



RFI/RI Work Plan for the Early Construction and Operational Disposal Site L-3 (NBN), L-Area Rubble Pit (131-1L), and L-Area Rubble Pit (131-4L) Operable Unit (U)

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Aiken, South Carolina

EXECUTIVE SUMMARY

This Resource Conservation and Recovery Act Facility Investigation/Remedial Investigation Report work plan has been prepared for the Early Construction and Operational Disposal Site L-3 (no building number), L-Area Rubble Pit (131-1L), and L-Area Rubble Pit (131-4L) operable unit. The operable unit is located near L Area at the Savannah River Site in Aiken, South Carolina (Figure ES-1). This document presents previous characterization data for the operable unit, defines the data quality objectives, determines the data needs for characterization, and provides a plan for the collection of additional data.

The operable unit consists of the three subunits: Early Construction and Operational Disposal Site L-3, L-Area Rubble Pit (131-1L), and L-Area Rubble Pit (131-4L) (Figure ES-1).

Early Construction and Operational Disposal Site L-3

The Early Construction and Operational Disposal Site L-3 subunit is one of twenty-five similar sites at Savannah River Site, which were identified during a review of early 1950s aerial photographs. These sites were used during the construction and early operation of Savannah River Site for disposal of construction debris and other non-radioactive waste materials such as rubble and concrete. The subunit is estimated to have been in use from November 1953 to June 1954 and there are no records of hazardous or radioactive waste disposal at the subunit. Sections of the trenches may have been used as a burn pit for disposal of combustible waste.

A site evaluation of the subunit was conducted in 2002 and results were reported in the *Site Evaluation Report for the Early Construction and Operational Disposal Site (ECODS) L-3 (NBN) (U)* (WSRC 2003). Based on the site evaluation report, in accordance with 300.420(b)(1)(I) of the National Oil and Hazardous Substances Pollution Contingency Plan, the Early Construction and Operational Disposal Site L-3 was removed from the Federal Facility Agreement Appendix G.1, *Areas to Be Investigated*, and placed in Appendix C, *RCRA/CERCLA Units*, for further action (FFA 1993). The characterization data for the subunit meets the Savannah River Site requirements for definitive level data that is of sufficient quality and quantity to conduct a baseline risk assessment to support remedial decision making.

L-Area Rubble Pit (131-1L)

The L-Area Rubble Pit (131-1L) subunit is a former waste disposal area reportedly used for various construction debris. Plant records indicate that metal, lumber, poles, and concrete were disposed of in the subunit. There are no records of hazardous or radioactive material disposed of at the pit. No characterization has been performed at the subunit. The L-Area Rubble Pit (131-1L) is in Appendix C of the Federal Facility Agreement, *RCRA/CERCLA Units*, for further assessment (FFA 1993). A soil-gas survey indicated volatile hydrocarbons consistent with typical landfill degradation exist.

L-Area Rubble Pit (131-4L)

The L-Area Rubble Pit (131-4L) subunit is an unlined pit, reported to have operated from 1973 to 1983, before it was filled and seeded in 1983. The subunit received inert rubble from the L-Area Powerhouse Stack and Silo demolition. The rubble consisted primarily of concrete and asphalt material with some metal. Operating procedures indicate it was to receive inert, non-hazardous materials and there are no records indicating any disposal of hazardous or radioactive materials.

A site evaluation of the subunit was conducted from 1992 to 1994 and results were reported in the *Site Evaluation Report for the L-Area Rubble Pit (131-4L) (U)* (WSRC 1994). Based on the site evaluation report, in accordance with 300.420(b)(1)(I) of the National Oil and Hazardous Substances Pollution Contingency Plan, the L-Area Rubble Pit (131-4L) was removed from Federal Facility Agreement Appendix G.1, *Areas to Be Investigated*, and placed in Appendix C, *RCRA/CERCLA Units*, for further assessment (FFA 1993). The quality of the characterization data set does not allow for it to be used in a baseline risk assessment.

Conclusions and Objectives

An adequate data set exists for the Early Construction and Operational Disposal Site L-3 subunit from the 2002 site evaluation characterization. However, full characterization of the L-Area Rubble Pits (131-1L and 131-4L) is needed in order to define the nature and extent of contamination for risk screening and problem definition, and determination of likely response

actions. Based on the conceptual site model and data quality objectives, the conclusions and/or data needs for the three subunits are as follows:

Early Construction and Operational Disposal Site L-3

- No additional characterization is needed for the Early Construction and Operational Disposal Site L-3 subunit.

L-Area Rubble Pit (131-1L)

- There is no unit-specific data available. Therefore, sampling is proposed to define the nature and extent of contamination in surface and subsurface soils. These data are needed to support human health and ecological risk assessments and a contaminant migration analysis.
- Due to the type of material that was disposed of in the pit, there is a possibility for the unit to contain asbestos-containing material. Therefore, material will be evaluated to determine the presence of asbestos during sampling.

L-Area Rubble Pit (131-4L)

- Due to insufficient definitive level data, inconsistent sampling depths, and lack of sampling location spatial reference information, previous sampling at the L-Area Rubble Pit (131-4L) subunit is inadequate for human health and ecological risk assessments and contaminant migration analysis. Therefore, sampling is proposed to define the nature and extent of contamination in surface and subsurface soils consistent with current protocols. These data are needed to support the human health and ecological risk assessments and the contaminant migration analysis for the subunit.
- Due to the type of material that was disposed of in the pit, there is a possibility for the unit to contain asbestos-containing material. Therefore, material will be evaluated to determine the presence of asbestos during sampling.

To accomplish these objectives, a sampling and analysis plan for the additional data needs at L-Area Rubble Pit 131-1L and 131-4L are included in this work plan. The proposed strategy for characterizing each subunit is summarized below.

L-Area Rubble Pit (131-1L)

- A ground penetrating radar survey is proposed to verify the subunit boundaries and depth.
- Sampling is proposed at 21 locations and at five depth intervals (Figure ES-2). Depth intervals include surface soil (0.0- to 0.3-meters [0- to 1-foot]) and subsurface soil (0.3- to 1.2-meters, 2.4- to 3.0-meters, 3.0- to 3.7-meters, and 4.3- to 4.9-meters [1- to 4-feet, 8- to 10-feet, 10- to 12-feet, and 14- to 16-feet]). A tentative subsurface soil depth is proposed at 5.5- to 6.1-meters (18- to 20-feet) depth.
- The 21 locations identified include 13 locations within the subunit boundary and eight locations peripheral to the subunit to aid in extent determination.
- All samples will be analyzed for all constituents on the Target Analyte List and Target Compound List, to include all volatiles, semi-volatiles, pesticides, and polychlorinated biphenyls, as well as radiological indicators (gross alpha and nonvolatile beta). Additionally, visual inspections for asbestos will be conducted during drilling operations.

L-Area Rubble Pit (131-4L)

- The L-Area Rubble Pit (131-4L) subunit is estimated to be approximately 36.6-meters by 30.5-meters (120- feet by 100-feet) based on the current orange ball marker locations and descriptions of the area in the site evaluation report (Figure ES-3).
- Sampling is proposed at 31 locations and at four depth intervals (Figure ES-3). Depth intervals include surface soil (0.0- to 0.3-meters [0- to 1-foot]) and subsurface soil (0.3- to 1.2-meters, 1.8- to 2.4-meters, and 3.0- to 3.6-meters [1- to 4-feet, 6- to 8-feet, and 10- to 12-feet]). A tentative subsurface soil depth is proposed at 4.3- to 4.9-meters (14- to 16-feet) depth.

- The 31 locations identified include 19 locations within the subunit boundary and 12 locations at the peripheral of the subunit to aid in extent determination.
- All samples will be analyzed for all constituents on the Target Analyte List and Target Compound List, to include all volatiles, semi-volatiles, pesticides, and polychlorinated biphenyls, as well as radiological indicators (gross alpha and nonvolatile beta).
- Additionally, visual inspections for asbestos will be conducted during drilling operations.

The data obtained under this work plan will be used to support the baseline risk assessments, contaminant fate and transport analyses, and remedial assessment process for the Early Construction and Operational Disposal Site L-3, L-Area Rubble Pit (131-1L), and L-Area Rubble Pit (131-4L) operable unit. The work plan implementation is scheduled for a September 30, 2022, field start. The combined Resource Conservation and Recovery Act Facility Investigation/Remedial Investigation/Baseline Risk Assessment/Corrective Measures Study/Feasibility Study is scheduled for submittal in July 2023.

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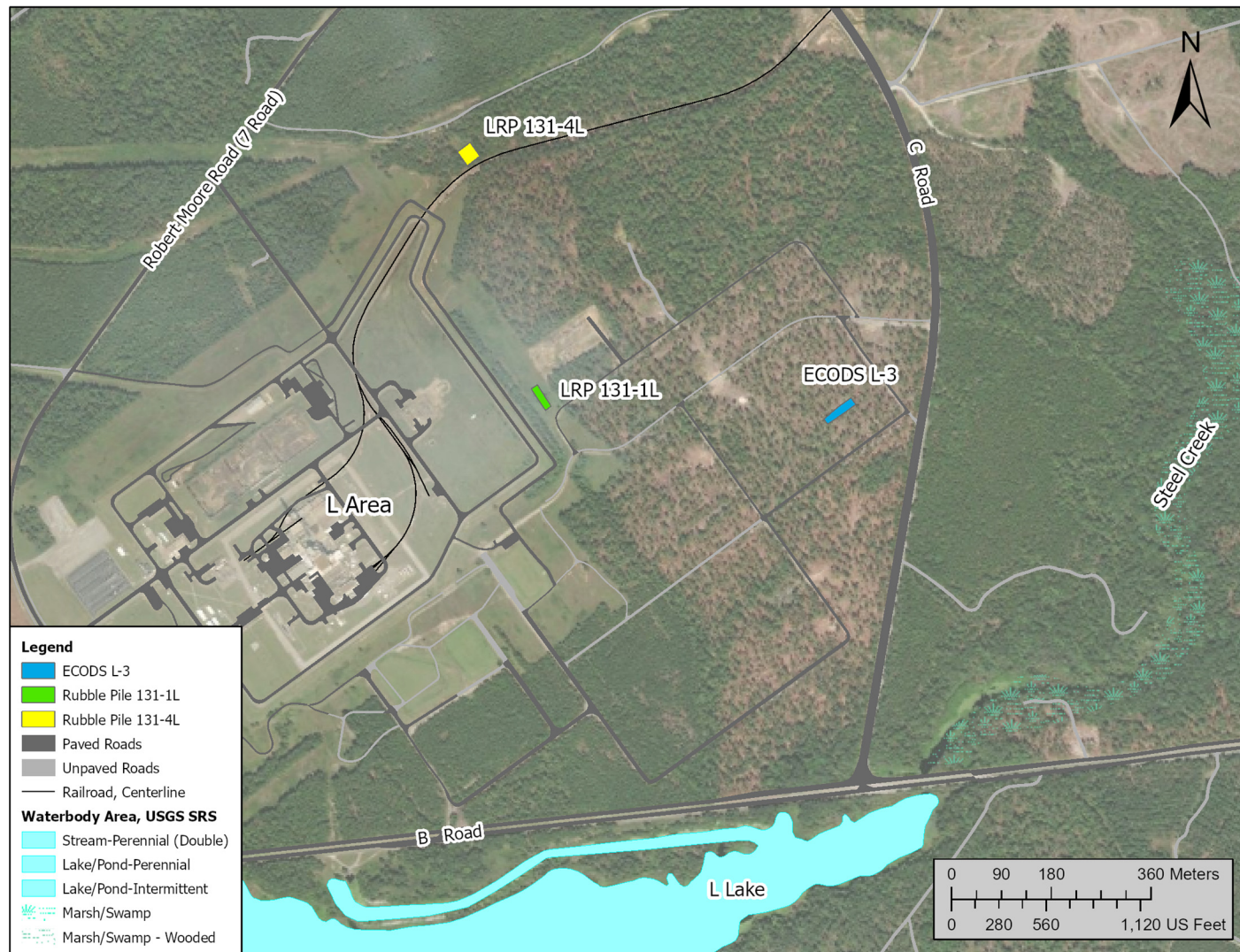


Figure ES-1. Location of ECODS L-3, LRP 131-1L, and LRP 131-4L OU

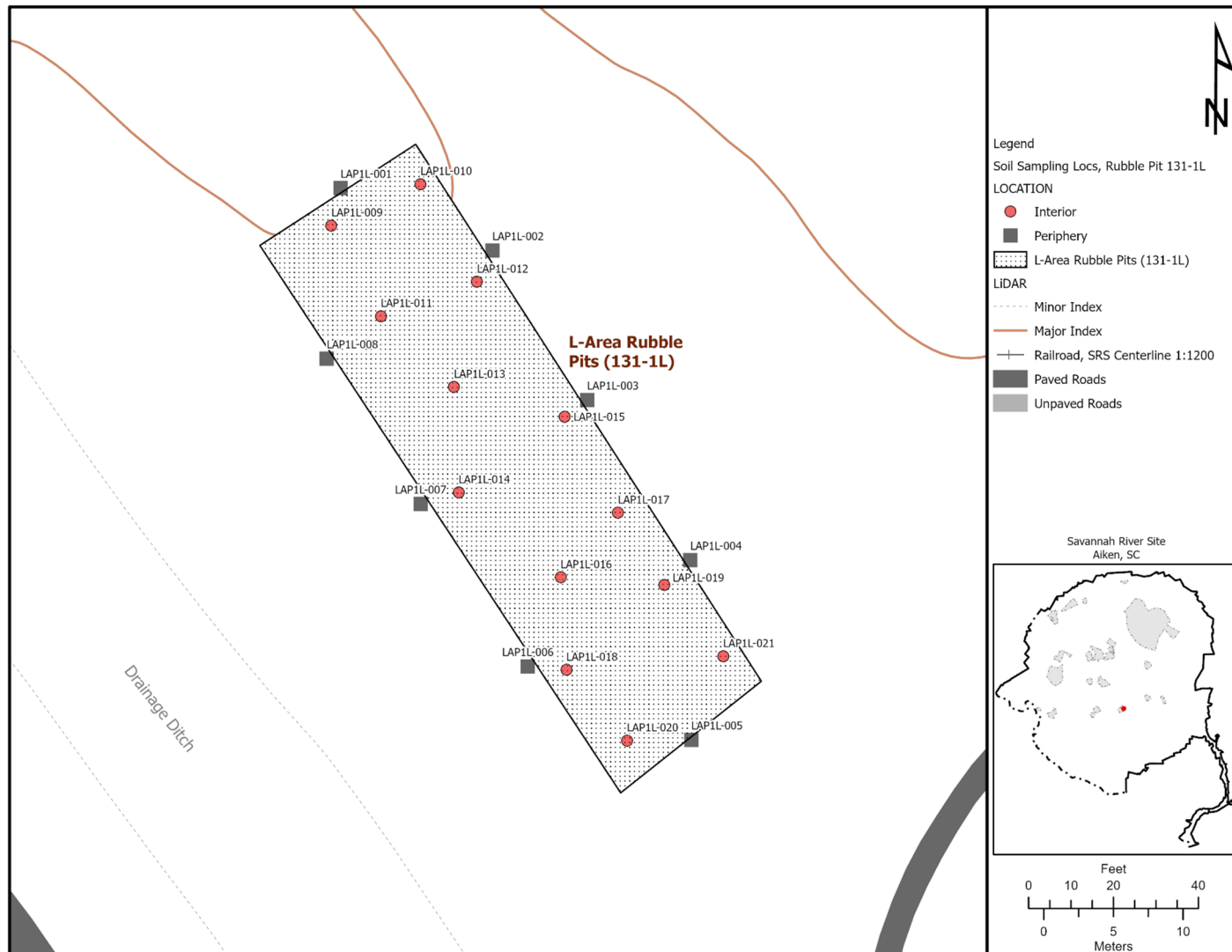


Figure ES-2. Proposed RFI/RI Work Plan Sample Locations for the L-Area Rubble Pit 131-1L Subunit

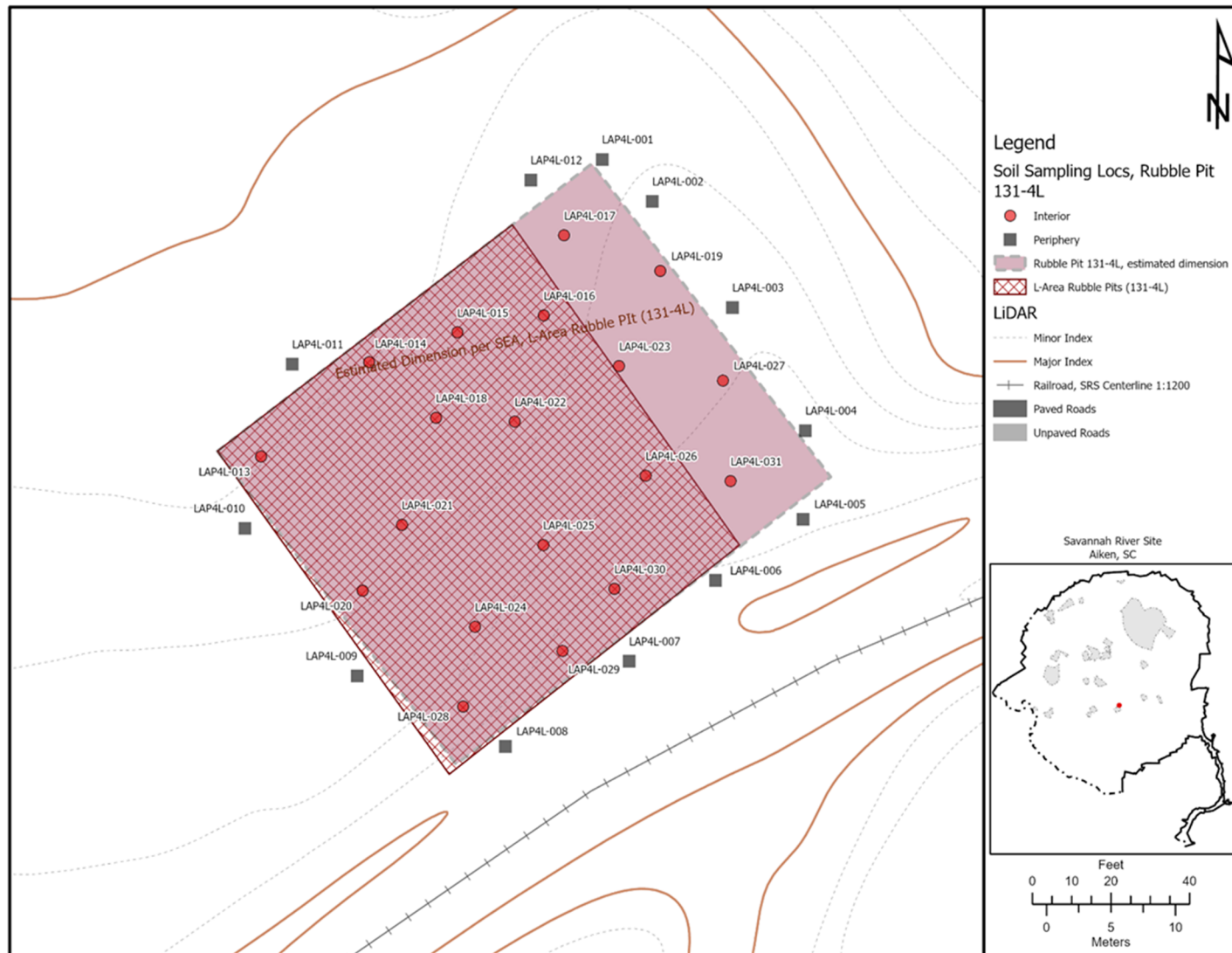


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LIST OF ABBREVIATIONS AND ACRONYMS

~	approximate, approximately
<	less than
≥	greater than or equal to
°C	degrees Celsius
ACP	Area Completion Projects
amsl	above mean sea level
ARAR	applicable and/or relevant and appropriate requirement
As	arsenic
BaP	benzo(a)pyrene
BRA	baseline risk assessment
bgs	below ground surface
Cd	cadmium
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CFR	Code of Federal Regulations
CM	contaminant migration
CMCOC	contaminant migration constituent of concern
CMS	corrective measures study
COPC	constituent of potential concern
COPEC	constituent of potential ecological concern
Cr	chromium
Cr ⁺⁶	hexavalent chromium
CRDL	contract required detection limit
CSM	conceptual site model
Cu	copper
CWM	clear wide-mouth glass jar
D	definitive
DEHP	bis(2-ethylhexyl)phthalate
DQD	decision quality data
DQO	data quality objective
ECO	ecological
ECODS	Early Construction and Operational Disposal Site
EN	essential nutrient
ERDMS	environmental restoration data management system
ESV	ecological screening value
FD	field duplicate
FFA	Federal Facility Agreement
FS	Feasibility Study
ft	feet
ft ²	square feet
FY	fiscal year
g	gram
GPR	ground penetrating radar

LIST OF ABBREVIATIONS AND ACRONYMS *(Continued)*

H ₂ SO ₄	sulfuric acid
HASP	Health and Safety Plan
HCL	hydrochloric acid
HDPE	high-density polyethylene plastic bottle
Hg	mercury
HH	human health
HI	Hazard Index
HNO ₃	nitric acid
HQ	hazard quotient
IDW	investigation derived waste
km	kilometer
L	liter
LANL	Los Alamos National Laboratory
LASG	L-Area Southern Groundwater
LOAEL	lowest observed adverse effect level
LRP	L-Area Rubble Pit
m	meter
m ²	square meter
MCL	maximum contaminant level
MDA	minimum detectable activity
MDL	method detection limit
µg/kg	microgram per kilogram
mg/kg	milligram per kilogram
mi	mile
mL	milliliter
MS	matrix spike
MTBE	methyl tertiary butyl ether
NaHSO ₄	sodium bisulfate
NBN	no building number
Ni	nickel
NNS	no national standard
NPDES	National Pollutant Discharge Elimination System
OU	operable unit
PAH	polycyclic aromatic hydrocarbons
Pb	lead
PCB	polychlorinated biphenyl
PCE	tetrachloroethylene
pCi/g	picocuries per gram
PQO	project quality objectives
PRG	preliminary remediation goal
PTFE	teflon lined seals
PTSM	principal threat source material
QA	quality assurance

LIST OF ABBREVIATIONS AND ACRONYMS *(Continued/End)*

QAPP	Quality Assurance Program Plan
QC	quality control
RB	equipment/rinsate blank
RCRA	Resource Conservation and Recovery Act
RFI	RCRA Facility Investigation
RI	Remedial Investigation
RPD	relative percent difference
RSL	regional screening level
RSV	refinement screening value
ROD	record of decision
SAP	sampling and analysis plan
SARA	Superfund Amendments Reauthorization Act
Sb	antimony
SCDHEC	South Carolina Department of Health and Environmental Control
SD	screening data
SE	site evaluation
SEMS	Superfund Enterprise Management System
SER	site evaluation report
SPL	split sample
SRNS	Savannah River Nuclear Solutions, LLC
SRS	Savannah River Site
ssEQL	sample specific estimated quantification limit
TAL	Target Analyte List
TB	trip blank
TBC	to-be-considered
TCE	trichloroethylene
TCL	Target Compound List
TO	Technical Oversight
UAZ	Upper Aquifer Zone
USC	unit-specific constituents
USDOE	United States Department of Energy
USEPA	United States Environmental Protection Agency
UU	Unverified and Unvalidated
V	vanadium
VOA	volatile organic analysis
VOC	volatile organic compound
VU	Verified and Unvalidated
VV	Verified and Validated
VZCOMML	Vadose Zone Contaminant Migration Model-Multi-Layered software V.4.0
WSRC	Washington Savannah River Company, LLC
WSRC	Westinghouse Savannah River Company, LLC
Zn	zinc

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1.0 INTRODUCTION

This Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI)/Remedial Investigation (RI) work plan has been prepared for the Early Construction and Operational Disposal Site (ECODS) L-3 (no building number [NBN]), L-Area Rubble Pit (LRP) (131-1L), and LRP (131-4L) operable unit (OU). The ECODS L-3, LRP 131-1L, and LRP 131-4L OU is located near L Area at the Savannah River Site (SRS).

Varying levels of previous characterization data exist for each of the three OU subunits. Site evaluation (SE) data reported in 2003 for the ECODS L-3 subunit and in 1994 for the LRP 131-4L subunit will be discussed in this RFI/RI work plan. There is no subunit-specific characterization data for the LRP 131-1L subunit; however, a soil-gas prescreen was performed at the subunit. SE data provides an opportunity to proactively consider data uncertainties, problems warranting action, remedial action objectives, and likely response actions. However, the primary objectives of the RFI/RI work plan are to summarize existing data for the three subunits and identify additional data needs. Within this RFI/RI work plan, a sampling and analysis plan (SAP) will be included to present the scope and objectives of characterization efforts for the subunits.

1.1 RFI/RI Work Plan Organization

Section 1.0 discusses the purpose and organization of the report, regulatory background, unit description, and process history, geology and hydrogeology for the ECODS L-3, LRP 131-1L, and LRP 131-4L OU subunits. Section 2.0 presents analytical data and comparisons to screening levels from previous investigations, including the 2003 and 1994 SE reports (SERs) for the ECODS L-3 and LRP 131-4L subunits, respectively. Section 3.0 formulates data quality objectives (DQOs) as a basis for planning additional work. Section 4.0 describes how each subunit source will be evaluated and the data collection to be performed in fiscal year (FY) 2023. The SAP for additional data collection is incorporated into Sections 5.0 through 7.0 of the report rather than submitted as a separate SAP report. Section 5.0 describes the design and rationale of the unit characterization work proposed for FY2023. Section 6.0 provides the analytical plan and data quality levels for each type of data to be collected. Section 7.0 describes the field collection procedures for the planned samples.

Finally, Section 8.0 presents the unit-specific safety, health, and emergency response plan, and Section 9.0 presents the project schedule following the RFI/RI work plan submittal.

1.2 Regulatory Background

On December 21, 1989, SRS was included on the National Priorities List. The inclusion created a need to integrate the established RCRA program with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) requirements to provide for a focused environmental program. In accordance with Section 120 of CERCLA 42 United States Code Section 9620, the United States Department of Energy (USDOE) negotiated a Federal Facility Agreement (FFA) with United States Environmental Protection Agency (USEPA) and South Carolina Department of Health and Environmental Control (SCDHEC) to coordinate remedial activities at SRS into one comprehensive program which fulfills these dual regulatory requirements (FFA 1993). The FFA is a legally binding agreement between regulatory agencies and USDOE that establishes the responsibilities and schedules for the comprehensive remediation of SRS. The ECODS L-3, LRP 131-1L, and LRP 131-4L OU is listed in Appendix C of the FFA (FFA 1993).

1.2.1 ECODS L-3 Subunit

The ECODS L-3 is one of twenty-five ECODS at SRS which were identified during a review of early 1950s aerial photographs. These sites were used during the construction and early operation of SRS for disposal of construction debris and other non-radioactive waste materials, such as rubble and concrete. ECODS L-3 is estimated to have been in use from November 1953 to June 1954 and there are no records of hazardous or radioactive waste disposal at the subunit. Prior to use as a disposal site, the area was farmland. Sections of the disposal trenches may have been used as a burn pit for disposal of combustible waste.

A SE of the ECODS L-3 subunit was conducted in 2002 and results were reported in the *Site Evaluation Report for the Early Construction and Operational Disposal Site (ECODS) L-3 (NBN) (U)* (Westinghouse Savannah River Company, LLC [WSRC] 2003). Based on the site evaluation report (SER), in accordance with 300.420(b)(1)(I) of the National Oil and Hazardous Substances Pollution Contingency Plan, the ECODS L-3 was removed from FFA Appendix G.1, *Areas to Be*

Investigated, and placed in Appendix C, *RCRA/CERCLA Units*, for further assessment (FFA 1993).

1.2.2 LRP 131-1L Subunit

The LRP 131-1L subunit is a former waste disposal area reportedly used for various construction debris. SRS records indicate that metal, lumber, poles, and concrete were disposed of in the LRP 131-1L subunit. There are no records of hazardous or radioactive material disposed of at the pit. No characterization has been performed at the LRP 131-1L subunit. The LRP 131-1L is in Appendix C of the FFA, *RCRA/CERCLA Units*, for further assessment (FFA 1993).

1.2.3 LRP 131-4L Subunit

The LRP 131-4L subunit is an unlined pit, reported to have operated from 1973 to 1983, before it was filled and seeded in 1983. The LRP 131-4L subunit received inert rubble from the L-Area Powerhouse Stack and Silo demolition. The rubble consisted primarily of concrete and asphalt material with some metal. Operating procedures indicate it was to receive inert, non-hazardous materials and there are no records indicating any disposal of hazardous or radioactive materials.

A SE of the LRP 131-4L subunit was conducted from 1992 to 1994 and results were reported in the *Site Evaluation Report for the L-Area Rubble Pit (131-4L) (U)* (WSRC 1994). Based on the SER, in accordance with 300.420(b)(1)(I) of the National Oil and Hazardous Substances Pollution Contingency Plan, the LRP 131-4L was removed from FFA Appendix G.1, *Areas to Be Investigated*, and placed in Appendix C, *RCRA/CERCLA Units*, for further assessment (FFA 1993).

1.3 Land Use

The ECODS L-3, LRP 131-1L, and LRP 131-4L OU is located in an area designated for industrial use as defined by the *Land Use Control Assurance Plan for the Savannah River Site* (WSRC 1999). No current or future development of the OU is planned. Land use controls will be part of any remedial action to ensure prevention of unrestricted use (e.g., residential), unless unrestricted use is supported by the RFI/RI baseline risk assessment (BRA) results. Groundwater is not part of the OU and is addressed in the L-Area Southern Groundwater (LASG) OU monitored natural

attenuation final remedy. There is no current or projected future use of the groundwater as a drinking water source.

1.4 Summary of Unit Description

L Area is located in the southern portion of the SRS (Figure 1). Prior to construction of L Area, the land was farmland. The ECODS L-3, LRP 131-1L, and LRP 131-4L OU is within the Steel Creek Watershed. L Area is an industrialized area of SRS, consisting primarily of a nuclear reactor and support facilities that operated from August 1954 to 1968 and 1984 to 1988. Between 1968 and 1984, the reactor facility was in warm standby (WSRC 2005). Facilities in L Area are still active, with the primary mission of receiving, stabilizing and dispositioning spent nuclear fuel.

1.4.1 ECODS L-3 Subunit

The ECODS L-3 subunit is located in the southern portion of SRS and is one of twenty-five ECODS that were identified during a review of early 1950s aerial photographs (Figure 2). ECODS were used during the construction and early operation of SRS for disposal of construction debris and other waste material. The waste at ECODS L-3 was buried in two trenches, located end to end and approximately (~) 18-meters (m) (60-feet [ft]) wide by 30 m (100 ft) long (Figure 3). Sections of the trenches may have been used as a burn pit for combustible waste disposal.

The ECODS L-3 subunit is located in the southern portion of the SRS, immediately southeast of L Area (Figure 2). The subunit is ~9.7-kilometers (km) (6.0-miles [mi]) north of the nearest SRS boundary and is within the Steel Creek Watershed. The ECODS L-3 subunit is located ~518 m (1,700 ft) southeast of the southeastern corner of the L Area perimeter fence.

