pCi/g
103657	ASI-19	0.17	0.33	479988.014	1351529.085	Uranium, Total	13.44716	NV	mg/kg
103657	ASI-19	0.17	0.33	479988.014	1351529.085	Uranium-234	4.55	NV	pCi/g
103657	ASI-19	0.17	0.33	479988.014	1351529.085	Uranium-235/236	0.18	NV	pCi/g
103657	ASI-19	0.17	0.33	479988.014	1351529.085	Uranium-238	4.49	NV	pCi/g
103660	ASI-19	0.33	0.5	479988.014	1351529.085	Radium-226	0.883	NV	pCi/g
103660	ASI-19	0.33	0.5	479988.014	1351529.085	Radium-228	0.831	NV	pCi/g
103660	ASI-19	0.33	0.5	479988.014	1351529.085	Thorium-228	2.84	NV	pCi/g
103660	ASI-19	0.33	0.5	479988.014	1351529.085	Thorium-230	1.43	NV	pCi/g
103660	ASI-19	0.33	0.5	479988.014	1351529.085	Thorium-232	0.77	NV	pCi/g
103660	ASI-19	0.33	0.5	479988.014	1351529.085	Uranium, Total	17.816304	NV	mg/kg
103660	ASI-19	0.33	0.5	479988.014	1351529.085	Uranium-234	5.15	NV	pCi/g
103660	ASI-19	0.33	0.5	479988.014	1351529.085	Uranium-235/236	0.36	NV	pCi/g
103660	ASI-19	0.33	0.5	479988.014	1351529.085	Uranium-238	5.93	NV	pCi/g
103663	ASI-19	0.5	1	479988.014	1351529.085	Radium-226	0.994	NV	pCi/g
103663	ASI-19	0.5	1	479988.014	1351529.085	Radium-228	1.02	NV	pCi/g

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A1PII IMPLEMENTATION PLAN
APPENDIX B TABLE B-2

Sample ID	Location	Top Depth (ft)	Bot. Depth (ft)	Northing	Easting	Parameter	Result	Qualifier	Units
103663	ASI-19	0.5	1	479988.014	1351529.085	Thorium-228	2.41	NV	pCi/g
103663	ASI-19	0.5	1	479988.014	1351529.085	Thorium-230	1.05	NV	pCi/g
103663	ASI-19	0.5	1	479988.014	1351529.085	Thorium-232	1.19	NV	pCi/g
103663	ASI-19	0.5	1	479988.014	1351529.085	Uranium, Total	10.653976	NV	mg/kg
103663	ASI-19	0.5	1	479988.014	1351529.085	Uranium-234	3.34	NV	pCi/g
103663	ASI-19	0.5	1	479988.014	1351529.085	Uranium-235/236	0.19	NV	pCi/g
103663	ASI-19	0.5	1	479988.014	1351529.085	Uranium-238	3.55	NV	pCi/g
103666	ASI-19	1	1.5	479988.014	1351529.085	Radium-226	1.1	NV	pCi/g
103666	ASI-19	1	1.5	479988.014	1351529.085	Radium-228	1.09	NV	pCi/g
103666	ASI-19	1	1.5	479988.014	1351529.085	Thorium-228	2.59	NV	pCi/g
103666	ASI-19	1	1.5	479988.014	1351529.085	Thorium-230	1.38	NV	pCi/g
103666	ASI-19	1	1.5	479988.014	1351529.085	Thorium-232	0.9	NV	pCi/g
103666	ASI-19	1	1.5	479988.014	1351529.085	Uranium, Total	6.0815871	NV	mg/kg
103666	ASI-19	1	1.5	479988.014	1351529.085	Uranium-234	1.48	NV	pCi/g
103666	ASI-19	1	1.5	479988.014	1351529.085	Uranium-235/236	0.15	NV	pCi/g
103666	ASI-19	1	1.5	479988.014	1351529.085	Uranium-238	2.02	NV	pCi/g
103669	ASI-19	1.5	2	479988.014	1351529.085	Radium-226	1.14	NV	pCi/g
103669	ASI-19	1.5	2	479988.014	1351529.085	Radium-228	1.13	NV	pCi/g
103669	ASI-19	1.5	2	479988.014	1351529.085	Thorium-228	2.46	NV	pCi/g
103669	ASI-19	1.5	2	479988.014	1351529.085	Thorium-230	1.52	NV	pCi/g
103669	ASI-19	1.5	2	479988.014	1351529.085	Thorium-232	1.42	NV	pCi/g
103669	ASI-19	1.5	2	479988.014	1351529.085	Uranium, Total	4.5577875	NV	mg/kg
103669	ASI-19	1.5	2	479988.014	1351529.085	Uranium-234	1.44	NV	pCi/g
103669	ASI-19	1.5	2	479988.014	1351529.085	Uranium-235/236	0.1	UNV	pCi/g
103669	ASI-19	1.5	2	479988.014	1351529.085	Uranium-238	1.52	NV	pCi/g
103677	ASI-8	0	0.17	480249.58	1351462.542	Radium-226	1.39	NV	pCi/g
103677	ASI-8	0	0.17	480249.58	1351462.542	Radium-228	1.39	NV	pCi/g
103677	ASI-8	0	0.17	480249.58	1351462.542	Thorium-228	3.09	NV	pCi/g
103677	ASI-8	0	0.17	480249.58	1351462.542	Thorium-230	4.52	NV	pCi/g
103677	ASI-8	0	0.17	480249.58	1351462.542	Thorium-232	1.16	NV	pCi/g
103677	ASI-8	0	0.17	480249.58	1351462.542	Uranium, Total	281.84945	NV	mg/kg
103677	ASI-8	0	0.17	480249.58	1351462.542	Uranium-234	92	NV	pCi/g
103677	ASI-8	0	0.17	480249.58	1351462.542	Uranium-235/236	5.12	NV	pCi/g
103677	ASI-8	0	0.17	480249.58	1351462.542	Uranium-238	93.9	NV	pCi/g

Sample ID	Location	Top Depth (ft)	Bot. Depth (ft)	Northing	Easting	Parameter	Result	Qualifier	Units
103680	ASI-8	0.17	0.33	480249.58	1351462.542	Radium-226	1.65	NV	pCi/g
103680	ASI-8	0.17	0.33	480249.58	1351462.542	Radium-228	1.33	NV	pCi/g
103680	ASI-8	0.17	0.33	480249.58	1351462.542	Thorium-228	3.07	NV	pCi/g
103680	ASI-8	0.17	0.33	480249.58	1351462.542	Thorium-230	4.47	NV	pCi/g
103680	ASI-8	0.17	0.33	480249.58	1351462.542	Thorium-232	1.12	NV	pCi/g
103680	ASI-8	0.17	0.33	480249.58	1351462.542	Uranium, Total	210.62045	NV	mg/kg
103680	ASI-8	0.17	0.33	480249.58	1351462.542	Uranium-234	70.4	NV	pCi/g
103680	ASI-8	0.17	0.33	480249.58	1351462.542	Uranium-235/236	3.63	NV	pCi/g
103680	ASI-8	0.17	0.33	480249.58	1351462.542	Uranium-238	70.2	NV	pCi/g
103683	ASI-8	0.33	0.5	480249.58	1351462.542	Radium-226	1.82	NV	pCi/g
103683	ASI-8	0.33	0.5	480249.58	1351462.542	Radium-228	1.29	NV	pCi/g
103683	ASI-8	0.33	0.5	480249.58	1351462.542	Thorium-228	3.5	NV	pCi/g
103683	ASI-8	0.33	0.5	480249.58	1351462.542	Thorium-230	4.12	NV	pCi/g
103683	ASI-8	0.33	0.5	480249.58	1351462.542	Thorium-232	1.17	NV	pCi/g
103683	ASI-8	0.33	0.5	480249.58	1351462.542	Uranium, Total	214.60301	NV	mg/kg
103683	ASI-8	0.33	0.5	480249.58	1351462.542	Uranium-234	40.1	NV	pCi/g
103683	ASI-8	0.33	0.5	480249.58	1351462.542	Uranium-235/236	2.6	NV	pCi/g
103683	ASI-8	0.33	0.5	480249.58	1351462.542	Uranium-238	71.7	NV	pCi/g
103686	ASI-8	0.5	1	480249.58	1351462.542	Radium-226	1.14	NV	pCi/g
103686	ASI-8	0.5	1	480249.58	1351462.542	Radium-228	0.963	NV	pCi/g
103686	ASI-8	0.5	1	480249.58	1351462.542	Thorium-228	2.4	NV	pCi/g
103686	ASI-8	0.5	1	480249.58	1351462.542	Thorium-230	2.18	NV	pCi/g
103686	ASI-8	0.5	1	480249.58	1351462.542	Thorium-232	0.55	NV	pCi/g
103686	ASI-8	0.5	1	480249.58	1351462.542	Uranium, Total	51.889041	NV	mg/kg
103686	ASI-8	0.5	1	480249.58	1351462.542	Uranium-234	17.4	NV	pCi/g
103686	ASI-8	0.5	1	480249.58	1351462.542	Uranium-235/236	0.86	NV	pCi/g
103686	ASI-8	0.5	1	480249.58	1351462.542	Uranium-238	17.3	NV	pCi/g
103689	ASI-8	1	1.5	480249.58	1351462.542	Radium-226	1.1	NV	pCi/g
103689	ASI-8	1	1.5	480249.58	1351462.542	Radium-228	1.11	NV	pCi/g
103689	ASI-8	1	1.5	480249.58	1351462.542	Thorium-228	3.43	NV	pCi/g
103689	ASI-8	1	1.5	480249.58	1351462.542	Thorium-230	1.25	NV	pCi/g
103689	ASI-8	1	1.5	480249.58	1351462.542	Thorium-232	1.26	NV	pCi/g
103689	ASI-8	1	1.5	480249.58	1351462.542	Uranium, Total	6.7767103	NV	mg/kg
103689	ASI-8	1	1.5	480249.58	1351462.542	Uranium-234	2.39	NV	pCi/g

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A1PII IMPLEMENTATION PLAN
APPENDIX B TABLE B-2

Sample ID	Location	Top Depth (ft)	Bot. Depth (ft)	Northing	Easting	Parameter	Result	Qualifier	Units
103689	ASI-8	1	1.5	480249.58	1351462.542	Uranium-235/236	0.1	UNV	pCi/g
103689	ASI-8	1	1.5	480249.58	1351462.542	Uranium-238	2.26	NV	pCi/g
103692	ASI-8	1.5	2	480249.58	1351462.542	Radium-226	1.17	NV	pCi/g
103692	ASI-8	1.5	2	480249.58	1351462.542	Radium-228	1.13	NV	pCi/g
103692	ASI-8	1.5	2	480249.58	1351462.542	Thorium-228	3.34	NV	pCi/g
103692	ASI-8	1.5	2	480249.58	1351462.542	Thorium-230	1.66	NV	pCi/g
103692	ASI-8	1.5	2	480249.58	1351462.542	Thorium-232	0.99	NV	pCi/g
103692	ASI-8	1.5	2	480249.58	1351462.542	Uranium, Total	3.6882096	NV	mg/kg
103692	ASI-8	1.5	2	480249.58	1351462.542	Uranium-234	1.14	NV	pCi/g
103692	ASI-8	1.5	2	480249.58	1351462.542	Uranium-235/236	0.1	UNV	pCi/g
103692	ASI-8	1.5	2	480249.58	1351462.542	Uranium-238	1.23	NV	pCi/g
103701	ASI-14	0	0.17	479897.715	1351665.686	Radium-226	2.05	NV	pCi/g
103701	ASI-14	0	0.17	479897.715	1351665.686	Radium-228	1.54	NV	pCi/g
103701	ASI-14	0	0.17	479897.715	1351665.686	Thorium-228	2.6	NV	pCi/g
103701	ASI-14	0	0.17	479897.715	1351665.686	Thorium-230	4.23	NV	pCi/g
103701	ASI-14	0	0.17	479897.715	1351665.686	Thorium-232	1.05	NV	pCi/g
103701	ASI-14	0	0.17	479897.715	1351665.686	Uranium, Total	140.16522	NV	mg/kg
103701	ASI-14	0	0.17	479897.715	1351665.686	Uranium-234	44.5	NV	pCi/g
103701	ASI-14	0	0.17	479897.715	1351665.686	Uranium-235/236	3.17	NV	pCi/g
103701	ASI-14	0	0.17	479897.715	1351665.686	Uranium-238	46.6	NV	pCi/g
103703	ASI-14	0.17	0.33	479897.715	1351665.686	Radium-226	1.89	NV	pCi/g
103703	ASI-14	0.17	0.33	479897.715	1351665.686	Radium-228	1.41	NV	pCi/g
103703	ASI-14	0.17	0.33	479897.715	1351665.686	Thorium-228	3.08	NV	pCi/g
103703	ASI-14	0.17	0.33	479897.715	1351665.686	Thorium-230	4.71	NV	pCi/g
103703	ASI-14	0.17	0.33	479897.715	1351665.686	Thorium-232	1.47	NV	pCi/g
103703	ASI-14	0.17	0.33	479897.715	1351665.686	Uranium, Total	125.24809	NV	mg/kg
103703	ASI-14	0.17	0.33	479897.715	1351665.686	Uranium-234	41.6	NV	pCi/g
103703	ASI-14	0.17	0.33	479897.715	1351665.686	Uranium-235/236	2.45	NV	pCi/g
103703	ASI-14	0.17	0.33	479897.715	1351665.686	Uranium-238	41.7	NV	pCi/g
103704	ASI-10	0.17	0.33	480062.429	1351607.084	Uranium, Total	114	NV	mg/kg
103705	ASI-10	0.33	0.5	480062.429	1351607.084	Radium-226	1.77	NV	pCi/g
103705	ASI-10	0.33	0.5	480062.429	1351607.084	Radium-228	1.18	NV	pCi/g
103705	ASI-10	0.33	0.5	480062.429	1351607.084	Thorium-228	1.86	NV	pCi/g
103705	ASI-10	0.33	0.5	480062.429	1351607.084	Thorium-230	2.29	NV	pCi/g

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Sample ID	Location	Top Depth (ft)	Bot. Depth (ft)	Northing	Easting	Parameter	Result	Qualifier	Units
103705	ASI-10	0.33	0.5	480062.429	1351607.084	Thorium-232	1	NV	pCi/g
103705	ASI-10	0.33	0.5	480062.429	1351607.084	Uranium, Total	60.882813	NV	mg/kg
103705	ASI-10	0.33	0.5	480062.429	1351607.084	Uranium-234	19.8	NV	pCi/g
103705	ASI-10	0.33	0.5	480062.429	1351607.084	Uranium-235/236	1	NV	pCi/g
103705	ASI-10	0.33	0.5	480062.429	1351607.084	Uranium-238	20.3	NV	pCi/g
103707	ASI-10	0.5	1	480062.429	1351607.084	Radium-226	1.69	NV	pCi/g
103707	ASI-10	0.5	1	480062.429	1351607.084	Radium-228	1	NV	pCi/g
103707	ASI-10	0.5	1	480062.429	1351607.084	Thorium-228	2.91	NV	pCi/g
103707	ASI-10	0.5	1	480062.429	1351607.084	Thorium-230	2.5	NV	pCi/g
103707	ASI-10	0.5	1	480062.429	1351607.084	Thorium-232	1.04	NV	pCi/g
103707	ASI-10	0.5	1	480062.429	1351607.084	Uranium, Total	31.501656	NV	mg/kg
103707	ASI-10	0.5	1	480062.429	1351607.084	Uranium-234	10.3	NV	pCi/g
103707	ASI-10	0.5	1	480062.429	1351607.084	Uranium-235/236	0.54	NV	pCi/g
103707	ASI-10	0.5	1	480062.429	1351607.084	Uranium-238	10.5	NV	pCi/g
103709	ASI-10	0.5	1	480062.429	1351607.084	Radium-226	4.39	NV	pCi/g
103709	ASI-10	0.5	1	480062.429	1351607.084	Radium-228	0.774	NV	pCi/g
103709	ASI-10	0.5	1	480062.429	1351607.084	Thorium-228	3.36	NV	pCi/g
103709	ASI-10	0.5	1	480062.429	1351607.084	Thorium-230	6.55	NV	pCi/g
103709	ASI-10	0.5	1	480062.429	1351607.084	Thorium-232	0.62	NV	pCi/g
103709	ASI-10	0.5	1	480062.429	1351607.084	Uranium-234	7.83	NV	pCi/g
103709	ASI-10	0.5	1	480062.429	1351607.084	Uranium-235/236	0.38	NV	pCi/g
103709	ASI-10	0.5	1	480062.429	1351607.084	Uranium-238	7	NV	pCi/g
103710	ASI-10	1	1.5	480062.429	1351607.084	Uranium, Total	14	NV	mg/kg
103711	ASI-10	1.5	2	480062.429	1351607.084	Radium-226	0.921	NV	pCi/g
103711	ASI-10	1.5	2	480062.429	1351607.084	Radium-228	0.577	NV	pCi/g
103711	ASI-10	1.5	2	480062.429	1351607.084	Thorium-228	2.17	NV	pCi/g
103711	ASI-10	1.5	2	480062.429	1351607.084	Thorium-230	1.11	NV	pCi/g
103711	ASI-10	1.5	2	480062.429	1351607.084	Thorium-232	0.6	NV	pCi/g
103711	ASI-10	1.5	2	480062.429	1351607.084	Uranium, Total	9.449595	NV	mg/kg
103711	ASI-10	1.5	2	480062.429	1351607.084	Uranium-234	3.24	NV	pCi/g
103711	ASI-10	1.5	2	480062.429	1351607.084	Uranium-235/236	0.16	NV	pCi/g
103711	ASI-10	1.5	2	480062.429	1351607.084	Uranium-238	3.15	NV	pCi/g
103715	ASI-9	0	0.17	480239.688	1351570.182	Radium-226	1.24	NV	pCi/g
103715	ASI-9	0	0.17	480239.688	1351570.182	Radium-228	1.52	NV	pCi/g

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A1PII IMPLEMENTATION PLAN
APPENDIX B TABLE B-2

Sample ID	Location	Top Depth (ft)	Bot. Depth (ft)	Northing	Easting	Parameter	Result	Qualifier	Units
103715	ASI-9	0	0.17	480239.688	1351570.182	Thorium-228	2.75	NV	pCi/g
103715	ASI-9	0	0.17	480239.688	1351570.182	Thorium-230	2.6	NV	pCi/g
103715	ASI-9	0	0.17	480239.688	1351570.182	Thorium-232	1.14	NV	pCi/g
103715	ASI-9	0	0.17	480239.688	1351570.182	Uranium, Total	230.08129	NV	mg/kg
103715	ASI-9	0	0.17	480239.688	1351570.182	Uranium-234	77.8	NV	pCi/g
103715	ASI-9	0	0.17	480239.688	1351570.182	Uranium-235/236	4.52	NV	pCi/g
103715	ASI-9	0	0.17	480239.688	1351570.182	Uranium-238	76.6	NV	pCi/g
103717	ASI-9	0.17	0.33	480239.688	1351570.182	Radium-226	1.32	NV	pCi/g
103717	ASI-9	0.17	0.33	480239.688	1351570.182	Radium-228	1.63	NV	pCi/g
103717	ASI-9	0.17	0.33	480239.688	1351570.182	Thorium-228	2.65	NV	pCi/g
103717	ASI-9	0.17	0.33	480239.688	1351570.182	Thorium-230	2.53	NV	pCi/g
103717	ASI-9	0.17	0.33	480239.688	1351570.182	Thorium-232	1.45	NV	pCi/g
103717	ASI-9	0.17	0.33	480239.688	1351570.182	Uranium, Total	194.93697	NV	mg/kg
103717	ASI-9	0.17	0.33	480239.688	1351570.182	Uranium-234	64.6	NV	pCi/g
103717	ASI-9	0.17	0.33	480239.688	1351570.182	Uranium-235/236	4.47	NV	pCi/g
103717	ASI-9	0.17	0.33	480239.688	1351570.182	Uranium-238	64.8	NV	pCi/g
103719	ASI-9	0.33	0.5	480239.688	1351570.182	Radium-226	1.2	NV	pCi/g
103719	ASI-9	0.33	0.5	480239.688	1351570.182	Radium-228	1.42	NV	pCi/g
103719	ASI-9	0.33	0.5	480239.688	1351570.182	Thorium-228	2.1	NV	pCi/g
103719	ASI-9	0.33	0.5	480239.688	1351570.182	Thorium-230	2.43	NV	pCi/g
103719	ASI-9	0.33	0.5	480239.688	1351570.182	Thorium-232	1.3	NV	pCi/g
103719	ASI-9	0.33	0.5	480239.688	1351570.182	Uranium, Total	186.34877	NV	mg/kg
103719	ASI-9	0.33	0.5	480239.688	1351570.182	Uranium-234	63.1	NV	pCi/g
103719	ASI-9	0.33	0.5	480239.688	1351570.182	Uranium-235/236	3.92	NV	pCi/g
103719	ASI-9	0.33	0.5	480239.688	1351570.182	Uranium-238	62	NV	pCi/g
103721	ASI-9	0.5	1	480239.688	1351570.182	Radium-226	1.23	NV	pCi/g
103721	ASI-9	0.5	1	480239.688	1351570.182	Radium-228	1.19	NV	pCi/g
103721	ASI-9	0.5	1	480239.688	1351570.182	Thorium-228	3.25	NV	pCi/g
103721	ASI-9	0.5	1	480239.688	1351570.182	Thorium-230	1.86	NV	pCi/g
103721	ASI-9	0.5	1	480239.688	1351570.182	Thorium-232	1.31	NV	pCi/g
103721	ASI-9	0.5	1	480239.688	1351570.182	Uranium, Total	34.789531	NV	mg/kg
103721	ASI-9	0.5	1	480239.688	1351570.182	Uranium-234	11.4	NV	pCi/g
103721	ASI-9	0.5	1	480239.688	1351570.182	Uranium-235/236	0.57	NV	pCi/g
103721	ASI-9	0.5	1	480239.688	1351570.182	Uranium-238	11.6	NV	pCi/g

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Sample ID	Location	Top Depth (ft)	Bot. Depth (ft)	Northing	Easting	Parameter	Result	Qualifier	Units
103723	ASI-9	1	1.5	480239.688	1351570.182	Radium-226	1.33	NV	pCi/g
103723	ASI-9	1	1.5	480239.688	1351570.182	Radium-228	1.19	NV	pCi/g
103723	ASI-9	1	1.5	480239.688	1351570.182	Thorium-228	2.96	NV	pCi/g
103723	ASI-9	1	1.5	480239.688	1351570.182	Thorium-230	1.21	NV	pCi/g
103723	ASI-9	1	1.5	480239.688	1351570.182	Thorium-232	1.04	NV	pCi/g
103723	ASI-9	1	1.5	480239.688	1351570.182	Uranium, Total	9.8133982	NV	mg/kg
103723	ASI-9	1	1.5	480239.688	1351570.182	Uranium-234	3.53	NV	pCi/g
103723	ASI-9	1	1.5	480239.688	1351570.182	Uranium-235/236	0.11	NV	pCi/g
103723	ASI-9	1	1.5	480239.688	1351570.182	Uranium-238	3.28	NV	pCi/g
103725	ASI-9	1.5	2	480239.688	1351570.182	Radium-226	1.28	NV	pCi/g
103725	ASI-9	1.5	2	480239.688	1351570.182	Radium-228	1.1	NV	pCi/g
103725	ASI-9	1.5	2	480239.688	1351570.182	Thorium-228	3.89	NV	pCi/g
103725	ASI-9	1.5	2	480239.688	1351570.182	Thorium-230	1.94	NV	pCi/g
103725	ASI-9	1.5	2	480239.688	1351570.182	Thorium-232	1.11	NV	pCi/g
103725	ASI-9	1.5	2	480239.688	1351570.182	Uranium, Total	7.4257083	NV	mg/kg
103725	ASI-9	1.5	2	480239.688	1351570.182	Uranium-234	2.76	NV	pCi/g
103725	ASI-9	1.5	2	480239.688	1351570.182	Uranium-235/236	0.16	NV	pCi/g
103725	ASI-9	1.5	2	480239.688	1351570.182	Uranium-238	2.47	NV	pCi/g
103730	ASI-13	0	0.17	480107.59	1351672.383	Radium-226	2.53	NV	pCi/g
103730	ASI-13	0	0.17	480107.59	1351672.383	Radium-228	1.24	NV	pCi/g
103730	ASI-13	0	0.17	480107.59	1351672.383	Thorium-228	1.02	NV	pCi/g
103730	ASI-13	0	0.17	480107.59	1351672.383	Thorium-230	4.34	NV	pCi/g
103730	ASI-13	0	0.17	480107.59	1351672.383	Thorium-232	1.47	NV	pCi/g
103730	ASI-13	0	0.17	480107.59	1351672.383	Uranium, Total	89.752113	NV	mg/kg
103730	ASI-13	0	0.17	480107.59	1351672.383	Uranium-234	29.6	NV	pCi/g
103730	ASI-13	0	0.17	480107.59	1351672.383	Uranium-235/236	1.64	NV	pCi/g
103730	ASI-13	0	0.17	480107.59	1351672.383	Uranium-238	29.9	NV	pCi/g
103733	ASI-13	0.17	0.33	480107.59	1351672.383	Radium-226	2.78	NV	pCi/g
103733	ASI-13	0.17	0.33	480107.59	1351672.383	Radium-228	1.38	NV	pCi/g
103733	ASI-13	0.17	0.33	480107.59	1351672.383	Thorium-228	1.15	NV	pCi/g
103733	ASI-13	0.17	0.33	480107.59	1351672.383	Thorium-230	4.29	NV	pCi/g
103733	ASI-13	0.17	0.33	480107.59	1351672.383	Thorium-232	1.22	NV	pCi/g
103733	ASI-13	0.17	0.33	480107.59	1351672.383	Uranium, Total	75.788071	NV	mg/kg
103733	ASI-13	0.17	0.33	480107.59	1351672.383	Uranium-234	27	NV	pCi/g

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A1PII IMPLEMENTATION PLAN
APPENDIX B TABLE B-2

Sample ID	Location	Top Depth (ft)	Bot. Depth (ft)	Northing	Easting	Parameter	Result	Qualifier	Units
103733	ASI-13	0.17	0.33	480107.59	1351672.383	Uranium-235/236	1.05	NV	pCi/g
103733	ASI-13	0.17	0.33	480107.59	1351672.383	Uranium-238	25.3	NV	pCi/g
103736	ASI-13	0.33	0.5	480107.59	1351672.383	Radium-226	2.68	NV	pCi/g
103736	ASI-13	0.33	0.5	480107.59	1351672.383	Radium-228	1.07	NV	pCi/g
103736	ASI-13	0.33	0.5	480107.59	1351672.383	Thorium-228	0.87	NV	pCi/g
103736	ASI-13	0.33	0.5	480107.59	1351672.383	Thorium-230	3.95	NV	pCi/g
103736	ASI-13	0.33	0.5	480107.59	1351672.383	Thorium-232	0.84	NV	pCi/g
103736	ASI-13	0.33	0.5	480107.59	1351672.383	Uranium, Total	58.585033	NV	mg/kg
103736	ASI-13	0.33	0.5	480107.59	1351672.383	Uranium-234	18.8	NV	pCi/g
103736	ASI-13	0.33	0.5	480107.59	1351672.383	Uranium-235/236	1.18	NV	pCi/g
103736	ASI-13	0.33	0.5	480107.59	1351672.383	Uranium-238	19.5	NV	pCi/g
103739	ASI-13	0.5	1	480107.59	1351672.383	Radium-226	2.49	NV	pCi/g
103739	ASI-13	0.5	1	480107.59	1351672.383	Radium-228	1.04	NV	pCi/g
103739	ASI-13	0.5	1	480107.59	1351672.383	Thorium-228	0.83	NV	pCi/g
103739	ASI-13	0.5	1	480107.59	1351672.383	Thorium-230	2.78	NV	pCi/g
103739	ASI-13	0.5	1	480107.59	1351672.383	Thorium-232	0.76	NV	pCi/g
103739	ASI-13	0.5	1	480107.59	1351672.383	Uranium, Total	28.259464	NV	mg/kg
103739	ASI-13	0.5	1	480107.59	1351672.383	Uranium-234	9.5	NV	pCi/g
103739	ASI-13	0.5	1	480107.59	1351672.383	Uranium-235/236	0.48	NV	pCi/g
103739	ASI-13	0.5	1	480107.59	1351672.383	Uranium-238	9.42	NV	pCi/g
103742	ASI-13	1	1.5	480107.59	1351672.383	Radium-226	1.02	NV	pCi/g
103742	ASI-13	1	1.5	480107.59	1351672.383	Radium-228	0.785	NV	pCi/g
103742	ASI-13	1	1.5	480107.59	1351672.383	Thorium-228	0.63	NV	pCi/g
103742	ASI-13	1	1.5	480107.59	1351672.383	Thorium-230	1.12	NV	pCi/g
103742	ASI-13	1	1.5	480107.59	1351672.383	Thorium-232	0.7	NV	pCi/g
103742	ASI-13	1	1.5	480107.59	1351672.383	Uranium, Total	11.224158	NV	mg/kg
103742	ASI-13	1	1.5	480107.59	1351672.383	Uranium-234	3.81	NV	pCi/g
103742	ASI-13	1	1.5	480107.59	1351672.383	Uranium-235/236	0.2	NV	pCi/g
103742	ASI-13	1	1.5	480107.59	1351672.383	Uranium-238	3.74	NV	pCi/g
103747	ASI-13	1.5	2	480107.59	1351672.383	Uranium, Total	11	UNV	mg/kg
103754	ASI-12	0	0.17	480203.919	1351769.682	Thorium-228	1.15	NV	pCi/g
103754	ASI-12	0	0.17	480203.919	1351769.682	Thorium-230	2.07	NV	pCi/g
103754	ASI-12	0	0.17	480203.919	1351769.682	Thorium-232	1.11	NV	pCi/g
103754	ASI-12	0	0.17	480203.919	1351769.682	Uranium, Total	141.99428	NV	/kg

Sample ID	Location	Top Depth (ft)	Bot. Depth (ft)	Northing	Easting	Parameter	Result	Qualifier	Units
103754	ASI-12	0	0.17	480203.919	1351769.682	Uranium-234	46.7	NV	pCi/g
103754	ASI-12	0	0.17	480203.919	1351769.682	Uranium-235/236	2.62	NV	pCi/g
103754	ASI-12	0	0.17	480203.919	1351769.682	Uranium-238	47.3	NV	pCi/g
103756	ASI-12	0.17	0.33	480203.919	1351769.682	Thorium-228	1.39	NV	pCi/g
103756	ASI-12	0.17	0.33	480203.919	1351769.682	Thorium-230	2.42	NV	pCi/g
103756	ASI-12	0.17	0.33	480203.919	1351769.682	Thorium-232	1.16	NV	pCi/g
103756	ASI-12	0.17	0.33	480203.919	1351769.682	Uranium, Total	130.30323	NV	mg/kg
103756	ASI-12	0.17	0.33	480203.919	1351769.682	Uranium-234	43.1	NV	pCi/g
103756	ASI-12	0.17	0.33	480203.919	1351769.682	Uranium-235/236	2.44	NV	pCi/g
103756	ASI-12	0.17	0.33	480203.919	1351769.682	Uranium-238	43.4	NV	pCi/g
103758	ASI-12	0.33	0.5	480203.919	1351769.682	Thorium-228	0.84	NV	pCi/g
103758	ASI-12	0.33	0.5	480203.919	1351769.682	Thorium-230	1.36	NV	pCi/g
103758	ASI-12	0.33	0.5	480203.919	1351769.682	Thorium-232	1.05	NV	pCi/g
103758	ASI-12	0.33	0.5	480203.919	1351769.682	Uranium, Total	73.676622	NV	mg/kg
103758	ASI-12	0.33	0.5	480203.919	1351769.682	Uranium-234	24.9	NV	pCi/g
103758	ASI-12	0.33	0.5	480203.919	1351769.682	Uranium-235/236	0.99	NV	pCi/g
103758	ASI-12	0.33	0.5	480203.919	1351769.682	Uranium-238	24.6	NV	pCi/g
103760	ASI-12	0.5	1	480203.919	1351769.682	Thorium-228	0.98	NV	pCi/g
103760	ASI-12	0.5	1	480203.919	1351769.682	Thorium-230	1.07	NV	pCi/g
103760	ASI-12	0.5	1	480203.919	1351769.682	Thorium-232	0.91	NV	pCi/g
103760	ASI-12	0.5	1	480203.919	1351769.682	Uranium, Total	9.8652111	NV	mg/kg
103760	ASI-12	0.5	1	480203.919	1351769.682	Uranium-234	3.45	NV	pCi/g
103760	ASI-12	0.5	1	480203.919	1351769.682	Uranium-235/236	0.1	UNV	pCi/g
103760	ASI-12	0.5	1	480203.919	1351769.682	Uranium-238	3.29	NV	pCi/g
103762	ASI-12	1	1.5	480203.919	1351769.682	Thorium-228	1.07	NV	pCi/g
103762	ASI-12	1	1.5	480203.919	1351769.682	Thorium-230	1.23	NV	pCi/g
103762	ASI-12	1	1.5	480203.919	1351769.682	Thorium-232	1.08	NV	pCi/g
103762	ASI-12	1	1.5	480203.919	1351769.682	Uranium, Total	3.5082969	NV	mg/kg
103762	ASI-12	1	1.5	480203.919	1351769.682	Uranium-234	1.21	NV	pCi/g
103762	ASI-12	1	1.5	480203.919	1351769.682	Uranium-235/236	0.1	UNV	pCi/g
103762	ASI-12	1	1.5	480203.919	1351769.682	Uranium-238	1.17	NV	pCi/g
103764	ASI-12	1.5	2	480203.919	1351769.682	Thorium-228	0.95	NV	pCi/g
103764	ASI-12	1.5	2	480203.919	1351769.682	Thorium-230	0.92	NV	pCi/g
103764	ASI-12	1.5	2	480203.919	1351769.682	Thorium-232	0.94	NV	pCi/g

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Sample ID	Location	Top Depth (ft)	Bot. Depth (ft)	Northing	Easting	Parameter	Result	Qualifier	Units
103764	ASI-12	1.5	2	480203.919	1351769.682	Uranium, Total	3.4183406	NV	mg/kg
103764	ASI-12	1.5	2	480203.919	1351769.682	Uranium-234	1.16	NV	pCi/g
103764	ASI-12	1.5	2	480203.919	1351769.682	Uranium-235/236	0.1	UNV	pCi/g
103764	ASI-12	1.5	2	480203.919	1351769.682	Uranium-238	1.14	NV	pCi/g
103770	ASI-11	0	0.17	480207.662	1351657.442	Thorium-228	1.71	NV	pCi/g
103770	ASI-11	0	0.17	480207.662	1351657.442	Thorium-230	3.17	NV	pCi/g
103770	ASI-11	0	0.17	480207.662	1351657.442	Thorium-232	1.71	NV	pCi/g
103770	ASI-11	0	0.17	480207.662	1351657.442	Uranium, Total	204.94134	NV	mg/kg
103770	ASI-11	0	0.17	480207.662	1351657.442	Uranium-234	71.2	NV	pCi/g
103770	ASI-11	0	0.17	480207.662	1351657.442	Uranium-235/236	4.22	NV	pCi/g
103770	ASI-11	0	0.17	480207.662	1351657.442	Uranium-238	68.2	NV	pCi/g
103772	ASI-11	0.17	0.33	480207.662	1351657.442	Thorium-228	1.66	NV	pCi/g
103772	ASI-11	0.17	0.33	480207.662	1351657.442	Thorium-230	2.98	NV	pCi/g
103772	ASI-11	0.17	0.33	480207.662	1351657.442	Thorium-232	1.49	NV	pCi/g
103772	ASI-11	0.17	0.33	480207.662	1351657.442	Uranium, Total	116.32049	NV	mg/kg
103772	ASI-11	0.17	0.33	480207.662	1351657.442	Uranium-234	39.4	NV	pCi/g
103772	ASI-11	0.17	0.33	480207.662	1351657.442	Uranium-235/236	1.81	NV	pCi/g
103772	ASI-11	0.17	0.33	480207.662	1351657.442	Uranium-238	38.8	NV	pCi/g
103774	ASI-11	0.33	0.5	480207.662	1351657.442	Thorium-228	1.14	NV	pCi/g
103774	ASI-11	0.33	0.5	480207.662	1351657.442	Thorium-230	2.3	NV	pCi/g
103774	ASI-11	0.33	0.5	480207.662	1351657.442	Thorium-232	1.14	NV	pCi/g
103774	ASI-11	0.33	0.5	480207.662	1351657.442	Uranium, Total	81.930492	NV	mg/kg
103774	ASI-11	0.33	0.5	480207.662	1351657.442	Uranium-234	28.4	NV	pCi/g
103774	ASI-11	0.33	0.5	480207.662	1351657.442	Uranium-235/236	1.46	NV	pCi/g
103774	ASI-11	0.33	0.5	480207.662	1351657.442	Uranium-238	27.3	NV	pCi/g
103776	ASI-11	0.5	1	480207.662	1351657.442	Thorium-228	1.27	NV	pCi/g
103776	ASI-11	0.5	1	480207.662	1351657.442	Thorium-230	1.37	NV	pCi/g
103776	ASI-11	0.5	1	480207.662	1351657.442	Thorium-232	1.29	NV	pCi/g
103776	ASI-11	0.5	1	480207.662	1351657.442	Uranium, Total	28.127857	NV	mg/kg
103776	ASI-11	0.5	1	480207.662	1351657.442	Uranium-234	9.54	NV	pCi/g
103776	ASI-11	0.5	1	480207.662	1351657.442	Uranium-235/236	0.71	NV	pCi/g
103776	ASI-11	0.5	1	480207.662	1351657.442	Uranium-238	9.34	NV	pCi/g
103778	ASI-11	1	1.5	480207.662	1351657.442	Thorium-228	1.08	NV	pCi/g
103778	ASI-11	1	1.5	480207.662	1351657.442	Thorium-230	1.21	NV	pCi/g