The ECODS L-3 subunit is in a relatively flat area that slopes gradually to the southwest and is covered in mature pine trees with a moderately dense understory (Figures 3 and 4). There is no evidence of stained soil or stressed vegetation within the ECODS L-3 subunit. The nearest wetland to the ECODS L-3 subunit is the extensive wetland areas associated with L Lake, ~0.6 km (0.4 mi) to the south. The nearest RCRA/CERCLA unit is the LRP 131-1L, which is ~488 m (1,600 ft) northwest of the ECODS L-3 subunit.

Elevation at the ECODS L-3 subunit is ~76 m (250 ft) above mean sea level (amsl) (Figure 3). Surface drainage flows overland for ~0.6 km (0.4 mi) to the southwest until reaching a ponded area of Steel Creek at the northwest intersection of SRS Roads B and C (Figure 5). This area flows through a culvert, under Road B, and into L Lake. From this point, L Lake flows southwest and south for 5.6 km (3.5 mi) before discharging into lower Steel Creek. Steel Creek flows south and west for an additional 12 km (7.5 mi) before discharging into the Savannah River. Drainage from the ECODS L-3 subunit does not discharge to a National Pollutant Discharge Elimination System (NPDES)-permitted storm water outfall, as it is in an area not served by storm sewers.

According to the U.S. Soil Conservation Service Soil Survey, soils at the subunit consist of Wagram Sand. This well-drained soil type consists of a surface layer of pale brown sand, with a subsurface layer of pale yellow sand, and a subsoil of yellowish brown fine sandy loam. The soil is moderately to very strongly acidic, with moderate permeability and low water capacity (USDA 1990).

In general, the geology in the area is typical coastal plain sediments consisting of alternating beds of sands, silts, and clays. More specifically based on a nearby soil boring (LSW020), the geology at shallow depths where the OU is constructed mainly consist of clayey sands with increasing clay zones in subsurface sediments with low permeability at greater depths. A copy of the boring log is provided in Attachment A.

A regional potentiometric surface of the Upper Aquifer Zone (UAZ) was developed in 2003 using water levels and stream measurements from wells and surface water bodies in the area. The constructed surface indicates that shallow groundwater flow in the vicinity of the ECODS L-3 subunit is southeasterly towards Steel Creek and ultimately to L Lake (Figure 6). The regional direction of groundwater flow matches recent LASG OU specific groundwater flow and potentiometric surface. The regional potentiometric surface was used to depict the general groundwater surface and flow direction because the unit-specific potentiometric surface does not include the three subunits.

1.4.2 LRP 131-1L Subunit

The LRP 131-1L subunit is located to the east of L Area, ~46 m (150 ft) outside of the facility boundary fence (Figure 2). The subunit is a rectangular area ~12 m (40 ft) by 46 m (150 ft) (Figure 7). Although there is not reliable information on the pit depth, typical disposal trenches used at SRS are ~3.0 m (10 ft) deep. Based on nearby groundwater monitoring well cluster LAW 3, groundwater depth at this location is ~4.6 m (15 ft) below ground surface (bgs).

The subunit area is covered in heavy brush and scattered, mature pine trees with no sign of stress (Figure 8). During site visits in 1991, there was no evidence of buried materials, surface disturbance, or visible protrusions (WSRC 1991). However, during a site visit on December 7, 2021, asphalt debris on the surface was observed (Figure 9) and an obvious depression was observed within the subunit (Figure 10).

The surface elevation at the LRP 131-1L is ~75 m (246 ft) amsl and is relatively flat across the subunit. The subunit gently slopes to the southeast (Figures 5 and 7). Running adjacent to the LRP 131-1L subunit is a man-made ditch with a depth of ~3.0 m (10 ft) and width ranging from 15 to 21 m (50 to 70 ft) (Figures 7 and 11). The ditch receives rainfall runoff and runs to the south, following the L Area facility fenceline. The LRP 131-1L subunit is within the Steel Creek Watershed; runoff from the subunit eventually discharges to Steel Creek, located ~1,280 m (4,200 ft) southeast of the pit. Steel Creek flows ~400 m (1,300 ft) before discharging to L Lake. From this point, L Lake flows southwest and south for 5.6 km (3.5 mi) before discharging into Steel Creek again. Steel Creek flows south and west for an additional 12 km (7.5 mi) before discharging into the Savannah River. Drainage from the LRP 131-1L does not discharge to a NPDES-permitted storm water outfall, as it is in an area not served by storm sewers.

The elevation of the LRP 131-1L is ~75 m (246 ft) amsl and the topography is relatively flat. The water table beneath the rubble pit is ~4.6 m (15 ft) bgs and occurs in the Barnwell Group formations.

In general, the geology in the area is typical coastal plain sediments consisting of alternating beds of sands, silts, and clays. More specifically, description of subsurface sediments from a nearby boring (LSW 4C) indicates the geology at shallow depths where the OU is constructed mainly

consists of clayey to silty sands. The first competent unit with increased clay content, or continuous soil layer that is resistant to vertical groundwater flow, is observed at a depth of ~35.1 m (115 ft) bgs. A copy of the boring log is provided in Attachment B.

A regional potentiometric surface of the UAZ was developed in 2003 using water levels and stream measurements from wells and surface water bodies in the area. The constructed surface indicates that shallow groundwater flow in the vicinity of the LRP 131-1L subunit is to the south towards L Lake (Figure 6). The regional direction of groundwater flow matches recent LASG OU specific groundwater flow and potentiometric surface. The regional potentiometric surface was used to depict the general groundwater surface and flow direction because the unit-specific potentiometric surface does not include the three subunits.

1.4.3 LRP 131-4L Subunit

The LRP 131-4L subunit is located north of the L-Area fence and east of Road 7. The area slopes to the southeast toward railroad tracks which continue into L Area (Figures 5 and 12). Just before the railroad tracks on the southeastern end of the subunit, there is a depression and drainpipe which collects runoff and carries it through a culvert under the railroad tracks. Orange ball markers were placed to designate the subunit boundaries, an area ~30.5 m by 30.5 m (100 ft by 100 ft). However, during the 1994 SE evaluation, the subunit size was questioned due to land disturbance on the northwestern side of the subunit, outside of the orange ball markers. Therefore, the SER considered the LRP 131-4L subunit to be ~36.6 m by 30.5 m (120 ft by 100 ft) to include the disturbed land. The nearest RCRA/CERCLA unit is the L-Area Bingham Pump Outage Pits (643-2G and 643-3G), located ~305 m (1,000 ft) to the northwest. This unit is located side-gradient of the LRP 131-4L subunit and related effects are not expected.

The LRP 131-4L subunit area is covered in dense vegetation and is surrounded by mature pine trees. There is no evidence of stressed vegetation at the subunit. During the SE, fragments of blacktop and asphalt were observed on the surface. This observation was confirmed during a subunit walkdown on December 7, 2021 (Figure 14). The subunit surface elevation ranges from ~81 to 84 m (265 to 275 ft) amsl (Figure 12). The water table in this area is ~7.6 m (25 ft) bgs. Surface runoff flows across the subunit to the southeast and collects at the culvert, which then

travels under the nearby railroad tracks. This culvert and drainage system discharges to L Lake, ~1,300 m (4,300 ft) away. From this point, L Lake flows southwest and south for 5.6 km (3.5 mi) before discharging into Steel Creek. Steel Creek flows south and west for an additional 12 km (7.5 mi) before discharging into the Savannah River. Drainage from the LRP 131-4L does not discharge to a NPDES-permitted storm water outfall, as it is in an area not served by storm sewers.

There is limited information close to the LRP 131-4L subunit in providing details relative to the local geology at the unit. In general, the geology in the area is typically coastal plain sediments consisting of alternating beds of sands, silts, and clays. More specifically, it was noted in the LRP 131-4L SER that the backfill soils in this area contained a significant amount of clay and at one deeper sample point, a fairly “pure” layer of kaolin clay was encountered. There are no nearby borings to provide additional details on the geological setting of the OU. However, the nearest boring (LSW 4C) is located at the LRP 131-1L subunit. Description of subsurface sediments mainly consists of clayey to silty sands. The first competent unit with increased clay content is observed at a depth of ~35.1 m (115 ft) bgs. For reference, a copy of the boring log is provided in Attachment B.

A regional potentiometric surface of the UAZ was developed in 2003 using water levels and stream measurements from wells and surface water bodies in the area. The constructed surface indicates that shallow groundwater flow in the vicinity of the LRP 131-4L subunit is south-southwesterly towards L Lake (Figure 6). The regional direction of groundwater flow matches recent LASG OU specific groundwater flow and potentiometric surface. The regional potentiometric surface was used to depict the general groundwater surface and flow direction because the unit-specific potentiometric surface does not include the three subunits.

2.0 PRELIMINARY UNIT EVALUATION

The purpose of this section is to describe and summarize the existing information available for the ECODS L-3, LRP 131-1L, and LRP 131-4L OU. The results above respective method detection limits (MDLs) from the ECODS L-3 subunit SER and the LRP 131-4L subunit SER are provided in Appendix A and Appendix B, respectively. When applicable, this data was compared to risk-

based and contaminant migration (CM) thresholds and used to identify potential problems warranting action and additional data gaps for nature and extent of contamination determinations. A summary of the unit evaluations for the three subunits is discussed in more detail below.

2.1 Previous Investigations

2.1.1 ECODS L-3 Subunit

SE characterization efforts in 2002 included a radiological control survey, a ground penetrating radar (GPR) survey, and soil sampling. The radiological control survey designated the area as a “Clean Area.” Two confirmation samples were sent for laboratory analyses of gross alpha and nonvolatile beta. Sample results confirmed both samples were below the screening level of 20-picocuries per gram (pCi/g) for gross alpha and 50 pCi/g for nonvolatile beta.

Based on historical photographs, it is estimated that waste disposed of in the ECODS L-3 subunit was buried in two trenches located end-to-end. The boundaries of the trenches were estimated by the 2002 GPR survey completed, with the size of each trench estimated to be ~18 m (60 ft) wide by 30 m (100 ft) long (Figure 3). The GPR survey estimated the depth as ~7.3 m (24 ft). However, during soil sampling, the bottom of the two trenches within the subunit were confirmed at depths of 3.4 m (11 ft) or less. Depth to groundwater at the subunit is ~10.7 m (35 ft) bgs (WSRC 2003).

The 2002 SE composite soil sampling was performed at 23 locations, including 5 background locations, using direct push technology (Figure 3). Eighteen of the locations (EL3-01 through EL3-18) were distributed systematically throughout the area using a grid pattern. Sample locations EL3-01 through EL3-16 were within the trenches; sample location EL3-17 was adjacent to the east end of the eastern trench; and sample location EL3-18 was between the two trenches. The remaining five sampling locations were selected based on the groundwater flow path (one side-gradient location, EL3-19; one down-gradient location, EL3-20; and three up-gradient background locations, EL3-21 through EL3-23). According to the protocol used at the time, the samples were collected, the three up-gradient samples were used to calculate the site-specific background mean. Following the USEPA and SCDHEC guidance for assessing the site worker and the resident exposure scenarios, sample depth intervals included 0.0 to 0.3 m (0 to 1 ft) and 0.3 to 1.2 m (1 to 4 ft) for the site worker and resident scenarios, respectively.

Examination of the direct push soil cores within the ECODS L-3 subunit revealed that undisturbed soil was present at all sample locations at depths of 3.4 m (11 ft) or less. Therefore, additional samples were collected at various depths ranging from 1.2 to 3.7 m (4 to 12 ft). Based on the depths where native soil was encountered, samples were collected ~0.6 m (2 ft) below the depth of the trenches as indicated by examination of the soil samples. The depths of these intervals are displayed in Table 1. Additional samples were collected from a depth of up to 4.9 m (16 ft) at the first two sample locations (EL3-01 and EL3-02) to confirm the presence of undisturbed soil at these locations. All background locations were also sampled up to 4.9 m (16 ft) for twice the background mean calculations. Field duplicate (FD) samples were identified with an "FD" flag (Table 1). Five equipment/rinsate blanks (RB) and six trip blanks (TB) also were collected for quality assurance. SE soil sampling results above MDLs are presented in Appendix A.

Sampling personnel noted the presence of waste materials (including glass, metal, and rubber) at sample locations EL3-01, EL3-06, EL3-07, EL3-08, EL3-10, EL3-14, and EL3-15 at depths ranging from 0 to 2.4 m (0 to 8 ft).

The definitive level data from the SER is considered usable for the purposes of performing a BRA to support remedial decision making. SER data and estimates of subsurface lithology from nearby cone penetrometer technology borehole logs were used to perform a preliminary CM screening using Vadose Zone Contaminant Migration Model-Multi-Layered software (V.4.0) (VZCOMML[®]).

2.1.2 LRP 131-1L Subunit

The only previous investigation performed at the LRP 131-1L subunit was a soil-gas survey performed in 1991 to determine if hazardous waste may be present in the subsurface soils and to identify potential areas of contamination within the unit. A total of ten soil-gas samples were collected along the centerline of the longer subunit dimension, with ~4.6 m (15 ft) spacing. Quality control (QC) samples were also collected and analyzed, following two standards and two blanks for each 20 samples. Samples were analyzed for hydrocarbons and chlorinated hydrocarbons.

2.1.3 LRP 131-4L Subunit

As part of the SE effort, a soil-gas survey, a radiological control survey, a GPR survey, and soil sampling was performed at the LRP 131-4L subunit (WSRC 1994). The soil-gas survey of the LRP 131-4L subunit was performed in 1992 and very low levels of tetrachloroethylene (PCE) and mercury (Hg) were detected. The radiological control survey, completed in 1992, determined that the subunit was a “Clean Area” due to no radioactive contamination detected.

The GPR survey was performed in July 1994 in order to define the boundaries of the subunit and to determine the depth for soil sampling. GPR data indicated that the pit ranged between 1.2 to 2.1 m (4 to 7 ft) in depth and slopes toward the southeast, following the subunit topography. The subunit boundaries were not able to be definitively determined from the GPR survey. The survey also indicated soil disturbance to the northwest, therefore the original subunit boundaries were expanded to include this area for sampling. Orange ball markers indicate the original subunit boundary corners (Figure 12 and 13).

In September 1994, soil sampling was performed to confirm and investigate the presence of PCE and Hg at the LRP 131-4L, as well as identify nature and extent of any other contaminants present. Eleven subunit locations and one background location were identified for the SE soil sampling (Figure 13). At three sample locations on the downgradient side of the subunit, samples were taken from 1.5 to 2.1 m (5 to 7 ft) bgs to investigate potential migration of contaminants from the subunit. Over 20 attempts were made to collect a deep sample (1.5 to 2.1 m [5 to 7 ft] bgs) from the middle of the subunit area, but a homogenous layer of asphalt and concrete was encountered at ~0.3 to 0.6 m (1 to 2 ft) throughout the area. A deep sample (1.5 to 2.1 m [5 to 7 ft] bgs) was taken at the background location. A total of eleven surface samples (depths shallower than 0.9 m [3 ft] bgs) and three subsurface samples (deeper than 0.9 m [3 ft] bgs) were taken from the subunit.

2.2 Unit Evaluation Conclusions

2.2.1 ECODS L-3 Subunit

Preliminary screening of the 2003 SER data was performed in 2022 for the ECODS L-3 subunit by comparing the soil data to USEPA regional screening levels (RSLs) and SRS soils background

data. A more detailed screening at this early stage of the RI/Feasibility Study (FS) process allows for better identification of problems that may warrant action and potential data gaps. Preliminary data screening tables are presented in Appendix C.

Preliminary human health (HH) risk screening on the ECODS L-3 subunit data was performed using the maximum detected concentration from the 0.0 to 0.3 m (0 to 1 ft) soil depth interval. The USEPA RSL table was used to obtain the thresholds for the default residential scenario used in the evaluation (USEPA 2021). Aluminum, antimony (Sb), cadmium (Cd), chromium (Cr), iron, lead (Pb), benzo(a)pyrene (BaP), polychlorinated biphenyl (PCB) 1254 and PCB 1260 were identified as HH constituents of potential concern (COPCs) in surface soil. From the list of COPCs, maximum detected concentrations of Cr (assume hexavalent chromium [Cr⁺⁶]), Pb, PCB 1254 and PCB 1260 were greater than the industrial worker RSLs at the ECODS L-3 subunit (Figures 15-18).

Preliminary principal threat source material (PTSM) screening was performed using the maximum detected concentration from the all-depth soil intervals (0.0 to 0.3 m, 0.3 to 1.2 m, 1.2 to 2.4 m, 2.4 to 3.7 m, and 3.7 to 4.9 m [0 to 1 ft, 1 to 4 ft, 4 to 8 ft, 8 to 12 ft, and 12 to 16 ft]). In general, principal threat wastes are those source materials considered to be highly toxic or highly mobile which generally cannot be contained in a reliable manner or would present a significant risk to HH or the environment should exposure occur. The source material (i.e., soil) is preliminarily considered to be PTSM if the cumulative industrial worker risk exceeds 1E-03 for carcinogens and/or Hazard Index (HI) greater than 10 for noncarcinogens. The USEPA RSL table was used to obtain the thresholds for the default industrial worker scenario used in the evaluation (USEPA 2021). The data screening indicated that there is no PTSM (HI = 2.1, risk = 4.0E-05) at the ECODS L-3 subunit.

Preliminary ecological (ECO) risk screening was performed using the maximum detected concentration from the 0.0 to 0.3 m (0 to 1 ft) and 0.3 to 1.2 m (1 to 4 ft) depth intervals. The USEPA Region 4 Ecological Risk Assessment Supplemental Guidance (USEPA 2018) and the Los Alamos National Laboratory (LANL) EcoRisk Database (LANL 2017) were used to obtain the no-effect screening levels used in data screening. Sb, Cd, Cr, copper (Cu), Pb, Hg, nickel (Ni),

zinc (Zn), bis(2-ethylhexyl)phthalate (DEHP), cyanide, PCB 1254, and PCB 1260 were identified as ECO COPCs for terrestrial receptors in the 0.0 to 0.3 m (0 to 1 ft) interval (Cu had the highest risk [Figure 19]). Maximum detected concentrations of the COPCs (except Sb and PCB 1260) are greater than lowest observed adverse effects level (LOAEL) – based refinement screening values (RSVs) for ECO receptors.

Preliminary ECO COPCs in the 0.3 to 1.2 m (1 to 4 ft) interval include: Sb, Cd, Cr, Cu, Pb, manganese, Hg, Ni, vanadium (V), Zn, 1,1-biphenyl, polycyclic aromatic hydrocarbons (PAHs) (13 total, including: benzo[g,h,i]perylene, benzo[a]anthracene, BaP, benzo[b]fluoranthene, benzo[k]fluoranthene, chrysene, dibenz[a,h]anthracene, fluoranthene, fluorene, indeno[1,2,3-cd]pyrene, naphthalene, phenanthrene, pyrene), DEHP, carbazole, and PCB 1254 (benzo[a]anthracene had the highest risk of the PAHs [Figure 20]). From the list of COPCs, maximum detected concentrations of Sb, Cd, Cr, Cu, Pb, Hg, Ni, V, Zn, benzo(a)anthracene, fluoranthene, pyrene, DEHP, and PCB 1254 are greater than LOAEL – based RSVs for ECO receptors.

The preliminary contaminant migration constituent of concern (CMCOC) screen by VZCOMML[®] did not identify any potential CMCOCs for the ECODS L-3 subunit.

2.2.2 LRP 131-1L Subunit

There is no characterization data for the LRP 131-1L subunit that is usable for a preliminary data screening. Results of the soil-gas survey indicate volatile hydrocarbon compounds from methane through hexane are likely to be present in subunit soils. The concentration of methane exceeds the cumulative concentrations of the other compounds detected. The results are consistent with degradation of typical landfill contents (i.e., lumber, construction debris, etc.). However, contamination within the subunit cannot be ruled out and further investigation is warranted.

2.2.3 LRP 131-4L Subunit

The data set from the 1994 SER was used to perform preliminary data screening for LRP 131-4L subunit by comparing the soil data to USEPA RSLs and SRS soils background data. All soil samples were analyzed for constituents on the Target Compound List (TCL) with Tentatively

Identified Compounds and for constituents on the Target Analyte List (TAL). Results above MDLs are presented in Appendix B. Elevated levels of semivolatile compounds were detected in surface samples at nine locations. The maximally detected constituent was BaP, with levels as high as 2,200-micrograms per kilogram ($\mu\text{g}/\text{kg}$). Other PAHs were detected in the area but were below action levels. No volatile compounds were detected. Metal values were either similar to the background results or were well below respective action levels. Neither PCE nor Hg were detected in any soil samples.

This screening-level data is not considered usable for the purposes of performing a BRA to support remedial decision. However, the screening was performed to provide a preliminary indication of nature and extent of contamination and potential problems warranting action based on the available data. Sample results corresponding to specific depth intervals and location are not available. Preliminary data screening tables are presented in Appendix D.

Preliminary HH risk screening was not performed since the SE sample results cannot be definitively related to the surface interval. Per SRS protocols, the HH risk assessment is performed on the 0.0 to 0.3 m (0 to 1 ft) interval for soil. Considering all depth intervals, maximum detected concentrations of arsenic, Cr and BaP exceeded the industrial worker RSLs at the LRP 131-4L subunit.

Preliminary PTSM screening was performed using the maximum detected concentration from all depth soil intervals: 0.0 to 0.6 m, 0.3 to 0.6 m, 0.3 to 0.9 m, 0.9 to 1.2 m, 1.2 to 1.5 m, and 1.5 to 2.1 m (0 to 2 ft, 1 to 2 ft, 1 to 3 ft, 3 to 4 ft, 4 to 5 ft, and 5 to 7 ft). The USEPA RSL table was used to obtain the thresholds for the default industrial worker scenario used in the evaluation (USEPA 2021). The data screening indicated that there is no PTSM ($\text{HI} = 0.09$, $\text{risk} = 8.9\text{E}-06$) at the LRP 131-4L subunit.

A preliminary CM analysis for the LRP 131-4L subunit soil was performed using the SE soils data. The preliminary CM screen by VZCOMML did not identify any potential CMCOCs for the LRP 131-4L subunit.

2.3 Operable Unit Strategy

Various amounts and types of data exist for the ECODS L-3, LRP 131-1L, and LRP 131-4L OU subunits from previous investigations. However, the results of the previous investigations identified the need for additional data to fully characterize the nature and extent of contamination at two of the three subunits. The additional data needs are summarized below for each subunit.

ECODS L-3 Subunit

The existing data from the 2003 SER of the ECODS L-3 subunit is adequate to define the nature and extent of contamination in the subunit as agreed to on December 13, 2021, by the USEPA, SCDHEC, and USDOE (Savannah River Nuclear Solutions, LLC [SRNS] 2021). Uncertainties in the data exist and additional sampling may allow for refinement of the problem(s) warranting action, but it is not expected to affect the scope of problem(s) or the likely response actions for the ECODS L-3. At other SRS ECODS, an asbestos investigation is commonly completed in conjunction with other planned activities to support the final risk management decision. In the case of the ECODS L-3, likely response actions related to the presence of Pb and PCBs would also address the presence of asbestos-containing material. Therefore, SRS will work under the assumption that asbestos containing material is potentially present and will determine likely response actions accordingly.

Additionally, there is uncertainty in the Cr speciation in the subunit because samples collected to support the SER were not analyzed for Cr⁺⁶. However, likely response actions for Cr⁺⁶ in the subunit would be consistent with other HH problems warranting action. Therefore, there are no additional data needs that would affect the likely response actions for the ECODS L-3 subunit, and no additional sampling is proposed in this RFI/RI work plan.

LRP 131-1L Subunit

The only previous investigation conducted at the LRP 131-1L subunit was a soil-gas survey completed in 1991. This survey indicated the presence of various volatile hydrocarbons (i.e., methane through hexane). There was no additional characterization of the subunit; therefore, investigation of the subunit is warranted.

The RFI/RI work plan proposes a GPR survey of the LRP 131-1L subunit to verify the subunit boundaries and depth. The boundaries of the subunit will then be used to verify and modify the proposed sampling approach, if required. Following GPR determination of the subunit boundaries and depth, soil sampling is proposed in a random, unbiased sampling pattern with locations spaced 6.1 m (20 ft) apart within the subunit. A total of 21 locations have been identified for sampling at five depth intervals each, for a total of 105 samples. The design and analysis details of the sampling strategy are discussed in Section 5.2.

In addition to soil sampling, visual inspections for asbestos will be conducted during drilling operations. If asbestos is found, sampling will be suspended pending the outcome of a waste analysis. If asbestos is confirmed, further sampling will be reevaluated based on data needs for additional problems warranting action and response actions.

Groundwater sampling and surface water sampling are not proposed in this RFI/RI work plan. As part of the LASG OU investigation of potential source areas in L Area, the LRP 131-1L subunit was not identified as a potential source to groundwater in the LASG OU record of decision (ROD) (Washington Savannah River Company, LLC [WSRC] 2007). Based on results at nearby LSW 4 monitoring well cluster, there is nothing that indicates an impact related to the LRP 131-1L subunit. However, groundwater analyses at this location did not include all potential contaminants related to the subunit. Therefore, potential impact from the subunit will be evaluated through VZCOMML[®] modeling with data collected to support this RFI/RI work plan.

LRP 131-4L Subunit

The 1994 SE data for the LRP 131-4L does not include definitive level data that can be used for risk level determinations and/or remedial action objectives. Therefore, a full characterization of the subunit that allows for determinations based on SCDHEC and USEPA exposure scenarios and contaminant action levels is required.

Soil sampling of the subunit is proposed to be done in a random, unbiased sampling pattern spaced 6.1 m (20 ft) apart within the subunit. A total of 31 locations have been identified for sampling at four depth intervals each, for a total of 124 samples. Additionally, one of the peripheral locations

will be continuously cored to a minimum depth of 15 m (50 ft) bgs and lithologic descriptions recorded. The design and analysis details of the sampling strategy are discussed in Section 5.3.

In addition to soil sampling, visual inspections for asbestos will be conducted during drilling operations. If asbestos is found, sampling will be suspended pending the outcome of a waste analysis. If asbestos is confirmed, further sampling will be reevaluated based on data needs for additional problems warranting action and response actions.

Groundwater sampling and surface water sampling are not proposed in this RFI/RI work plan. As part of the LASG OU investigation of potential source areas in L Area, the LRP 131-4L subunit was not identified as a potential source to groundwater in the LASG OU ROD (WSRC 2007). Based on results at nearby LSW 4 monitoring well cluster, there is nothing that indicates an impact related to the LRP 131-4L subunit. However, groundwater analyses at this location did not include all potential contaminants related to the subunit. Therefore, potential impact from the subunit will be evaluated through VZCOMML modeling with data collected to support this RFI/RI work plan.

2.4 Potential ARARs and TBC Criteria

Section 121(d) of the CERCLA, as amended by the Superfund Amendments Reauthorization Act (SARA), requires that remedial actions comply with requirements and standards set forth under Federal and State environmental laws. SARA requires that the remedial action for a site meet all applicable and/or relevant and appropriate requirements (ARARs) unless a waiver is invoked. Development of ARARs and to-be-considered (TBC) criteria is an iterative process performed through the assessment and corrective action of the unit. ARARs may be location-, chemical- or action-specific.

Analytical data are compared to the chemical-specific ARARs. Chemical-specific ARARs or TBC requirements exist under federal and state regulations for Pb and PCBs.

For Pb in soil, the CERCLA value of 400 milligram per kilogram (mg/kg) was set by the USEPA Office of Solid Waste Emergency Response and adopted as a TBC for the screening process. The ARAR TBC screening threshold corresponds to the residential RSL of 400 mg/kg. At the ECODS

L-3 subunit, one soil sample is above this concentration. The maximum detected concentration of Pb is 1,300 mg/kg from location EL3-06 (0 to 0.3 m [0 to 1 ft]) depth interval.

PCBs are governed by the Toxic Substances Control Act (40 Code of Federal Regulations [CFR] Part 761). The final rule for PCB disposal was established on August 20, 1998, as amended. It addresses residual levels of PCB remediation waste that can be left in place. Action levels are based on site-specific conditions; soil containing less than 1 mg/kg is considered acceptable for free release. At the ECODS L-3 subunit, the concentrations are above the free-release ARAR of 1 mg/kg at four locations for PCB 1254 (maximum detect = 5.63 mg/kg, sample location EL3-16 in the 0.0 to 0.3 m [0 to 1 ft] interval) and two locations for PCB 1260 (maximum detect = 2.17 mg/kg, sample location EL3-16 in the 0.0 to 0.3 m [0 to 1 ft] interval).

The soil characterization samples proposed in this workplan for the LRP 131-1L and LRP 131-4L subunits will be compared to the Pb and PCB chemical-specific ARAR concentrations.

Additional investigation is required to fully characterize the nature and extent of contamination for two of the three subunits in the ECODS L-3, LRP 131-1L, and LRP 131-4L OU. The list of potential ARARs and TBC criteria (chemical-specific, action-specific, and location-specific) is expected to be modified and refined as more data are obtained as a result of this work plan.

2.5 Potential Corrective Measures Study/Feasibility Study Options

Based on known and available information and data, please refer to Tables 2 through 4 for potential corrective measures study (CMS)/FS options at each subunit. However, this list of potential CMS/FS options could change pending the outcome and discussion related to the planned sampling activities.

2.6 Potential Early and/or Interim Remedial Action

There is no PTSM identified at the ECODS L-3 subunit that would require consideration of an early or interim action based on previous investigations. In addition, previous investigation data does not indicate that contaminant levels are high enough to warrant an early or interim action for the ECODS L-3 subunit. The LRP 131-1L and LRP 131-4L subunits do not have adequate

characterization data from previous investigations to determine the need for an early or interim action. Following characterization activities to support this RFI/RI work plan, the need for an early or interim action will be re-evaluated.

3.0 DATA QUALITY OBJECTIVES (DQO)

The purpose of this section is to provide a discussion of DQOs. DQOs are quantitative and qualitative descriptions of the information required to achieve project goals. They apply to all unit remediation activities, including, but not limited to, scoping for potential contamination, verifying contamination, characterizing the extent and concentration of contamination, risk assessment, evaluation and design of alternative cleanup remedies, and monitoring cleanup. The focus of the DQO development process is effective and efficient planning for data collection. The DQO process is participatory, encouraging input and consensus for all data users. The process is intended to encourage effective, efficient thinking about key data planning issues, thus bringing increased understanding and acceptance of project goals. The DQO process is a series of planning steps based on the scientific method (see 3.1.1 to 3.1.8 below) and are detailed in EPA540-R-93-071, *Data Quality Objectives Process for Superfund* (USEPA 1993). The DQO process provides a systematic, flexible approach to decision-making. The steps are portrayed sequentially, but the DQO process is iterative. The DQOs for each subunit are found in Tables 2 through 4.

3.1 DQO Evaluation

The DQO process includes the following steps, each of which comprises a sub-section within Chapter 3:

- Conceptual Site Model (CSM)
- State the Problem
- Identify the Decisions
- Identify the Inputs to the Decisions
- Define the Boundaries of the Study
- Develop Decision Rules
- Specify Limits for Decision Errors
- Optimize Design for Obtaining Data

3.1.1 Conceptual Site Model (CSM)

The CSM is an objective framework for assessing data pertinent to the investigation. The preliminary CSMs for the three subunits of the ECODS L-3, LRP 131-1L, and LRP 131-4L OU (Figures 21 through 23) identify and evaluate suspected sources of contamination, contaminant release mechanisms, potentially affected media (secondary sources of contamination), potential exposure pathways, and potential HH and ECO receptors.

Exposure pathways describe the course a chemical or physical agent takes from the source to the exposed receptor. The following seven components constitute an exposure pathway:

- Primary Sources
- Primary Sources Environmental Release Mechanisms
- Secondary Sources
- Secondary Sources Environmental Release Mechanisms
- Exposure media (sediment, soil, surface water, etc.)
- Exposure route (ingestion, dermal contact, inhalation, external radiation, etc.)
- Receptor (resident, worker, wildlife, etc.)