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Sample ID	Location	Top Depth (ft)	Bot. Depth (ft)	Northing	Easting	Parameter	Result	Qualifier	Units
103778	ASI-11	1	1.5	480207.662	1351657.442	Thorium-232	1.27	NV	pCi/g
103778	ASI-11	1	1.5	480207.662	1351657.442	Uranium, Total	6.7467249	NV	mg/kg
103778	ASI-11	1	1.5	480207.662	1351657.442	Uranium-234	2.11	NV	pCi/g
103778	ASI-11	1	1.5	480207.662	1351657.442	Uranium-235/236	0.1	UNV	pCi/g
103778	ASI-11	1	1.5	480207.662	1351657.442	Uranium-238	2.25	NV	pCi/g
103780	ASI-11	1.5	2	480207.662	1351657.442	Thorium-228	1.31	NV	pCi/g
103780	ASI-11	1.5	2	480207.662	1351657.442	Thorium-230	1.38	NV	pCi/g
103780	ASI-11	1.5	2	480207.662	1351657.442	Thorium-232	0.98	NV	pCi/g
103780	ASI-11	1.5	2	480207.662	1351657.442	Uranium, Total	5.3074236	NV	mg/kg
103780	ASI-11	1.5	2	480207.662	1351657.442	Uranium-234	1.55	NV	pCi/g
103780	ASI-11	1.5	2	480207.662	1351657.442	Uranium-235/236	0.1	UNV	pCi/g
103780	ASI-11	1.5	2	480207.662	1351657.442	Uranium-238	1.77	NV	pCi/g
103786	ASI-15	0	0.17	479893.616	1351768.886	Thorium-228	1.38	NV	pCi/g
103786	ASI-15	0	0.17	479893.616	1351768.886	Thorium-230	31.9	NV	pCi/g
103786	ASI-15	0	0.17	479893.616	1351768.886	Thorium-232	1.04	NV	pCi/g
103786	ASI-15	0	0.17	479893.616	1351768.886	Uranium, Total	86.44117	NV	mg/kg
103786	ASI-15	0	0.17	479893.616	1351768.886	Uranium-234	29	NV	pCi/g
103786	ASI-15	0	0.17	479893.616	1351768.886	Uranium-235/236	1.56	NV	pCi/g
103786	ASI-15	0	0.17	479893.616	1351768.886	Uranium-238	28.8	NV	pCi/g
103788	ASI-15	0.17	0.33	479893.616	1351768.886	Thorium-228	1.55	NV	pCi/g
103788	ASI-15	0.17	0.33	479893.616	1351768.886	Thorium-230	30.2	NV	pCi/g
103788	ASI-15	0.17	0.33	479893.616	1351768.886	Thorium-232	1.2	NV	pCi/g
103788	ASI-15	0.17	0.33	479893.616	1351768.886	Uranium, Total	88.277907	NV	mg/kg
103788	ASI-15	0.17	0.33	479893.616	1351768.886	Uranium-234	29.6	NV	pCi/g
103788	ASI-15	0.17	0.33	479893.616	1351768.886	Uranium-235/236	1.67	NV	pCi/g
103788	ASI-15	0.17	0.33	479893.616	1351768.886	Uranium-238	29.4	NV	pCi/g
103790	ASI-15	0.33	0.5	479893.616	1351768.886	Thorium-228	1.37	NV	pCi/g
103790	ASI-15	0.33	0.5	479893.616	1351768.886	Thorium-230	26	NV	pCi/g
103790	ASI-15	0.33	0.5	479893.616	1351768.886	Thorium-232	1.17	NV	pCi/g
103790	ASI-15	0.33	0.5	479893.616	1351768.886	Uranium, Total	51.028704	NV	mg/kg
103790	ASI-15	0.33	0.5	479893.616	1351768.886	Uranium-234	18.1	NV	pCi/g
103790	ASI-15	0.33	0.5	479893.616	1351768.886	Uranium-235/236	0.93	NV	pCi/g
103790	ASI-15	0.33	0.5	479893.616	1351768.886	Uranium-238	17	NV	pCi/g
103792	ASI-15	0.5	1	479893.616	1351768.886	Thorium-228	1.15	NV	pCi/g

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Sample ID	Location	Top Depth (ft)	Bot. Depth (ft)	Northing	Easting	Parameter	Result	Qualifier	Units
103792	ASI-15	0.5	1	479893.616	1351768.886	Thorium-230	5.16	NV	pCi/g
103792	ASI-15	0.5	1	479893.616	1351768.886	Thorium-232	1.19	NV	pCi/g
103792	ASI-15	0.5	1	479893.616	1351768.886	Uranium, Total	24.501294	NV	mg/kg
103792	ASI-15	0.5	1	479893.616	1351768.886	Uranium-234	8.05	NV	pCi/g
103792	ASI-15	0.5	1	479893.616	1351768.886	Uranium-235/236	0.27	NV	pCi/g
103792	ASI-15	0.5	1	479893.616	1351768.886	Uranium-238	8.19	NV	pCi/g
103794	ASI-15	1	1.5	479893.616	1351768.886	Thorium-228	1.1	NV	pCi/g
103794	ASI-15	1	1.5	479893.616	1351768.886	Thorium-230	1.86	NV	pCi/g
103794	ASI-15	1	1.5	479893.616	1351768.886	Thorium-232	0.87	NV	pCi/g
103794	ASI-15	1	1.5	479893.616	1351768.886	Uranium, Total	8.2954671	NV	mg/kg
103794	ASI-15	1	1.5	479893.616	1351768.886	Uranium-234	3.07	NV	pCi/g
103794	ASI-15	1	1.5	479893.616	1351768.886	Uranium-235/236	0.11	NV	pCi/g
103794	ASI-15	1	1.5	479893.616	1351768.886	Uranium-238	2.77	NV	pCi/g
103796	ASI-15	1.5	2	479893.616	1351768.886	Thorium-228	1.18	NV	pCi/g
103796	ASI-15	1.5	2	479893.616	1351768.886	Thorium-230	1.54	NV	pCi/g
103796	ASI-15	1.5	2	479893.616	1351768.886	Thorium-232	1.4	NV	pCi/g
103796	ASI-15	1.5	2	479893.616	1351768.886	Uranium, Total	5.4273654	NV	mg/kg
103796	ASI-15	1.5	2	479893.616	1351768.886	Uranium-234	1.69	NV	pCi/g
103796	ASI-15	1.5	2	479893.616	1351768.886	Uranium-235/236	0.1	UNV	pCi/g
103796	ASI-15	1.5	2	479893.616	1351768.886	Uranium-238	1.81	NV	pCi/g
103802	ASI-16	0	0.17	480032.518	1351803.984	Radium-226	5.43	NV	pCi/g
103802	ASI-16	0	0.17	480032.518	1351803.984	Radium-228	1.24	NV	pCi/g
103802	ASI-16	0	0.17	480032.518	1351803.984	Thorium-228	1.07	NV	pCi/g
103802	ASI-16	0	0.17	480032.518	1351803.984	Thorium-230	17.12	NV	pCi/g
103802	ASI-16	0	0.17	480032.518	1351803.984	Thorium-232	1.36	NV	pCi/g
103802	ASI-16	0	0.17	480032.518	1351803.984	Uranium, Total	90.659068	NV	mg/kg
103802	ASI-16	0	0.17	480032.518	1351803.984	Uranium-234	30.9	NV	pCi/g
103802	ASI-16	0	0.17	480032.518	1351803.984	Uranium-235/236	1.67	NV	pCi/g
103802	ASI-16	0	0.17	480032.518	1351803.984	Uranium-238	30.2	NV	pCi/g
103805	ASI-16	0.17	0.33	480032.518	1351803.984	Radium-226	6.29	NV	pCi/g
103805	ASI-16	0.17	0.33	480032.518	1351803.984	Radium-228	1.23	NV	pCi/g
103805	ASI-16	0.17	0.33	480032.518	1351803.984	Thorium-228	1.02	NV	pCi/g
103805	ASI-16	0.17	0.33	480032.518	1351803.984	Thorium-230	12.8	NV	pCi/g
103805	ASI-16	0.17	0.33	480032.518	1351803.984	Thorium-232	1.1	NV	pCi/g

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Sample ID	Location	Top Depth (ft)	Bot. Depth (ft)	Northing	Easting	Parameter	Result	Qualifier	Units
103805	ASI-16	0.17	0.33	480032.518	1351803.984	Uranium, Total	107.54383	NV	mg/kg
103805	ASI-16	0.17	0.33	480032.518	1351803.984	Uranium-234	34	NV	pCi/g
103805	ASI-16	0.17	0.33	480032.518	1351803.984	Uranium-235/236	2.14	NV	pCi/g
103805	ASI-16	0.17	0.33	480032.518	1351803.984	Uranium-238	35.8	NV	pCi/g
103808	ASI-16	0.33	0.5	480032.518	1351803.984	Radium-226	9.31	NV	pCi/g
103808	ASI-16	0.33	0.5	480032.518	1351803.984	Radium-228	1.17	NV	pCi/g
103808	ASI-16	0.33	0.5	480032.518	1351803.984	Thorium-228	1.2	NV	pCi/g
103808	ASI-16	0.33	0.5	480032.518	1351803.984	Thorium-230	16.4	NV	pCi/g
103808	ASI-16	0.33	0.5	480032.518	1351803.984	Thorium-232	1.3	NV	pCi/g
103808	ASI-16	0.33	0.5	480032.518	1351803.984	Uranium, Total	100.01032	NV	mg/kg
103808	ASI-16	0.33	0.5	480032.518	1351803.984	Uranium-234	31.3	NV	pCi/g
103808	ASI-16	0.33	0.5	480032.518	1351803.984	Uranium-235/236	1.94	NV	pCi/g
103808	ASI-16	0.33	0.5	480032.518	1351803.984	Uranium-238	33.3	NV	pCi/g
103811	ASI-16	0.5	1	480032.518	1351803.984	Radium-226	12.4	NV	pCi/g
103811	ASI-16	0.5	1	480032.518	1351803.984	Radium-228	0.905	NV	pCi/g
103811	ASI-16	0.5	1	480032.518	1351803.984	Thorium-228	0.96	NV	pCi/g
103811	ASI-16	0.5	1	480032.518	1351803.984	Thorium-230	19.7	NV	pCi/g
103811	ASI-16	0.5	1	480032.518	1351803.984	Thorium-232	0.84	NV	pCi/g
103811	ASI-16	0.5	1	480032.518	1351803.984	Uranium, Total	47.043529	NV	mg/kg
103811	ASI-16	0.5	1	480032.518	1351803.984	Uranium-234	15.7	NV	pCi/g
103811	ASI-16	0.5	1	480032.518	1351803.984	Uranium-235/236	0.68	NV	pCi/g
103811	ASI-16	0.5	1	480032.518	1351803.984	Uranium-238	15.7	NV	pCi/g
103814	ASI-16	1	1.5	480032.518	1351803.984	Radium-226	3.1	NV	pCi/g
103814	ASI-16	1	1.5	480032.518	1351803.984	Radium-228	0.975	NV	pCi/g
103814	ASI-16	1	1.5	480032.518	1351803.984	Thorium-228	0.95	NV	pCi/g
103814	ASI-16	1	1.5	480032.518	1351803.984	Thorium-230	3.96	NV	pCi/g
103814	ASI-16	1	1.5	480032.518	1351803.984	Thorium-232	0.67	NV	pCi/g
103814	ASI-16	1	1.5	480032.518	1351803.984	Uranium, Total	27.994104	NV	mg/kg
103814	ASI-16	1	1.5	480032.518	1351803.984	Uranium-234	8.58	NV	pCi/g
103814	ASI-16	1	1.5	480032.518	1351803.984	Uranium-235/236	0.55	NV	pCi/g
103814	ASI-16	1	1.5	480032.518	1351803.984	Uranium-238	9.32	NV	pCi/g
103817	ASI-16	1.5	2	480032.518	1351803.984	Radium-226	1.65	NV	pCi/g
103817	ASI-16	1.5	2	480032.518	1351803.984	Radium-228	1.16	NV	pCi/g
103817	ASI-16	1.5	2	480032.518	1351803.984	Thorium-228	1.36	NV	pCi/g

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Sample ID	Location	Top Depth (ft)	Bot. Depth (ft)	Northing	Easting	Parameter	Result	Qualifier	Units
103817	ASI-16	1.5	2	480032.518	1351803.984	Thorium-230	2.75	NV	pCi/g
103817	ASI-16	1.5	2	480032.518	1351803.984	Thorium-232	1.27	NV	pCi/g
103817	ASI-16	1.5	2	480032.518	1351803.984	Uranium, Total	11.45291	NV	mg/kg
103817	ASI-16	1.5	2	480032.518	1351803.984	Uranium-234	3.29	NV	pCi/g
103817	ASI-16	1.5	2	480032.518	1351803.984	Uranium-235/236	0.18	NV	pCi/g
103817	ASI-16	1.5	2	480032.518	1351803.984	Uranium-238	3.82	NV	pCi/g
103826	ASI-20	1.5	2	480105.935	1351466.604	Uranium, Total	305	NV	mg/kg
103827	ASI-20	2	2.5	480105.935	1351466.604	Uranium, Total	310	NV	mg/kg
103828	ASI-20	2.5	3	480105.935	1351466.604	Uranium, Total	100	NV	mg/kg
103829	ASI-20	3	3.5	480105.935	1351466.604	Uranium, Total	58	NV	mg/kg
103830	ASI-20	3.5	4	480105.935	1351466.604	Uranium, Total	49	NV	mg/kg
103831	ASI-21	1	1.5	480208.637	1351497.673	Uranium, Total	124	NV	mg/kg
103833	ASI-21	2	2.5	480208.637	1351497.673	Uranium, Total	11	UNV	mg/kg
103834	ASI-21	2.5	3	480208.637	1351497.673	Uranium, Total	11	UNV	mg/kg
103835	ASI-21	3	3.5	480208.637	1351497.673	Uranium, Total	11	UNV	mg/kg
103836	ASI-21	3.5	4	480208.637	1351497.673	Uranium, Total	11	UNV	mg/kg
103837	ASI-25	0.5	1	480016.018	1351810.284	Uranium, Total	20	NV	mg/kg
103838	ASI-25	1	1.5	480016.018	1351810.284	Uranium, Total	11	UNV	mg/kg
103839	ASI-25	1.5	2	480016.018	1351810.284	Uranium, Total	11	UNV	mg/kg
103840	ASI-25	2	2.5	480016.018	1351810.284	Uranium, Total	22	NV	mg/kg
103841	ASI-26	0.5	1	479927.817	1351807.885	Uranium, Total	11	UNV	mg/kg
103842	ASI-26	1	1.5	479927.817	1351807.885	Uranium, Total	11	UNV	mg/kg
103843	ASI-26	1.5	2	479927.817	1351807.885	Uranium, Total	11	UNV	mg/kg
103844	ASI-26	2	2.5	479927.817	1351807.885	Uranium, Total	11	UNV	mg/kg
103845	ASI-26	2.5	3	479927.817	1351807.885	Uranium, Total	11	UNV	mg/kg
103846	ASI-26	3	3.5	479927.817	1351807.885	Uranium, Total	11	UNV	mg/kg
103847	ASI-26	3.5	4	479927.817	1351807.885	Uranium, Total	11	UNV	mg/kg
103848	ASI-23	0.5	1	480164.381	1351819.012	Uranium, Total	56	NV	mg/kg
103849	ASI-23	1	1.5	480164.381	1351819.012	Uranium, Total	11	UNV	mg/kg
103850	ASI-23	1.5	2	480164.381	1351819.012	Uranium, Total	11	UNV	mg/kg
103851	ASI-23	2	2.5	480164.381	1351819.012	Uranium, Total	11	UNV	mg/kg
103852	ASI-23	2.5	3	480164.381	1351819.012	Uranium, Total	11	UNV	mg/kg
103853	ASI-23	3	3.5	480164.381	1351819.012	Uranium, Total	11	UNV	mg/kg
103854	ASI-23	3.5	4	480164.381	1351819.012	Uranium, Total	11	UNV	/kg

000154

Sample ID	Location	Top Depth (ft)	Bot. Depth (ft)	Northing	Easting	Parameter	Result	Qualifier	Units
103855	ASI-24	0.5	1	480073.999	1351816.643	Uranium, Total	96	NV	mg/kg
103856	ASI-24	1	1.5	480073.999	1351816.643	Uranium, Total	69	NV	mg/kg
103857	ASI-24	1.5	2	480073.999	1351816.643	Uranium, Total	21	NV	mg/kg
103858	ASI-24	2	2.5	480073.999	1351816.643	Uranium, Total	11	UNV	mg/kg
103859	ASI-24	2.5	3	480073.999	1351816.643	Uranium, Total	11	UNV	mg/kg
103860	ASI-24	3	3.5	480073.999	1351816.643	Uranium, Total	11	UNV	mg/kg
103861	ASI-24	3.5	4	480073.999	1351816.643	Uranium, Total	11	UNV	mg/kg
103862	ASI-29	0	0.5	480165.5165	1351324.037	Uranium, Total	11	UNV	mg/kg
103863	ASI-29	0.5	1	480165.5165	1351324.037	Uranium, Total	208	NV	mg/kg
103864	ASI-29	1	1.5	480165.5165	1351324.037	Uranium, Total	11	UNV	mg/kg
103865	ASI-30	0	0.5	480173.9168	1351395.835	Uranium, Total	103	NV	mg/kg
103866	ASI-30	0.5	1	480173.9168	1351395.835	Uranium, Total	11	UNV	mg/kg
103867	ASI-30	1	1.5	480173.9168	1351395.835	Uranium, Total	11	UNV	mg/kg
103868	ASI-31	0	0.5	480144.1161	1351326.037	Uranium, Total	102	NV	mg/kg
103869	ASI-31	0.5	1	480144.1161	1351326.037	Uranium, Total	11	UNV	mg/kg
103870	ASI-31	1	1.5	480144.1161	1351326.037	Uranium, Total	11	UNV	mg/kg
103871	ASI-32	0	0.5	480096.1651	1351397.355	Uranium, Total	148	NV	mg/kg
103872	ASI-32	0.5	1	480096.1651	1351397.355	Uranium, Total	11	UNV	mg/kg
103873	ASI-32	1	1.5	480096.1651	1351397.355	Uranium, Total	11	UNV	mg/kg
103874	ASI-22	0	0.5	479963.926	1351461.586	Uranium, Total	338	NV	mg/kg
103875	ASI-22	0.5	1	479963.926	1351461.586	Uranium, Total	154	NV	mg/kg
103876	ASI-22	1	1.5	479963.926	1351461.586	Uranium, Total	110	NV	mg/kg
103877	ASI-22	1.5	2	479963.926	1351461.586	Uranium, Total	11	UNV	mg/kg
103878	ASI-22	2	2.5	479963.926	1351461.586	Uranium, Total	11	UNV	mg/kg
103879	ASI-22	2.5	3	479963.926	1351461.586	Uranium, Total	11	UNV	mg/kg
103880	ASI-22	3	3.5	479963.926	1351461.586	Uranium, Total	11	UNV	mg/kg
103881	ASI-22	3.5	4	479963.926	1351461.586	Uranium, Total	29	NV	mg/kg
103882	ASI-27	0	0.5	480269.1186	1351547.531	Uranium, Total	89	NV	mg/kg
103883	ASI-27	0.5	1	480269.1186	1351547.531	Uranium, Total	11	UNV	mg/kg
103884	ASI-27	1	1.5	480269.1186	1351547.531	Uranium, Total	11	UNV	mg/kg
103885	ASI-28	0	0.5	480263.9189	1351624.629	Uranium, Total	119	NV	mg/kg
103886	ASI-28	0.5	1	480263.9189	1351624.629	Uranium, Total	11	UNV	mg/kg
103887	ASI-28	1	1.5	480263.9189	1351624.629	Uranium, Total	11	UNV	mg/kg
103888	ASI-33	0	0.5	479729.884	1351430.709	Uranium, Total	11	UNV	mg/kg

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Sample ID	Location	Top Depth (ft)	Bot. Depth (ft)	Northing	Easting	Parameter	Result	Qualifier	Units
103889	ASI-34	0	0.5	479743.025	1351403.538	Uranium, Total	11	UNV	mg/kg
103890	ASI-35	0	0.5	479749.624	1351429.588	Uranium, Total	11	UNV	mg/kg
103891	ASI-36	0	0.5	479754.616	1351411.018	Uranium, Total	11	UNV	mg/kg
103892	ASI-37	0	0.5	479767.736	1351424.498	Uranium, Total	11	UNV	mg/kg
103893	ASI-38	0	0.5	479778.171	1351417.848	Uranium, Total	11	UNV	mg/kg
103894	ASI-39	0	0.5	479791.04	1351441.538	Uranium, Total	11	UNV	mg/kg
103895	ASI-40	0	0.5			Uranium, Total	11	UNV	mg/kg
103896	ASI-41	0	0.5			Uranium, Total	11	UNV	mg/kg
103897	ASI-42	0	0.5	479954.029	1351391.116	Uranium, Total	11	UNV	mg/kg
103898	ASI-43	0	0.5	479963.593	1351405.506	Uranium, Total	11	UNV	mg/kg
103899	ASI-44	0	0.5	479963.219	1351386.866	Uranium, Total	11	UNV	mg/kg
103900	ASI-45	0	0.5	480184.5171	1351422.504	Uranium, Total	147	NV	mg/kg
103901	ASI-46	0	0.5	480165.6167	1351440.934	Uranium, Total	115	NV	mg/kg
103902	ASI-47	0	0.5	480140.144	1351558.383	Uranium, Total	79	NV	mg/kg
103903	ASI-48	0	0.5	480160.531	1351581.323	Uranium, Total	131	NV	mg/kg
103904	ASI-49	0	0.5	480167.989	1351611.913	Uranium, Total	282	NV	mg/kg
103905	ASI-50	0	0.5	480129.677	1351468.854	Uranium, Total	367	NV	mg/kg
103906	ASI-51	0	0.5	480199.002	1351470.773	Uranium, Total	370	NV	mg/kg
103907	ASI-52	0	0.5	480195.389	1351584.113	Uranium, Total	107	NV	mg/kg
103908	ASI-53	0	0.5	480176.346	1351818.942	Uranium, Total	51	NV	mg/kg
103909	ASI-54	0	0.5	480111.994	1351816.563	Uranium, Total	78	NV	mg/kg
103910	ASI-55	0	0.5	480061.021	1351812.214	Uranium, Total	68	NV	mg/kg
103911	ASI-56	0	0.5	480042.238	1351822.794	Uranium, Total	17	NV	mg/kg
103912	ASI-57	0	0.5	480080.273	1352356.822	Uranium, Total	11	UNV	mg/kg
103913	ASI-58	0	0.5	480128.709	1351824.313	Uranium, Total	11	UNV	mg/kg
104001	C-1	0	0.17	480721.3777	1351954.461	Radium-226	0.949	NV	pCi/g
104001	C-1	0	0.17	480721.3777	1351954.461	Radium-228	1.26	NV	pCi/g
104001	C-1	0	0.17	480721.3777	1351954.461	Thorium, Total	10.944216	NV	pCi/g
104001	C-1	0	0.17	480721.3777	1351954.461	Thorium-228	1.2	NV	pCi/g
104001	C-1	0	0.17	480721.3777	1351954.461	Thorium-230	1.4	NV	pCi/g
104001	C-1	0	0.17	480721.3777	1351954.461	Thorium-232	1.2	NV	pCi/g
104001	C-1	0	0.17	480721.3777	1351954.461	Uranium, Total	48.5	NV	mg/kg
104001	C-1	0	0.17	480721.3777	1351954.461	Uranium-234	16	NV	pCi/g
104001	C-1	0	0.17	480721.3777	1351954.461	Uranium-235/236	0.2	NV	pCi/g

Sample ID	Location	Top Depth (ft)	Bot. Depth (ft)	Northing	Easting	Parameter	Result	Qualifier	Units
104001	C-1	0	0.17	480721.3777	1351954.461	Uranium-238	20.6	NV	pCi/g
104002	C-1	0	0.17	480721.3777	1351954.461	Uranium, Total	70	NV	mg/kg
104003	C-1	0.17	0.33	480721.3777	1351954.461	Radium-226	0.792	NV	pCi/g
104003	C-1	0.17	0.33	480721.3777	1351954.461	Radium-228	1.17	NV	pCi/g
104003	C-1	0.17	0.33	480721.3777	1351954.461	Thorium, Total	11.856246	NV	pCi/g
104003	C-1	0.17	0.33	480721.3777	1351954.461	Thorium-228	1.2	NV	pCi/g
104003	C-1	0.17	0.33	480721.3777	1351954.461	Thorium-230	2	NV	pCi/g
104003	C-1	0.17	0.33	480721.3777	1351954.461	Thorium-232	1.3	NV	pCi/g
104003	C-1	0.17	0.33	480721.3777	1351954.461	Uranium, Total	30.8	NV	mg/kg
104003	C-1	0.17	0.33	480721.3777	1351954.461	Uranium-234	16.7	NV	pCi/g
104003	C-1	0.17	0.33	480721.3777	1351954.461	Uranium-235/236	0.93	NV	pCi/g
104003	C-1	0.17	0.33	480721.3777	1351954.461	Uranium-238	22.2	NV	pCi/g
104004	C-1	0.17	0.33	480721.3777	1351954.461	Uranium, Total	68	NV	mg/kg
104005	C-1	0.33	0.5	480721.3777	1351954.461	Radium-226	0.88	NV	pCi/g
104005	C-1	0.33	0.5	480721.3777	1351954.461	Radium-228	1.2	NV	pCi/g
104005	C-1	0.33	0.5	480721.3777	1351954.461	Thorium, Total	8.9378555	NV	pCi/g
104005	C-1	0.33	0.5	480721.3777	1351954.461	Thorium-228	1.2	NV	pCi/g
104005	C-1	0.33	0.5	480721.3777	1351954.461	Thorium-230	2.2	NV	pCi/g
104005	C-1	0.33	0.5	480721.3777	1351954.461	Thorium-232	0.98	NV	pCi/g
104005	C-1	0.33	0.5	480721.3777	1351954.461	Uranium, Total	63.3	NV	mg/kg
104005	C-1	0.33	0.5	480721.3777	1351954.461	Uranium-234	17.2	NV	pCi/g
104005	C-1	0.33	0.5	480721.3777	1351954.461	Uranium-235/236	0.87	NV	pCi/g
104005	C-1	0.33	0.5	480721.3777	1351954.461	Uranium-238	21.7	NV	pCi/g
104006	C-1	0.33	0.5	480721.3777	1351954.461	Uranium, Total	70	NV	mg/kg
104007	C-2	0	0.17	480672.1467	1351868.263	Radium-226	0.864	NV	pCi/g
104007	C-2	0	0.17	480672.1467	1351868.263	Radium-228	1.07	NV	pCi/g
104007	C-2	0	0.17	480672.1467	1351868.263	Thorium, Total	11.85628	NV	pCi/g
104007	C-2	0	0.17	480672.1467	1351868.263	Thorium-228	1.4	NV	pCi/g
104007	C-2	0	0.17	480672.1467	1351868.263	Thorium-230	2.2	NV	pCi/g
104007	C-2	0	0.17	480672.1467	1351868.263	Thorium-232	1.3	NV	pCi/g
104007	C-2	0	0.17	480672.1467	1351868.263	Uranium, Total	87.2	NV	mg/kg
104007	C-2	0	0.17	480672.1467	1351868.263	Uranium-234	24.1	NV	pCi/g
104007	C-2	0	0.17	480672.1467	1351868.263	Uranium-235/236	1.6	NV	pCi/g
104007	C-2	0	0.17	480672.1467	1351868.263	Uranium-238	36.6	NV	pCi/g

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Sample ID	Location	Top Depth (ft)	Bot. Depth (ft)	Northing	Easting	Parameter	Result	Qualifier	Units
104008	C-2	0	0.17	480672.1467	1351868.263	Uranium, Total	118	NV	mg/kg
104009	C-2	0.17	0.33	480672.1467	1351868.263	Radium-226	0.934	NV	pCi/g
104009	C-2	0.17	0.33	480672.1467	1351868.263	Radium-228	1.31	NV	pCi/g
104009	C-2	0.17	0.33	480672.1467	1351868.263	Thorium, Total	10.944253	NV	pCi/g
104009	C-2	0.17	0.33	480672.1467	1351868.263	Thorium-228	1.1	NV	pCi/g
104009	C-2	0.17	0.33	480672.1467	1351868.263	Thorium-230	2.4	NV	pCi/g
104009	C-2	0.17	0.33	480672.1467	1351868.263	Thorium-232	1.2	NV	pCi/g
104009	C-2	0.17	0.33	480672.1467	1351868.263	Uranium, Total	96.8	NV	mg/kg
104009	C-2	0.17	0.33	480672.1467	1351868.263	Uranium-234	26	NV	pCi/g
104009	C-2	0.17	0.33	480672.1467	1351868.263	Uranium-235/236	1.5	NV	pCi/g
104009	C-2	0.17	0.33	480672.1467	1351868.263	Uranium-238	37.5	NV	pCi/g
104010	C-2	0.17	0.33	480672.1467	1351868.263	Uranium, Total	110	NV	mg/kg
104011	C-2	0.33	0.5	480672.1467	1351868.263	Radium-226	0.901	NV	pCi/g
104011	C-2	0.33	0.5	480672.1467	1351868.263	Radium-228	1.21	NV	pCi/g
104011	C-2	0.33	0.5	480672.1467	1351868.263	Thorium, Total	8.2994555	NV	pCi/g
104011	C-2	0.33	0.5	480672.1467	1351868.263	Thorium-228	1.2	NV	pCi/g
104011	C-2	0.33	0.5	480672.1467	1351868.263	Thorium-230	2.2	NV	pCi/g
104011	C-2	0.33	0.5	480672.1467	1351868.263	Thorium-232	0.91	NV	pCi/g
104011	C-2	0.33	0.5	480672.1467	1351868.263	Uranium, Total	80.8	NV	mg/kg
104011	C-2	0.33	0.5	480672.1467	1351868.263	Uranium-234	21.9	NV	pCi/g
104011	C-2	0.33	0.5	480672.1467	1351868.263	Uranium-235/236	1.4	NV	pCi/g
104011	C-2	0.33	0.5	480672.1467	1351868.263	Uranium-238	35.4	NV	pCi/g
104012	C-2	0.33	0.5	480672.1467	1351868.263	Uranium, Total	104	NV	mg/kg
104013	C-3	0	0.17	480622.4157	1351953.781	Radium-226	0.884	NV	pCi/g
104013	C-3	0	0.17	480622.4157	1351953.781	Radium-228	1.12	NV	pCi/g
104013	C-3	0	0.17	480622.4157	1351953.781	Thorium, Total	7.6609682	NV	pCi/g
104013	C-3	0	0.17	480622.4157	1351953.781	Thorium-228	0.85	NV	pCi/g
104013	C-3	0	0.17	480622.4157	1351953.781	Thorium-230	1.3	NV	pCi/g
104013	C-3	0	0.17	480622.4157	1351953.781	Thorium-232	0.84	NV	pCi/g
104013	C-3	0	0.17	480622.4157	1351953.781	Uranium, Total	27.2	NV	mg/kg
104013	C-3	0	0.17	480622.4157	1351953.781	Uranium-234	11.3	NV	pCi/g
104013	C-3	0	0.17	480622.4157	1351953.781	Uranium-235/236	0.71	NV	pCi/g
104013	C-3	0	0.17	480622.4157	1351953.781	Uranium-238	12	NV	pCi/g
104014	C-3	0	0.17	480622.4157	1351953.781	Uranium, Total	38	NV	/kg

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Sample ID	Location	Top Depth (ft)	Bot. Depth (ft)	Northing	Easting	Parameter	Result	Qualifier	Units
104015	C-3	0.17	0.33	480622.4157	1351953.781	Radium-226	0.844	NV	pCi/g
104015	C-3	0.17	0.33	480622.4157	1351953.781	Radium-228	1.09	NV	pCi/g
104015	C-3	0.17	0.33	480622.4157	1351953.781	Thorium, Total	10.944228	NV	pCi/g
104015	C-3	0.17	0.33	480622.4157	1351953.781	Thorium-228	1.1	NV	pCi/g
104015	C-3	0.17	0.33	480622.4157	1351953.781	Thorium-230	1.9	NV	pCi/g
104015	C-3	0.17	0.33	480622.4157	1351953.781	Thorium-232	1.2	NV	pCi/g
104015	C-3	0.17	0.33	480622.4157	1351953.781	Uranium, Total	27.7	NV	mg/kg
104015	C-3	0.17	0.33	480622.4157	1351953.781	Uranium-234	15.3	NV	pCi/g
104015	C-3	0.17	0.33	480622.4157	1351953.781	Uranium-235/236	0.82	NV	pCi/g
104015	C-3	0.17	0.33	480622.4157	1351953.781	Uranium-238	17	NV	pCi/g
104016	C-3	0.17	0.33	480622.4157	1351953.781	Uranium, Total	40	NV	mg/kg
104017	C-3	0.33	0.5	480622.4157	1351953.781	Radium-226	0.89	NV	pCi/g
104017	C-3	0.33	0.5	480622.4157	1351953.781	Radium-228	1.08	NV	pCi/g
104017	C-3	0.33	0.5	480622.4157	1351953.781	Thorium, Total	10.944216	NV	pCi/g
104017	C-3	0.33	0.5	480622.4157	1351953.781	Thorium-228	1.2	NV	pCi/g
104017	C-3	0.33	0.5	480622.4157	1351953.781	Thorium-230	1.4	NV	pCi/g
104017	C-3	0.33	0.5	480622.4157	1351953.781	Thorium-232	1.2	NV	pCi/g
104017	C-3	0.33	0.5	480622.4157	1351953.781	Uranium, Total	26.2	NV	mg/kg
104017	C-3	0.33	0.5	480622.4157	1351953.781	Uranium-234	11.8	NV	pCi/g
104017	C-3	0.33	0.5	480622.4157	1351953.781	Uranium-235/236	0.68	NV	pCi/g
104017	C-3	0.33	0.5	480622.4157	1351953.781	Uranium-238	12.9	NV	pCi/g
104018	C-3	0.33	0.5	480622.4157	1351953.781	Thorium, Total	18	UNV	mg/kg
104018	C-3	0.33	0.5	480622.4157	1351953.781	Uranium, Total	89	NV	mg/kg
104018	C-3	0.33	0.5	480622.4157	1351953.781	Uranium, Total	42	NV	mg/kg
104019	C-4	0	0.17	480597.1754	1351803.295	Radium-226	0.866	NV	pCi/g
104019	C-4	0	0.17	480597.1754	1351803.295	Radium-228	1.41	NV	pCi/g
104019	C-4	0	0.17	480597.1754	1351803.295	Thorium, Total	5.1073339	NV	pCi/g
104019	C-4	0	0.17	480597.1754	1351803.295	Thorium-228	0.61	NV	pCi/g
104019	C-4	0	0.17	480597.1754	1351803.295	Thorium-230	1.2	NV	pCi/g
104019	C-4	0	0.17	480597.1754	1351803.295	Thorium-232	0.56	NV	pCi/g
104019	C-4	0	0.17	480597.1754	1351803.295	Uranium, Total	76.3	NV	mg/kg
104019	C-4	0	0.17	480597.1754	1351803.295	Uranium-234	44.6	NV	pCi/g
104019	C-4	0	0.17	480597.1754	1351803.295	Uranium-235/236	2.59	NV	pCi/g
104019	C-4	0	0.17	480597.1754	1351803.295	Uranium-238	44.9	NV	pCi/g