If any of these elements are missing, the pathway is incomplete and is not considered further in the quantitative risk assessment. A pathway is complete when all seven components are present to permit potential exposure of a receptor to a source of contamination. Exposure analysis is important in terms of identifying all potentially complete exposure routes, understanding the nature and extent (as well as fate and transport) of contamination, and developing preliminary remedial alternatives. In a complete pathway, exposure occurs at exposure points that may represent only a small portion of the entire exposure route. If there is no exposure point, then there is no exposure, and the pathway is considered incomplete.

3.1.1.1 ECODS L-3 Subunit

Primary Sources of Contamination

The ECODS L-3 subunit was in use from ~November 1953 to June 1954. ECODS were used during the construction and early operation of SRS for disposal of construction debris and other

waste materials. Some sections of these sites may have also been used as burn pits for disposal of combustible waste. The ECODS L-3 subunit was used to dispose of materials, potentially containing asbestos, associated with the construction and operation of L Area.

Primary Sources Environmental Release Mechanisms

Environmental mechanisms evaluated as primary sources of contamination to the ECODS L-3 subunit were releases and deposition of the buried wastes disposed of in the trenches during L Area construction activities in the 1950s.

Secondary Sources of Contamination

As a primary source contacts other media, secondary sources of contamination can potentially be created. At the ECODS L-3 subunit, construction debris disposed of during the construction of the L Area had the potential to create secondary sources in surface soil, subsurface soil and deep soil.

Secondary Sources Environmental Release Mechanisms

At the ECODS L-3 subunit, potential secondary release mechanisms include water infiltration/leaching, volatilization, biotic uptake, fugitive dust by wind or other surface soil disturbances, and excavation of deep soil.

Exposure media

The ECODS L-3 subunit exposure media includes air vapor, air particulates, biota, surface soil, subsurface soil, and deep soil.

Exposure route

The ECODS L-3 subunit exposure routes include inhalation, ingestion, dermal contact and external exposure.

Receptor

Potential HH receptors identified at the ECODS L-3 subunit were the industrial worker and resident receptors. Potential ECO receptors only include terrestrial receptors.

3.1.1.2 LRP 131-1L Subunit

Primary Sources of Contamination

The LRP 131-1L subunit was a former waste disposal area reportedly used for various construction debris. Plant records indicate that metal, lumber, poles, and concrete were disposed of in the LRP 131-1L subunit. There are no records of hazardous or radioactive material disposed of at the pit.

Primary Sources Environmental Release Mechanisms

Environmental mechanisms evaluated as primary sources of contamination to the LRP 131-1L subunit were deposition and releases of wastes contained within the pit.

Secondary Sources of Contamination

As a primary source contacts other media, secondary sources of contamination can potentially be created. At the LRP 131-1L subunit, disposed waste contained within the subunit had the potential to create secondary sources in the surface soil, subsurface soil, and deep soil.

Secondary Sources Environmental Release Mechanisms

At the LRP 131-1L subunit, potential secondary release mechanisms include water infiltration/leaching, volatilization, biotic uptake, fugitive dust by wind or other surface soil disturbances, and excavation.

Exposure media

The LRP 131-1L subunit exposure media includes air vapor, air particulates, biota, surface soil, subsurface soil, and deep soil.

Exposure route

The LRP 131-1L subunit exposure routes include inhalation, ingestion, dermal contact and external exposure.

Receptor

Potential HH receptors identified at the LRP 131-1L subunit were the industrial worker and resident receptors. Potential ECO receptors only include terrestrial receptors.

3.1.1.3 LRP 131-4L Subunit

Primary Sources of Contamination

The LRP 131-4L subunit was reported to have operated from 1973 to 1983. The pit received inert rubble from the L-Area Powerhouse Stack and Silo demolition. The rubble consisted primarily of concrete and asphalt material with some metal. According to operating procedures, the LRP 131-4L subunit did not receive any hazardous or radioactive wastes.

Primary Sources Environmental Release Mechanisms

Environmental mechanisms evaluated as primary sources of contamination to the LRP 131-4L subunit were releases and deposition of the contaminated wastes disposed of within the subunit.

Secondary Sources of Contamination

As a primary source contacts other media, secondary sources of contamination can potentially be created. At the LRP 131-4L subunit, contaminated waste disposed of within the pit had the potential to create secondary sources in surface soil, subsurface soil and deep soil.

Secondary Sources Environmental Release Mechanisms

The LRP 131-4L subunit, potential secondary release mechanisms include water infiltration/leaching, volatilization, biotic uptake, fugitive dust by wind or other surface soil disturbances, and excavation.

Exposure media

The LRP 131-4L subunit exposure media includes air vapor, air particulates, biota, surface soil, subsurface soil and deep soil.

Exposure route

The LRP 131-4L subunit exposure routes include inhalation, ingestion, dermal contact and external exposure.

Receptor

Potential HH receptors identified at the LRP 131-4L subunit were the industrial worker and resident receptors. Potential ECO receptors only included terrestrial receptors.

3.1.2 *State the Problem*

3.1.2.1 ECODS L-3 Subunit

There are no additional data needs for the ECODS L-3 subunit.

3.1.2.2 LRP 131-1L Subunit

No previous characterization of the LRP 131-1L subunit has been completed. Full characterization of the entire subunit is required to determine unit-related contamination and problems warranting action. Sampling will be conducted in an unbiased, random manner. Samples will be analyzed for the full list of TAL and TCL constituents and radiological indicator parameters. Additionally, visual inspections for potential asbestos-containing material will be conducted during drilling activities.

3.1.2.3 LRP 131-4L Subunit

The 1994 SE for the LRP 131-4L subunit did not provide data that meets the quality level necessary for performing a baseline risk assessment to support remedial decisions. Additionally, there is not spatial reference data for the locations of the 1994 SER sample points. Therefore, full characterization of the entire subunit is required to determine unit-related contamination and problems warranting action. Sampling will be conducted in an unbiased, random manner. Samples will be analyzed for the full list of TAL and TCL constituents and radiological indicator parameters. Additionally, visual inspections for potential asbestos-containing material will be conducted during drilling activities.

3.1.3 *Identify the Decisions*

The following decisions are to be addressed during characterization within each of the subunits:

3.1.3.1 ECODS L-3 Subunit

No additional characterization is needed for the ECODS L-3 subunit.

3.1.3.2 LRP 131-1L Subunit

There is no unit-specific data available. Therefore, sampling is proposed to define the nature and extent of contamination in surface and subsurface soils. These data are needed to support HH and ECO risk assessments and a CM analysis.

Due to the type of material that was disposed of in the pit, there is a possibility for the unit to contain asbestos-containing material. Therefore, during sampling, material will be evaluated through visual inspection to determine the presence of asbestos-containing material. If suspected asbestos-containing material is observed, a waste analysis will be performed for confirmation.

3.1.3.3 LRP 131-4L Subunit

Due to insufficient definitive level data and inconsistent sampling depths, previous sampling at the LRP 131-4L subunit is inadequate for HH and ECO risk assessment. Therefore, sampling is proposed to define the nature and extent of contamination in surface and subsurface soils. These data are needed to support the HH and ECO risk assessments and the CM analysis for the subunit.

Due to the type of material that was disposed of in the pit, there is a possibility for the unit to contain asbestos-containing material. Therefore, during sampling, material will be evaluated through visual inspection to determine the presence of asbestos-containing material. If suspected asbestos-containing material is observed, a waste analysis will be performed for confirmation.

3.1.4 *Identify the Inputs to the Decisions*

All relevant data collected for the ECODS L-3, LRP 131-1L, and LRP 131-4L OU have been reviewed and summarized in Section 2.3 of this document. The data from previous investigations for the ECODS L-3 subunit is adequate to perform a BRA and make remedial decisions. However, there is not sufficient data to make remedial decisions for the other two subunits and additional data is required. Therefore, a data collection event is necessary.

USEPA RSLs/preliminary remediation goals (PRGs), ecological screening values (ESVs), and maximum contaminant levels (MCLs) will be used as basis for acceptance/performance criteria to determine if contaminated media poses a risk to HH or the environment. RSLs and radiological PRGs, ESVs, and MCLs will be used as the basis to guide remedial decisions concerning HH risk, ECO risk, and CM, respectively. Additionally, radionuclide and metals data for naturally occurring constituents detected in all sample depths will be compared against SRS background soil values (WSRC 2006) to identify unit-specific constituents (USCs). A CM analysis will be conducted on any resulting USCs to determine the potential for groundwater impacts.

3.1.5 Define the Boundaries of the Study

3.1.5.1 ECODS L-3 Subunit

The ECODS L-3 subunit consists of the boundary area around the outer perimeter of the disposal trenches indicated in Figure 3. The surface area of the subunit is ~406 square meters (m²) (4,370 square feet [ft²]).

3.1.5.2 LRP 131-1L Subunit

The LRP 131-1L subunit is a rectangular subunit ~12.2 m by 45.7 m (40 ft by 150 ft) used for waste disposal. The total surface area of the subunit is ~557 m² (6,000 ft²). The boundary of the subunit is shown in Figure 7.

3.1.5.3 LRP 131-4L Subunit

The LRP 131-4L subunit is a 36.6 m by 30.5 m (120 ft by 100 ft) waste disposal pit. The total surface area of the subunit is ~1,110 m² (12,000 ft²). The boundary of the unit is shown in Figure 12.

3.1.6 Develop Decision Rules

3.1.6.1 ECODS L-3 Subunit

There are no data needs for the ECODS L-3 subunit to support decisions.

3.1.6.2 LRP 131-1L Subunit

The purpose of data collection in the LRP 131-1L subunit is to determine the nature and extent of contamination at the LRP 131-1L subunit and determine presence of asbestos. No previous investigation data exists for the LRP 131-1L subunit. All samples collected at the subunit will be analyzed for the full suite of TAL/TCL constituents, radiological indicators, and evaluated for the presence of asbestos. These data are required for BRA and determination of problems warranting action.

3.1.6.3 LRP 131-4L Subunit

The purpose of data collection at the LRP 131-4L subunit is to determine the nature and extent of contamination at the LRP 131-4L subunit and determine presence of asbestos. The subunit will be sampled extensively, and all samples will be analyzed for the full suite of TAL/TCL constituents, radiological indicators, and evaluated for the presence of asbestos. These data are required for BRA and determination of problems warranting action.

3.1.7 *Specify the Limits on Decision Errors*

RFI/RI work plan characterization sample locations were chosen using an unbiased, random sampling strategy for the LRP 131-1L and LRP 131-4L subunits.

Total study error is the additive impact of two main sources of error: 1) sampling error, and 2) measurement error, with sampling error being responsible for the vast majority of the total error. “As much as 90% or more of the uncertainty in environmental data sets is due to sampling variability as a direct consequence of the heterogeneity of the environmental matrices” (Crumbling et al. 2001). The method best suited to reduce sampling error is to gather representative samples (Crumbling et al. 2001).

It is incorrect to assume that randomly collected, non-representative samples, plus perfect analytical chemistry will always lead risk managers to correct risk management decisions. In order to avoid incorrect risk management decisions, it is more important to develop decision quality data (DQD). DQD is defined as “Data of known quality that can logically be demonstrated to be effective for making the specified decision because both the sampling and analytical uncertainties

are managed to the degree necessary to meet clearly defined and stated data needs” (Crumbling et al. 2001). Therefore, it is more important for the risk managers to use DQD, emphasizing representative sampling with a specified percentage of definitive data in order to make a correct decision, and should not be confused by emphasizing analytical data quality which does not necessarily equate to a correct risk management decision.

Because the SRS possesses significant process and historical knowledge and in most instances has preliminary or survey data results for the majority of its waste units, this sampling plan will largely control sampling error (the cause of greatest total error) and set tolerable limits on decision errors by gathering data by judgmental, judgmental-stratified, and systematic sampling designs based on process knowledge, existing data, historical information/data, survey data, and institutional knowledge to generate DQD. This is the method SRS will use to control decision errors, since sample collection will be focused in areas of known contamination rather than using a sampling design intended to randomly search for contamination. Judgment-based sampling provides a very conservative and certain method for collecting data with a high likelihood for detecting worst-case contaminant concentrations while reducing total study error. Project quality objectives (PQOs) are qualitative and quantitative statements derived from the DQO process that clarify study objectives for the measurement performance criteria which define the appropriate types of data and acceptance limits for data. PQOs are used as the basis for establishing the quality and quantity of data needed to support decisions. The PQOs for the ECODS L-3, LRP 131-1L, and LRP 131-4L OU include the following:

- Relative percent difference (RPD) less than ($<$) 50% between regular soil sample and FD when result greater than or equal to (\geq) sample-specific estimated quantification limit (ssEQL) for precision data quality indicator.
- RPD $<$ 200% when soil sample result \geq MDL but $<$ ssEQL for accuracy/bias for precision data quality indicator.
- Percent Recovery from matrix spike (MS) and matrix spike duplicates are generally \geq 135% or $<$ 30% for accuracy/bias data quality indicator. MS recovery windows may be tighter than those listed. Refer to the Measurement Performance Criteria Tables in the Quality Assurance Program Plan (QAPP) (SRNS 2012a) for analyte and media-specific recovery percentages.

- No target compound \geq ssEQL for equipment blank, field blanks, method blanks, or instrument blanks for accuracy data quality indicator.
- ssEQL < MCL, RSL, or PRG as achievable per approved methods for sensitivity data quality indicator.
- Split sample (SPL) result will have an RPD <200% for soil samples.
- 5% of the samples will be SPLs for the comparability data quality indicator.
- 95% of samples sent to laboratory have useable (non-rejected) results for completeness data quality indicator.
- 90% of planned samples are collected and their data are useable for completeness data quality indicator.

The objective for the representativeness data quality indicator is qualitative and will be met by properly documenting field and analytical protocols. In the event these procedures and methods are not able to be implemented, the appropriate corrective action documentation should encompass the impact on the representativeness of the information. When review of the data and documentation determines the data to be nonrepresentative, the information is qualified for use or is not used by the project.

3.1.8 Optimize Design for Obtaining Data

In general, shallow soil samples will be collected by hand auger, while deeper soil samples will be collected using Rotasonic coring methods, or equivalent drilling method. Soil samples will be analyzed for the TAL and TCL constituents as well as radiological indicator analyses. Those samples with radiological indicator analyses exceeding the trigger limits will receive the appropriate radionuclide-specific analyses for alpha- or beta-emitting radionuclides. SAP content is provided in Sections 5.0 through 7.0.

3.2 Summary of DQO Evaluation

The ECODS L-3, LRP 131-1L, and LRP 131-4L OU is divided into three subunits. No additional characterization is needed for the ECODS L-3 subunit. Full characterization of the LRP 131-1L

and LRP 131-4L subunits is needed for BRA and determination of problems warranting action. Additionally, asbestos may be present in soil in the LRP 131-1L and LRP 131-4L subunits.

The nature and extent of contamination will be determined by soil sampling. Decision rules have been formulated for determining extent of contamination.

4.0 UNIT ASSESSMENT

4.1 Objectives

The unit assessment described in this chapter describes data collection activities. Data will be used to characterize the nature and extent of contamination, support HH and ECO risk assessments, and CM analysis, and support the decision-making process for remediation.

4.2 Primary Source Characterization

The primary sources at the ECODS L-3, LRP 131-1L, and LRP 131-4L OU include buried waste within the subunits. The subunits that will undergo characterization of the primary source are the LRP 131-1L and LRP 131-4L subunits.

There are no additional characterization needs for the ECODS L-3 subunit.

4.3 Secondary Source Characterization

At the ECODS L-3, LRP 131-1L, and LRP 131-4L OU, secondary contaminant sources are considered to be buried wastes and releases from contaminated waste disposed within the subunits which have released contaminants into soil.

4.4 Exposure Media Characterization

4.4.1 ECODS L-3 Subunit

No additional characterization is required at the ECODS L-3 subunit.

4.4.2 LRP 131-1L Subunit

Surface soils (0.0 to 0.3 m [0 to 1 ft]) will be sampled at the LRP 131-1L subunit and evaluated through HH and ECO risk assessment screening. Shallow subsurface soils (0.3 to 1.2 m [1 to 4 ft]) will be sampled and evaluated through ECO risk assessment screening. All soil intervals, including the deep subsurface soils (2.4 to 3.0 m, 3.0 to 3.7 m, and 4.3 to 4.9 m [8 to 10 ft, 10 to 12 ft, and 14 to 16 ft]), will be sampled and evaluated through CM and PTSM screening.

4.4.3 LRP 131-4L Subunit

Surface soils (0.0 to 0.3 m [0 to 1 ft]) will be sampled at the LRP 131-4L subunit and evaluated through HH and ECO risk assessment screening. Shallow subsurface soils (0.3 to 1.2 m [1 to 4 ft]) will be sampled and evaluated through ECO risk assessment screening. All soil intervals, including the deep subsurface soils (1.8 to 2.4 m and 3.0 to 3.6 m [6 to 8 ft and 10 to 12 ft]), will be sampled and evaluated through CM and PTSM screening.

5.0 SAMPLE DESIGN AND RATIONALE

The following section describes how the plan is implemented to collect the physical data to meet the criteria developed during the DQO process.

5.1 ECODS L-3 Subunit

The ECODS L-3 subunit was one of the disposal sites for the early construction of L Area. The ECODS L-3 subunit has been investigated by the site evaluation program (WSRC 2003). It appears that the nature and extent of contamination has been well bounded for the ECODS L-3 subunit, although it is uncertain if metals, including Cr^{+6} , are present due to native soil conditions or related to unit operations. The presence/absence of asbestos at the subunit is also unknown. However, these uncertainties do not impact the scope of the problem and/or the likely response actions. Therefore, no additional characterization of the subunit is proposed. Potential remedial actions for the ECODS L-3 subunit are summarized in Table 2.

5.2 LRP 131-1L Subunit

Characterization through soil sampling of the LRP 131-1L subunit is warranted in this RFI/RI work plan. Prior to soil sampling at the LRP 131-1L subunit, a GPR survey is proposed in an attempt to verify the subunit boundaries and depth. Once confirmed, the proposed sampling approach will be evaluated to ensure location and depth of samples are adequately located to investigate the unit. Any changes to the proposed plan will result in revision to the sampling strategy. Soil sampling is proposed in a random, unbiased sampling pattern with locations spaced 6.1 m (20 ft) apart within the subunit. A total of 21 locations have been identified for sampling at five depth intervals each, for a total of 105 samples (Figure 24). Depth intervals include surface soil (0.0 to 0.3 m [0 to 1 ft]) and subsurface soil (0.3 to 1.2 m, 2.4 to 3.0 m, 3.0 to 3.7 m, and 4.3 to 4.9 m [1 to 4 ft, 8 to 10 ft, 10 to 12 ft, and 14 to 16 ft]). A tentative subsurface soil depth is proposed at 5.5 to 6.1 m (18 to 20 ft) depth. The tentative interval will only be sampled if the pit bottom is not encountered at shallower depth intervals either through GPR or drilling. Shallow depth intervals (0.0 to 0.3 m and 0.3 to 1.2 m [0 to 1 ft and 1 to 4 ft]) will be collected using a hand-auger. Rotosonic sample collection, or equivalent drilling method, will be used for all other depths. The locations identified include 13 locations within the subunit boundary and 8 locations at the subunit boundary to aid in extent determination.

All samples will be analyzed for all constituents on the TAL and TCL, to include all volatiles, semi-volatiles, pesticides, and PCBs. Additionally, samples will be analyzed for gross alpha and nonvolatile beta. If gross alpha or nonvolatile beta results exceed the respective action levels, a full speciation analysis will be performed on exceeding samples. If the total Cr results indicate concentrations above SRS background concentrations and the likely response actions are dependent on a Cr⁺⁶ evaluation, then an amended SAP will be submitted to collect Cr⁺⁶ samples from the subunit.

In addition to soil sampling, visual inspections for asbestos-containing material will be conducted during drilling operations. If suspected asbestos-containing material is found, sampling will be suspended pending the outcome of a waste analysis. If asbestos is confirmed, no further sampling will be performed, and the unit path-forward will lead to remedy selection to manage assumed hazards.

The proposed sampling to support the RFI/RI work plan for the LRP 131-1L subunit is summarized in Table 3.

5.3 LRP 131-4L Subunit

Characterization through soil sampling of the LRP 131-4L subunit is warranted in this RFI/RI work plan. Soil sampling of the subunit is proposed to be done in a random, unbiased sampling pattern spaced 6.1 m (20 ft) apart within the subunit. A total of 31 locations have been identified for sampling at four depth intervals each, for a total of 124 samples (Figure 25). Depth intervals include surface soil (0.0 to 0.3 m [0 to 1 ft]) and subsurface soil (0.3 to 1.2 m, 1.8 to 2.4 m, and 3.0 to 3.6 m [1 to 4 ft, 6 to 8 ft, and 10 to 12 ft]). A tentative subsurface soil depth is proposed at 4.3 to 4.9 m (14 to 16 ft) depth. The tentative interval will only be sampled if the pit bottom is not encountered at shallower depth intervals. Soil cores will be recorded in the field for lithologic descriptions at all sample locations. Additionally, one of the peripheral locations (LAP4L-007 [Figure 25]) will be continuously cored to a minimum depth of 15 m (50 ft) bgs and lithologic descriptions recorded.

Shallow depth intervals (0.0 to 0.3 m and 0.3 to 1.2 m [0 to 1 ft and 1 to 4 ft]) will be collected using a hand-auger. Rotasonic sample collection, or equivalent drilling method, will be used for all other depths. The locations identified include 19 locations within the subunit boundary and 12 locations at the subunit boundary to aid in extent determination. All samples will be analyzed for all constituents on the TAL and TCL, to include all volatiles, semivolatiles, pesticides, and PCBs. Additionally, samples will be analyzed for gross alpha and nonvolatile beta. If gross alpha or nonvolatile beta results exceed the respective action levels, a full speciation analysis will be performed on exceeding samples. If the total Cr results indicate concentrations above SRS background concentrations and the likely response actions are dependent on a Cr⁺⁶ evaluation, then an amended SAP will be submitted to collect Cr⁺⁶ samples from the subunit.

In addition to soil sampling, visual inspections for asbestos-containing material will be conducted during drilling operations. If suspected asbestos-containing material is found, sampling will be suspended pending the outcome of a waste analysis. If asbestos is confirmed, no further sampling

will be performed, and the unit path-forward will lead to remedy selection to managed assumed hazards.

The proposed sampling for the LRP 131-4L subunit to support the RFI/RI work plan is summarized in Table 4.

6.0 ANALYTICAL PLAN

This section describes the data quality levels for each type of data being collected. All data collected under this work plan will follow the Area Completion Projects (ACP) QAPP for Environmental Data Collection and Management (SRNS 2012a). The data quality level is determined by the intended use of the data.

6.1 Subunit Analytical Plans

The specific analytes and analytical methods and detection limits for the sampling project are listed in Tables 5 and 6. The list of TAL/TCL constituents for soil samples are listed in Table 5. The radiological constituents for soil samples are listed in Table 6. Table 7 presents the minimum field quality control/quality assurance sampling requirements. Table 8 lists hold times, preservatives, and sample containers for all analyses. A summary of the samples to be collected for each subunit is presented in the sample matrix, Table 9.

6.2 Indicator Analyses

At SRS, radiological indicators (gross alpha and nonvolatile beta) are commonly used to identify soils and groundwater with concentrations of alpha- and beta-emitting radionuclides that may not be within the range of values expected in nature. If soil sample analytical results exceed predetermined trigger levels for gross alpha emitters (20 pCi/g) or nonvolatile beta emitters (50 pCi/g), radionuclide-specific analysis will be performed on the sample exceeding the trigger level. For example, if the sample exceeds the trigger for the 20 pCi/g alpha radiation screen level, the sample will undergo radionuclide-specific analyses for alpha emitters. Use of gross alpha and nonvolatile beta trigger level is consistent with the known occurrence of natural isotopes as well as recognized characterization and investigation derived waste (IDW) management methods at

SRS. The trigger levels for soil samples are based upon the maximum activities of naturally occurring isotopes in unimpacted SRS soils (WSRC 2006).

6.3 Field Analytical Sampling Quality Assurance/ Quality Control

QC samples will consist of FD, RB, TB and SPL samples. Field quality assurance (QA)/QC will be maintained through the use of QA/QC samples and methods as described below.

1. Field Duplicate (co-located) Samples: Two or more independent samples collected from side-by-side locations at the same point in time and space so as to be considered identical. These separate samples are intended to represent the same population and are carried through all steps of the sampling and analytical procedures in an identical manner. These samples are used to assess precision of the total method, including sampling, analysis, and site heterogeneity. FD samples are planned at a combined minimum rate of 5% according to Manual C3, Volume 10, ER-SOP-043, standard operating procedure for *Obtaining and Managing Environmental Data for Environmental Compliance & Area Completion Projects*, or typically 1 per 20 samples and analyzed for the same parameters as the associated samples.
2. Equipment/Rinsate Blank: A sample of water free of measurable contaminants poured over or through decontaminated field sampling equipment that is considered ready to collect or process an additional sample. The purpose of the RB is to assess the adequacy of the decontamination process. RBs are typically planned at a rate of 1 blank per 40 samples.
3. Trip Blank: A clean sample of water free of measurable contaminants that is taken to the sampling site and transported to the laboratory for analysis without having been exposed to sampling procedures. TBs are analyzed to assess whether contamination was introduced during sample shipment (typically analyzed for volatile organic compounds [VOCs] only). A blank consists of distilled-deionized water provided by the laboratory to be placed in every cooler with VOC samples typically at the rate of 1 blank per cooler.
4. Split Samples: Two or more representative portions from a sample in the field, analyzed by at least two different laboratories and/or methods. Prior to splitting, a sample is mixed (except volatiles, oil and grease, or when otherwise determined) to minimize sample heterogeneity. These are quality control samples used to assess precision, variability, and data comparability

between laboratories. SPLs are planned at a combined minimum rate of 5% or typically 1 per 20 samples and analyzed for the same parameters as the associated samples.

6.4 Data Quality Levels for the ECODS L-3, LRP 131-1L, and LRP 131-4L OU

The characterization data will have an SRS validation level of screening data (SD), which is data that is electronically Verified and Validated (VV) data, with 10% of the data receiving additional manual validation to the SRS Definitive (D) level (SRNS 2012b; SRNS 2012c). SD data is VV data which meet the following selected aspects of USEPA Functional Guideline criteria: Quantitation Limits, Surrogate or Tracer Recoveries, Blanks (Method/Lab/Prep, Trip, Field, Equipment/Rinsate), Laboratory Control Spike Recoveries, MS Recoveries/Duplicates, Lab Replicates, Field Replicates, Cooler Temps, Chemical Preservation, Holding Times. Requirements for SD data are listed in Table 7.

6.5 Sample Matrix Table

Table 9 is a Sampling Matrix table that includes all the detailed information for all samples planned to be collected. FDs, RBs, SPLs, and TBs are not shown on the table but will be produced during the work planning stage. The exact number of samples may change based on field conditions.

6.6 Sample Location Map

Figures 24 and 25 illustrate the proposed locations of samples to be collected.

7.0 FIELD IMPLEMENTATION

The following sections outline the field implementation procedures and processes for the ECODS L-3, LRP 131-1L, and LRP 131-4L OU work plan characterization effort. Additional implementing documents such as the environmental evaluation checklist, automated hazard analysis, radiological work instructions, and site-specific health and safety plan are internal to SRS, and detail day-to-day sampling operations and safety requirements.

7.1 Sample Collection Procedures and Processes

The ECODS L-3, LRP 131-1L, and LRP 131-4L OU work plan characterization effort includes soil sampling only. The following specific procedures will be followed:

- Sampling Surface and Sub-Surface Soils for Analytical Purposes, SRNS Manual 3Q1, Section 9016
- Soil and Sediment Sampling, SRNS Manual 3Q1, Section 3005
- Soil Boring Investigations, SRNS Manual 3Q1, Section 9006
- Technical Oversight (TO) Requirements for Groundwater Monitoring Wells and Soil Borings, SRNS Manual 3Q1, Section 9004

These procedures are consistent with the *USEPA Region 4 Field Branches Quality System and Technical Procedures* sampling procedures. Prior to beginning all field activities, all field crews will be required to read the procedures listed above and the TO will have had experience with that activity.

7.2 Equipment and Decontamination Procedures

In addition to the drilling rigs the following sampling equipment will be required:

- Camera for photo documentation;
- Field Logbook and/or Field Data Recorder with backup batteries;
- Global positioning system unit and backup batteries;
- Personal Protective Equipment;
- Hand auger system with bucket and extension rods;
- Stainless steel scoops, stainless steel mixing bowls, and VOC syringes;
- Balance capable of weighing to 0.01 grams;
- KIJ5 radio, Cell phone, and pager;
- All sample bottles with preservatives; and
- Cooler and frozen blue ice or equivalent for packing samples in the field.

Equipment needs will vary from day to day based on sampling requirements, field conditions, and drilling methods. Specific needs will be addressed at plan-of-the-day meetings by the TO, industrial hygiene personnel, radiological controls inspector, and safety personnel. Decontamination of field sampling equipment will be done in accordance to the 3Q1 Manual Procedure 9016, Section 5.4. Disposal of IDW will follow the job-specific waste management plan.

7.3 Sample Documentation

Overall documentation will be done in accordance with *Area Completion Projects Quality Assurance Project Plan for Environmental Data Collection and Management* (SRNS 2012a). Sample documentation will be conducted according to Manual C3, ER-SOP-043, standard operating procedure for *Obtaining and Managing Environmental Data for Environmental Compliance & Area Completion Projects*, which provides the general requirements and guidelines that are necessary for the documentation, record keeping, mobilization, collection, processing, reporting and storage of environmental data. Data Management Plan Q-DMP-B-00001, Environmental Restoration Data Management System, requires sampling information, such as bar-coded dates, times, sample identifications, weather, etc., to be recorded and maintained in logbooks and Chain-of-Custody documents included in the sampling package delivered to the project. Sampling documentation is tracked through a series of documents including:

- Mobilization Report;
- Chain-of-Custody Forms;
- Field Log Books;
- Analytical Data Packages; and
- SCDHEC and SRS required logs and forms.

A logbook for recording sample collection activities will be kept for this project. The subcontractor will ensure the logbook is correctly filled out and returned within two weeks after completion of sampling. Essential field information is the following: sample name, date of collection, time of collection, depth of sample and sampler's name. Space should be provided for any field observations or comments relating to the quality or representativeness of the sample. If the actual sample location differs from the planned sample location specified by the Chain-of-

Custody, the revised sample location should be indicated in the sample logbook. Information on the parent sample of each FD should be recorded.

7.4 Chain-of-Custody

Chain-of-Custody procedures establish requirements for sample custody and documenting custody from the time of collection through laboratory analysis. Chain-of-Custody demonstrates that samples obtained in the field have been securely collected and transported and have reached the analytical laboratory without alteration. Chain-of-Custody requirements are established by SRNS Manual 3Q1, Procedure 1001, *Chain-of-Custody Procedure*. At a minimum, Chain-of-Custody documents will include the following information which is compliant with USEPA requirements:

- Project name – i.e., monitoring well name, stream name, RFI/RI project name, etc.;
- Sample identification;
- Number of sample containers/bottles
- Sampler's signature for each sample, the sampler indicates;
- Date of sample collection;
- Time of sample collection;
- Sample identifiers (bar-coded labels);
- Sample description;
- Whether a sample is persevered or unpreserved;
- Whether a sample is filtered or unfiltered; and
- Analyses to be performed.