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A1PII IMPLEMENTATION PLAN
APPENDIX B TABLE B-2

Sample ID	Location	Top Depth (ft)	Bot. Depth (ft)	Northing	Easting	Parameter	Result	Qualifier	Units
104020	C-4	0	0.17	480597.1754	1351803.295	Uranium, Total	145	NV	mg/kg
104021	C-4	0.17	0.33	480597.1754	1351803.295	Radium-226	1.01	NV	pCi/g
104021	C-4	0.17	0.33	480597.1754	1351803.295	Radium-228	1.23	NV	pCi/g
104021	C-4	0.17	0.33	480597.1754	1351803.295	Thorium, Total	8.4817561	NV	pCi/g
104021	C-4	0.17	0.33	480597.1754	1351803.295	Thorium-228	0.67	NV	pCi/g
104021	C-4	0.17	0.33	480597.1754	1351803.295	Thorium-230	1.5	NV	pCi/g
104021	C-4	0.17	0.33	480597.1754	1351803.295	Thorium-232	0.93	NV	pCi/g
104021	C-4	0.17	0.33	480597.1754	1351803.295	Uranium, Total	56.1	NV	mg/kg
104021	C-4	0.17	0.33	480597.1754	1351803.295	Uranium-234	29.4	NV	pCi/g
104021	C-4	0.17	0.33	480597.1754	1351803.295	Uranium-235/236	1.43	NV	pCi/g
104021	C-4	0.17	0.33	480597.1754	1351803.295	Uranium-238	29.2	NV	pCi/g
104022	C-4	0.17	0.33	480597.1754	1351803.295	Uranium, Total	111	NV	mg/kg
104023	C-4	0.33	0.5	480597.1754	1351803.295	Radium-226	0.877	NV	pCi/g
104023	C-4	0.33	0.5	480597.1754	1351803.295	Radium-228	1.14	NV	pCi/g
104023	C-4	0.33	0.5	480597.1754	1351803.295	Thorium, Total	16.416206	NV	pCi/g
104023	C-4	0.33	0.5	480597.1754	1351803.295	Thorium-228	1	NV	pCi/g
104023	C-4	0.33	0.5	480597.1754	1351803.295	Thorium-230	1.7	NV	pCi/g
104023	C-4	0.33	0.5	480597.1754	1351803.295	Thorium-232	1.8	NV	pCi/g
104023	C-4	0.33	0.5	480597.1754	1351803.295	Uranium, Total	28.5	NV	mg/kg
104023	C-4	0.33	0.5	480597.1754	1351803.295	Uranium-234	13.3	NV	pCi/g
104023	C-4	0.33	0.5	480597.1754	1351803.295	Uranium-235/236	0.65	NV	pCi/g
104023	C-4	0.33	0.5	480597.1754	1351803.295	Uranium-238	14.2	NV	pCi/g
104024	C-4	0.33	0.5	480597.1754	1351803.295	Uranium, Total	37	NV	mg/kg
104025	C-5	0	0.17	480572.625	1351878.863	Radium-226	1.13	NV	pCi/g
104025	C-5	0	0.17	480572.625	1351878.863	Radium-228	1.44	NV	pCi/g
104025	C-5	0	0.17	480572.625	1351878.863	Thorium, Total	10.944211	NV	pCi/g
104025	C-5	0	0.17	480572.625	1351878.863	Thorium-228	1	NV	pCi/g
104025	C-5	0	0.17	480572.625	1351878.863	Thorium-230	1.8	NV	pCi/g
104025	C-5	0	0.17	480572.625	1351878.863	Thorium-232	1.2	NV	pCi/g
104025	C-5	0	0.17	480572.625	1351878.863	Uranium, Total	58.1	NV	mg/kg
104025	C-5	0	0.17	480572.625	1351878.863	Uranium-234	31.2	NV	pCi/g
104025	C-5	0	0.17	480572.625	1351878.863	Uranium-235/236	1.9	NV	pCi/g
104025	C-5	0	0.17	480572.625	1351878.863	Uranium-238	31.3	NV	pCi/g
104026	C-5	0	0.17	480572.625	1351878.863	Uranium, Total	100	NV	/kg

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Sample ID	Location	Top Depth (ft)	Bot. Depth (ft)	Northing	Easting	Parameter	Result	Qualifier	Units
104027	C-5	0.17	0.33	480572.625	1351878.863	Radium-226	0.962	NV	pCi/g
104027	C-5	0.17	0.33	480572.625	1351878.863	Radium-228	1.17	NV	pCi/g
104027	C-5	0.17	0.33	480572.625	1351878.863	Thorium, Total	4.5601696	NV	pCi/g
104027	C-5	0.17	0.33	480572.625	1351878.863	Thorium-228	0.78	NV	pCi/g
104027	C-5	0.17	0.33	480572.625	1351878.863	Thorium-230	1.5	NV	pCi/g
104027	C-5	0.17	0.33	480572.625	1351878.863	Thorium-232	0.5	NV	pCi/g
104027	C-5	0.17	0.33	480572.625	1351878.863	Uranium, Total	47	NV	mg/kg
104027	C-5	0.17	0.33	480572.625	1351878.863	Uranium-234	30.2	NV	pCi/g
104027	C-5	0.17	0.33	480572.625	1351878.863	Uranium-235/236	1.48	NV	pCi/g
104027	C-5	0.17	0.33	480572.625	1351878.863	Uranium-238	28.4	NV	pCi/g
104028	C-5	0.17	0.33	480572.625	1351878.863	Uranium, Total	67	NV	mg/kg
104029	C-5	0.33	0.5	480572.625	1351878.863	Radium-226	1.08	NV	pCi/g
104029	C-5	0.33	0.5	480572.625	1351878.863	Radium-228	1.37	NV	pCi/g
104029	C-5	0.33	0.5	480572.625	1351878.863	Thorium, Total	6.2929638	NV	pCi/g
104029	C-5	0.33	0.5	480572.625	1351878.863	Thorium-228	0.94	NV	pCi/g
104029	C-5	0.33	0.5	480572.625	1351878.863	Thorium-230	0.99	NV	pCi/g
104029	C-5	0.33	0.5	480572.625	1351878.863	Thorium-232	0.69	NV	pCi/g
104029	C-5	0.33	0.5	480572.625	1351878.863	Uranium, Total	28.3	NV	mg/kg
104029	C-5	0.33	0.5	480572.625	1351878.863	Uranium-234	6.5	NV	pCi/g
104029	C-5	0.33	0.5	480572.625	1351878.863	Uranium-235/236	0.77	NV	pCi/g
104029	C-5	0.33	0.5	480572.625	1351878.863	Uranium-238	16	NV	pCi/g
104030	C-5	0.33	0.5	480572.625	1351878.863	Uranium, Total	51	NV	mg/kg
104031	C-6	0	0.17	480521.8737	1351828.484	Radium-226	0.943	NV	pCi/g
104031	C-6	0	0.17	480521.8737	1351828.484	Radium-228	1.17	NV	pCi/g
104031	C-6	0	0.17	480521.8737	1351828.484	Thorium, Total	10.94427	NV	pCi/g
104031	C-6	0	0.17	480521.8737	1351828.484	Thorium-228	1.4	NV	pCi/g
104031	C-6	0	0.17	480521.8737	1351828.484	Thorium-230	2	NV	pCi/g
104031	C-6	0	0.17	480521.8737	1351828.484	Thorium-232	1.2	NV	pCi/g
104031	C-6	0	0.17	480521.8737	1351828.484	Uranium, Total	8.55	NV	mg/kg
104031	C-6	0	0.17	480521.8737	1351828.484	Uranium-234	6.27	NV	pCi/g
104031	C-6	0	0.17	480521.8737	1351828.484	Uranium-235/236	0.65	NV	pCi/g
104031	C-6	0	0.17	480521.8737	1351828.484	Uranium-238	6.59	NV	pCi/g
104032	C-6	0	0.17	480521.8737	1351828.484	Uranium, Total	22	NV	mg/kg
104033	C-6	0.17	0.33	480521.8737	1351828.484	Radium-226	1.01	NV	pCi/g

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Sample ID	Location	Top Depth (ft)	Bot. Depth (ft)	Northing	Easting	Parameter	Result	Qualifier	Units
104033	C-6	0.17	0.33	480521.8737	1351828.484	Radium-228	1.26	NV	pCi/g
104033	C-6	0.17	0.33	480521.8737	1351828.484	Thorium, Total	10.944248	NV	pCi/g
104033	C-6	0.17	0.33	480521.8737	1351828.484	Thorium-228	1.3	NV	pCi/g
104033	C-6	0.17	0.33	480521.8737	1351828.484	Thorium-230	1.8	NV	pCi/g
104033	C-6	0.17	0.33	480521.8737	1351828.484	Thorium-232	1.2	NV	pCi/g
104033	C-6	0.17	0.33	480521.8737	1351828.484	Uranium, Total	14.2	NV	mg/kg
104033	C-6	0.17	0.33	480521.8737	1351828.484	Uranium-234	6.59	NV	pCi/g
104033	C-6	0.17	0.33	480521.8737	1351828.484	Uranium-235/236	0.36	NV	pCi/g
104033	C-6	0.17	0.33	480521.8737	1351828.484	Uranium-238	6.14	NV	pCi/g
104034	C-6	0.17	0.33	480541.874	1351843.538	Uranium, Total	24	NV	mg/kg
104035	C-6	0.33	0.5	480521.8737	1351828.484	Radium-226	0.971	NV	pCi/g
104035	C-6	0.33	0.5	480521.8737	1351828.484	Radium-228	1.09	NV	pCi/g
104035	C-6	0.33	0.5	480521.8737	1351828.484	Thorium, Total	10.944214	NV	pCi/g
104035	C-6	0.33	0.5	480521.8737	1351828.484	Thorium-228	1.1	NV	pCi/g
104035	C-6	0.33	0.5	480521.8737	1351828.484	Thorium-230	1.6	NV	pCi/g
104035	C-6	0.33	0.5	480521.8737	1351828.484	Thorium-232	1.2	NV	pCi/g
104035	C-6	0.33	0.5	480521.8737	1351828.484	Uranium, Total	12	NV	mg/kg
104035	C-6	0.33	0.5	480521.8737	1351828.484	Uranium-234	6.23	NV	pCi/g
104035	C-6	0.33	0.5	480521.8737	1351828.484	Uranium-235/236	0.31	NV	pCi/g
104035	C-6	0.33	0.5	480521.8737	1351828.484	Uranium-238	6.99	NV	pCi/g
104036	C-6	0.33	0.5	480521.8737	1351828.484	Uranium, Total	25	NV	mg/kg
104037	C-7	0	0.17	480522.3039	1351853.874	Radium-226	1.19	NV	pCi/g
104037	C-7	0	0.17	480522.3039	1351853.874	Radium-228	1.23	NV	pCi/g
104037	C-7	0	0.17	480522.3039	1351853.874	Thorium, Total	24.624385	NV	pCi/g
104037	C-7	0	0.17	480522.3039	1351853.874	Thorium-228	2.1	NV	pCi/g
104037	C-7	0	0.17	480522.3039	1351853.874	Thorium-230	2.6	NV	pCi/g
104037	C-7	0	0.17	480522.3039	1351853.874	Thorium-232	2.7	NV	pCi/g
104037	C-7	0	0.17	480522.3039	1351853.874	Uranium, Total	15.8	NV	mg/kg
104037	C-7	0	0.17	480522.3039	1351853.874	Uranium-234	7.52	NV	pCi/g
104037	C-7	0	0.17	480522.3039	1351853.874	Uranium-235/236	0.44	NV	pCi/g
104037	C-7	0	0.17	480522.3039	1351853.874	Uranium-238	7.98	NV	pCi/g
104038	C-7	0	0.17	480522.3039	1351853.874	Uranium, Total	26	NV	mg/kg
104039	C-7	0.17	0.33	480522.3039	1351853.874	Radium-226	1.06	NV	pCi/g
104039	C-7	0.17	0.33	480522.3039	1351853.874	Radium-228	1.12	NV	pCi/g

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Sample ID	Location	Top Depth (ft)	Bot. Depth (ft)	Northing	Easting	Parameter	Result	Qualifier	Units
104039	C-7	0.17	0.33	480522.3039	1351853.874	Thorium, Total	11.856201	NV	pCi/g
104039	C-7	0.17	0.33	480522.3039	1351853.874	Thorium-228	1	NV	pCi/g
104039	C-7	0.17	0.33	480522.3039	1351853.874	Thorium-230	1.6	NV	pCi/g
104039	C-7	0.17	0.33	480522.3039	1351853.874	Thorium-232	1.3	NV	pCi/g
104039	C-7	0.17	0.33	480522.3039	1351853.874	Uranium, Total	14.4	NV	mg/kg
104039	C-7	0.17	0.33	480522.3039	1351853.874	Uranium-234	9.31	NV	pCi/g
104039	C-7	0.17	0.33	480522.3039	1351853.874	Uranium-235/236	0.3	NV	pCi/g
104039	C-7	0.17	0.33	480522.3039	1351853.874	Uranium-238	9.4	NV	pCi/g
104040	C-7	0.17	0.33	480522.3039	1351853.874	Uranium, Total	30	NV	mg/kg
104041	C-7	0.33	0.5	480522.3039	1351853.874	Radium-226	1.39	NV	pCi/g
104041	C-7	0.33	0.5	480522.3039	1351853.874	Radium-228	1.22	NV	pCi/g
104041	C-7	0.33	0.5	480522.3039	1351853.874	Thorium, Total	12.76826	NV	pCi/g
104041	C-7	0.33	0.5	480522.3039	1351853.874	Thorium-228	1.4	NV	pCi/g
104041	C-7	0.33	0.5	480522.3039	1351853.874	Thorium-230	1.8	NV	pCi/g
104041	C-7	0.33	0.5	480522.3039	1351853.874	Thorium-232	1.4	NV	pCi/g
104041	C-7	0.33	0.5	480522.3039	1351853.874	Uranium, Total	8.07	NV	mg/kg
104041	C-7	0.33	0.5	480522.3039	1351853.874	Uranium-234	3.93	NV	pCi/g
104041	C-7	0.33	0.5	480522.3039	1351853.874	Uranium-235/236	0.16	NV	pCi/g
104041	C-7	0.33	0.5	480522.3039	1351853.874	Uranium-238	4.66	NV	pCi/g
104042	C-7	0.33	0.5	480522.3039	1351853.874	Uranium, Total	20	NV	mg/kg
104043	C-8	0	0.17	480522.304	1351978.67	Radium-226	1.18	NV	pCi/g
104043	C-8	0	0.17	480522.304	1351978.67	Radium-228	1.27	NV	pCi/g
104043	C-8	0	0.17	480522.304	1351978.67	Thorium, Total	6.8401621	NV	pCi/g
104043	C-8	0	0.17	480522.304	1351978.67	Thorium-228	0.8	NV	pCi/g
104043	C-8	0	0.17	480522.304	1351978.67	Thorium-230	1.3	NV	pCi/g
104043	C-8	0	0.17	480522.304	1351978.67	Thorium-232	0.75	NV	pCi/g
104043	C-8	0	0.17	480522.304	1351978.67	Uranium, Total	15.6	NV	mg/kg
104043	C-8	0	0.17	480522.304	1351978.67	Uranium-234	5.69	NV	pCi/g
104043	C-8	0	0.17	480522.304	1351978.67	Uranium-235/236	0.28	NV	pCi/g
104043	C-8	0	0.17	480522.304	1351978.67	Uranium-238	6.02	NV	pCi/g
104044	C-8	0	0.17	480522.304	1351978.67	Uranium, Total	24	NV	mg/kg
104045	C-8	0.17	0.33	480522.304	1351978.67	Radium-226	1.27	NV	pCi/g
104045	C-8	0.17	0.33	480522.304	1351978.67	Radium-228	1.2	NV	pCi/g
104045	C-8	0.17	0.33	480522.304	1351978.67	Thorium, Total	4.5600948	NV	pCi/g