A Chain-of-Custody record is used as physical and legal evidence of sample custody to trace the sample from collection through delivery to the analyzing laboratory and where the samples were stored. The Chain-of-Custody record must originate with the responsible organization or the person collecting the sample. Every sample is assigned a unique identification number that is entered on the Chain-of-Custody document. The Chain-of-Custody records each transfer of custody of the samples by a relinquishing party to a receiving organization whose name and identifying contact information is located on the form.

7.5 Sample Management and Shipping

Soil samples will be collected in accordance with SRNS Manual 3Q1, Section 9000, *Hydrogeologic Data Collection Procedures and Specifications* (SRNS 2010). Sample management for analytical laboratories and intra-SRS facilities is primarily controlled by SRNS Quality Assurance Manual 1Q, Procedure 13-1, *Packaging, Handling, Shipping, Storage and Receiving*. The purpose of this procedure is to define the requirements and specify the responsible parties and their roles for the packaging, handling, shipping, storage, and receiving of items to ensure that they are properly controlled to prevent damage or loss and to minimize their deterioration. Sample shipment is also regulated by SRNS Manual 19Q, Procedure 1.02, *General Transportation Requirements for Radioactive and Non-Radioactive Hazardous Materials*. These manuals provide specific requirements to sampler personnel for the safe offsite shipment or onsite transfer of radioactive and non-radioactive hazardous materials and hazardous substances, mixed waste (radiological/nonradiological hazardous materials) and empty packaging that have previously contained mixed waste. It specifies the required packaging, labeling, record-keeping, selection of appropriate transportation carrier, and appropriate transport container based on the analytically pre-tested nature of a sample. Radiological samples must meet United States Department of Transportation shipping regulations as well. Samples associated with this work plan are expected to be non-hazardous and non-radiological as they represent environmental media rather than waste materials.

Samples will be stored in coolers with blue ice, if applicable, in the custody of the sampler, or designee, until delivered to the ACP Sample Packaging personnel in B-Area. If samples need to be stored over-night prior to delivery to the B Area sample-packaging group, then they will be stored in a locked facility with the Chain-of-Custody, and in a refrigerator (4°C + 2°C) if required for sample preservation. ACP Sample Packaging personnel in B Area will manage, package, and ship samples to the laboratories in accordance with Manual C3, Volume IX, Procedure ER-SOP-803B, *Packaging of Non-Department of Transportation (DOT) Samples for On-Site Transfers/Off-Site Shipments*. Table 8 lists proper preservatives, holding times, and sample containers for samples collected in the field, stored, and transported to the analytical laboratories.

7.6 Data Validation and Data Management

Requirements for data validation/verification and data management procedures are found in SRNS Procedures and Standard Operating Procedures, the USEPA Functional Guidelines, and two USDOE National Policies and Procedures:

- SRNS Manual C1, ER-AP-305 – Use of Field-Generated Blanks;
- SRNS Manual C1, ER-AP-306 – Laboratory Data Records Review;
- SRNS Manual C3, Volume X, ER-SOP-033 – Analytical Data Qualification;
- SRNS Manual C3, Volume X, ER-SOP-043 – Obtaining and Managing Environmental Data for Environmental Compliance & Area Completion Projects;
- Data Management Plan, Q-DMP-B-00001, Environmental Restoration Data Management System;
- Department of Energy Consolidated Audit Program, Policies and Practices, Procedure AD-1, Revision 2, November 10, 2009; and
- Quality Systems for Analytical Services, Revision 2.5, Department of Energy, November 9, 2009.

In addition, SRS procedures incorporate the criteria found in the USEPA National Functional Guidelines to verify, validate, and qualify analytical data to assess its usability for risk and remedial management decisions. Adherence to this complex list of procedures and guidelines establishes: (a) if data meets the specific technical and QC criteria established by the DQOs and laboratory QAPPs; and (b) the usability of any data not meeting the specific technical and QC criteria. All data is qualified for usability using USEPA Functional Guidelines. Adherence to the guideline requirements and the USDOE Audit Program for analytical laboratories allows the data to be qualified based upon a set of nationally established functional guideline qualifiers for uniformity.

Depending upon the PQOs, data will be verified and/or validated according to the following criteria:

- Verification – Confirmation by examination and provision of objective evidence that the specified analytical requirements have been met. This is to be an electronic data deliverable completeness check for all required fields. Data verification consists of a completeness check to confirm that all sampling data and data fields requested from the laboratory have been received and comply with specified requirements.
- Validation – Confirmation by manual examination and provision of objective evidence that the particular requirements for a specific intended use are fulfilled. Data validation consists of any analyte- and sample-specific process for evaluating compliance of the laboratory data received with methods, procedures, or contract requirements.

The ACP Data Management group will enter sample collection and laboratory data into the Environment Restoration Data Management System (ERDMS) in accordance with Procedure ER-SOP-43. Properly completed and qualified data is entered into the ERDMS Database. Data records are updated, re-qualified, and continuously corrected for usability based on the results of electronic verification and manual validation evaluations as corrective actions are resolved with the analytical laboratories. A data usability report will be prepared that will accompany the RFI/RI/BRA/CMS/FS report.

7.7 Investigation Derived Waste

IDW will be managed according to the site-specific IDW management plan developed for the project.

8.0 SAFETY, HEALTH, AND EMERGENCY RESPONSE PLAN

A unit-specific Health and Safety Plan (HASP) will be prepared in accordance with 29 CFR 1910.120 and approved prior to field investigations. This plan will meet Occupational Safety and Health Administration requirements and follow SRNS safety, health, and emergency response plan guidance (WSRC 1996). All personnel involved in the performance of the work shall be familiar with the provisions of the HASP.

9.0 SCHEDULE

Regulatory approval of the RFI/RI work plan is expected in August 2022. Implementation of the work contained herein is scheduled to begin in September 2022. The current schedule identifies that the combined RFI/RI/BRA/CMS/FS report will be submitted in July 2023, followed by a Statement of Basis/Proposed Plan. Should a second phase of characterization for Cr⁺⁶, asbestos, or further nature and extent of contamination be required, then the submittal date for the RFI/RI/BRA/CMS/FS report and subsequent deliverables will be adjusted accordingly. Table 10 illustrates the current project implementation schedule.

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10.0 REFERENCES

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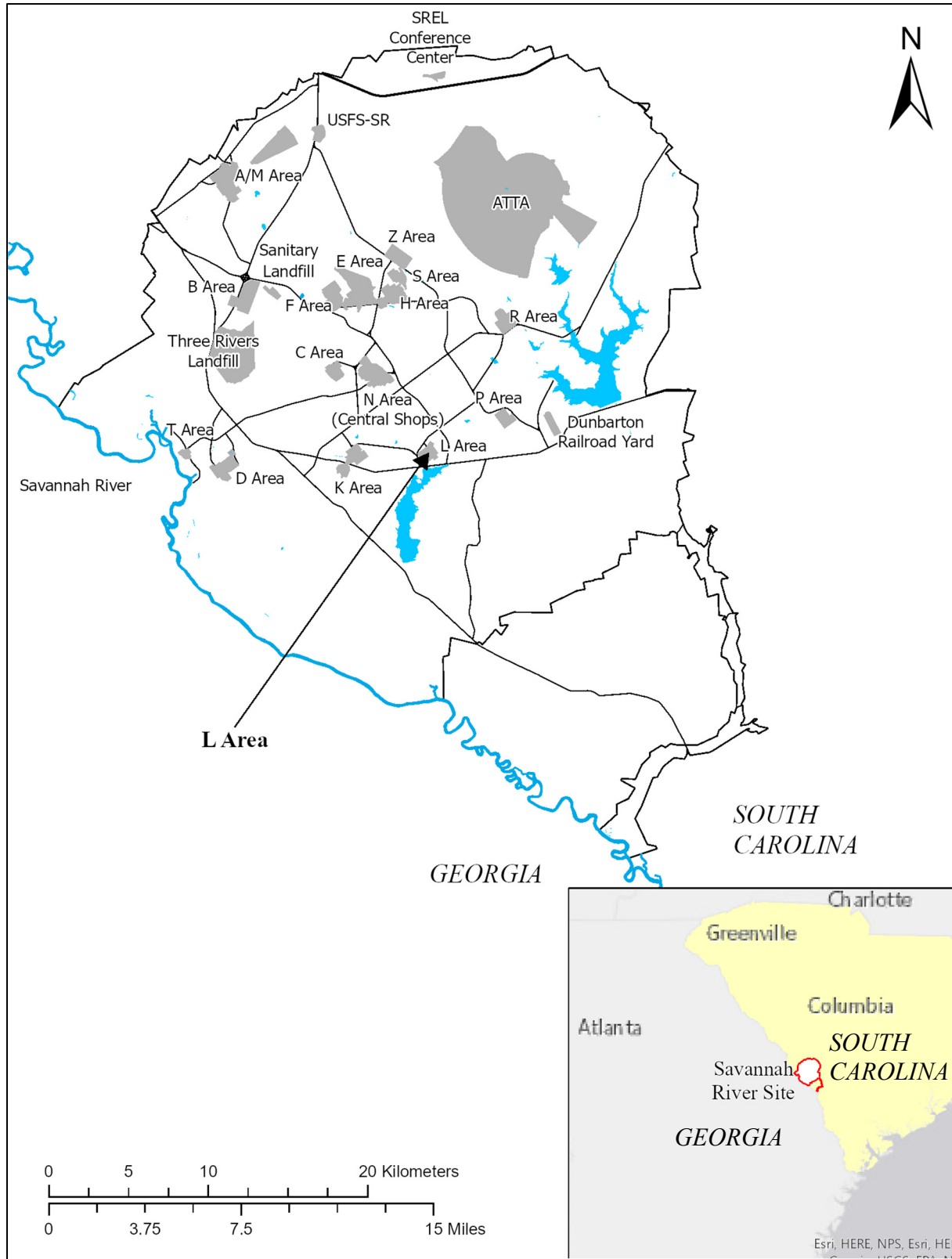


Figure 1. Location of L Area at the SRS

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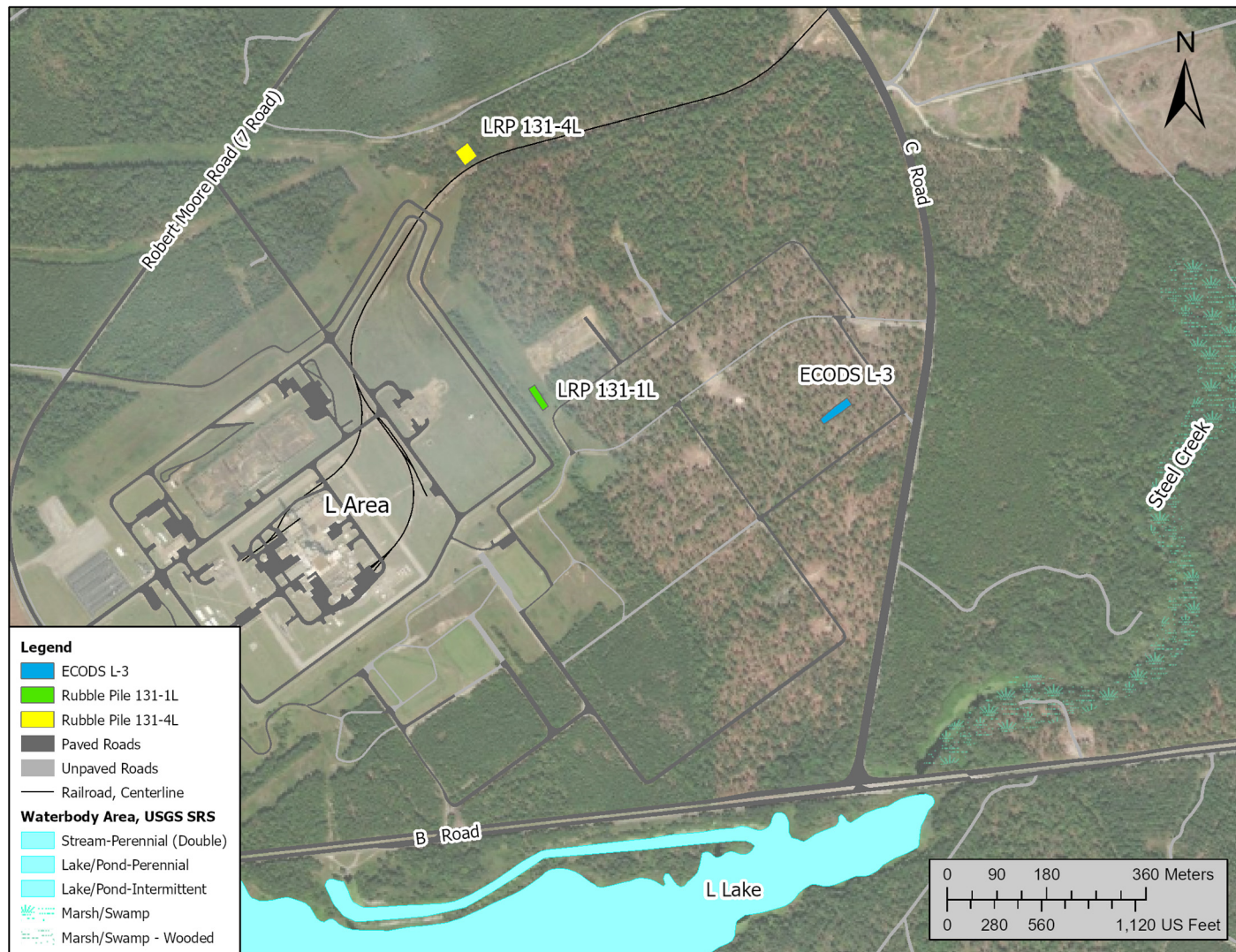


Figure 2. Location of ECODS L-3, LRP 131-1L, and LRP 131-4L OU

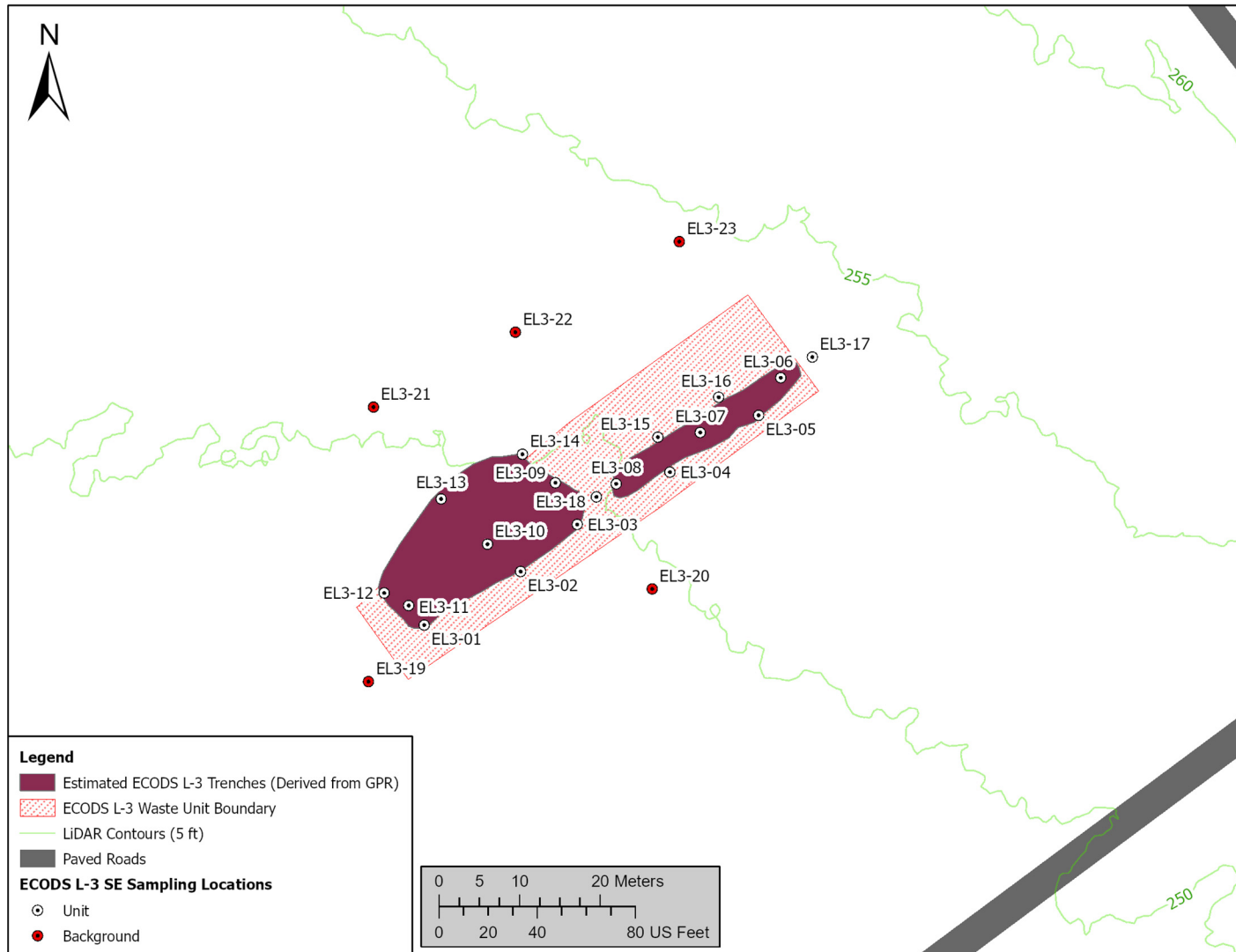


Figure 3. ECODS L-3 Subunit Boundaries and Site Evaluation Sampling Locations



Figure 4. Photograph of the ECODS L-3 Subunit During December 2021 Walkdown

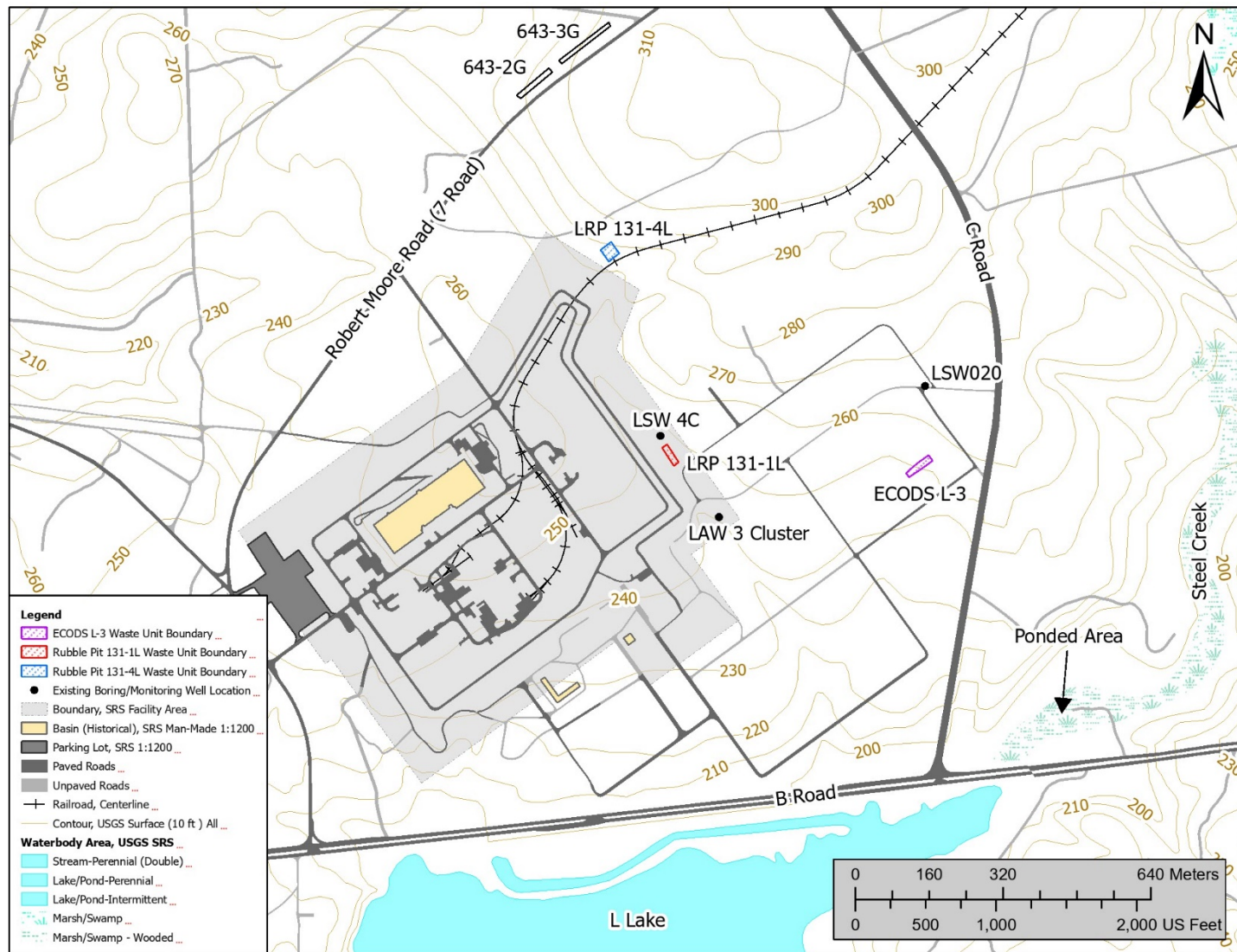


Figure 5. ECODS L-3, LRP 131-1L, and LRP 131-4L OU Surface Drainage for Each Subunit

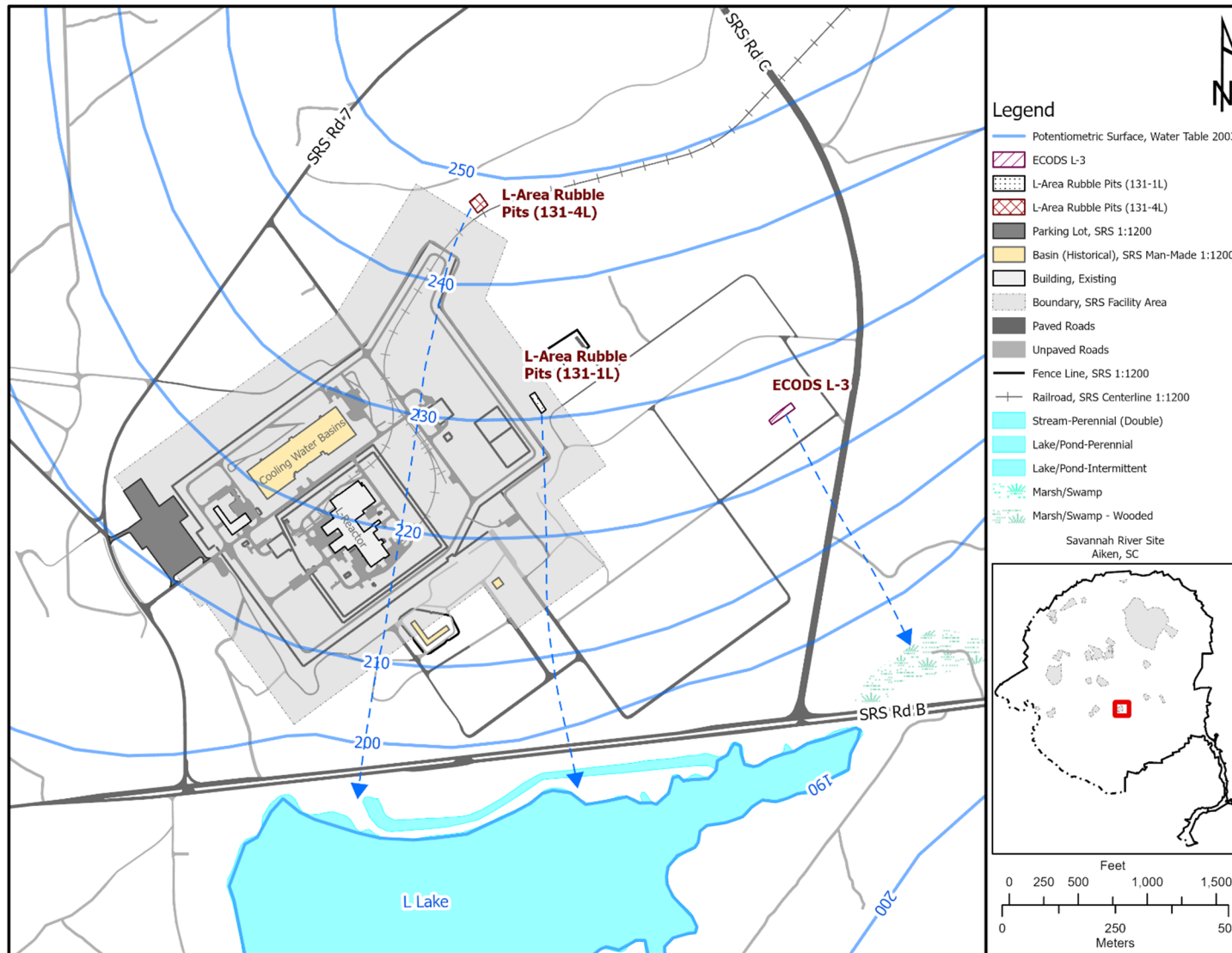


Figure 6. Regional Potentiometric Surface of the Upper Aquifer Zone (2003 Data)

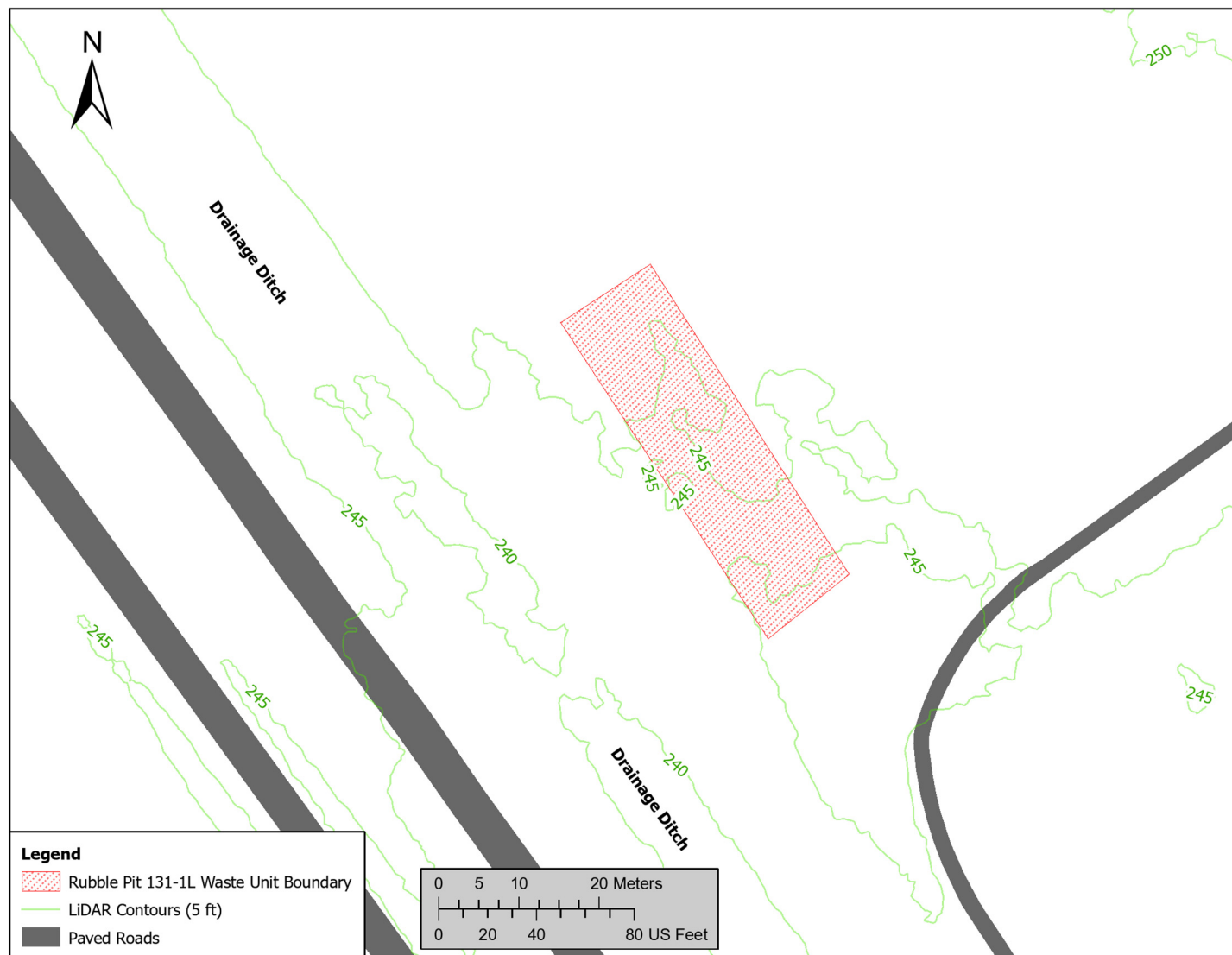


Figure 7. LRP 131-1L Subunit Boundaries and Topography



Figure 8. Photograph of LRP 131-1L Subunit During December 2021 Walkdown



Figure 9. Asphalt Debris Observed at LRP 131-1L During December 2021 Walkdown



Figure 10. Depression Observed at LRP 131-1L During December 2021 Walkdown

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Figure 11. Photograph of Drainage Ditch Adjacent to LRP 131-1L (Located to the Right) During December 2021 Walkdown