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Sample ID	Location	Top Depth (ft)	Bot. Depth (ft)	Northing	Easting	Parameter	Result	Qualifier	Units
104045	C-8	0.17	0.33	480522.304	1351978.67	Thorium-228	0.44	NV	pCi/g
104045	C-8	0.17	0.33	480522.304	1351978.67	Thorium-230	0.83	NV	pCi/g
104045	C-8	0.17	0.33	480522.304	1351978.67	Thorium-232	0.5	NV	pCi/g
104045	C-8	0.17	0.33	480522.304	1351978.67	Uranium, Total	14.5	NV	mg/kg
104045	C-8	0.17	0.33	480522.304	1351978.67	Uranium-234	5.88	NV	pCi/g
104045	C-8	0.17	0.33	480522.304	1351978.67	Uranium-235/236	0.28	NV	pCi/g
104045	C-8	0.17	0.33	480522.304	1351978.67	Uranium-238	6	NV	pCi/g
104046	C-8	0.17	0.33	480522.304	1351978.67	Uranium, Total	32	NV	mg/kg
104047	C-8	0.33	0.5	480522.304	1351978.67	Radium-226	1.2	NV	pCi/g
104047	C-8	0.33	0.5	480522.304	1351978.67	Radium-228	1.22	NV	pCi/g
104047	C-8	0.33	0.5	480522.304	1351978.67	Thorium, Total	3.2832771	NV	pCi/g
104047	C-8	0.33	0.5	480522.304	1351978.67	Thorium-228	0.38	NV	pCi/g
104047	C-8	0.33	0.5	480522.304	1351978.67	Thorium-230	0.62	NV	pCi/g
104047	C-8	0.33	0.5	480522.304	1351978.67	Thorium-232	0.36	NV	pCi/g
104047	C-8	0.33	0.5	480522.304	1351978.67	Uranium, Total	25.5	NV	mg/kg
104047	C-8	0.33	0.5	480522.304	1351978.67	Uranium-234	11.4	NV	pCi/g
104047	C-8	0.33	0.5	480522.304	1351978.67	Uranium-235/236	0.44	NV	pCi/g
104047	C-8	0.33	0.5	480522.304	1351978.67	Uranium-238	11.6	NV	pCi/g
104048	C-8	0.33	0.5	480522.304	1351978.67	Uranium, Total	37	NV	mg/kg
104049	C-9	0	0.17	480496.8933	1351828.834	Radium-226	1.26	NV	pCi/g
104049	C-9	0	0.17	480496.8933	1351828.834	Radium-228	1.49	NV	pCi/g
104049	C-9	0	0.17	480496.8933	1351828.834	Thorium, Total	10.944109	NV	pCi/g
104049	C-9	0	0.17	480496.8933	1351828.834	Thorium-230	2.2	NV	pCi/g
104049	C-9	0	0.17	480496.8933	1351828.834	Thorium-232	1.2	NV	pCi/g
104049	C-9	0	0.17	480496.8933	1351828.834	Uranium, Total	62.3	NV	mg/kg
104049	C-9	0	0.17	480496.8933	1351828.834	Uranium-234	24.5	NV	pCi/g
104049	C-9	0	0.17	480496.8933	1351828.834	Uranium-235/236	1.33	NV	pCi/g
104049	C-9	0	0.17	480496.8933	1351828.834	Uranium-238	24.3	NV	pCi/g
104050	C-9	0	0.17	480496.8933	1351828.834	Thorium, Total	20	NV	mg/kg
104050	C-9	0	0.17	480496.8933	1351828.834	Uranium, Total	84	NV	mg/kg
104051	C-9	0.17	0.33	480496.8933	1351828.834	Radium-226	1.2	NV	pCi/g
104051	C-9	0.17	0.33	480496.8933	1351828.834	Radium-228	1.26	NV	pCi/g
104051	C-9	0.17	0.33	480496.8933	1351828.834	Thorium, Total	9.1200843	NV	pCi/g
104051	C-9	0.17	0.33	480496.8933	1351828.834	Thorium-230	1.7	NV	pCi/g

Sample ID	Location	Top Depth (ft)	Bot. Depth (ft)	Northing	Easting	Parameter	Result	Qualifier	Units
104051	C-9	0.17	0.33	480496.8933	1351828.834	Thorium-232	1	NV	pCi/g
104051	C-9	0.17	0.33	480496.8933	1351828.834	Uranium, Total	49.6	NV	mg/kg
104051	C-9	0.17	0.33	480496.8933	1351828.834	Uranium-234	21.6	NV	pCi/g
104051	C-9	0.17	0.33	480496.8933	1351828.834	Uranium-235/236	1.1	NV	pCi/g
104051	C-9	0.17	0.33	480496.8933	1351828.834	Uranium-238	22.2	NV	pCi/g
104052	C-9	0.17	0.33	480496.8933	1351828.834	Thorium, Total	18	UNV	mg/kg
104052	C-9	0.17	0.33	480496.8933	1351828.834	Uranium, Total	80	UNV	mg/kg
104053	C-9	0.33	0.5	480496.8933	1351828.834	Radium-226	1.31	NV	pCi/g
104053	C-9	0.33	0.5	480496.8933	1351828.834	Radium-228	1.36	NV	pCi/g
104053	C-9	0.33	0.5	480496.8933	1351828.834	Thorium, Total	14.592064	NV	pCi/g
104053	C-9	0.33	0.5	480496.8933	1351828.834	Thorium-230	1.3	NV	pCi/g
104053	C-9	0.33	0.5	480496.8933	1351828.834	Thorium-232	1.6	NV	pCi/g
104053	C-9	0.33	0.5	480496.8933	1351828.834	Uranium, Total	26.8	NV	mg/kg
104053	C-9	0.33	0.5	480496.8933	1351828.834	Uranium-234	11	NV	pCi/g
104053	C-9	0.33	0.5	480496.8933	1351828.834	Uranium-235/236	0.69	NV	pCi/g
104053	C-9	0.33	0.5	480496.8933	1351828.834	Uranium-238	10.8	NV	pCi/g
104054	C-9	0.33	0.5	480496.8933	1351828.834	Thorium, Total	18	UNV	mg/kg
104054	C-9	0.33	0.5	480496.8933	1351828.834	Uranium, Total	40	NV	mg/kg
104055	C-10	0	0.17	480497.4836	1351953.811	Radium-226	1.1	NV	pCi/g
104055	C-10	0	0.17	480497.4836	1351953.811	Radium-228	1.38	NV	pCi/g
104055	C-10	0	0.17	480497.4836	1351953.811	Thorium, Total	8.2993438	NV	pCi/g
104055	C-10	0	0.17	480497.4836	1351953.811	Thorium-230	2.9	NV	pCi/g
104055	C-10	0	0.17	480497.4836	1351953.811	Thorium-232	0.91	NV	pCi/g
104055	C-10	0	0.17	480497.4836	1351953.811	Uranium, Total	71.3	NV	mg/kg
104055	C-10	0	0.17	480497.4836	1351953.811	Uranium-234	27.9	NV	pCi/g
104055	C-10	0	0.17	480497.4836	1351953.811	Uranium-235/236	1.52	NV	pCi/g
104055	C-10	0	0.17	480497.4836	1351953.811	Uranium-238	28.2	NV	pCi/g
104056	C-10	0	0.17	480497.4836	1351953.811	Thorium, Total	18	UNV	mg/kg
104056	C-10	0	0.17	480497.4836	1351953.811	Uranium, Total	100	NV	mg/kg
104057	C-10	0.17	0.33	480497.4836	1351953.811	Radium-226	1.46	NV	pCi/g
104057	C-10	0.17	0.33	480497.4836	1351953.811	Radium-228	1.51	NV	pCi/g
104057	C-10	0.17	0.33	480497.4836	1351953.811	Thorium, Total	10.944114	NV	pCi/g
104057	C-10	0.17	0.33	480497.4836	1351953.811	Thorium-230	2.3	NV	pCi/g
104057	C-10	0.17	0.33	480497.4836	1351953.811	Thorium-232	1.2	NV	pCi/g

Sample ID	Location	Top Depth (ft)	Bot. Depth (ft)	Northing	Easting	Parameter	Result	Qualifier	Units
104057	C-10	0.17	0.33	480497.4836	1351953.811	Uranium, Total	53.1	NV	mg/kg
104057	C-10	0.17	0.33	480497.4836	1351953.811	Uranium-234	29	NV	pCi/g
104057	C-10	0.17	0.33	480497.4836	1351953.811	Uranium-235/236	1.71	NV	pCi/g
104057	C-10	0.17	0.33	480497.4836	1351953.811	Uranium-238	30	NV	pCi/g
104058	C-10	0.17	0.33	480497.4836	1351953.811	Thorium, Total	18	UNV	mg/kg
104058	C-10	0.17	0.33	480497.4836	1351953.811	Uranium, Total	39	NV	mg/kg
104059	C-10	0.33	0.5	480497.4836	1351953.811	Radium-226	1.19	NV	pCi/g
104059	C-10	0.33	0.5	480497.4836	1351953.811	Radium-228	1.23	NV	pCi/g
104059	C-10	0.33	0.5	480497.4836	1351953.811	Thorium, Total	10.944089	NV	pCi/g
104059	C-10	0.33	0.5	480497.4836	1351953.811	Thorium-230	1.8	NV	pCi/g
104059	C-10	0.33	0.5	480497.4836	1351953.811	Thorium-232	1.2	NV	pCi/g
104059	C-10	0.33	0.5	480497.4836	1351953.811	Uranium, Total	23.9	NV	mg/kg
104059	C-10	0.33	0.5	480497.4836	1351953.811	Uranium-234	10.4	NV	pCi/g
104059	C-10	0.33	0.5	480497.4836	1351953.811	Uranium-235/236	0.54	NV	pCi/g
104059	C-10	0.33	0.5	480497.4836	1351953.811	Uranium-238	11.4	NV	pCi/g
104060	C-10	0.33	0.5	480497.4836	1351953.811	Thorium, Total	19	NV	mg/kg
104060	C-10	0.33	0.5	480497.4836	1351953.811	Uranium, Total	91	NV	mg/kg
104101	D-1	0	0.17	480210.6679	1351818.764	Radium-226	2.83	NV	pCi/g
104101	D-1	0	0.17	480210.6679	1351818.764	Radium-228	1.14	NV	pCi/g
104101	D-1	0	0.17	480210.6679	1351818.764	Thorium, Total	8.4818034	NV	pCi/g
104101	D-1	0	0.17	480210.6679	1351818.764	Thorium-230	4.1	NV	pCi/g
104101	D-1	0	0.17	480210.6679	1351818.764	Thorium-232	0.93	NV	pCi/g
104101	D-1	0	0.17	480210.6679	1351818.764	Uranium, Total	41	NV	mg/kg
104101	D-1	0	0.17	480210.6679	1351818.764	Uranium-234	15.8	NV	pCi/g
104101	D-1	0	0.17	480210.6679	1351818.764	Uranium-235/236	1.01	NV	pCi/g
104101	D-1	0	0.17	480210.6679	1351818.764	Uranium-238	16.2	NV	pCi/g
104102	D-1	0	0.17	480210.6679	1351818.764	Thorium, Total	18	UNV	mg/kg
104102	D-1	0	0.17	480210.6679	1351818.764	Uranium, Total	49	NV	mg/kg
104103	D-1	0.17	0.33	480210.6679	1351818.764	Radium-226	2.7	NV	pCi/g
104103	D-1	0.17	0.33	480210.6679	1351818.764	Radium-228	1.09	NV	pCi/g
104103	D-1	0.17	0.33	480210.6679	1351818.764	Thorium, Total	10.032188	NV	pCi/g
104103	D-1	0.17	0.33	480210.6679	1351818.764	Thorium-230	3.8	NV	pCi/g
104103	D-1	0.17	0.33	480210.6679	1351818.764	Thorium-232	1.1	NV	pCi/g
104103	D-1	0.17	0.33	480210.6679	1351818.764	Uranium, Total	33.4	NV	/kg

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Sample ID	Location	Top Depth (ft)	Bot. Depth (ft)	Northing	Easting	Parameter	Result	Qualifier	Units
104103	D-1	0.17	0.33	480210.6679	1351818.764	Uranium-234	12.2	NV	pCi/g
104103	D-1	0.17	0.33	480210.6679	1351818.764	Uranium-235/236	0.67	NV	pCi/g
104103	D-1	0.17	0.33	480210.6679	1351818.764	Uranium-238	12.2	NV	pCi/g
104104	D-1	0.17	0.33	480210.6679	1351818.764	Thorium, Total	18	UNV	mg/kg
104104	D-1	0.17	0.33	480210.6679	1351818.764	Uranium, Total	35	NV	mg/kg
104105	D-1	0.33	0.5	480210.6679	1351818.764	Radium-226	2.08	NV	pCi/g
104105	D-1	0.33	0.5	480210.6679	1351818.764	Radium-228	0.969	NV	pCi/g
104105	D-1	0.33	0.5	480210.6679	1351818.764	Thorium, Total	10.944159	NV	pCi/g
104105	D-1	0.33	0.5	480210.6679	1351818.764	Thorium-230	3.2	NV	pCi/g
104105	D-1	0.33	0.5	480210.6679	1351818.764	Thorium-232	1.2	NV	pCi/g
104105	D-1	0.33	0.5	480210.6679	1351818.764	Uranium, Total	25	NV	mg/kg
104105	D-1	0.33	0.5	480210.6679	1351818.764	Uranium-234	9.33	NV	pCi/g
104105	D-1	0.33	0.5	480210.6679	1351818.764	Uranium-235/236	0.39	NV	pCi/g
104105	D-1	0.33	0.5	480210.6679	1351818.764	Uranium-238	10	NV	pCi/g
104106	D-1	0.33	0.5	480210.6679	1351818.764	Thorium, Total	18	UNV	mg/kg
104106	D-1	0.33	0.5	480210.6679	1351818.764	Uranium, Total	28	NV	mg/kg
104107	D-2	0	0.17	480209.3581	1351868.453	Radium-226	13.8	NV	pCi/g
104107	D-2	0	0.17	480209.3581	1351868.453	Radium-228	1.14	NV	pCi/g
104107	D-2	0	0.17	480209.3581	1351868.453	Thorium, Total	7.2971904	NV	pCi/g
104107	D-2	0	0.17	480209.3581	1351868.453	Thorium-230	24	NV	pCi/g
104107	D-2	0	0.17	480209.3581	1351868.453	Thorium-232	0.8	NV	pCi/g
104107	D-2	0	0.17	480209.3581	1351868.453	Uranium, Total	69.6	NV	mg/kg
104107	D-2	0	0.17	480209.3581	1351868.453	Uranium-234	25.2	NV	pCi/g
104107	D-2	0	0.17	480209.3581	1351868.453	Uranium-235/236	1.3	NV	pCi/g
104107	D-2	0	0.17	480209.3581	1351868.453	Uranium-238	25.6	NV	pCi/g
104108	D-2	0	0.17	480209.3581	1351868.453	Thorium, Total	18	UNV	mg/kg
104108	D-2	0	0.17	480209.3581	1351868.453	Uranium, Total	89	NV	mg/kg
104109	D-2	0.17	0.33	480209.3581	1351868.453	Radium-226	11.9	NV	pCi/g
104109	D-2	0.17	0.33	480209.3581	1351868.453	Radium-228	1.13	NV	pCi/g
104109	D-2	0.17	0.33	480209.3581	1351868.453	Thorium, Total	8.0262944	NV	pCi/g
104109	D-2	0.17	0.33	480209.3581	1351868.453	Thorium-230	14	NV	pCi/g
104109	D-2	0.17	0.33	480209.3581	1351868.453	Thorium-232	0.88	NV	pCi/g
104109	D-2	0.17	0.33	480209.3581	1351868.453	Uranium, Total	64.2	NV	mg/kg
104109	D-2	0.17	0.33	480209.3581	1351868.453	Uranium-234	26.6	NV	pCi/g

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A1PII IMPLEMENTATION PLAN
APPENDIX B TABLE B-2

Sample ID	Location	Top Depth (ft)	Bot. Depth (ft)	Northing	Easting	Parameter	Result	Qualifier	Units
104109	D-2	0.17	0.33	480209.3581	1351868.453	Uranium-235/236	1.55	NV	pCi/g
104109	D-2	0.17	0.33	480209.3581	1351868.453	Uranium-238	27.9	NV	pCi/g
104110	D-2	0.17	0.33	480209.3581	1351868.453	Thorium, Total	18	UNV	mg/kg
104110	D-2	0.17	0.33	480209.3581	1351868.453	Uranium, Total	64	NV	mg/kg
104111	D-2	0.33	0.5	480209.3581	1351868.453	Radium-226	15.3	NV	pCi/g
104111	D-2	0.33	0.5	480209.3581	1351868.453	Radium-228	1.11	NV	pCi/g
104111	D-2	0.33	0.5	480209.3581	1351868.453	Thorium, Total	7.661792	NV	pCi/g
104111	D-2	0.33	0.5	480209.3581	1351868.453	Thorium-230	20	NV	pCi/g
104111	D-2	0.33	0.5	480209.3581	1351868.453	Thorium-232	0.84	NV	pCi/g
104111	D-2	0.33	0.5	480209.3581	1351868.453	Uranium, Total	65.4	NV	mg/kg
104111	D-2	0.33	0.5	480209.3581	1351868.453	Uranium-234	21.9	NV	pCi/g
104111	D-2	0.33	0.5	480209.3581	1351868.453	Uranium-235/236	1.03	NV	pCi/g
104111	D-2	0.33	0.5	480209.3581	1351868.453	Uranium-238	22.9	NV	pCi/g
104112	D-2	0.33	0.5	480209.3581	1351868.453	Thorium, Total	18	UNV	mg/kg
104112	D-2	0.33	0.5	480209.3581	1351868.453	Uranium, Total	84	NV	mg/kg
104113	D-3		0.17	480160.7669	1351868.863	Radium-226	4.55	NV	pCi/g
104113	D-3		0.17	480160.7669	1351868.863	Radium-228	0.888	NV	pCi/g
104113	D-3		0.17	480160.7669	1351868.863	Thorium, Total	10.944367	NV	pCi/g
104113	D-3		0.17	480160.7669	1351868.863	Thorium-230	7.4	NV	pCi/g
104113	D-3		0.17	480160.7669	1351868.863	Thorium-232	1.2	NV	pCi/g
104113	D-3		0.17	480160.7669	1351868.863	Uranium, Total	20.6	NV	mg/kg
104113	D-3		0.17	480160.7669	1351868.863	Uranium-234	14.1	NV	pCi/g
104113	D-3		0.17	480160.7669	1351868.863	Uranium-235/236	0.73	NV	pCi/g
104113	D-3		0.17	480160.7669	1351868.863	Uranium-238	14.8	NV	pCi/g
104114	D-3	0	0.17	480160.7669	1351868.863	Thorium, Total	18	UNV	mg/kg
104114	D-3	0	0.17	480160.7669	1351868.863	Uranium, Total	50	NV	mg/kg
104115	D-3	0.17	0.33	480160.7669	1351868.863	Radium-226	4.74	NV	pCi/g
104115	D-3	0.17	0.33	480160.7669	1351868.863	Radium-228	0.953	NV	pCi/g
104115	D-3	0.17	0.33	480160.7669	1351868.863	Thorium, Total	8.4819323	NV	pCi/g
104115	D-3	0.17	0.33	480160.7669	1351868.863	Thorium-230	6.7	NV	pCi/g
104115	D-3	0.17	0.33	480160.7669	1351868.863	Thorium-232	0.93	NV	pCi/g
104115	D-3	0.17	0.33	480160.7669	1351868.863	Uranium, Total	30	NV	mg/kg
104115	D-3	0.17	0.33	480160.7669	1351868.863	Uranium-234	9.5	NV	pCi/g
104115	D-3	0.17	0.33	480160.7669	1351868.863	Uranium-235/236	0.44	NV	pCi/g