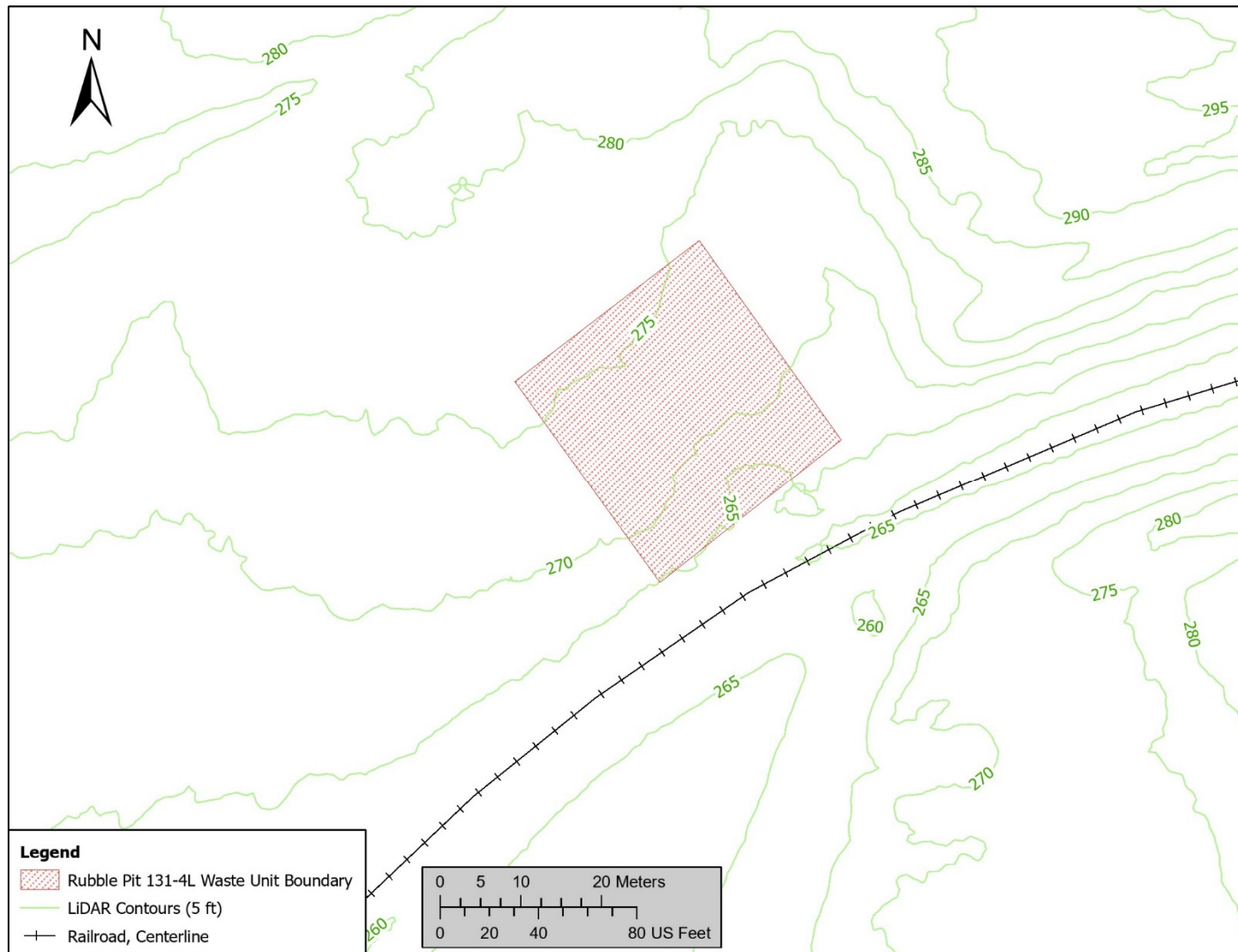


Figure 12. LRP 131-4L Subunit Boundaries and Topography

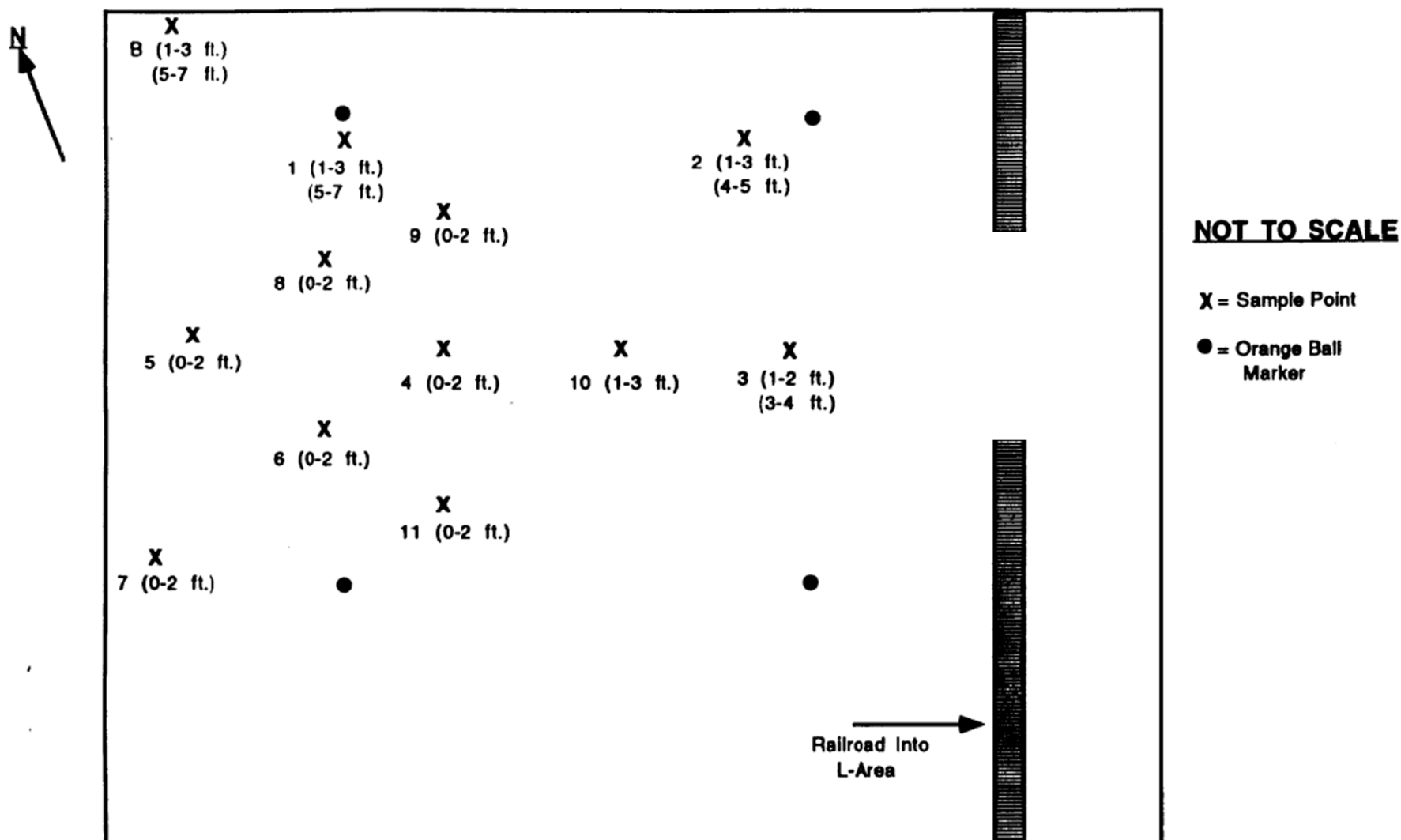


Figure 13. 1994 Site Evaluation Sampling Locations for the LRP 131-4L

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Figure 14. Debris Observed at the LRP 131-4L Subunit During December 2021 Walkdown

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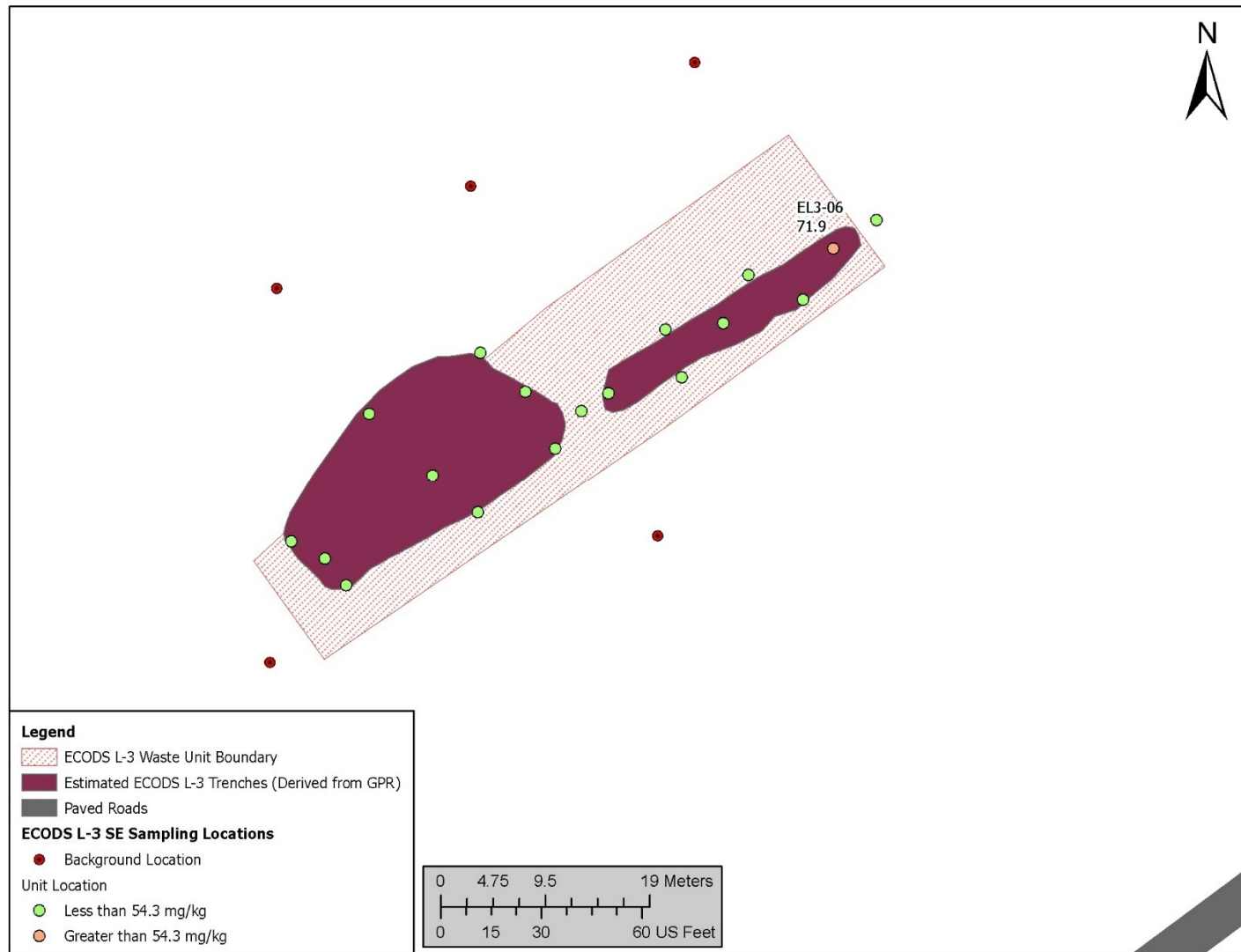


Figure 15. ECODS L-3 SE Chromium Surface Soil (0 to 1 ft) Result [mg/kg] Above SRS Maximum Background (54.3 mg/kg)

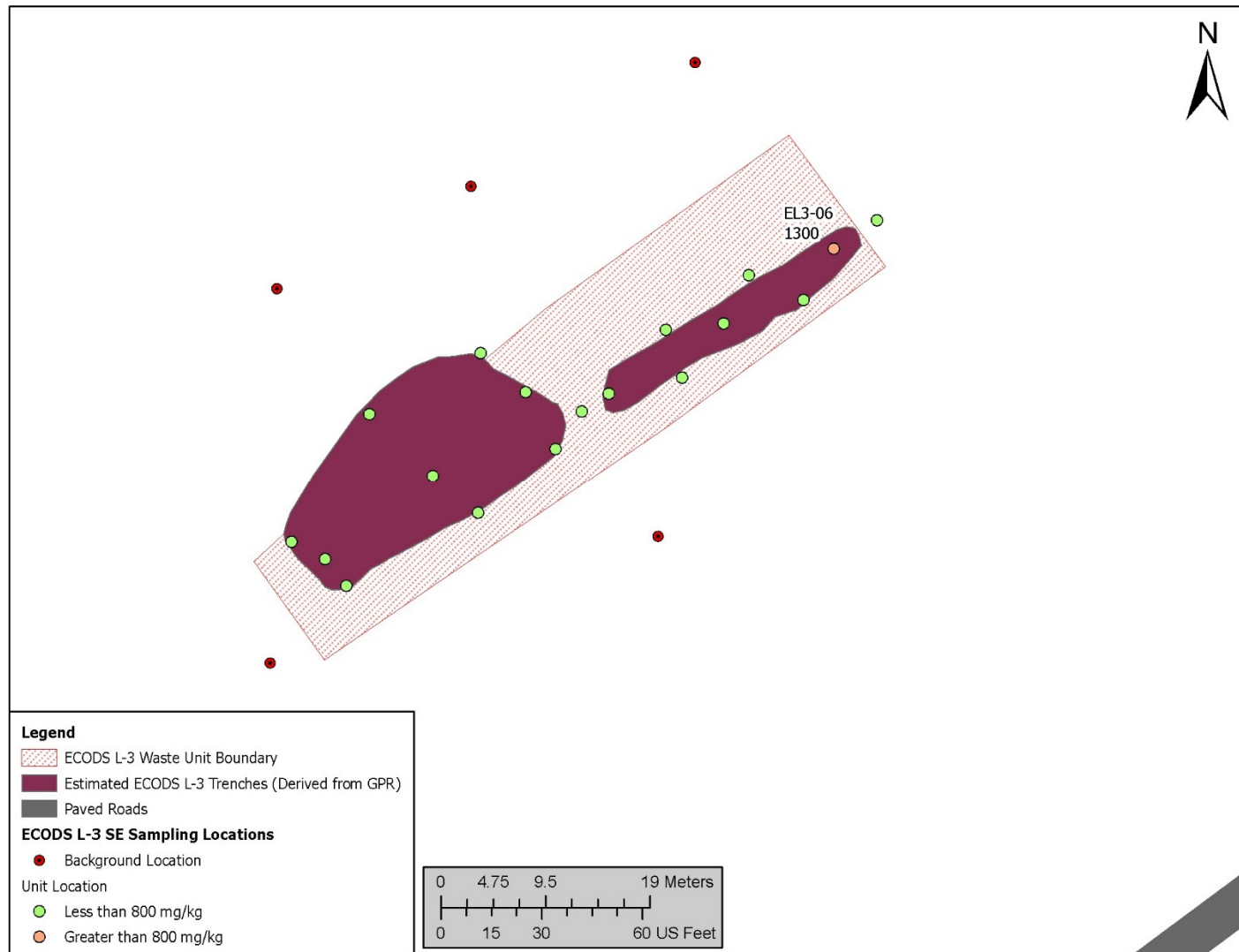


Figure 16. ECODS L-3 SE Lead Surface Soil (0 to 1 ft) Result [mg/kg] Above Industrial Worker RSL (800 mg/kg)

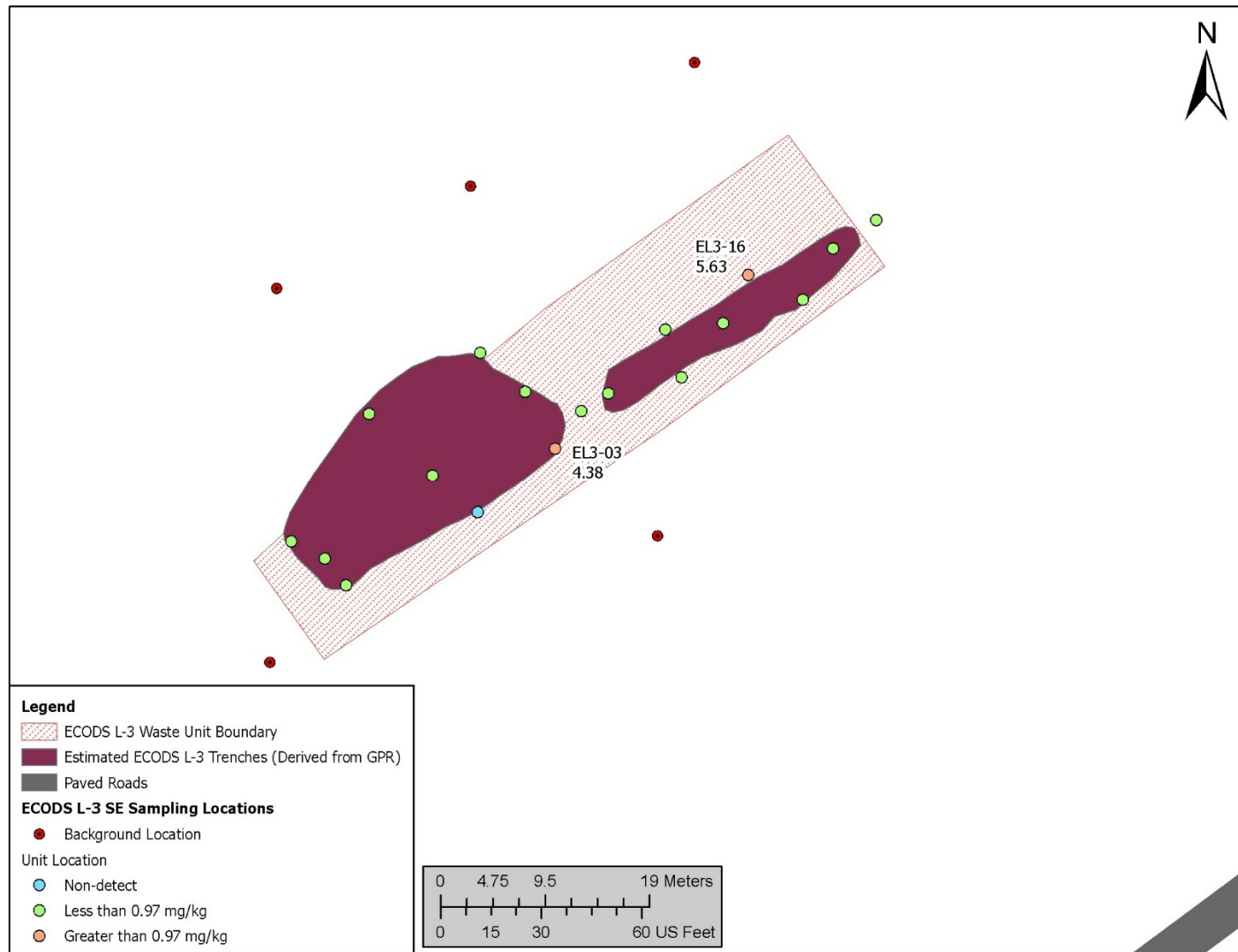


Figure 17. ECODS L-3 SE PCB 1254 Surface Soil (0 to 1 ft) Results [mg/kg] Above Industrial Worker RSL (0.97 mg/kg)

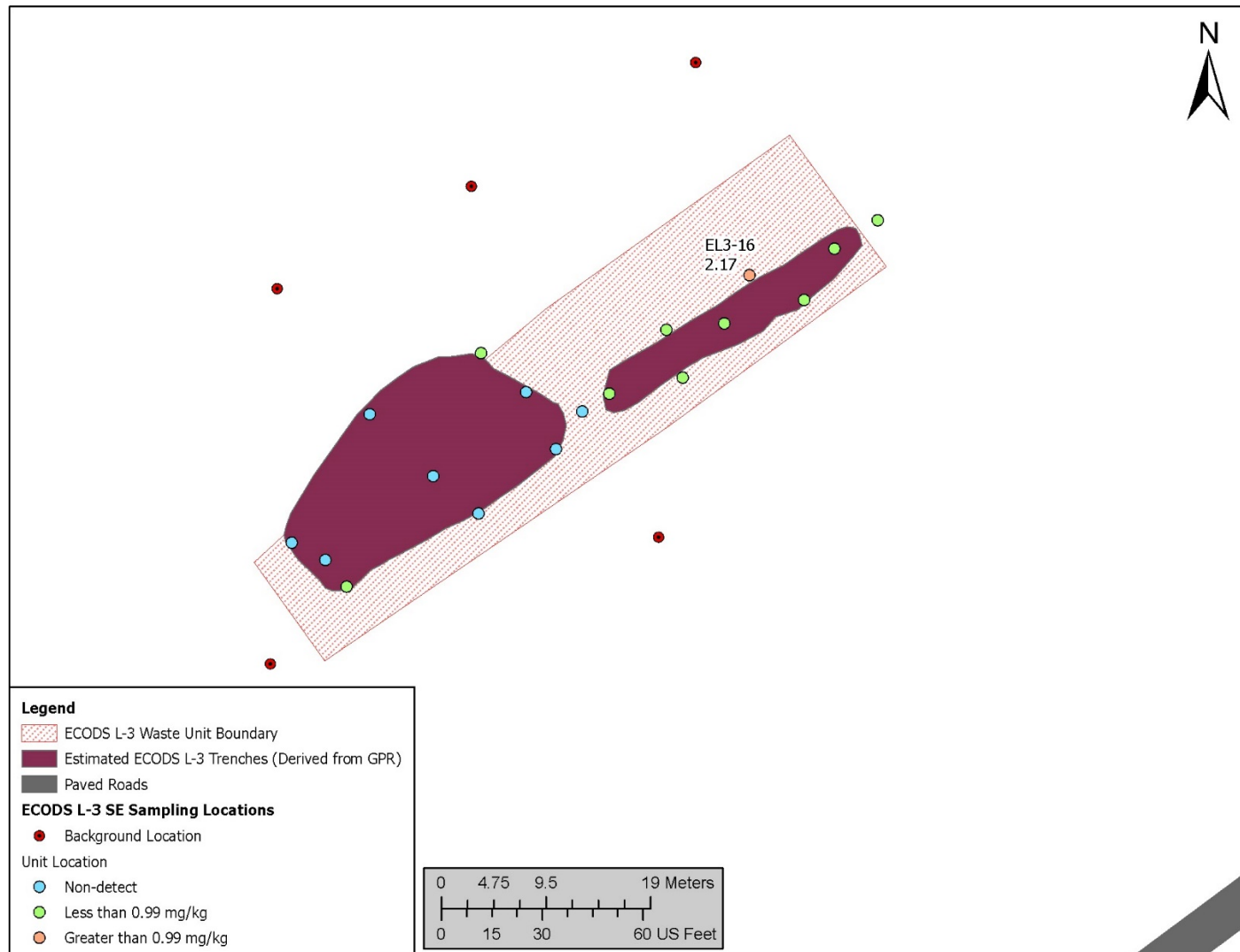


Figure 18. ECODS L-3 SE PCB 1260 Surface Soil (0 to 1 ft) Results [mg/kg] Above Industrial Worker RSL (0.99 mg/kg)

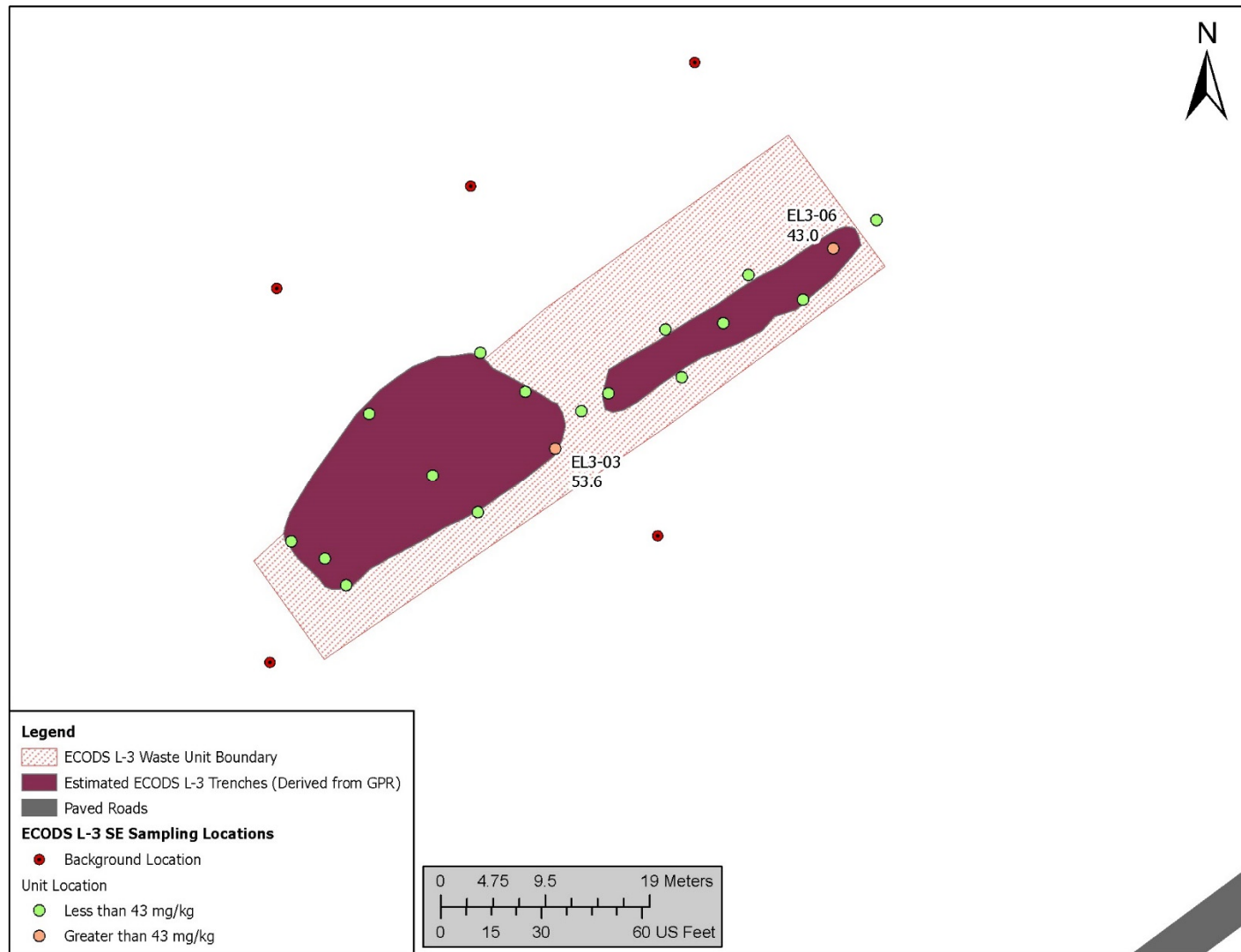


Figure 19. ECODS L-3 SE Copper Surface Soil (0 to 1 ft) Results [mg/kg] Above Ecological RSV (43 mg/kg)

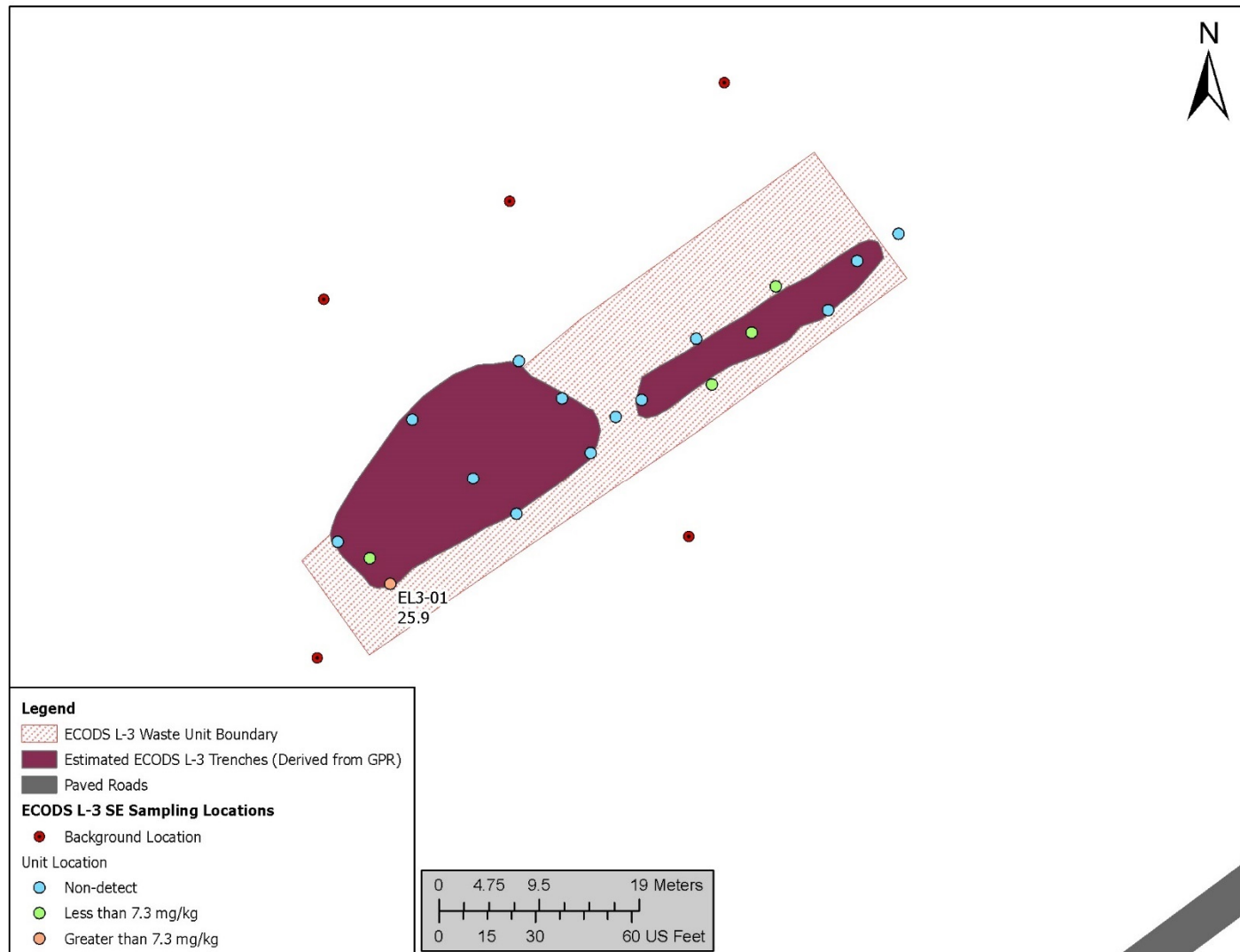
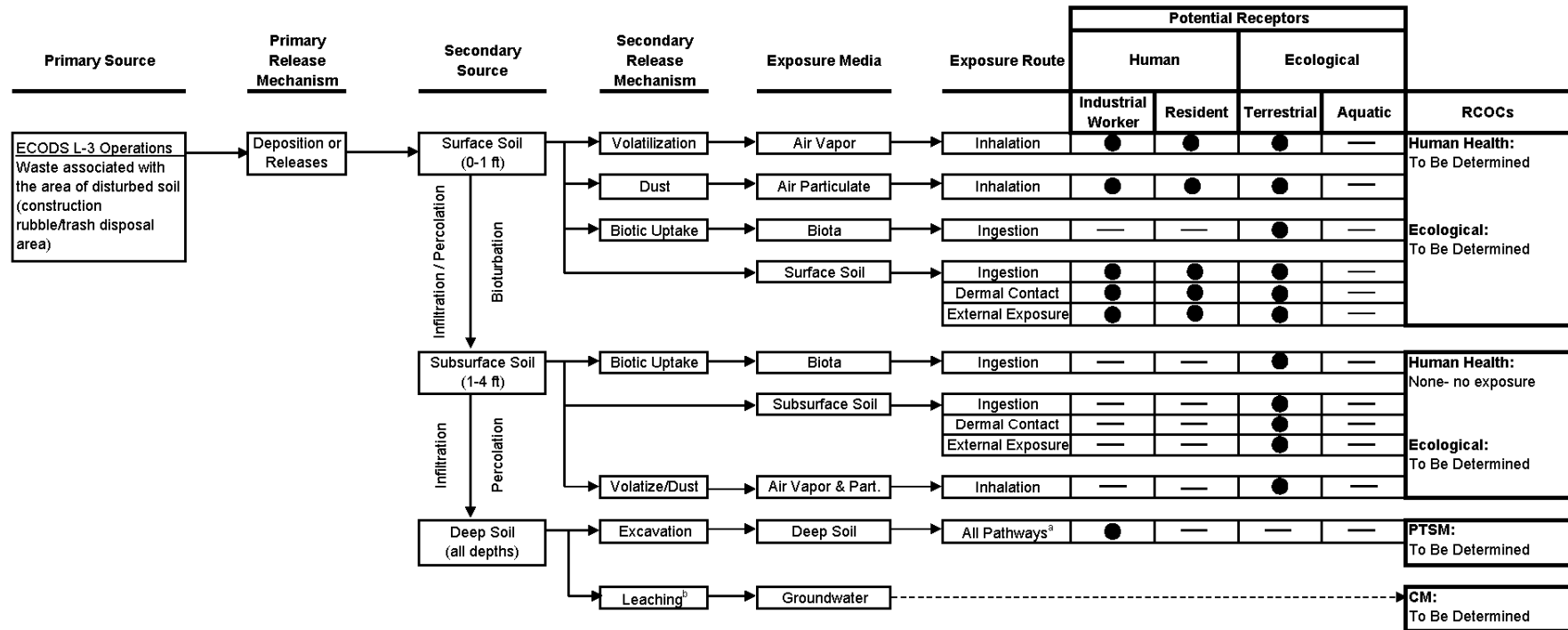


Figure 20. ECODS L-3 SE Benzo(a)anthracene Subsurface Soil (1 to 4 ft) Result [mg/kg] Above Ecological RSV (7.3 mg/kg)



a - All pathways represents ingestion, inhalation, dermal contact and external radiation exposure for the principal threat source material (PTSM) evaluation for toxicity.
b - Leaching represents the potential of a contaminant in soil to migrate to groundwater above MCLs per the contaminant migration (CM) analysis and does not represent a human or ecological exposure route.