Sample ID	Location	Top Depth (ft)	Bot. Depth (ft)	Northing	Easting	Parameter	Result	Qualifier	Units
104115	D-3	0.17	0.33	480160.7669	1351868.863	Uranium-238	9.98	NV	pCi/g
104116	D-3	0.17	0.33	480160.7669	1351868.863	Thorium, Total	18	UNV	mg/kg
104116	D-3	0.17	0.33	480160.7669	1351868.863	Uranium, Total	36	NV	mg/kg
104117	D-3	0.33	0.5	480160.7669	1351868.863	Radium-226	4.37	NV	pCi/g
104117	D-3	0.33	0.5	480160.7669	1351868.863	Radium-228	0.991	NV	pCi/g
104117	D-3	0.33	0.5	480160.7669	1351868.863	Thorium, Total	8.4819323	NV	pCi/g
104117	D-3	0.33	0.5	480160.7669	1351868.863	Thorium-230	6.7	NV	pCi/g
104117	D-3	0.33	0.5	480160.7669	1351868.863	Thorium-232	0.93	NV	pCi/g
104117	D-3	0.33	0.5	480160.7669	1351868.863	Uranium, Total	28.1	NV	mg/kg
104117	D-3	0.33	0.5	480160.7669	1351868.863	Uranium-234	9.14	NV	pCi/g
104117	D-3	0.33	0.5	480160.7669	1351868.863	Uranium-235/236	0.39	NV	pCi/g
104117	D-3	0.33	0.5	480160.7669	1351868.863	Uranium-238	10.1	NV	pCi/g
104118	D-3	0.33	0.5	480160.7669	1351868.863	Thorium, Total	18	UNV	mg/kg
104118	D-3	0.33	0.5	480160.7669	1351868.863	Uranium, Total	32	NV	mg/kg
104119	D-4	0	0.17	480110.8662	1351867.363	Radium-226	1.33	NV	pCi/g
104119	D-4	0	0.17	480110.8662	1351867.363	Radium-228	1.25	NV	pCi/g
104119	D-4	0	0.17	480110.8662	1351867.363	Thorium, Total	10.944069	NV	pCi/g
104119	D-4	0	0.17	480110.8662	1351867.363	Thorium-230	1.4	NV	pCi/g
104119	D-4	0	0.17	480110.8662	1351867.363	Thorium-232	1.2	NV	pCi/g
104119	D-4	0	0.17	480110.8662	1351867.363	Uranium, Total	20.4	NV	mg/kg
104119	D-4	0	0.17	480110.8662	1351867.363	Uranium-234	7.15	NV	pCi/g
104119	D-4	0	0.17	480110.8662	1351867.363	Uranium-235/236	0.49	NV	pCi/g
104119	D-4	0	0.17	480110.8662	1351867.363	Uranium-238	7.64	NV	pCi/g
104120	D-4	0	0.17	480110.8662	1351867.363	Thorium, Total	19	NV	mg/kg
104120	D-4	0	0.17	480110.8662	1351867.363	Uranium, Total	22	NV	mg/kg
104121	D-4	0.17	0.33	480110.8662	1351867.363	Radium-226	1.15	NV	pCi/g
104121	D-4	0.17	0.33	480110.8662	1351867.363	Radium-228	1.11	NV	pCi/g
104121	D-4	0.17	0.33	480110.8662	1351867.363	Thorium, Total	10.032055	NV	pCi/g
104121	D-4	0.17	0.33	480110.8662	1351867.363	Thorium-230	1.1	NV	pCi/g
104121	D-4	0.17	0.33	480110.8662	1351867.363	Thorium-232	1.1	NV	pCi/g
104121	D-4	0.17	0.33	480110.8662	1351867.363	Uranium, Total	19.1	NV	mg/kg
104121	D-4	0.17	0.33	480110.8662	1351867.363	Uranium-234	7.57	NV	pCi/g
104121	D-4	0.17	0.33	480110.8662	1351867.363	Uranium-235/236	0.41	NV	pCi/g
104121	D-4	0.17	0.33	480110.8662	1351867.363	Uranium-238	7.49	NV	pCi/g

Sample ID	Location	Top Depth (ft)	Bot. Depth (ft)	Northing	Easting	Parameter	Result	Qualifier	Units
104122	D-4	0.17	0.33	480110.8662	1351867.363	Thorium, Total	18	UNV	mg/kg
104122	D-4	0.17	0.33	480110.8662	1351867.363	Uranium, Total	20	NV	mg/kg
104123	D-4	0.33	0.5	480110.8662	1351867.363	Radium-226	1.29	NV	pCi/g
104123	D-4	0.33	0.5	480110.8662	1351867.363	Radium-228	1.25	NV	pCi/g
104123	D-4	0.33	0.5	480110.8662	1351867.363	Thorium, Total	11.856046	NV	pCi/g
104123	D-4	0.33	0.5	480110.8662	1351867.363	Thorium-230	0.92	NV	pCi/g
104123	D-4	0.33	0.5	480110.8662	1351867.363	Thorium-232	1.3	NV	pCi/g
104123	D-4	0.33	0.5	480110.8662	1351867.363	Uranium, Total	20.3	NV	mg/kg
104123	D-4	0.33	0.5	480110.8662	1351867.363	Uranium-234	7.19	NV	pCi/g
104123	D-4	0.33	0.5	480110.8662	1351867.363	Uranium-235/236	0.36	NV	pCi/g
104123	D-4	0.33	0.5	480110.8662	1351867.363	Uranium-238	6.99	NV	pCi/g
104124	D-4	0.33	0.5	480110.8662	1351867.363	Thorium, Total	18	UNV	mg/kg
104124	D-4	0.33	0.5	480110.8662	1351867.363	Uranium, Total	20	NV	mg/kg
104125	D-5		0.17	480060.0652	1351865.953	Radium-226	1.13	NV	pCi/g
104125	D-5		0.17	480060.0652	1351865.953	Radium-228	1.07	NV	pCi/g
104125	D-5		0.17	480060.0652	1351865.953	Thorium, Total	11.856079	NV	pCi/g
104125	D-5		0.17	480060.0652	1351865.953	Thorium-230	1.6	NV	pCi/g
104125	D-5		0.17	480060.0652	1351865.953	Thorium-232	1.3	NV	pCi/g
104125	D-5		0.17	480060.0652	1351865.953	Uranium, Total	18.4	NV	mg/kg
104125	D-5		0.17	480060.0652	1351865.953	Uranium-234	7.63	NV	pCi/g
104125	D-5		0.17	480060.0652	1351865.953	Uranium-235/236	0.53	NV	pCi/g
104125	D-5		0.17	480060.0652	1351865.953	Uranium-238	7.85	NV	pCi/g
104126	D-5	0	0.17	480060.0652	1351865.953	Thorium, Total	18	UNV	mg/kg
104126	D-5	0	0.17	480060.0652	1351865.953	Uranium, Total	22	NV	mg/kg
104127	D-5	0.17	0.33	480060.0652	1351865.953	Radium-226	1.29	NV	pCi/g
104127	D-5	0.17	0.33	480060.0652	1351865.953	Radium-228	1.12	NV	pCi/g
104127	D-5	0.17	0.33	480060.0652	1351865.953	Thorium, Total	12.038464	NV	pCi/g
104127	D-5	0.17	0.33	480060.0652	1351865.953	Thorium-230	1.3	NV	pCi/g
104127	D-5	0.17	0.33	480060.0652	1351865.953	Thorium-232	1.32	NV	pCi/g
104127	D-5	0.17	0.33	480060.0652	1351865.953	Uranium, Total	38.8	NV	mg/kg
104127	D-5	0.17	0.33	480060.0652	1351865.953	Uranium-234	8.53	NV	pCi/g
104127	D-5	0.17	0.33	480060.0652	1351865.953	Uranium-235/236	0.48	NV	pCi/g
104127	D-5	0.17	0.33	480060.0652	1351865.953	Uranium-238	8.76	NV	pCi/g
104128	D-5	0.17	0.33	480060.0652	1351865.953	Thorium, Total	18	UNV	/kg

000170

Sample ID	Location	Top Depth (ft)	Bot. Depth (ft)	Northing	Easting	Parameter	Result	Qualifier	Units
104128	D-5	0.17	0.33	480060.0652	1351865.953	Uranium, Total	21	NV	mg/kg
104129	D-5	0.33	0.5	480060.0652	1351865.953	Radium-226	1.13	NV	pCi/g
104129	D-5	0.33	0.5	480060.0652	1351865.953	Radium-228	1.11	NV	pCi/g
104129	D-5	0.33	0.5	480060.0652	1351865.953	Thorium, Total	7.3872932	NV	pCi/g
104129	D-5	0.33	0.5	480060.0652	1351865.953	Thorium-230	1.88	NV	pCi/g
104129	D-5	0.33	0.5	480060.0652	1351865.953	Thorium-232	0.81	NV	pCi/g
104129	D-5	0.33	0.5	480060.0652	1351865.953	Uranium, Total	27.4	NV	mg/kg
104129	D-5	0.33	0.5	480060.0652	1351865.953	Uranium-234	7.73	NV	pCi/g
104129	D-5	0.33	0.5	480060.0652	1351865.953	Uranium-235/236	0.24	NV	pCi/g
104129	D-5	0.33	0.5	480060.0652	1351865.953	Uranium-238	7.36	NV	pCi/g
104130	D-5	0.33	0.5	480060.0652	1351865.953	Thorium, Total	21	NV	mg/kg
104130	D-5	0.33	0.5	480060.0652	1351865.953	Uranium, Total	17	NV	mg/kg
RVA14-101	RVA14-101	0	0.5	480244.08	1351498.76	Uranium, Total	11	UNV	mg/kg
RVA14-102	RVA14-102	0	0.5	480235.11	1351510.78	Uranium, Total	11	UNV	mg/kg
RVA14-103	RVA14-103	0	0.5	480242.66	1351578.05	Uranium, Total	33.2	NV	mg/kg
RVA14-104	RVA14-104	0	0.5	480242.41	1351588.32	Uranium, Total	11	UNV	mg/kg
RVA14-105	RVA14-105	0	0.5	480242.92	1351598.22	Uranium, Total	11	UNV	mg/kg
RVA14-106	RVA14-106	0	0.5	480251.52	1351649.53	Uranium, Total	43.1	NV	mg/kg
RVA14-107	RVA14-107	0	0.5	480251.58	1351638.3	Uranium, Total	11	UNV	mg/kg
RVA14-108	RVA14-108	0	0.5	480251.83	1351628.61	Uranium, Total	11.9	NV	mg/kg
RVA14-109	RVA14-109	0	0.5	480251.7	1351617.96	Uranium, Total	28.2	NV	mg/kg
RVA14-110	RVA14-110	0	0.5	480252.82	1351588.3	Uranium, Total	68.5	NV	mg/kg
RVA14-111	RVA14-111	0	0.5	480253.13	1351569.48	Uranium, Total	21.4	NV	mg/kg
RVA14-112	RVA14-112	0	0.5	480252.74	1351539.23	Uranium, Total	37.4	NV	mg/kg
RVA14-113	RVA14-113	0	0.5	480252.35	1351508.03	Uranium, Total	61.1	NV	mg/kg
RVA14-114	RVA14-114	0	0.5	480264.33	1351498.91	Uranium, Total	11	UNV	mg/kg
RVA14-115	RVA14-115	0	0.5	480264.58	1351489.03	Uranium, Total	11	UNV	mg/kg
RVA14-116	RVA14-116	0	0.5	480263.71	1351508.6	Uranium, Total	11	UNV	mg/kg
RVA14-117	RVA14-117	0	0.5	480263.97	1351529.34	Uranium, Total	11	UNV	mg/kg
RVA14-118	RVA14-118	0	0.5	480263.28	1351548.92	Uranium, Total	134	NV	mg/kg
RVA14-119	RVA14-119	0	0.5	480263.04	1351558.42	Uranium, Total	11	UNV	mg/kg
RVA14-120	RVA14-120	0	0.5	480261.53	1351589.02	Uranium, Total	63.8	NV	mg/kg
RVA14-121	RVA14-121	0	0.5	480262.49	1351618.52	Uranium, Total	11	UNV	mg/kg
RVA14-122	RVA14-122	0	0.5	480262.57	1351637.54	Uranium, Total	15.8	NV	mg/kg

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Sample ID	Location	Top Depth (ft)	Bot. Depth (ft)	Northing	Easting	Parameter	Result	Qualifier	Units
RVA14-123	RVA14-123	0	0.5	480270.57	1351628.54	Uranium, Total	11	UNV	mg/kg
RVA14-124	RVA14-124	0	0.5	480271.63	1351610.49	Uranium, Total	11	UNV	mg/kg
RVA14-125	RVA14-125	0	0.5	480272.7	1351589.97	Uranium, Total	79.1	NV	mg/kg
RVA14-126	RVA14-126	0	0.5	480272.76	1351579.51	Uranium, Total	11	UNV	mg/kg
RVA14-127	RVA14-127	0	0.5	480272.82	1351569.62	Uranium, Total	11	UNV	mg/kg
RVA14-128	RVA14-128	0	0.5	480272.8	1351539.95	Uranium, Total	56.6	NV	mg/kg
RVA14-129	RVA14-129	0	0.5	480273.81	1351529.89	Uranium, Total	11	UNV	mg/kg
RVA14-130	RVA14-130	0	0.5	480283.32	1351618.87	Uranium, Total	11	UNV	mg/kg
RVA14-131	RVA14-131	0	0.5	480283.2	1351638.84	Uranium, Total	11	UNV	mg/kg
RVA14-132	RVA14-132	0	0.5	480282.56	1351650.05	Uranium, Total	121.2	NV	mg/kg
RVA14-133	RVA14-133	0	0.5	480292.58	1351589.93	Uranium, Total	54.7	NV	mg/kg
RVA14-134	RVA14-134	0	0.5	480292.69	1351570.15	Uranium, Total	24.9	NV	mg/kg
RVA14-135	RVA14-135	0	0.5	480292.25	1351549.41	Uranium, Total	26.9	NV	mg/kg
RVA14-136	RVA14-136	0	0.5	480302.61	1351589.71	Uranium, Total	11	UNV	mg/kg
RVA14-137	RVA14-137	0	0.5	480301.75	1351639.53	Uranium, Total	207.8	NV	mg/kg
RVA14-138	RVA14-138	0	0.5	480312.03	1351629.24	Uranium, Total	11	UNV	mg/kg
RVA14-139	RVA14-139	0	0.5	480320.99	1351620.08	Uranium, Total	11	UNV	mg/kg
RVA14-140	RVA14-140	0	0.5	480321.62	1351609.25	Uranium, Total	229	NV	mg/kg
RVA14-201	RVA14-201	0	0.5	480169.16	1351296.46	Uranium, Total	53.9	NV	mg/kg
RVA14-202	RVA14-202	0	0.5	480167.65	1351326.68	Uranium, Total	11	UNV	mg/kg
RVA14-203	RVA14-203	0	0.5	480181.25	1351332.8	Uranium, Total	11	UNV	mg/kg
RVA14-204	RVA14-204	0	0.5	480147.84	1351379.79	Uranium, Total	16.6	NV	mg/kg
RVA14-205	RVA14-205	0	0.5	480141.17	1351419.81	Uranium, Total	60.3	NV	mg/kg
RVA14-206	RVA14-206	0	0.5	480141.32	1351457.66	Uranium, Total	31.2	NV	mg/kg
RVA14-207	RVA14-207	0	0.5	480107.23	1351458.6	Uranium, Total	26.5	NV	mg/kg
RVA14-208	RVA14-208	0	0.5	480053.63	1351462.07	Uranium, Total	411	NV	mg/kg
RVA14-209	RVA14-209	0	0.5	480250.57	1351424.51	Uranium, Total	115	NV	mg/kg
RVA14-210	RVA14-210	0	0.5	480246.24	1351452.2	Uranium, Total	31	NV	mg/kg
RVA14-211	RVA14-211	0	0.5	480215.98	1351383.6	Uranium, Total	11	UNV	mg/kg
RVA14-212	RVA14-212	0	0.5	480205.52	1351422.79	Uranium, Total	11	UNV	mg/kg
RVA14-213	RVA14-213	0	0.5	480202.5	1351453.17	Uranium, Total	11	UNV	mg/kg
RVA14-214	RVA14-214	0	0.5	480190.34	1351365.1	Uranium, Total	120	NV	mg/kg
RVA14-215	RVA14-215	0	0.5	480185.89	1351412.38	Uranium, Total	11	UNV	mg/kg
RVA14-216	RVA14-216	0	0.5	480183.22	1351448.86	Uranium, Total	11	UNV	/kg