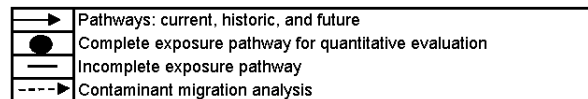
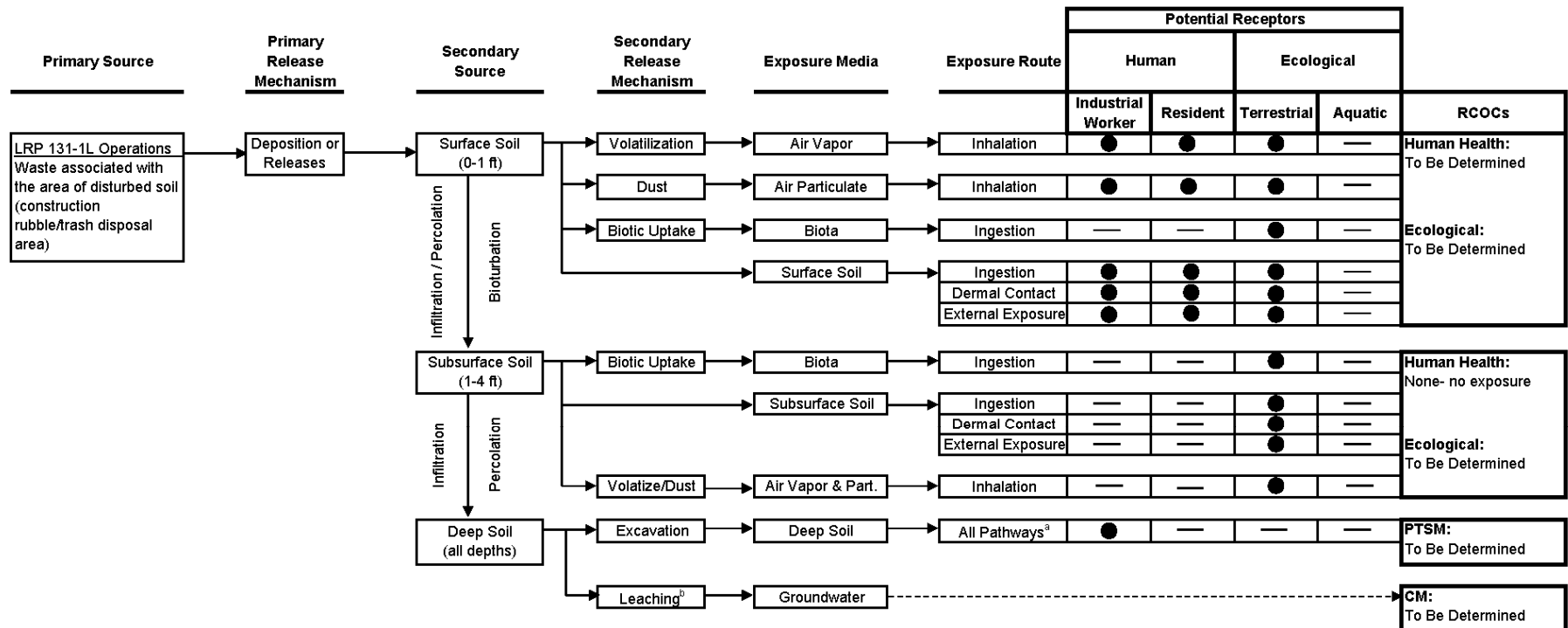


Figure 21. Preliminary Conceptual Site Model for ECODS L-3 Subunit



a - All pathways represents ingestion, inhalation, dermal contact and external radiation exposure for the principal threat source material (PTSM) evaluation for toxicity.

b - Leaching represents the potential of a contaminant in soil to migrate to groundwater above MCLs per the contaminant migration (CM) analysis and does not represent a human or ecological exposure route.

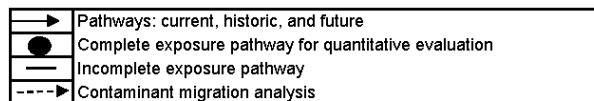
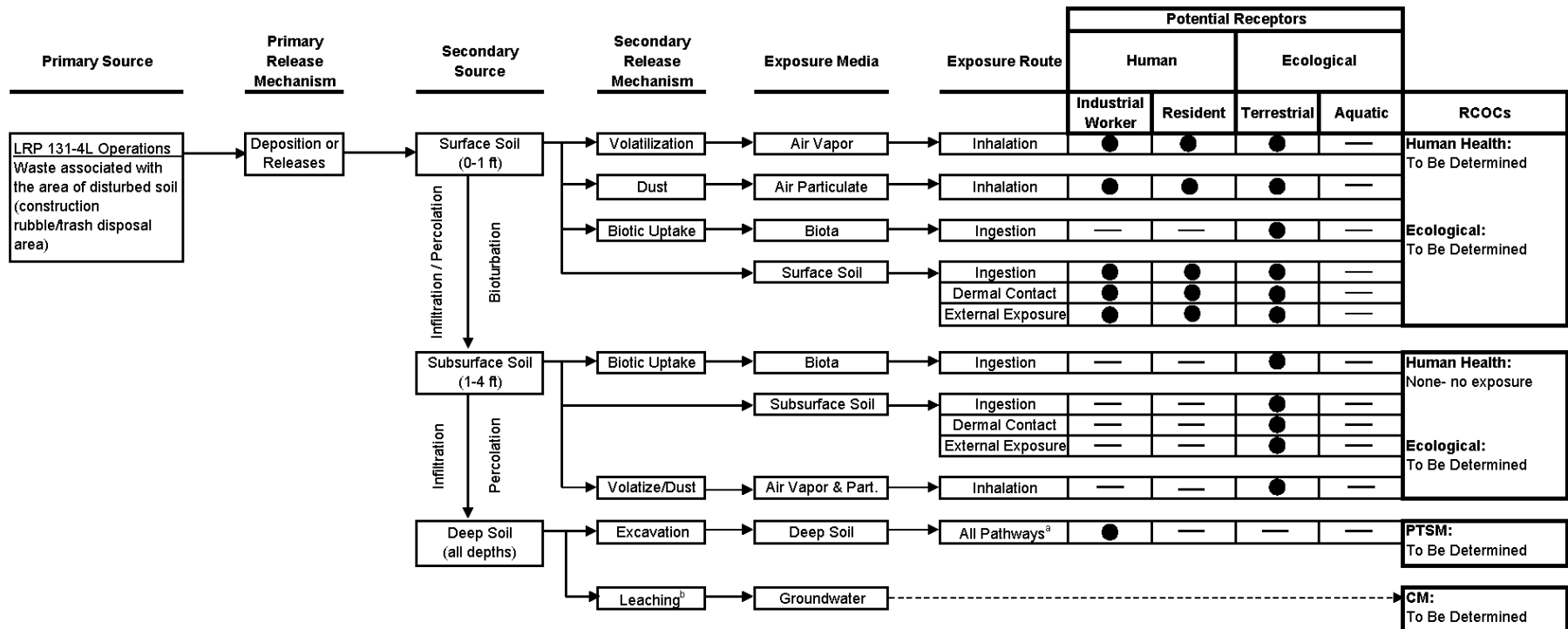


Figure 22. Preliminary Conceptual Site Model for L-Area Rubble Pit (131-1L) Subunit



a - All pathways represents ingestion, inhalation, dermal contact and external radiation exposure for the principal threat source material (PTSM) evaluation for toxicity.

b - Leaching represents the potential of a contaminant in soil to migrate to groundwater above MCLs per the contaminant migration (CM) analysis and does not represent a human or ecological exposure route.

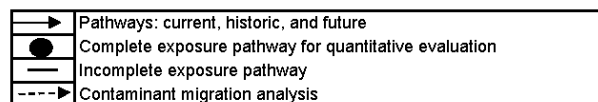


Figure 23. Preliminary Conceptual Site Model for L-Area Rubble Pit (131-4L) Subunit

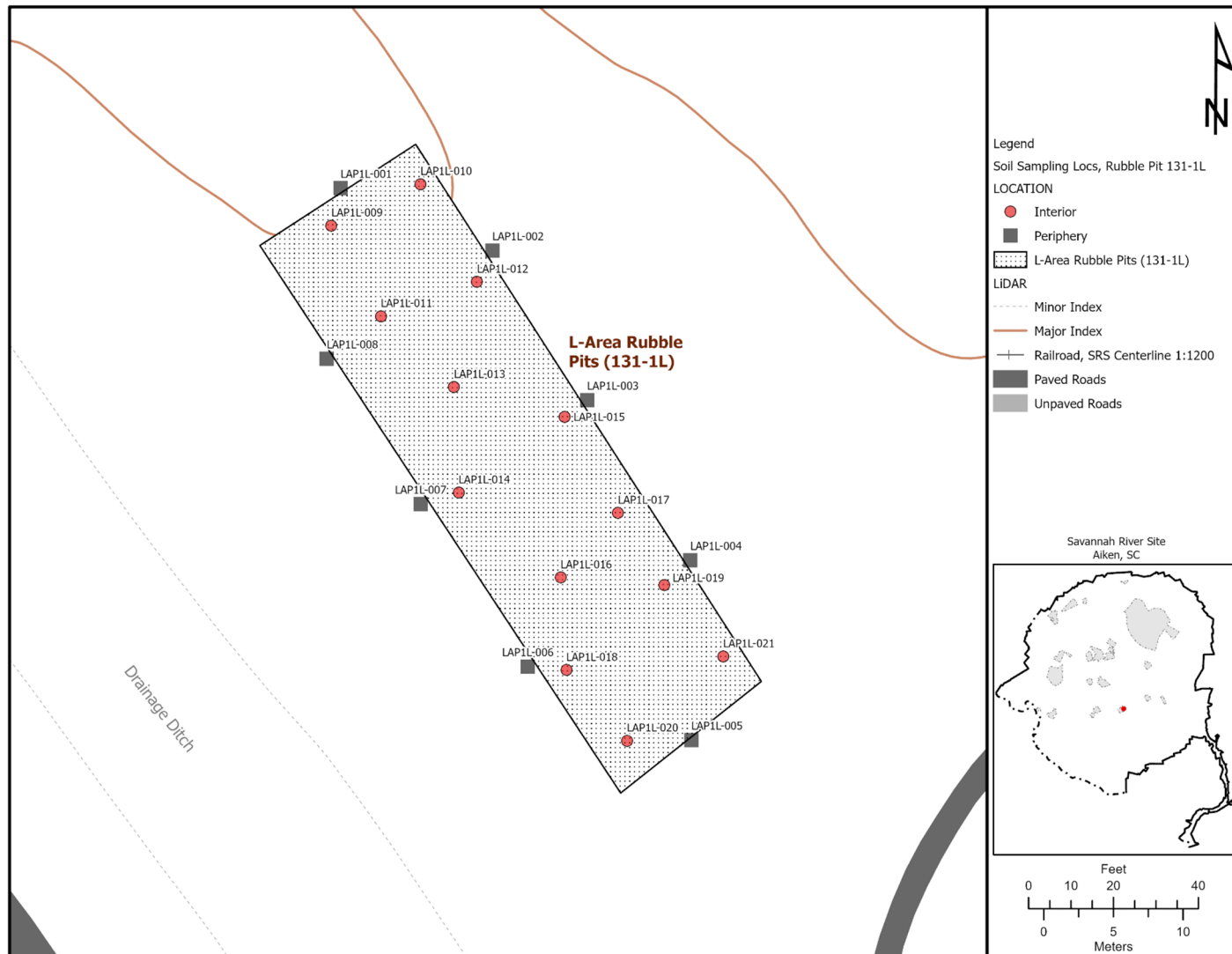


Figure 24. Proposed RFI/RI Work Plan Sample Locations for the LRP 131-1L Subunit

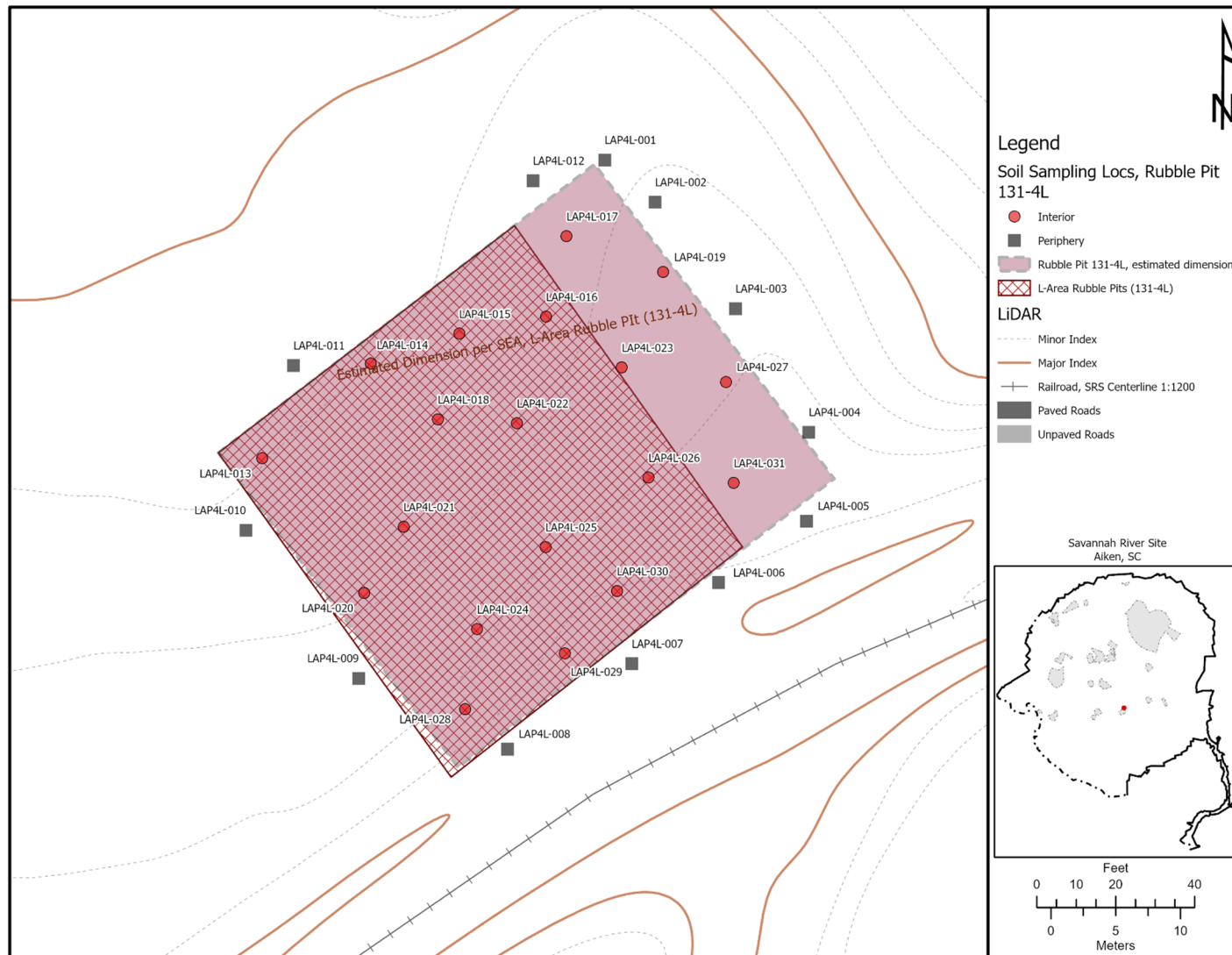


Figure 25. Proposed RFI/RI Work Plan Sampling Locations for the LRP 131-4L Subunit

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Table 1. ECODES L-3 Subunit Site Evaluation Sampling Depth Intervals

Station ID	Sample Type	Depth Intervals [ft bgs]
EL3-01	REG	0 to 1, 1 to 4, 4 to 8, 8 to 12, 12 to 16
EL3-02	REG	0 to 1, 1 to 4, 4 to 8, 8 to 12, 12 to 16
EL3-02	FD	8 to 12
EL3-03	REG	0 to 1, 1 to 4, 4 to 8
EL3-04	REG	0 to 1, 1 to 4, 4 to 8
EL3-04	FD	1 to 4
EL3-05	REG	0 to 1, 1 to 4, 4 to 8
EL3-06	REG	0 to 1, 1 to 4, 4 to 8, 8 to 12
EL3-06	FD	0 to 1
EL3-07	REG	0 to 1, 1 to 4, 4 to 8
EL3-08	REG	0 to 1, 1 to 4, 4 to 8
EL3-09	REG	0 to 1, 1 to 4, 4 to 8
EL3-10	REG	0 to 1, 1 to 4, 4 to 8, 8 to 12
EL3-11	REG	0 to 1, 1 to 4, 4 to 8
EL3-12	REG	0 to 1, 1 to 4, 4 to 8
EL3-12	FD	0 to 1
EL3-13	REG	0 to 1, 1 to 4, 4 to 8
EL3-14	REG	0 to 1, 1 to 4, 4 to 8
EL3-14	FD	4 to 8
EL3-15	REG	0 to 1, 1 to 4, 4 to 8
EL3-16	REG	0 to 1, 1 to 4, 4 to 8, 8 to 12
EL3-16	FD	1 to 4
EL3-17	Composite	0 to 1, 1 to 4, 4 to 8
EL3-18	Composite	0 to 1, 1 to 4, 4 to 8
EL3-18	FD	4 to 8
EL3-19	Background	0 to 1, 1 to 4, 8 to 12, 12 to 16
EL3-20	Background	0 to 1, 1 to 4, 8 to 12, 12 to 16
EL3-20	FD	8 to 12
EL3-21	Background	0 to 1, 1 to 4, 8 to 12, 12 to 16
EL3-22	Background	0 to 1, 1 to 4, 8 to 12, 12 to 16
EL3-22	FD	1 to 4
EL3-23	Background	0 to 1, 1 to 4, 8 to 12, 12 to 16

ft bgs - feet below ground surface
FD - field duplicate
REG - regular

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Table 2. Data Quality Objectives for the ECODS L-3 Subunit

Pathway (Media)	Probable Conditions	Exposure Pathway and/or Release Mechanisms	Data Needs and DQOs Including Engineering / Physical Processes	Field Activities Including Removal and Characterization	Parameters	Potential Remedial Action Alternatives
Surface soil, subsurface soil, deep soil	Contamination of surface soil from construction material and burning from deposition of waste material on ground surface and in trenches Infiltration/percolation of contamination through surface soils into subsurface soils	Ingestion, inhalation, absorption, and/or direct exposure with soils and/or debris presently buried in the subunit	No data needs and therefore no DQOs.	No field activities.	N/A	No Action Land Use Controls Excavation of contaminated soils Cover System with Land Use Controls

Table 3. Data Quality Objectives for the LRP 131-1L Subunit

Pathway (Media)	Probable Conditions	Exposure Pathway and/or Release Mechanisms	Data Needs and DQOs Including Engineering / Physical Processes	Field Activities Including Removal and Characterization	Parameters	Potential Remedial Action Alternatives
Surface soil, subsurface soil, deep soil	Contamination of surface soil from construction material and burning from deposition of waste material on ground surface and pits Infiltration/ percolation of contamination through surface soils into subsurface soils	Ingestion, inhalation, absorption, and/or direct exposure with soils and/or debris presently buried in the subunit	Define the nature and extent of contamination of the subunit. Full characterization of the subunit.	Collection of surface soils, subsurface, and deep soils from 0 to 1 ft, 1 to 4 ft, 8 to 10 ft, 10 to 12 ft, and 14 to 16 ft (tentatively 18 to 20 ft) 21 Locations: 13 inside the subunit and 8 at subunit boundary	Data validated to SRS electronic VV level, with 10% of the sampling batches validated to the SRS definitive level. Full TCL and TAL suite of analytes; gross alpha and nonvolatile beta. Cr ⁺⁶ analysis if required by elevated Total Cr. Asbestos visual inspection during field activities.	No Action Land Use Controls Excavation of contaminated soils Cover System with Land Use Controls

Table 4. Data Quality Objectives for the LRP 131-4L Subunit

Pathway (Media)	Probable Conditions	Exposure Pathway and/or Release Mechanisms	Data Needs and DQOs Including Engineering / Physical Processes	Field Activities Including Removal and Characterization	Parameters	Potential Remedial Action Alternatives
Surface soil, subsurface soil, deep soil	Contamination of surface soil from construction material and burning from deposition of waste material on ground surface and pits Infiltration/percolation of contamination through surface soils into subsurface soils	Ingestion, inhalation, absorption, and/or direct exposure with soils and/or debris presently buried in the subunit	Define the nature and extent of contamination of the subunit. Full characterization of the subunit.	Collection of surface soils, subsurface, and deep soils from 0 to 1 ft, 1 to 4 ft, 6 to 8 ft, and 10 to 12 ft (tentatively 14 to 16 ft) 31 Locations: 19 inside the subunit and 12 at subunit boundary	Data validated to SRS electronic VV level, with 10% of the sampling batches validated to the SRS definitive level. Full TCL and TAL suite of analytes; gross alpha and nonvolatile beta. Cr ⁺⁶ analysis if required by elevated Total Cr. Asbestos visual inspection during field activities.	No Action Land Use Controls Excavation of contaminated soils Cover System with Land Use Controls

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Table 5. Laboratory Analytical Specifications Table TAL/TCL Analytes for Soil Media

Analyte	Analyte ID	Preparation ^A Method	USEPA ^A Method	CRDL ^B (µg/kg)
Target Analyte List				
Metals				
Aluminum	7429-90-5	3051A,3052	EPA6010C	1,900
Antimony	7440-36-0	3051A,3052	EPA6010C	350
Arsenic	7440-38-2	3051A,3052	EPA6010C	312
Barium	7440-39-3	3051A,3052	EPA6010C	21
Beryllium	7440-41-7	3051A,3052	EPA6010C	31.1
Cadmium	7440-43-9	3051A,3052	EPA6010C	40
Calcium	7440-70-2	3051A,3052	EPA6010C	69
Chromium	7440-47-3	3051A,3052	EPA6010C	90
Cobalt	7440-48-4	3051A,3052	EPA6010C	80
Copper	7440-50-8	3051A,3052	EPA6010C	100
Iron	7439-89-6	3051A,3052	EPA6010C	2,190
Lead	7439-92-1	3051A,3052	EPA6010C	590
Magnesium	7439-95-4	3051A,3052	EPA6010C	14.1
Manganese	7439-96-5	3051A,3052	EPA6010C	88.5
Mercury	7439-97-6	3051A,3052	EPA7471B	15.2
Nickel	7440-02-0	3051A,3052	EPA6010C	88
Potassium	7440-09-7	3051A,3052	EPA6010C	80
Selenium	7782-49-2	3051A,3052	EPA6010C	5.7
Silver	7440-22-4	3051A,3052	EPA6010C	101
Sodium	7440-23-5	3051A,3052	EPA6010C	298
Thallium	7440-28-0	3051A,3052	EPA6010C	160
Vanadium	7440-62-2	3051A,3052	EPA6010C	74
Zinc	7440-66-6	3051A,3052	EPA6010C	4.3
Specific Analysis				
Hexavalent chromium (Cr ⁺⁶)	18540-29-9	3060A	EPA7196A/7199	TBD
Cyanide	57-12-5	N/A	EPA9012B	3,000
Target Compound List				
PCBs				
AROCLOR 1016	12674-11-2	3540C,3541,3545A	EPA8082A	3.2
AROCLOR 1221	11104-28-2	3540C,3541,3545A	EPA8082A	0.22
AROCLOR 1232	11141-16-5	3540C,3541,3545A	EPA8082A	0.22
AROCLOR 1242	53469-21-9	3540C,3541,3545A	EPA8082A	0.22
AROCLOR 1248	12672-29-6	3540C,3541,3545A	EPA8082A	0.22
AROCLOR 1254	11097-69-1	3540C,3541,3545A	EPA8082A	0.22
AROCLOR 1260	11096-82-5	3540C,3541,3545A	EPA8082A	0.22
Pesticides				
Aldrin	309-00-2	3540C,3541,3545A,3550C	EPA8081B	0.029
alpha-Benzene hexachloride	319-84-6	3540C,3541,3545A,3550C	EPA8081B	0.066
alpha-Chlordane	5103-71-9	3540C,3541,3545A,3550C	EPA8081B	0.021
beta-Benzene hexachloride	319-85-7	3540C,3541,3545A,3550C	EPA8081B	0.32
DDD	72-54-8	3540C,3541,3545A,3550C	EPA8081B	2.4
DDE	72-55-9	3540C,3541,3545A,3550C	EPA8081B	1.7
DDT	50-29-3	3540C,3541,3545A,3550C	EPA8081B	1.01
delta-Benzene hexachloride	319-86-8	3540C,3541,3545A,3550C	EPA8081B	0.066
Dieldrin	60-57-1	3540C,3541,3545A,3550C	EPA8081B	0.03
Endosulfan I	959-98-8	3540C,3541,3545A,3550C	EPA8081B	0.066
Endosulfan II	33213-65-9	3540C,3541,3545A,3550C	EPA8081B	0.13

Table 5. Laboratory Analytical Specifications Table TAL/TCL Analytes for Soil Media (Continued)

Analyte	Analyte ID	Preparation ^A Method	USEPA ^A Method	CRDL ^B (µg/kg)
Target Compound List (continued)				
Pesticides (continued)				
Endosulfan sulfate	1031-07-8	3540C,3541,3545A,3550C	EPA8081B	0.13
Endrin	72-20-8	3540C,3541,3545A,3550C	EPA8081B	0.13
Endrin aldehyde	7421-93-4	3540C,3541,3545A,3550C	EPA8081B	0.13
Endrin ketone	53494-70-5	3540C,3541,3545A,3550C	EPA8081B	0.34
gamma-Chlordane	5103-74-2	3540C,3541,3545A,3550C	EPA8081B	C
Heptachlor	76-44-8	3540C,3541,3545A,3550C	EPA8081B	0.44
Heptachlor epoxide	1024-57-3	3540C,3541,3545A,3550C	EPA8081B	0.59
Lindane	58-89-9	3540C,3541,3545A,3550C	EPA8081B	0.066
Methoxychlor	72-43-5	3540C,3541,3545A,3550C	EPA8081B	1.13
Toxaphene	8001-35-2	3540C,3541,3545A,3550C	EPA8081B	18.7
Semi-volatiles				
2,4,5-Trichlorophenol	95-95-4	3540C,3541,3545A,3550C	EPA8270D	7.4
2,4,6-Trichlorophenol	88-06-2	3540C,3541,3545A,3550C	EPA8270D	7.4
2,4-Dichlorophenol	120-83-2	3540C,3541,3545A,3550C	EPA8270D	14
2,4-Dimethylphenol	105-67-9	3540C,3541,3545A,3550C	EPA8270D	14
2,4-Dinitrophenol	51-28-5	3540C,3541,3545A,3550C	EPA8270D	120
2-Chlorophenol	95-57-8	3540C,3541,3545A,3550C	EPA8270D	5.7
2-Methyl-4,6-dinitrophenol	534-52-1	3540C,3541,3545A,3550C	EPA8270D	7.8
2-Nitrophenol	88-75-5	3540C,3541,3545A,3550C	EPA8270D	13
4-Chloro-m-cresol	59-50-7	3540C,3541,3545A,3550C	EPA8270D	55.5
4-Nitrophenol	100-02-7	3540C,3541,3545A,3550C	EPA8270D	156
m/p-Cresol	1319-77-3	3540C,3541,3545A,3550C	EPA8270D	96
o-Cresol (2-Methylphenol)	95-48-7	3540C,3541,3545A,3550C	EPA8270D	5.6
Pentachlorophenol	87-86-5	3540C,3541,3545A,3550C	EPA8270D	3
Phenol	108-95-2	3540C,3541,3545A,3550C	EPA8270D	6.2
1,2,4,5-Tetrachlorobenzene	95-94-3	3540C,3541,3545A,3550C	EPA8270D	170
2,3,4,6-Tetrachlorophenol	58-90-2	3540C,3541,3545A,3550C	EPA8270D	170
1,1'-Biphenyl	92-52-4	3540C,3541,3545A,3550C	EPA8270D	350
2,4-Dinitrotoluene	121-14-2	3540C,3541,3545A,3550C	EPA8270D	44.6
2,6-Dinitrotoluene	606-20-2	3540C,3541,3545A,3550C	EPA8270D	28
2-Chloronaphthalene	91-58-7	3540C,3541,3545A,3550C	EPA8270D	5.6
2-Methylnaphthalene	91-57-6	3540C,3541,3545A,3550C	EPA8270D	50
2-Nitroaniline	88-74-4	3540C,3541,3545A,3550C	EPA8270D	3.5
3,3'-Dichlorobenzidine	91-94-1	3540C,3541,3545A,3550C	EPA8270D	143
4-Bromophenyl phenyl ether	101-55-3	3540C,3541,3545A,3550C	EPA8270D	15
4-Chloroaniline	106-47-8	3540C,3541,3545A,3550C	EPA8270D	16
4-Chlorophenyl phenyl ether	7005-72-3	3540C,3541,3545A,3550C	EPA8270D	40.9
Acenaphthene	83-32-9	3540C,3541,3545A,3550C	EPA8270D	35.2
Acenaphthylene	208-96-8	3540C,3541,3545A,3550C	EPA8270D	35
Acetophenone	98-86-2	3540C,3541,3545A,3550C	EPA8270D	0.49
Anthracene	120-12-7	3540C,3541,3545A,3550C	EPA8270D	44.5
Atrazine	1912-24-9	3540C,3541,3545A,3550C	EPA8270D	2.2
Benzaldehyde	100-52-7	3540C,3541,3545A,3550C	EPA8270D	6100
Benzo[a]anthracene	56-55-3	3540C,3541,3545A,3550C	EPA8270D	29.4
Benzo[a]pyrene	50-32-8	3540C,3541,3545A,3550C	EPA8270D	25.5
Benzo[b]fluoranthene	205-99-2	3540C,3541,3545A,3550C	EPA8270D	55.3
Benzo[g,h,i]perylene	191-24-2	3540C,3541,3545A,3550C	EPA8270D	29.6
Benzo[k]fluoranthene	207-08-9	3540C,3541,3545A,3550C	EPA8270D	58.8

Table 5. Laboratory Analytical Specifications Table TAL/TCL Analytes for Soil Media (Continued)

Analyte	Analyte ID	Preparation ^A Method	USEPA ^A Method	CRDL ^B (µg/kg)
Target Compound List (continued)				
Semi-volatiles (continued)				
Bis(2-chloro-1-methylethyl) ether	108-60-1	3540C,3541,3545A,3550C	EPA8270D	54.1
Bis(2-chloroethoxy) methane	111-91-1	3540C,3541,3545A,3550C	EPA8270D	7.2
Bis(2-chloroethyl) ether	111-44-4	3540C,3541,3545A,3550C	EPA8270D	69.5
Bis(2-ethylhexyl) phthalate	117-81-7	3540C,3541,3545A,3550C	EPA8270D	35
Butylbenzyl phthalate	85-68-7	3540C,3541,3545A,3550C	EPA8270D	28
Caprolactam	105-60-2	3540C,3541,3545A,3550C	EPA8270D	46.3
Carbazole	86-74-8	3540C,3541,3545A,3550C	EPA8270D	24
Chrysene	218-01-9	3540C,3541,3545A,3550C	EPA8270D	32.9
Dibenz[a,h]anthracene	53-70-3	3540C,3541,3545A,3550C	EPA8270D	33.2
Dibenzofuran	132-64-9	3540C,3541,3545A,3550C	EPA8270D	38.9
Dibutyl phthalate	84-74-2	3540C,3541,3545A,3550C	EPA8270D	28
Diethyl phthalate	84-66-2	3540C,3541,3545A,3550C	EPA8270D	28
Dimethyl phthalate	131-11-3	3540C,3541,3545A,3550C	EPA8270D	28
Di-n-octyl phthalate	117-84-0	3540C,3541,3545A,3550C	EPA8270D	28
Fluoranthene	206-44-0	3540C,3541,3545A,3550C	EPA8270D	3.4
Fluorene	86-73-7	3540C,3541,3545A,3550C	EPA8270D	37.9
Hexachlorobenzene	118-74-1	3540C,3541,3545A,3550C	EPA8270D	32.2
Hexachlorobutadiene	87-68-3	3540C,3541,3545A,3550C	EPA8270D	5.6
Hexachlorocyclopentadiene	77-47-4	3540C,3541,3545A,3550C	EPA8270D	2.4
Hexachloroethane	67-72-1	3540C,3541,3545A,3550C	EPA8270D	30
Indeno[1,2,3-c,d]pyrene	193-39-5	3540C,3541,3545A,3550C	EPA8270D	30
Isophorone	78-59-1	3540C,3541,3545A,3550C	EPA8270D	44
m-Nitroaniline	99-09-2	3540C,3541,3545A,3550C	EPA8270D	164
Naphthalene	91-20-3	3540C,3541,3545A,3550C	EPA8270D	5.6
Nitrobenzene	98-95-3	3540C,3541,3545A,3550C	EPA8270D	14
N-Nitrosodiphenylamine	86-30-6	3540C,3541,3545A,3550C	EPA8270D	13
N-Nitrosodipropylamine	621-64-7	3540C,3541,3545A,3550C	EPA8270D	55.9
Phenanthrene	85-01-8	3540C,3541,3545A,3550C	EPA8270D	33.5
p-Nitroaniline	100-01-6	3540C,3541,3545A,3550C	EPA8270D	28
Pyrene	129-00-0	3540C,3541,3545A,3550C	EPA8270D	8.2
Volatiles				
1,1,1-Trichloroethane	71-55-6	5035A	EPA8260B	1.18
1,1,2,2-Tetrachloroethane	79-34-5	5035A	EPA8260B	1.33
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	5035A	EPA8260B	C
1,1,2-Trichloroethane	79-00-5	5035A	EPA8260B	0.85
1,1-Dichloroethane	75-34-3	5035A	EPA8260B	1.15
1,1-Dichloroethylene	75-35-4	5035A	EPA8260B	0.054
1,2,4-Trichlorobenzene	120-82-1	5035A	EPA8260B	0.423
1,2-Dibromo-3-chloropropane	96-12-8	5035A	EPA8260B	0.45
1,2-Dibromoethane	106-93-4	5035A	EPA8260B	0.0069
1,2-Dichlorobenzene	95-50-1	5035A	EPA8260B	C
1,2-Dichloroethane (EDC)	107-06-2	5035A	EPA8260B	0.35
1,2-Dichloropropane	78-87-5	5035A	EPA8260B	0.35
1,3-Dichlorobenzene	541-73-1	5035A	EPA8260B	C
1,4-Dichlorobenzene	106-46-7	5035A	EPA8260B	C
2-Hexanone	591-78-6	5035A	EPA8260B	2.86

Table 5. Laboratory Analytical Specifications Table TAL/TCL Analytes for Soil Media (Continued/End)

Analyte	Analyte ID	Preparation ^A Method	USEPA ^A Method	CRDL ^B ($\mu\text{g}/\text{kg}$)
Target Compound List (continued)				
Volatiles (continued)				
Acetone	67-64-1	5035A	EPA8260B	7.03
Benzene	71-43-2	5035A	EPA8260B	0.823
Bromodichloromethane	75-27-4	5035A	EPA8260B	1
Bromoform (Tribromomethane)	75-25-2	5035A	EPA8260B	1.15
Bromomethane (Methyl bromide)	74-83-9	5035A	EPA8260B	2.56
Carbon disulfide	75-15-0	5035A	EPA8260B	0.988
Carbon tetrachloride	56-23-5	5035A	EPA8260B	1.22
Chlorobenzene	108-90-7	5035A	EPA8260B	0.987
Chloroethane	75-00-3	5035A	EPA8260B	2.69
Chloroethene (Vinyl chloride)	75-01-4	5035A	EPA8260B	0.15
Chloroform	67-66-3	5035A	EPA8260B	1.42
Chloromethane (Methyl chloride)	74-87-3	5035A	EPA8260B	1.2
cis-1,2-Dichloroethylene	156-59-2	5035A	EPA8260B	C
cis-1,3-Dichloropropene	10061-01-5	5035A	EPA8260B	1.31
Cyclohexane	110-82-7	5035A	EPA8260B	0.08
Dibromochloromethane	124-48-1	5035A	EPA8260B	1.03
Dichlorodifluoromethane	75-71-8	5035A	EPA8260B	4
Dichloromethane (Methylene chloride)	75-09-2	5035A	EPA8260B	1.65
Ethylbenzene	100-41-4	5035A	EPA8260B	1.07
Cumene (Isopropylbenzene)	98-82-8	5035A	EPA8260B	0.254
Methyl acetate	79-20-9	5035A	EPA8260B	22,000
Methyl ethyl ketone	78-93-3	5035A	EPA8260B	4.68
Methyl isobutyl ketone	108-10-1	5035A	EPA8260B	2.62
Methyl tertiary butyl ether (MTBE)	1634-04-4	5035A	EPA8260B	0.107
Methylcyclohexane	108-87-2	5035A	EPA8260B	2,600
Styrene	100-42-5	5035A	EPA8260B	0.72
Tetrachloroethylene (PCE)	127-18-4	5035A	EPA8260B	1.42
Toluene	108-88-3	5035A	EPA8260B	1.07
trans-1,2-Dichloroethylene	156-60-5	5035A	EPA8260B	2
trans-1,3-Dichloropropene	10061-02-6	5035A	EPA8260B	1.13
Trichloroethylene (TCE)	79-01-6	5035A	EPA8260B	1.37
Trichlorofluoromethane	75-69-4	5035A	EPA8260B	2
o-Xylene	95-47-6	5035A	EPA8260B	3.11
m,p-Xylene	MPXYL	5035A	EPA8260B	5
Bromochloromethane	74-97-5	5035A	EPA8260B	5
1,4-Dioxane	123-91-1	5035A	EPA8260B	100
1,2-Dichlorobenzene	95-50-1	5035A	EPA8260B	5
1,2,3-Trichlorobenzene	87-61-6	5035A	EPA8260B	5

A) Extraction and preparation methods differ depending upon media, concentration, instrument, laboratory, and analytical method.

Preparation methods will also influence detection limits.

B) CRDL is the contract required detection limit and is not always attainable.

C) Laboratory instructed to obtain the lowest possible method detection limit.

N/A = not available

TBD = to be decided

Table 6. Laboratory Analytical Specifications Table for Radiological Analytes in Soil Media

Radionuclides	Typical Soil MDAs^A <i>(pCi/g)</i>	Typical Water MDAs^A <i>(pCi/L)</i>	Analytical Method^B
Alpha Spectroscopy			
Americium-241	0.50	0.40	NNS
Americium-243	0.50	0.462	NNS
Curium-243/244	0.351	0.503	NNS
Curium-245/246	0.416	0.458	NNS
Neptunium-237	0.07	0.771	NNS
Plutonium-238	0.50	0.35	NNS
Plutonium-239/240	0.50	0.353	NNS
Plutonium-242	0.50	0.372	NNS
Thorium-228	0.50	0.445	NNS
Thorium-230	0.50	0.523	NNS
Thorium-232	0.50	0.45	NNS
Uranium-233/234	0.50	0.663	NNS
Uranium-235	0.206	0.684	NNS
Uranium 238	0.50	0.744	NNS
Gamma Spectroscopy Analyses			
Actinium-228	0.30	25.00	NNS
Cesium-137	0.15	5.0	NNS
Cobalt-60	0.03	10.00	NNS
Europium-154	0.25	25.0	NNS
Lead-214	0.25	20.00	NNS
Potassium-40	1.00	75.00	NNS
Radionuclide Indicators			
Gross Alpha	3.000	3.00	EPA900.0MOD
Nonvolatile beta	4.000	4.00	EPA900.0MOD
Individual Beta Analyses			
Carbon-14	2.00	10.00	NNS
Iodine-129	2.00	1.00	NNS
Nickel-59	3.38	20.00	NNS
Nickel-63	4.00	10.00	NNS
Promethium-147	10.00	10.00	NNS
Radium-226	0.895	0.30	EPA903.0MOD
Radium-228	1.29	0.50	EPA903.0MOD
Strontium-90	2.00	0.852	NNS
Technetium-99	5.00	17.3	NNS
Tritium	6.00	0.50	EPA906.0MOD

NNS = no national standard

- A) All minimum detectable activities (MDAs) are sample-specific. The MDAs represented above are typical MDAs as reported by the subcontract laboratories but are not always achievable.
- B) Extraction and preparation methods differ depending upon media, concentration, instrument, laboratory, and analytical method. Preparation methods will also influence detection limits. Laboratory instructed to obtain the lowest possible method detection limit.

Table 7. Minimum Field Quality Control/Quality Assurance Sampling Requirements

Data Quality Level	Field Quality Control/Quality Assurance Samples	Frequency of Field Quality Control/Quality Assurance Sample
UU	None	
VU	None	
VV	Co-located Field Duplicate	Minimum 5% ²
	Trip Blank	Minimum 1 per cooler
	Equipment Blank	1 per 40 samples ³
	Field Blank	Optional; 1 per 40 samples ⁴
	Split Sample	Minimum 5%
SD ¹	Co-located Field Duplicate	Minimum 5% ²
	Trip Blank	1 per cooler
	Equipment Blank	1 per 40 samples ³
	Field Blank	Optional; 1 per 40 samples ⁴
	Split Sample	Minimum 5%
D	Co-located Field Duplicate	Minimum 5% ²
	Trip Blank	1 per cooler
	Equipment Blank	1 per 40 samples ³
	Field Blank	Optional; 1 per 40 samples ⁴
	Split Sample	Minimum 5%

Data Quality Levels

UU Data Unverified and Unvalidated Data (no errors from ERDMS database loading screens)
VU Data Verified and Unvalidated Data (includes missing data checks)
VV Data Verified and Validated Data (validated to automated criteria; equivalent to USEPA Screening Level Data)
SD Data USEPA Screening Level Data with 10% Definitive Confirmation Data USEPA Definitive Level Data
D Data USEPA Definitive Level Data

Footnotes:

1. Level of data quality used in this work plan
2. Minimum frequency established per ER-SOP-043
3. Typical frequency
4. Recommended based on project needs; typical frequency

Table 8. Preservatives, Holding Times, and Sample Containers

Parameter	Preservatives		Holding Time		Containers	
	Aqueous	Solid	Aqueous	Solid	Aqueous	Solid
Volatile Organic Compounds (VOCs) Including: 8260 – VOCs	No Residual Chlorine Adjust pH to <2 with H ₂ SO ₄ , HCL, or solid sodium bisulfate (NaHSO ₄). Cool to 4°C	Low-level soil Add ~5 g soil to 40 mL VOA vial preserved with 1 g of NaHSO ₄ /5 mL water	14 days	Low/High Level 14 days	3x40 mL glass VOC vial, PTFE septa cap	3x40 (or 60) mL glass VOA vial (with stir bar for low-level soil), PTFE septa cap
Extractable Organics Including: 8270 – Semivolatile Organics	No Residual Chlorine Cool to 4°C	Cool to 4°C	7 days until extraction/ analyzed within 40 days after extraction	14 days until extraction/ analyzed within 40 days after extraction	2 x 1 L amber glass bottle per chemical parameter	250 mL CWM
8081 – Organochlorine Pesticides 8082 – Polychlorinated Biphenyls 8310 – Polycyclic Aromatic Hydrocarbons	Extracts must be stored at 4°C and in the dark until analysis. Extracts must be stored at 4°C and in the dark until analysis	Cool to 4°C	7 days until extraction/ analyzed within 40 days after extraction	14 days until extraction/ analyzed within 40 days after extraction	2 x 1 L amber glass bottle per chemical parameter	250 mL CWM
Metals (except Cr ⁺⁶ & Hg)	HNO ₃ to pH <2	Cool to 4°C	6 months	6 months	1 L HDPE	250 mL CWM (metals and cyanide may be collected in the same container for soils)
Hg	HNO ₃ to pH <2	Cool to 4°C	28 days	28 days	250 mL HDPE or glass	250 mL CWM
Cr ⁺⁶	Cool to 4°C	Cool to 4°C	24 hours	30 days	250 mL HDPE	250 mL CWM
Miscellaneous Radiological Test Gross Alpha	HNO ₃ to pH <2	Cool to 4°C	6 months	6 months	2 L HDPE	250 mL HDPE
Radiological Test Nonvolatile Beta	HNO ₃ to pH <2	Cool to 4°C	6 months	6 months	2 L HDPE	250 mL HDPE
Tritium	None Cool 0 to 6°C	None Cool 0 to 6°C	180 days	180 days	250 Amber Glass	250 HDPE or 4 oz Amber Glass

Abbreviations used in Table:

g = gram	NaHSO ₄ = sodium bisulfate
L = liter	PTFE = teflon lined seals
mL = milliliter	CWM = clear wide-mouth glass jar
VOA = volatile organic analysis	HNO ₃ = nitric acid
H ₂ SO ₄ = sulfuric acid	HDPE = high-density polyethylene plastic bottle
HCL = hydrochloric acid	

Table 9. ECODS L-3, LRP 131-1L, and LRP 131-4L OU Sample Matrix

Sample Type ¹	ECODS L-3, LRP 131-1L, LRP 131-4L OU Subunits	Station	Top Depth (ft bgs)	Bottom Depth (ft bgs)	Media	Sample Method	Analyses ²	Comments
REG	LRP 131-1L	LAPIL-001	0	1	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-1L	LAPIL-001	1	4	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-1L	LAPIL-001	6	8	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-1L	LAPIL-001	10	12	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-1L	LAPIL-001	14	16	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Peripheral Location; Tentative Depth
REG	LRP 131-1L	LAPIL-002	0	1	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-1L	LAPIL-002	1	4	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-1L	LAPIL-002	6	8	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-1L	LAPIL-002	10	12	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-1L	LAPIL-002	14	16	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Peripheral Location; Tentative Depth
REG	LRP 131-1L	LAPIL-003	0	1	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-1L	LAPIL-003	1	4	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-1L	LAPIL-003	6	8	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-1L	LAPIL-003	10	12	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-1L	LAPIL-003	14	16	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Peripheral Location; Tentative Depth
REG	LRP 131-1L	LAPIL-004	0	1	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-1L	LAPIL-004	1	4	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-1L	LAPIL-004	6	8	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-1L	LAPIL-004	10	12	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-1L	LAPIL-004	14	16	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Peripheral Location; Tentative Depth
REG	LRP 131-1L	LAPIL-005	0	1	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-1L	LAPIL-005	1	4	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-1L	LAPIL-005	6	8	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-1L	LAPIL-005	10	12	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-1L	LAPIL-005	14	16	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Peripheral Location; Tentative Depth
REG	LRP 131-1L	LAPIL-006	0	1	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-1L	LAPIL-006	1	4	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-1L	LAPIL-006	6	8	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-1L	LAPIL-006	10	12	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-1L	LAPIL-006	14	16	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Peripheral Location; Tentative Depth
REG	LRP 131-1L	LAPIL-007	0	1	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-1L	LAPIL-007	1	4	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-1L	LAPIL-007	6	8	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-1L	LAPIL-007	10	12	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-1L	LAPIL-007	14	16	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Peripheral Location; Tentative Depth
REG	LRP 131-1L	LAPIL-008	0	1	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-1L	LAPIL-008	1	4	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-1L	LAPIL-008	6	8	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-1L	LAPIL-008	10	12	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-1L	LAPIL-008	14	16	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Peripheral Location; Tentative Depth
REG	LRP 131-1L	LAPIL-009	0	1	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-1L	LAPIL-009	1	4	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Interior Subunit Location

Table 9. ECODS L-3, LRP 131-1L, and LRP 131-4L OU Sample Matrix (Continued)

Sample Type ¹	ECODS L-3, LRP 131-1L, LRP 131-4L OU Subunits	Station	Top Depth (ft bgs)	Bottom Depth (ft bgs)	Media	Sample Method	Analyses ²	Comments
REG	LRP 131-1L	LAPIL-009	6	8	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-1L	LAPIL-009	10	12	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-1L	LAPIL-009	14	16	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location; Tentative Depth
REG	LRP 131-1L	LAPIL-010	0	1	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-1L	LAPIL-010	1	4	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-1L	LAPIL-010	6	8	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-1L	LAPIL-010	10	12	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-1L	LAPIL-010	14	16	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location; Tentative Depth
REG	LRP 131-1L	LAPIL-011	0	1	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-1L	LAPIL-011	1	4	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-1L	LAPIL-011	6	8	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-1L	LAPIL-011	10	12	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-1L	LAPIL-011	14	16	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location; Tentative Depth
REG	LRP 131-1L	LAPIL-012	0	1	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-1L	LAPIL-012	1	4	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-1L	LAPIL-012	6	8	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-1L	LAPIL-012	10	12	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-1L	LAPIL-012	14	16	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location; Tentative Depth
REG	LRP 131-1L	LAPIL-013	0	1	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-1L	LAPIL-013	1	4	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-1L	LAPIL-013	6	8	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-1L	LAPIL-013	10	12	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-1L	LAPIL-013	14	16	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location; Tentative Depth
REG	LRP 131-1L	LAPIL-014	0	1	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-1L	LAPIL-014	1	4	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-1L	LAPIL-014	6	8	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-1L	LAPIL-014	10	12	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-1L	LAPIL-014	14	16	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location; Tentative Depth
REG	LRP 131-1L	LAPIL-015	0	1	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-1L	LAPIL-015	1	4	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-1L	LAPIL-015	6	8	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-1L	LAPIL-015	10	12	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-1L	LAPIL-015	14	16	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location; Tentative Depth
REG	LRP 131-1L	LAPIL-016	0	1	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-1L	LAPIL-016	1	4	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Interior Subunit Location

Table 9. ECODS L-3, LRP 131-1L, and LRP 131-4L OU Sample Matrix (Continued)

Sample Type ¹	ECODS L-3, LRP 131-1L, LRP 131-4L OU Subunits	Station	Top Depth (ft bgs)	Bottom Depth (ft bgs)	Media	Sample Method	Analyses ²	Comments
REG	LRP 131-1L	LAPIL-016	6	8	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-1L	LAPIL-016	10	12	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-1L	LAPIL-016	14	16	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location; Tentative Depth
REG	LRP 131-1L	LAPIL-017	0	1	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-1L	LAPIL-017	1	4	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-1L	LAPIL-017	6	8	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-1L	LAPIL-017	10	12	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-1L	LAPIL-017	14	16	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location; Tentative Depth
REG	LRP 131-1L	LAPIL-018	0	1	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-1L	LAPIL-018	1	4	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-1L	LAPIL-018	6	8	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-1L	LAPIL-018	10	12	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-1L	LAPIL-018	14	16	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location; Tentative Depth
REG	LRP 131-1L	LAPIL-019	0	1	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-1L	LAPIL-019	1	4	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-1L	LAPIL-019	6	8	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-1L	LAPIL-019	10	12	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-1L	LAPIL-019	14	16	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location; Tentative Depth
REG	LRP 131-1L	LAPIL-020	0	1	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-1L	LAPIL-020	1	4	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-1L	LAPIL-020	6	8	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-1L	LAPIL-020	10	12	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-1L	LAPIL-020	14	16	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location; Tentative Depth
REG	LRP 131-1L	LAPIL-021	0	1	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-1L	LAPIL-021	1	4	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-1L	LAPIL-021	6	8	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-1L	LAPIL-021	10	12	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-1L	LAPIL-021	14	16	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location; Tentative Depth
REG	LRP 131-4L	LAP4L-001	0	1	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-4L	LAP4L-001	1	4	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-4L	LAP4L-001	8	10	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-4L	LAP4L-001	10	12	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-4L	LAP4L-001	14	16	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-4L	LAP4L-001	18	20	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Peripheral Location; Tentative Depth
REG	LRP 131-4L	LAP4L-002	0	1	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-4L	LAP4L-002	1	4	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-4L	LAP4L-002	8	10	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Peripheral Location

Table 9. ECODS L-3, LRP 131-1L, and LRP 131-4L OU Sample Matrix (Continued)

Sample Type ¹	ECODS L-3, LRP 131-1L, LRP 131-4L OU Subunits	Station	Top Depth (ft bgs)	Bottom Depth (ft bgs)	Media	Sample Method	Analyses ²	Comments
REG	LRP 131-4L	LAP4L-002	10	12	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-4L	LAP4L-002	14	16	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-4L	LAP4L-002	18	20	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Peripheral Location; Tentative Depth
REG	LRP 131-4L	LAP4L-003	0	1	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-4L	LAP4L-003	1	4	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-4L	LAP4L-003	8	10	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-4L	LAP4L-003	10	12	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-4L	LAP4L-003	14	16	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-4L	LAP4L-003	18	20	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Peripheral Location; Tentative Depth
REG	LRP 131-4L	LAP4L-004	0	1	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-4L	LAP4L-004	1	4	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-4L	LAP4L-004	8	10	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-4L	LAP4L-004	10	12	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-4L	LAP4L-004	14	16	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-4L	LAP4L-004	18	20	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Peripheral Location; Tentative Depth
REG	LRP 131-4L	LAP4L-005	0	1	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-4L	LAP4L-005	1	4	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-4L	LAP4L-005	8	10	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-4L	LAP4L-005	10	12	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-4L	LAP4L-005	14	16	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-4L	LAP4L-005	18	20	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Peripheral Location; Tentative Depth
REG	LRP 131-4L	LAP4L-006	0	1	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-4L	LAP4L-006	1	4	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-4L	LAP4L-006	8	10	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-4L	LAP4L-006	10	12	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-4L	LAP4L-006	14	16	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-4L	LAP4L-006	18	20	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Peripheral Location; Tentative Depth
REG	LRP 131-4L	LAP4L-007	0	1	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-4L	LAP4L-007	1	4	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-4L	LAP4L-007	8	10	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-4L	LAP4L-007	10	12	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-4L	LAP4L-007	14	16	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-4L	LAP4L-007	18	20	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Peripheral Location; Tentative Depth
REG	LRP 131-4L	LAP4L-008	0	1	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-4L	LAP4L-008	1	4	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-4L	LAP4L-008	8	10	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-4L	LAP4L-008	10	12	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-4L	LAP4L-008	14	16	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-4L	LAP4L-008	18	20	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Peripheral Location; Tentative Depth
REG	LRP 131-4L	LAP4L-009	0	1	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-4L	LAP4L-009	1	4	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-4L	LAP4L-009	8	10	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Peripheral Location

Table 9. ECODS L-3, LRP 131-1L, and LRP 131-4L OU Sample Matrix (Continued)

Sample Type ¹	ECODS L-3, LRP 131-1L, LRP 131-4L OU Subunits	Station	Top Depth (ft bgs)	Bottom Depth (ft bgs)	Media	Sample Method	Analyses ²	Comments
REG	LRP 131-4L	LAP4L-009	10	12	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-4L	LAP4L-009	14	16	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-4L	LAP4L-009	18	20	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Peripheral Location; Tentative Depth
REG	LRP 131-4L	LAP4L-010	0	1	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-4L	LAP4L-010	1	4	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-4L	LAP4L-010	8	10	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-4L	LAP4L-010	10	12	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-4L	LAP4L-010	14	16	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-4L	LAP4L-010	18	20	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Peripheral Location; Tentative Depth
REG	LRP 131-4L	LAP4L-011	0	1	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-4L	LAP4L-011	1	4	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-4L	LAP4L-011	8	10	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-4L	LAP4L-011	10	12	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-4L	LAP4L-011	14	16	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-4L	LAP4L-011	18	20	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Peripheral Location; Tentative Depth
REG	LRP 131-4L	LAP4L-012	0	1	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-4L	LAP4L-012	1	4	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-4L	LAP4L-012	8	10	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-4L	LAP4L-012	10	12	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-4L	LAP4L-012	14	16	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Peripheral Location
REG	LRP 131-4L	LAP4L-012	18	20	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Peripheral Location; Tentative Depth
REG	LRP 131-4L	LAP4L-013	0	1	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-013	1	4	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-013	8	10	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-013	10	12	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-013	14	16	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-013	18	20	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location; Tentative Depth
REG	LRP 131-4L	LAP4L-014	0	1	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-014	1	4	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-014	8	10	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-014	10	12	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-014	14	16	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-014	18	20	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location; Tentative Depth
REG	LRP 131-4L	LAP4L-015	0	1	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-015	1	4	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-015	8	10	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-015	10	12	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-015	14	16	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location

Table 9. ECODS L-3, LRP 131-1L, and LRP 131-4L OU Sample Matrix (Continued)

Sample Type ¹	ECODS L-3, LRP 131-1L, LRP 131-4L OU Subunits	Station	Top Depth (ft bgs)	Bottom Depth (ft bgs)	Media	Sample Method	Analyses ²	Comments
REG	LRP 131-4L	LAP4L-015	18	20	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location; Tentative Depth
REG	LRP 131-4L	LAP4L-016	0	1	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-016	1	4	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-016	8	10	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-016	10	12	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-016	14	16	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-016	18	20	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location; Tentative Depth
REG	LRP 131-4L	LAP4L-017	0	1	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-017	1	4	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-017	8	10	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-017	10	12	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-017	14	16	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-017	18	20	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location; Tentative Depth
REG	LRP 131-4L	LAP4L-018	0	1	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-018	1	4	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-018	8	10	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-018	10	12	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-018	14	16	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-018	18	20	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location; Tentative Depth
REG	LRP 131-4L	LAP4L-019	0	1	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-019	1	4	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-019	8	10	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-019	10	12	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-019	14	16	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-019	18	20	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location; Tentative Depth
REG	LRP 131-4L	LAP4L-020	0	1	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-020	1	4	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-020	8	10	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-020	10	12	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-020	14	16	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-020	18	20	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location; Tentative Depth
REG	LRP 131-4L	LAP4L-021	0	1	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-021	1	4	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-021	8	10	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-021	10	12	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location

Table 9. ECODS L-3, LRP 131-1L, and LRP 131-4L OU Sample Matrix (Continued)

Sample Type ¹	ECODS L-3, LRP 131-1L, LRP 131-4L OU Subunits	Station	Top Depth (ft bgs)	Bottom Depth (ft bgs)	Media	Sample Method	Analyses ²	Comments
REG	LRP 131-4L	LAP4L-021	14	16	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-021	18	20	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location; Tentative Depth
REG	LRP 131-4L	LAP4L-022	0	1	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-022	1	4	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-022	8	10	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-022	10	12	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-022	14	16	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-022	18	20	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location; Tentative Depth
REG	LRP 131-4L	LAP4L-023	0	1	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-023	1	4	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-023	8	10	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-023	10	12	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-023	14	16	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-023	18	20	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location; Tentative Depth
REG	LRP 131-4L	LAP4L-024	0	1	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-024	1	4	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-024	8	10	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-024	10	12	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-024	14	16	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-024	18	20	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location; Tentative Depth
REG	LRP 131-4L	LAP4L-025	0	1	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-025	1	4	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-025	8	10	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-025	10	12	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-025	14	16	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-025	18	20	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location; Tentative Depth
REG	LRP 131-4L	LAP4L-026	0	1	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-026	1	4	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-026	8	10	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-026	10	12	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-026	14	16	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-026	18	20	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location; Tentative Depth
REG	LRP 131-4L	LAP4L-027	0	1	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-027	1	4	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-027	8	10	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location

Table 9. ECODS L-3, LRP 131-1L, and LRP 131-4L OU Sample Matrix (Continued/End)

Sample Type ¹	ECODS L-3, LRP 131-1L, LRP 131-4L OU Subunits	Station	Top Depth (ft bgs)	Bottom Depth (ft bgs)	Media	Sample Method	Analyses ²	Comments
REG	LRP 131-4L	LAP4L-027	10	12	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-027	14	16	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-027	18	20	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location; Tentative Depth
REG	LRP 131-4L	LAP4L-028	0	1	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-028	1	4	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-028	8	10	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-028	10	12	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-028	14	16	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-028	18	20	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location; Tentative Depth
REG	LRP 131-4L	LAP4L-029	0	1	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-029	1	4	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-029	8	10	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-029	10	12	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-029	14	16	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-029	18	20	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location; Tentative Depth
REG	LRP 131-4L	LAP4L-030	0	1	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-030	1	4	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-030	8	10	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-030	10	12	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-030	14	16	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-030	18	20	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location; Tentative Depth
REG	LRP 131-4L	LAP4L-031	0	1	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-031	1	4	Soil	Hand Auger	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-031	8	10	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-031	10	12	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-031	14	16	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location
REG	LRP 131-4L	LAP4L-031	18	20	Soil	Rotosonic (or equivalent)	TCL, TAL, Radiological Indicators	Interior Subunit Location; Tentative Depth

1. Field Duplicates (FD), Equipment/Rinsate Blanks (RB) and Split Samples (SPL) are not shown but will be produced during work planning stage. Trip Blanks (TB) are not shown but will be sent with each shipment of VOCs. Table 7 summarizes the number of Quality Control/Quality Assurance (QC/QA) samples needed.