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Sample ID	Location	Top Depth (ft)	Bot. Depth (ft)	Northing	Easting	Parameter	Result	Qualifier	Units
RVA14-217	RVA14-217	0	0.5	480120.73	1351385.61	Uranium, Total	70	NV	mg/kg
RVA14-218	RVA14-218	0	0.5	480115	1351425.64	Uranium, Total	30.9	NV	mg/kg
RVA14-219	RVA14-219	0	0.5	480099.59	1351407.12	Uranium, Total	11	UNV	mg/kg
RVA14-220	RVA14-220	0	0.5	480097.91	1351434.1	Uranium, Total	11	UNV	mg/kg
RVA14-221	RVA14-221	0	0.5	480079.03	1351425.6	Uranium, Total	11	UNV	mg/kg
RVA14-222	RVA14-222	0	0.5	480067.82	1351432.45	Uranium, Total	11	UNV	mg/kg
RVA14-223	RVA14-223	0	0.5	480061.65	1351418.84	Uranium, Total	11	UNV	mg/kg
RVA14-224	RVA14-224	0	0.5	480052.06	1351439.6	Uranium, Total	11	UNV	mg/kg
RVA14-301	RVA14-301	0	0.5	480097.62	1351873.43	Uranium, Total	11	UNV	mg/kg
RVA14-302	RVA14-302	0	0.5	480121.53	1351857.07	Uranium, Total	11	UNV	mg/kg
RVA14-303	RVA14-303	0	0.5	480184.04	1351873.29	Uranium, Total	12.2	UNV	mg/kg
RVA14-304	RVA14-304	0	0.5	480229.08	1351875.69	Uranium, Total	11	UNV	mg/kg
RVA14-305	RVA14-305	0	0.5	480181.86	1351844.96	Uranium, Total	11	UNV	mg/kg
RVA14-306	RVA14-306	0	0.5	480151.35	1351838.15	Uranium, Total	11	UNV	mg/kg
RVA14-308	RVA14-308	0	0.5	480083.95	1351839.87	Uranium, Total	11	UNV	mg/kg
RVA14-309	RVA14-309	0	0.5	480228.59	1351836.34	Uranium, Total	11	UNV	mg/kg
RVA14-310	RVA14-310	0	0.5	480184.49	1351833.27	Uranium, Total	11	UNV	mg/kg
RVA14-401	RVA14-401	0	0.5	480690.38	1351848.28	Uranium, Total	24.8	NV	mg/kg
RVA14-402	RVA14-402	0	0.5	480702.47	1351861.74	Uranium, Total	94.7	NV	mg/kg
RVA14-403	RVA14-403	0	0.5	480752.42	1351861.41	Uranium, Total	11	UNV	mg/kg
RVA14-404	RVA14-404	0	0.5	480794.16	1351946.88	Uranium, Total	44.6	NV	mg/kg
RVA14-405	RVA14-405	0	0.5	480785.86	1351987.37	Uranium, Total	11	UNV	mg/kg
RVA14-406	RVA14-406	0	0.5	480785.56	1352001.06	Uranium, Total	11	UNV	mg/kg
RVA14-407	RVA14-407	0	0.5	480784.97	1352011.59	Uranium, Total	26.8	NV	mg/kg
RVA14-408	RVA14-408	0	0.5	480761.33	1351898.69	Uranium, Total	11	UNV	mg/kg
RVA14-409	RVA14-409	0	0.5	480762.05	1351938.66	Uranium, Total	11	UNV	mg/kg
RVA14-410	RVA14-410	0	0.5	480761.8	1351959.2	Uranium, Total	11	UNV	mg/kg
RVA14-411	RVA14-411	0	0.5	480741.24	1351878.34	Uranium, Total	11	UNV	mg/kg
RVA14-412	RVA14-412	0	0.5	480740.77	1351938.57	Uranium, Total	11	UNV	mg/kg
RVA14-413	RVA14-413	0	0.5	480742.27	1351958.7	Uranium, Total	11	UNV	mg/kg
RVA14-414	RVA14-414	0	0.5	480721.31	1351877.71	Uranium, Total	11	UNV	mg/kg
RVA14-415	RVA14-415	0	0.5	480721.37	1351937.94	Uranium, Total	11	UNV	mg/kg
RVA14-416	RVA14-416	0	0.5	480701.81	1351897.88	Uranium, Total	11	UNV	mg/kg
RVA14-417	RVA14-417	0	0.5	480701.47	1351958.39	Uranium, Total	11	UNV	mg/kg

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A1PII IMPLEMENTATION PLAN
APPENDIX B TABLE B-2

Sample ID	Location	Top Depth (ft)	Bot. Depth (ft)	Northing	Easting	Parameter	Result	Qualifier	Units
RVA14-418	RVA14-418	0	0.5	480681.18	1351877.4	Uranium, Total	11	UNV	mg/kg
RVA14-419	RVA14-419	0	0.5	480681.34	1351898.07	Uranium, Total	11	UNV	mg/kg
RVA14-420	RVA14-420	0	0.5	480680.82	1351917.78	Uranium, Total	11	UNV	mg/kg
RVA14-421	RVA14-421	0	0.5	480680.98	1351938.72	Uranium, Total	72.8	NV	mg/kg
RVA14-422	RVA14-422	0	0.5	480680.47	1351958.57	Uranium, Total	55	NV	mg/kg
RVA14-423	RVA14-423	0	0.5	480660.73	1351897.43	Uranium, Total	11	UNV	mg/kg
RVA14-424	RVA14-424	0	0.5	480661.84	1351918.24	Uranium, Total	11	UNV	mg/kg
RVA14-425	RVA14-425	0	0.5	480640.51	1351876.95	Uranium, Total	11	UNV	mg/kg
RVA14-426	RVA14-426	0	0.5	480640.8	1351897.34	Uranium, Total	11	UNV	mg/kg
RVA14-427	RVA14-427	0	0.5	480640.34	1351957.99	Uranium, Total	52	NV	mg/kg
RVA14-428	RVA14-428	0	0.5	480620.71	1351876.59	Uranium, Total	16.4	NV	mg/kg
RVA14-429	RVA14-429	0	0.5	480620.61	1351897.53	Uranium, Total	11	UNV	mg/kg
RVA14-430	RVA14-430	0	0.5	480620.36	1351917.11	Uranium, Total	11	UNV	mg/kg
RVA14-431	RVA14-431	0	0.5	480620.65	1351937.51	Uranium, Total	11	UNV	mg/kg
RVA14-432	RVA14-432	0	0.5	480600.54	1351896.76	Uranium, Total	58	NV	mg/kg
RVA14-433	RVA14-433	0	0.5	480600.29	1351916.88	Uranium, Total	11	UNV	mg/kg
RVA14-434	RVA14-434	0	0.5	480601.15	1351958.09	Uranium, Total	11	UNV	mg/kg
RVA14-435	RVA14-435	0	0.5	480579.64	1351876.41	Uranium, Total	117.4	NV	mg/kg
RVA14-436	RVA14-436	0	0.5	480580.34	1351896.95	Uranium, Total	11	UNV	mg/kg
RVA14-437	RVA14-437	0	0.5	480600.72	1351971.23	Uranium, Total	11	UNV	mg/kg
RVA14-438	RVA14-438	0	0.5	480608.53	1351971.68	Uranium, Total	11	UNV	mg/kg
RVA14-439	RVA14-439	0	0.5	480596.7	1352077.72	Uranium, Total	11	UNV	mg/kg
RVA14-440	RVA14-440	0	0.5	480589.22	1352068.66	Uranium, Total	11	UNV	mg/kg

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APPENDIX B-2

FIGURES

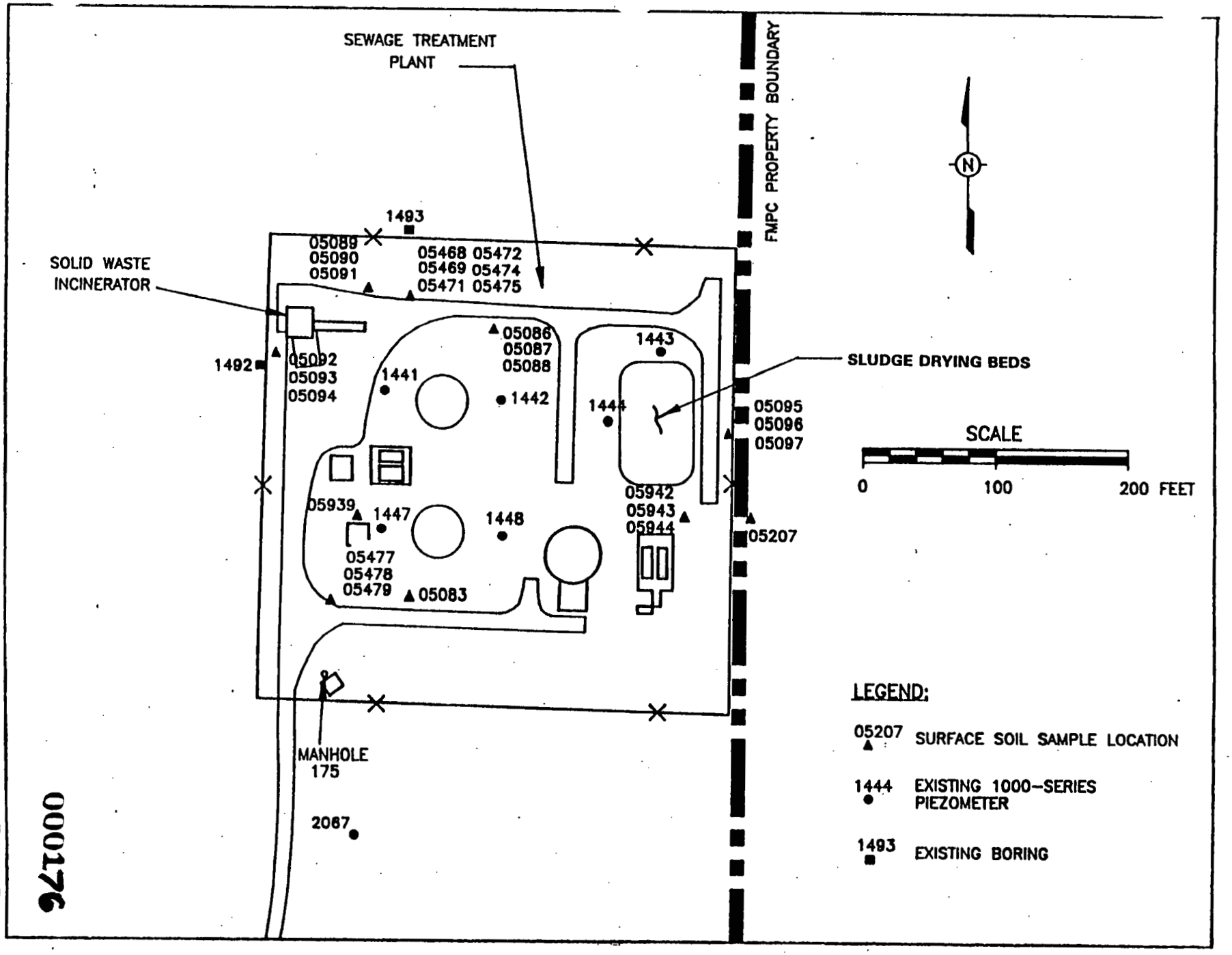

Figure B -1
Historical Sampling Locations in the Sewage Treatment Plant

602A_STPPROP_OU3_FND

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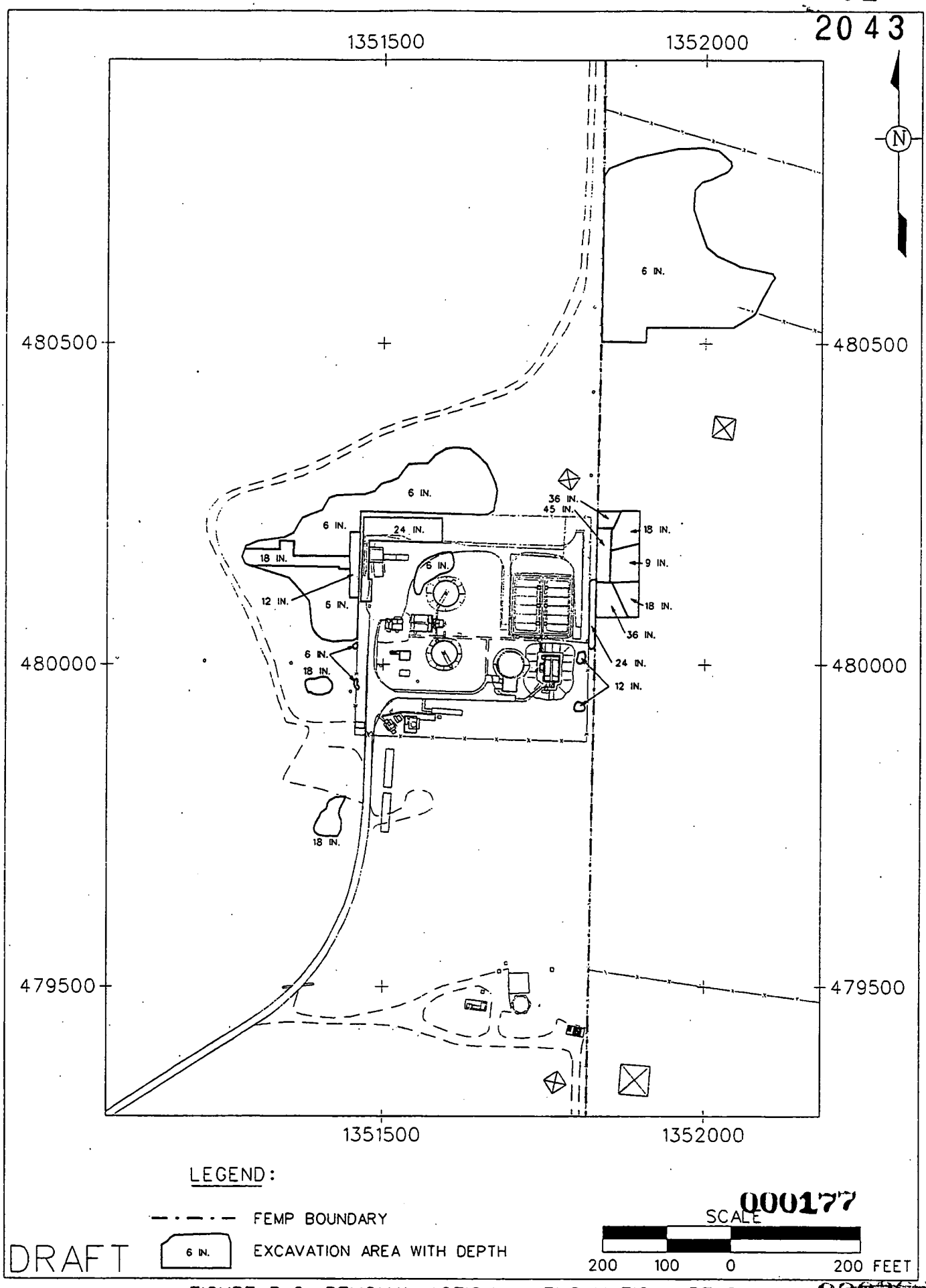
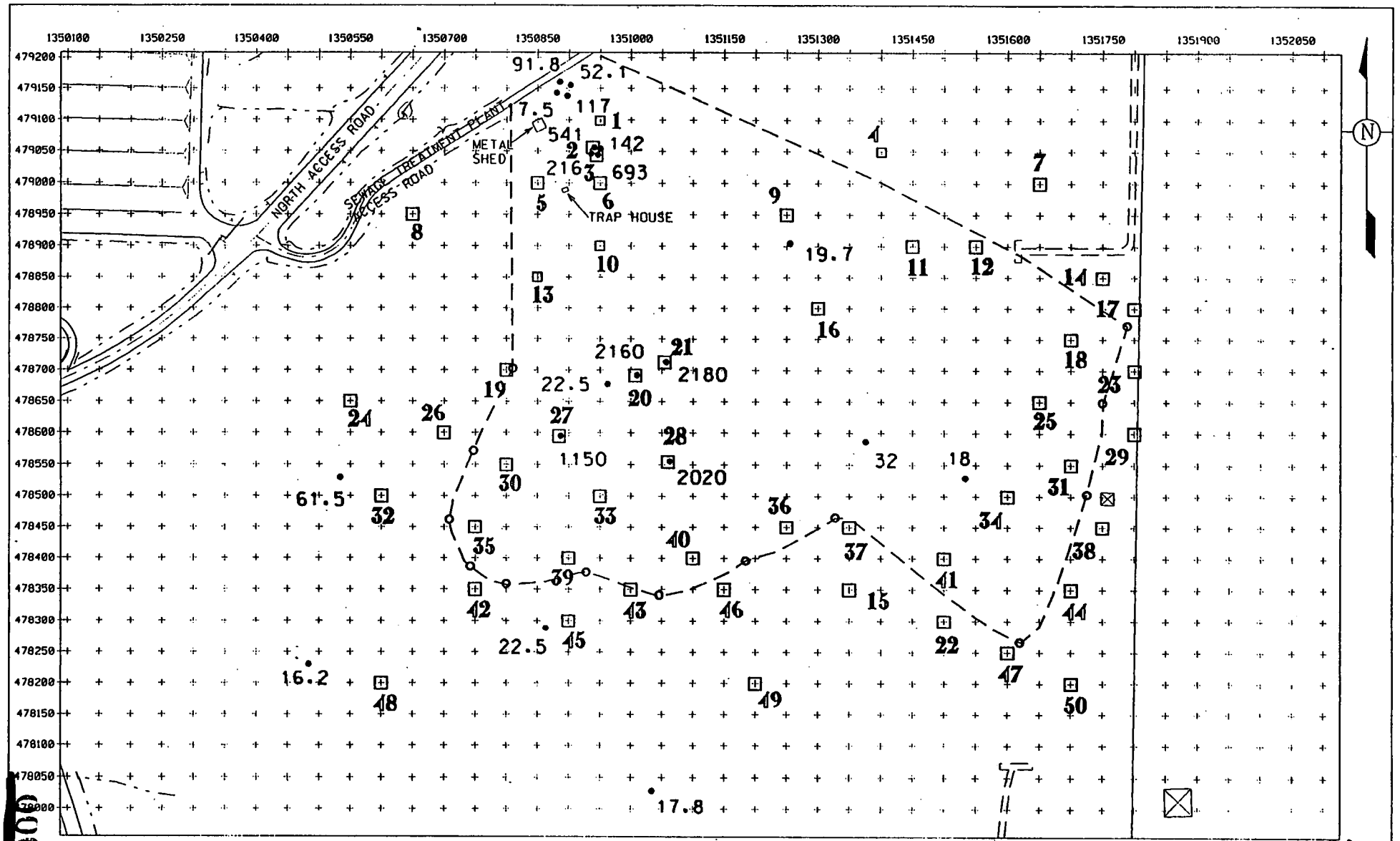


v:\5cra3\dgn\bmp\ip2012.dgn
STATE PLANAR COORDINATE SYSTEM 1983
19-NOV-1997

FIGURE B-2. REMOVAL ACTION 14 EXCAVATION AREAS



LEGEND:

142 • RI/FS LEAD RESULT (ppm)

5 □ PROPOSED SAMPLING LOCATION

o ESTIMATED BOUNDARY FLAG

— — — ESTIMATED BOUNDARY OF LEAD SHOT

·—·— FEMP BOUNDARY

SCALE

220 110 0 220 FEET

DRAFT

v:#5crw2#dgn#map#hor#dpth#work030.dgn
STATE PLANAR COORDINATE SYSTEM 1983

FIGURE B-3. PROPOSED TRAP RANGE SAMPLE LOCATIONS

18-NOV-1997

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