2. If the gross alpha result exceeds 20 pCi/g for a soil sample, then the Alpha spectroscopy radionuclides in Table 6 will also be analyzed for that sample. If the nonvolatile beta result exceeds 50 pCi/g for a soil sample, then the gamma spectroscopy radionuclides and individual beta analyses in Table 6 will also be analyzed for that sample.

ft bgs - feet below ground surface

TCL - Target Compound List

TAL - Target Analyte List

REG - regular sample

Subunit	Number of REG Samples	Minimum Number of QC/QA Samples				Total Number of Samples
		FD	RB	SPL	TB	
LRP 131-1L	105	6	3	6	21	141
LRP 131-4L	186	10	5	10	31	242

Table 10. ECODS L-3, LRP 131-1L, and LRP 131-4L OU Implementation Schedule

Deliverable	Projected Submittal/Start Date
RFI/RI Work Plan Field Start	September 30, 2022
Submit Rev. 0 RFI/RI/BRA/CMS/FS	July 11, 2023
Submit Rev. 0 Statement of Basis/Proposed Plan	April 22, 2024
Submit Rev. 0 Record of Decision	December 5, 2024
Submit Rev. 0 Corrective Measures Implementation/Remedial Action Implementation Plan	May 22, 2025
Submit Rev. 0 Land Use Control Implementation Plan	May 22, 2025
Remedial Action Start	November 2026

Bold dates indicate FFA milestones

APPENDIX A

2003 ECODS L-3 Subunit Site Evaluation Results Above Method Detection Limits

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Table A.1. ECODS L-3 Site Evaluation Results Above MDL

Location ID	Sample Interval [ft bgs]		Analyte	MDL	PQL	Qualifier	Sample Type	Result	Result Units
	Top	Bottom							
EL3-01	0	1	ALUMINUM	350	1970		REG	4560000	ug/kg
EL3-01	0	1	ANTIMONY	74	986		REG	1020	ug/kg
EL3-01	0	1	AROCLOR 1254	7.4	34.5	J	REG	138	ug/kg
EL3-01	0	1	AROCLOR 1260	7.57	34.5	J	REG	34.4	ug/kg
EL3-01	0	1	ARSENIC	74	394		REG	1070	ug/kg
EL3-01	0	1	BARIUM	93.7	394		REG	26200	ug/kg
EL3-01	0	1	CALCIUM	276	5920	J	REG	2980000	ug/kg
EL3-01	0	1	CHROMIUM	202	394		REG	5970	ug/kg
EL3-01	0	1	COBALT	78.9	394		REG	677	ug/kg
EL3-01	0	1	COPPER	69	789		REG	8780	ug/kg
EL3-01	0	1	DICHLOROMETHANE (METHYLENE CHLORIDE)	0.43	10.2	J	REG	0.696	ug/kg
EL3-01	0	1	IRON	828	1970		REG	4130000	ug/kg
EL3-01	0	1	LEAD	54.2	394		REG	13900	ug/kg
EL3-01	0	1	MAGNESIUM	661	3940	J	REG	263000	ug/kg
EL3-01	0	1	MANGANESE	459	740		REG	139000	ug/kg
EL3-01	0	1	MERCURY	3.05	10.2		REG	15.1	ug/kg
EL3-01	0	1	NICKEL	197	986		REG	2250	ug/kg
EL3-01	0	1	POTASSIUM	542	7890		REG	99800	ug/kg
EL3-01	0	1	TOLUENE	0.184	1.02	J	REG	0.44	ug/kg
EL3-01	0	1	VANADIUM	69	394		REG	9420	ug/kg
EL3-01	0	1	ZINC	143	986	J	REG	27600	ug/kg
EL3-01	1	4	1,1'-BIPHENYL	441	1840	J	REG	629	ug/kg
EL3-01	1	4	2-METHYLNAPHTHALENE	435	1840		REG	2000	ug/kg
EL3-01	1	4	ACENAPHTHENE	442	1840		REG	9270	ug/kg
EL3-01	1	4	ALUMINUM	3870	21800		REG	9650000	ug/kg
EL3-01	1	4	ANTHRACENE	352	1840		REG	17600	ug/kg
EL3-01	1	4	ANTIMONY	817	10900		REG	56600	ug/kg
EL3-01	1	4	AROCLOR 1254	7.9	36.8	J	REG	423	ug/kg
EL3-01	1	4	AROCLOR 1260	8.08	36.8	J	REG	130	ug/kg
EL3-01	1	4	ARSENIC	817	4360		REG	5960	ug/kg
EL3-01	1	4	BARIUM	1040	4360		REG	165000	ug/kg
EL3-01	1	4	BENZO(G,H,I)PERYLENE	332	1840		REG	9670	ug/kg
EL3-01	1	4	BENZO[A]ANTHRACENE	297	1840		REG	25900	ug/kg
EL3-01	1	4	BENZO[A]PYRENE	356	1840		REG	20600	ug/kg
EL3-01	1	4	BENZO[B]FLUORANTHENE	420	1840		REG	26900	ug/kg
EL3-01	1	4	BENZO[K]FLUORANTHENE	365	1840		REG	9720	ug/kg
EL3-01	1	4	CADMIUM	327	6540	J	REG	3750	ug/kg
EL3-01	1	4	CALCIUM	3050	65400	J	REG	52800000	ug/kg
EL3-01	1	4	CARBAZOLE	406	1840		REG	13800	ug/kg
EL3-01	1	4	CHROMIUM	2230	4360		REG	56600	ug/kg
EL3-01	1	4	CHRYSENE	304	1840		REG	21400	ug/kg
EL3-01	1	4	COBALT	872	4360		REG	4670	ug/kg
EL3-01	1	4	COPPER	763	8720		REG	166000	ug/kg
EL3-01	1	4	DIBENZ[AH]ANTHRACENE	362	1840		REG	2700	ug/kg
EL3-01	1	4	DIBENZOFURAN	402	1840		REG	5100	ug/kg
EL3-01	1	4	FLUORANTHENE	314	1840		REG	35000	ug/kg
EL3-01	1	4	FLUORENE	373	1840		REG	10500	ug/kg
EL3-01	1	4	INDENO[1,2,3-CD]PYRENE	332	1840		REG	8910	ug/kg
EL3-01	1	4	IRON	9150	21800		REG	23700000	ug/kg
EL3-01	1	4	LEAD	599	4360		REG	129000	ug/kg
EL3-01	1	4	MAGNESIUM	7300	43600	J	REG	2520000	ug/kg
EL3-01	1	4	MANGANESE	5070	8170		REG	447000	ug/kg
EL3-01	1	4	MERCURY	3.14	10.5		REG	161	ug/kg
EL3-01	1	4	NAPHTHALENE	437	1840		REG	5660	ug/kg
EL3-01	1	4	NICKEL	2180	10900		REG	34100	ug/kg
EL3-01	1	4	PHENANTHRENE	288	1840		REG	33900	ug/kg
EL3-01	1	4	POTASSIUM	5990	87200		REG	229000	ug/kg
EL3-01	1	4	PYRENE	287	1840		REG	34000	ug/kg
EL3-01	1	4	SODIUM	73800	240000	J	REG	202000	ug/kg
EL3-01	1	4	TOLUENE	0.197	1.1	J	REG	0.383	ug/kg

Table A.1. ECODS L-3 Site Evaluation Results Above MDL (Continued)

Location ID	Sample Interval [ft bgs]		Analyte	MDL	PQL	Qualifier	Sample Type	Result	Result Units
	Top	Bottom							
EL3-01	1	4	VANADIUM	763	4360		REG	19900	ug/kg
EL3-01	1	4	ZINC	1580	10900	J	REG	917000	ug/kg
EL3-01	4	8	ALUMINUM	3660	20600		REG	9300000	ug/kg
EL3-01	4	8	AROCOR 1254	7.76	36.2	J	REG	8.08	ug/kg
EL3-01	4	8	BARIUM	979	4120		REG	4760	ug/kg
EL3-01	4	8	BENZO[A]ANTHRACENE	29.2	181	J	REG	50.3	ug/kg
EL3-01	4	8	BENZO[A]PYRENE	34.9	181	J	REG	42.3	ug/kg
EL3-01	4	8	BENZO[B]FLUORANTHENE	41.3	181	J	REG	63.3	ug/kg
EL3-01	4	8	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	58.2	181		REG	351	ug/kg
EL3-01	4	8	CALCIUM	2880	61800	J	REG	514000	ug/kg
EL3-01	4	8	CHROMIUM	2110	4120		REG	16600	ug/kg
EL3-01	4	8	CHRYSENE	29.9	181	J	REG	33.6	ug/kg
EL3-01	4	8	COPPER	721	8240	J	REG	2760	ug/kg
EL3-01	4	8	FLUORANTHENE	30.8	181	J	REG	89.7	ug/kg
EL3-01	4	8	IRON	8650	20600		REG	14300000	ug/kg
EL3-01	4	8	LEAD	567	4120	J	REG	3170	ug/kg
EL3-01	4	8	MAGNESIUM	6900	41200	J	REG	66200	ug/kg
EL3-01	4	8	MANGANESE	4790	7730		REG	11100	ug/kg
EL3-01	4	8	MERCURY	3.16	10.5	J	REG	5.64	ug/kg
EL3-01	4	8	PHENANTHRENE	28.3	181	J	REG	78.5	ug/kg
EL3-01	4	8	POTASSIUM	5670	82400	J	REG	53000	ug/kg
EL3-01	4	8	PYRENE	28.2	181	J	REG	101	ug/kg
EL3-01	4	8	TOLUENE	0.186	1.03	J	REG	0.393	ug/kg
EL3-01	4	8	VANADIUM	721	4120		REG	33200	ug/kg
EL3-01	4	8	ZINC	1490	10300	J	REG	10700	ug/kg
EL3-01	8	12	ALUMINUM	3770	21300		REG	6940000	ug/kg
EL3-01	8	12	BARIUM	1010	4250	J	REG	3090	ug/kg
EL3-01	8	12	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	60.3	187		REG	1280	ug/kg
EL3-01	8	12	CALCIUM	2980	63800	J	REG	509000	ug/kg
EL3-01	8	12	CHROMIUM	2180	4250		REG	16000	ug/kg
EL3-01	8	12	COPPER	744	8510	J	REG	2480	ug/kg
EL3-01	8	12	FLUORANTHENE	31.9	187	J	REG	61	ug/kg
EL3-01	8	12	IRON	8930	21300		REG	14400000	ug/kg
EL3-01	8	12	LEAD	585	4250	J	REG	2480	ug/kg
EL3-01	8	12	MAGNESIUM	7120	42500	J	REG	50700	ug/kg
EL3-01	8	12	MANGANESE	4940	7970		REG	9950	ug/kg
EL3-01	8	12	MERCURY	3.11	10.4	J	REG	4.07	ug/kg
EL3-01	8	12	PHENANTHRENE	29.3	187	J	REG	50.1	ug/kg
EL3-01	8	12	POTASSIUM	5850	85100	J	REG	40500	ug/kg
EL3-01	8	12	PYRENE	29.2	187	J	REG	44.1	ug/kg
EL3-01	8	12	TOLUENE	0.204	1.14	J	REG	0.329	ug/kg
EL3-01	8	12	VANADIUM	744	4250		REG	34300	ug/kg
EL3-01	8	12	ZINC	1540	10600	J	REG	9310	ug/kg
EL3-01	12	16	ALUMINUM	4020	22600		REG	7350000	ug/kg
EL3-01	12	16	BARIUM	1070	4530	J	REG	4220	ug/kg
EL3-01	12	16	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	61.5	191		REG	594	ug/kg
EL3-01	12	16	CALCIUM	3170	67900	J	REG	462000	ug/kg
EL3-01	12	16	CHROMIUM	2320	4530		REG	11100	ug/kg
EL3-01	12	16	COPPER	792	9050	J	REG	2440	ug/kg
EL3-01	12	16	IRON	9500	22600		REG	12200000	ug/kg
EL3-01	12	16	LEAD	622	4530	J	REG	3670	ug/kg
EL3-01	12	16	MAGNESIUM	7580	45300	J	REG	63700	ug/kg
EL3-01	12	16	MANGANESE	5260	8480		REG	19900	ug/kg
EL3-01	12	16	POTASSIUM	6220	90500	J	REG	68700	ug/kg
EL3-01	12	16	TOLUENE	0.199	1.11	J	REG	0.299	ug/kg
EL3-01	12	16	VANADIUM	792	4530		REG	29900	ug/kg
EL3-01	12	16	ZINC	1640	11300	J	REG	11900	ug/kg
EL3-02	0	1	ALUMINUM	3530	19900		REG	9970000	ug/kg
EL3-02	0	1	BARIUM	944	3970		REG	27800	ug/kg
EL3-02	0	1	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	56.6	176	J	REG	59.3	ug/kg

Table A.1. ECODS L-3 Site Evaluation Results Above MDL (Continued)

Location ID	Sample Interval [ft bgs]		Analyte	MDL	PQL	Qualifier	Sample Type	Result	Result Units
	Top	Bottom							
EL3-02	0	1	CALCIUM	2780	59600	J	REG	581000	ug/kg
EL3-02	0	1	CHROMIUM	2040	3970		REG	8370	ug/kg
EL3-02	0	1	COPPER	695	7950	J	REG	1710	ug/kg
EL3-02	0	1	IRON	8340	19900		REG	6960000	ug/kg
EL3-02	0	1	LEAD	546	3970		REG	5420	ug/kg
EL3-02	0	1	MAGNESIUM	6650	39700	J	REG	147000	ug/kg
EL3-02	0	1	MANGANESE	4620	7450		REG	20400	ug/kg
EL3-02	0	1	MERCURY	3.02	10.1		REG	35.2	ug/kg
EL3-02	0	1	POTASSIUM	5460	79500		REG	124000	ug/kg
EL3-02	0	1	TOLUENE	0.185	1.03	J	REG	0.495	ug/kg
EL3-02	0	1	VANADIUM	695	3970		REG	16200	ug/kg
EL3-02	0	1	ZINC	1440	9930	J	REG	81800	ug/kg
EL3-02	1	4	ALUMINUM	3690	20800		REG	15300000	ug/kg
EL3-02	1	4	BARIUM	987	4150		REG	12500	ug/kg
EL3-02	1	4	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	59	183		REG	366	ug/kg
EL3-02	1	4	CALCIUM	2910	62300	J	REG	596000	ug/kg
EL3-02	1	4	CHROMIUM	2130	4150		REG	18600	ug/kg
EL3-02	1	4	COPPER	727	8310	J	REG	3830	ug/kg
EL3-02	1	4	IRON	8720	20800		REG	16300000	ug/kg
EL3-02	1	4	LEAD	571	4150		REG	5390	ug/kg
EL3-02	1	4	MAGNESIUM	6960	41500	J	REG	139000	ug/kg
EL3-02	1	4	MANGANESE	4830	7790		REG	9960	ug/kg
EL3-02	1	4	MERCURY	3.28	10.9		REG	46.7	ug/kg
EL3-02	1	4	NICKEL	2080	10400	J	REG	2170	ug/kg
EL3-02	1	4	POTASSIUM	5710	83100		REG	122000	ug/kg
EL3-02	1	4	STYRENE	0.118	1.07	J	REG	0.193	ug/kg
EL3-02	1	4	TOLUENE	0.193	1.07	J	REG	0.674	ug/kg
EL3-02	1	4	VANADIUM	727	4150		REG	38900	ug/kg
EL3-02	1	4	ZINC	1510	10400	J	REG	14600	ug/kg
EL3-02	4	8	ALUMINUM	3810	21500		REG	12000000	ug/kg
EL3-02	4	8	ARSENIC	806	4300		REG	5010	ug/kg
EL3-02	4	8	BARIUM	1020	4300		REG	5790	ug/kg
EL3-02	4	8	CALCIUM	3010	64500	J	REG	381000	ug/kg
EL3-02	4	8	CHROMIUM	2200	4300		REG	27100	ug/kg
EL3-02	4	8	COPPER	752	8590	J	REG	4140	ug/kg
EL3-02	4	8	IRON	9020	21500		REG	25800000	ug/kg
EL3-02	4	8	LEAD	591	4300	J	REG	3960	ug/kg
EL3-02	4	8	MAGNESIUM	7200	43000	J	REG	90800	ug/kg
EL3-02	4	8	MANGANESE	5000	8060	J	REG	7670	ug/kg
EL3-02	4	8	MERCURY	3.22	10.7		REG	15.2	ug/kg
EL3-02	4	8	POTASSIUM	5910	85900	J	REG	69400	ug/kg
EL3-02	4	8	TOLUENE	0.205	1.14	J	REG	0.511	ug/kg
EL3-02	4	8	VANADIUM	752	4300		REG	58700	ug/kg
EL3-02	8	12	ACETONE	0.817	11.5	J	FD	2.78	ug/kg
EL3-02	8	12	ALUMINUM	3750	21100		REG	8660000	ug/kg
EL3-02	8	12	ALUMINUM	3850	21700		FD	9160000	ug/kg
EL3-02	8	12	BARIUM	1030	4340	J	FD	3680	ug/kg
EL3-02	8	12	BARIUM	1000	4230	J	REG	3800	ug/kg
EL3-02	8	12	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	60.7	188		FD	206	ug/kg
EL3-02	8	12	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	60	186		REG	286	ug/kg
EL3-02	8	12	CALCIUM	2960	63400	J	REG	224000	ug/kg
EL3-02	8	12	CALCIUM	3040	65200	J	FD	255000	ug/kg
EL3-02	8	12	CHROMIUM	2170	4230		REG	17700	ug/kg
EL3-02	8	12	CHROMIUM	2230	4340		FD	20500	ug/kg
EL3-02	8	12	COPPER	760	8690	J	FD	3060	ug/kg
EL3-02	8	12	COPPER	740	8460	J	REG	2860	ug/kg
EL3-02	8	12	IRON	8880	21100		REG	16500000	ug/kg
EL3-02	8	12	IRON	9120	21700		FD	18100000	ug/kg
EL3-02	8	12	LEAD	597	4340	J	FD	4300	ug/kg
EL3-02	8	12	LEAD	582	4230	J	REG	3830	ug/kg

Table A.1. ECODS L-3 Site Evaluation Results Above MDL (Continued)

Location ID	Sample Interval [ft bgs]		Analyte	MDL	PQL	Qualifier	Sample Type	Result	Result Units
	Top	Bottom							
EL3-02	8	12	MAGNESIUM	7080	42300	J	REG	90200	ug/kg
EL3-02	8	12	MAGNESIUM	7280	43400	J	FD	92000	ug/kg
EL3-02	8	12	MANGANESE	4920	7930		REG	15500	ug/kg
EL3-02	8	12	MANGANESE	5050	8140		FD	17500	ug/kg
EL3-02	8	12	MERCURY	3.33	11.1	J	FD	8.73	ug/kg
EL3-02	8	12	MERCURY	3.15	10.5	J	REG	8.8	ug/kg
EL3-02	8	12	POTASSIUM	5820	84600	J	REG	66800	ug/kg
EL3-02	8	12	POTASSIUM	5970	86900	J	FD	67900	ug/kg
EL3-02	8	12	TOLUENE	0.207	1.15	J	FD	0.472	ug/kg
EL3-02	8	12	TOLUENE	0.196	1.09	J	REG	0.359	ug/kg
EL3-02	8	12	VANADIUM	740	4230		REG	40100	ug/kg
EL3-02	8	12	VANADIUM	760	4340		FD	44900	ug/kg
EL3-02	8	12	ZINC	1530	10600	J	REG	9390	ug/kg
EL3-02	8	12	ZINC	1570	10900	J	FD	14900	ug/kg
EL3-02	12	16	ALUMINUM	3820	21500		REG	6670000	ug/kg
EL3-02	12	16	BARIIUM	1020	4300	J	REG	1990	ug/kg
EL3-02	12	16	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	60.2	187	J	REG	159	ug/kg
EL3-02	12	16	CALCIUM	3010	64600	J	REG	116000	ug/kg
EL3-02	12	16	CHROMIUM	2210	4300		REG	15100	ug/kg
EL3-02	12	16	COPPER	753	8610	J	REG	2240	ug/kg
EL3-02	12	16	IRON	9040	21500		REG	16000000	ug/kg
EL3-02	12	16	LEAD	592	4300	J	REG	3770	ug/kg
EL3-02	12	16	MAGNESIUM	7210	43000	J	REG	61400	ug/kg
EL3-02	12	16	MANGANESE	5000	8070		REG	11600	ug/kg
EL3-02	12	16	POTASSIUM	5920	86100	J	REG	34300	ug/kg
EL3-02	12	16	TOLUENE	0.197	1.09	J	REG	0.492	ug/kg
EL3-02	12	16	VANADIUM	753	4300		REG	42600	ug/kg
EL3-02	12	16	ZINC	1560	10800	J	REG	7400	ug/kg
EL3-03	0	1	ACETONE	0.716	10.1	J	REG	1.71	ug/kg
EL3-03	0	1	ALUMINUM	3580	20200		REG	6740000	ug/kg
EL3-03	0	1	ANTIMONY	757	10100		REG	21700	ug/kg
EL3-03	0	1	AROCLOR 1254	373	1740		REG	4380	ug/kg
EL3-03	0	1	ARSENIC	757	4040		REG	4100	ug/kg
EL3-03	0	1	BARIIUM	959	4040	J	REG	43400	ug/kg
EL3-03	0	1	BENZO[A]ANTHRACENE	28.1	174	J	REG	31.6	ug/kg
EL3-03	0	1	BENZO[B]FLUORANTHENE	39.7	174	J	REG	40.3	ug/kg
EL3-03	0	1	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	560	1740		REG	16300	ug/kg
EL3-03	0	1	CALCIUM	2830	60600		REG	14700000	ug/kg
EL3-03	0	1	CHROMIUM	2070	4040	J	REG	17500	ug/kg
EL3-03	0	1	COPPER	707	8070	J	REG	53600	ug/kg
EL3-03	0	1	FLUORANTHENE	29.6	174	J	REG	42.8	ug/kg
EL3-03	0	1	IRON	8480	20200		REG	8150000	ug/kg
EL3-03	0	1	LEAD	555	4040		REG	130000	ug/kg
EL3-03	0	1	MAGNESIUM	6760	40400		REG	1150000	ug/kg
EL3-03	0	1	MANGANESE	4690	7570	J	REG	117000	ug/kg
EL3-03	0	1	MERCURY	2.95	9.85		REG	361	ug/kg
EL3-03	0	1	METHYL TERTIARY BUTYL ETHER (MTBE)	0.0706	1.01	J	REG	0.252	ug/kg
EL3-03	0	1	NICKEL	2020	10100	J	REG	11100	ug/kg
EL3-03	0	1	POTASSIUM	5550	80700		REG	212000	ug/kg
EL3-03	0	1	PYRENE	27.1	174	J	REG	37.2	ug/kg
EL3-03	0	1	TOLUENE	0.182	1.01	J	REG	0.313	ug/kg
EL3-03	0	1	VANADIUM	707	4040		REG	10700	ug/kg
EL3-03	0	1	ZINC	1460	10100	J	REG	321000	ug/kg
EL3-03	1	4	ACETONE	0.778	11	J	REG	1.47	ug/kg
EL3-03	1	4	ALUMINUM	3680	20700		REG	14700000	ug/kg
EL3-03	1	4	AROCLOR 1254	7.9	36.8	J	REG	322	ug/kg
EL3-03	1	4	AROCLOR 1260	8.09	36.8	J	REG	67.2	ug/kg
EL3-03	1	4	ARSENIC	777	4140	J	REG	3630	ug/kg
EL3-03	1	4	BARIIUM	984	4140	J	REG	18800	ug/kg
EL3-03	1	4	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	59.3	184		REG	1810	ug/kg

Table A.1. ECODS L-3 Site Evaluation Results Above MDL (Continued)

Location ID	Sample Interval [ft bgs]		Analyte	MDL	PQL	Qualifier	Sample Type	Result	Result Units
	Top	Bottom							
EL3-03	1	4	CALCIUM	2900	62200		REG	6300000	ug/kg
EL3-03	1	4	CHROMIUM	2120	4140	J	REG	19700	ug/kg
EL3-03	1	4	COPPER	725	8290	J	REG	10600	ug/kg
EL3-03	1	4	IRON	8700	20700		REG	17400000	ug/kg
EL3-03	1	4	LEAD	570	4140		REG	20400	ug/kg
EL3-03	1	4	MAGNESIUM	6940	41400		REG	471000	ug/kg
EL3-03	1	4	MANGANESE	4820	7770	J	REG	38600	ug/kg
EL3-03	1	4	MERCURY	3.24	10.8		REG	120	ug/kg
EL3-03	1	4	METHYL TERTIARY BUTYL ETHER (MTBE)	0.0767	1.1	J	REG	0.208	ug/kg
EL3-03	1	4	NICKEL	2070	10400	J	REG	2990	ug/kg
EL3-03	1	4	POTASSIUM	5700	82900		REG	160000	ug/kg
EL3-03	1	4	TOLUENE	0.197	1.1	J	REG	0.723	ug/kg
EL3-03	1	4	VANADIUM	725	4140		REG	36300	ug/kg
EL3-03	4	8	ACETONE	0.76	10.7	J	REG	1.32	ug/kg
EL3-03	4	8	ALUMINUM	3720	20900		REG	7670000	ug/kg
EL3-03	4	8	AROCLOR 1254	7.84	36.5	J	REG	184	ug/kg
EL3-03	4	8	AROCLOR 1260	8.03	36.5	J	REG	76.8	ug/kg
EL3-03	4	8	ARSENIC	785	4190	J	REG	4180	ug/kg
EL3-03	4	8	BARIUM	994	4190	J	REG	5280	ug/kg
EL3-03	4	8	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	58.9	183		REG	829	ug/kg
EL3-03	4	8	CALCIUM	2930	62800		REG	1450000	ug/kg
EL3-03	4	8	CHROMIUM	2150	4190	J	REG	19000	ug/kg
EL3-03	4	8	COPPER	733	8370	J	REG	3560	ug/kg
EL3-03	4	8	IRON	8790	20900		REG	17700000	ug/kg
EL3-03	4	8	LEAD	576	4190		REG	12700	ug/kg
EL3-03	4	8	MAGNESIUM	7010	41900		REG	146000	ug/kg
EL3-03	4	8	MANGANESE	4870	7850	J	REG	17400	ug/kg
EL3-03	4	8	MERCURY	3.23	10.8		REG	21.3	ug/kg
EL3-03	4	8	POTASSIUM	5760	83700	J	REG	54400	ug/kg
EL3-03	4	8	TOLUENE	0.193	1.07	J	REG	0.995	ug/kg
EL3-03	4	8	VANADIUM	733	4190		REG	39300	ug/kg
EL3-03	4	8	ZINC	1520	10500	J	REG	22200	ug/kg
EL3-04	0	1	ALUMINUM	3680	20700		REG	9630000	ug/kg
EL3-04	0	1	ANTIMONY	778	10400	J	REG	11600	ug/kg
EL3-04	0	1	AROCLOR 1254	7.48	34.8	J	REG	266	ug/kg
EL3-04	0	1	AROCLOR 1260	7.65	34.8	J	REG	75.6	ug/kg
EL3-04	0	1	BARIUM	986	4150	J	REG	48300	ug/kg
EL3-04	0	1	BENZO[B]FLUORANTHENE	39.8	174	J	REG	51.9	ug/kg
EL3-04	0	1	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	56.1	174	J	REG	113	ug/kg
EL3-04	0	1	CALCIUM	2900	62200		REG	6420000	ug/kg
EL3-04	0	1	CHROMIUM	2130	4150		REG	16200	ug/kg
EL3-04	0	1	COPPER	726	8300	J	REG	26500	ug/kg
EL3-04	0	1	FLUORANTHENE	29.7	174	J	REG	30	ug/kg
EL3-04	0	1	IRON	8710	20700		REG	7760000	ug/kg
EL3-04	0	1	LEAD	571	4150	J	REG	61100	ug/kg
EL3-04	0	1	MAGNESIUM	6950	41500		REG	429000	ug/kg
EL3-04	0	1	MANGANESE	4820	7780	J	REG	69100	ug/kg
EL3-04	0	1	MERCURY	2.98	9.93	J	REG	51.6	ug/kg
EL3-04	0	1	METHYL TERTIARY BUTYL ETHER (MTBE)	0.0736	1.05	J	REG	0.21	ug/kg
EL3-04	0	1	NICKEL	2070	10400	J	REG	6420	ug/kg
EL3-04	0	1	POTASSIUM	5710	83000		REG	169000	ug/kg
EL3-04	0	1	SELENIUM	674	10400	J	REG	1510	ug/kg
EL3-04	0	1	VANADIUM	726	4150		REG	17000	ug/kg
EL3-04	0	1	ZINC	1500	10400		REG	238000	ug/kg
EL3-04	1	4	ALUMINUM	3780	21300		REG	12900000	ug/kg
EL3-04	1	4	ALUMINUM	3750	21100		FD	11400000	ug/kg
EL3-04	1	4	AROCLOR 1254	7.81	36.4	J	FD	33.2	ug/kg
EL3-04	1	4	AROCLOR 1254	7.78	36.3	J	REG	21.6	ug/kg
EL3-04	1	4	AROCLOR 1260	7.99	36.4	J	FD	61.1	ug/kg
EL3-04	1	4	AROCLOR 1260	7.96	36.3	J	REG	18.6	ug/kg

Table A.1. ECODS L-3 Site Evaluation Results Above MDL (Continued)

Location ID	Sample Interval [ft bgs]		Analyte	MDL	PQL	Qualifier	Sample Type	Result	Result Units
	Top	Bottom							
EL3-04	1	4	ARSENIC	798	4260	J	REG	3180	ug/kg
EL3-04	1	4	ARSENIC	793	4230	J	FD	2990	ug/kg
EL3-04	1	4	BARIIUM	1010	4260	J	REG	12900	ug/kg
EL3-04	1	4	BARIIUM	1000	4230	J	FD	13400	ug/kg
EL3-04	1	4	BENZO[A]ANTHRACENE	29.3	181	J	REG	56.6	ug/kg
EL3-04	1	4	BENZO[B]FLUORANTHENE	41.4	181	J	REG	52.2	ug/kg
EL3-04	1	4	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	58.6	182		FD	568	ug/kg
EL3-04	1	4	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	58.4	181		REG	331	ug/kg
EL3-04	1	4	CALCIUM	2980	63800		REG	2280000	ug/kg
EL3-04	1	4	CALCIUM	2960	63400		FD	1670000	ug/kg
EL3-04	1	4	CHROMIUM	2180	4260		REG	22800	ug/kg
EL3-04	1	4	CHROMIUM	2170	4230		FD	18800	ug/kg
EL3-04	1	4	CHRYSENE	30	181	J	REG	52.9	ug/kg
EL3-04	1	4	COPPER	740	8460	J	FD	6280	ug/kg
EL3-04	1	4	COPPER	745	8510	J	REG	5640	ug/kg
EL3-04	1	4	FLUORANTHENE	30.9	181	J	REG	102	ug/kg
EL3-04	1	4	IRON	8940	21300		REG	19400000	ug/kg
EL3-04	1	4	IRON	8880	21100		FD	18700000	ug/kg
EL3-04	1	4	LEAD	585	4260	J	REG	9660	ug/kg
EL3-04	1	4	LEAD	581	4230	J	FD	7780	ug/kg
EL3-04	1	4	MAGNESIUM	7130	42600		REG	186000	ug/kg
EL3-04	1	4	MAGNESIUM	7080	42300		FD	148000	ug/kg
EL3-04	1	4	MANGANESE	4950	7980	J	REG	24900	ug/kg
EL3-04	1	4	MANGANESE	4920	7930	J	FD	18100	ug/kg
EL3-04	1	4	MERCURY	3.16	10.5	J	FD	29.8	ug/kg
EL3-04	1	4	MERCURY	3.16	10.5	J	REG	67.3	ug/kg
EL3-04	1	4	METHYL TERTIARY BUTYL ETHER (MTBE)	0.0748	1.07	J	FD	0.214	ug/kg
EL3-04	1	4	PHENANTHRENE	28.4	181	J	REG	56.6	ug/kg
EL3-04	1	4	POTASSIUM	5850	85100		REG	116000	ug/kg
EL3-04	1	4	POTASSIUM	5810	84600		FD	108000	ug/kg
EL3-04	1	4	PYRENE	28.3	181	J	REG	85.6	ug/kg
EL3-04	1	4	TOLUENE	0.192	1.07	J	FD	0.449	ug/kg
EL3-04	1	4	TOLUENE	0.197	1.1		REG	2.37	ug/kg
EL3-04	1	4	VANADIUM	745	4260		REG	43100	ug/kg
EL3-04	1	4	VANADIUM	740	4230		FD	41800	ug/kg
EL3-04	1	4	ZINC	1540	10600		REG	124000	ug/kg
EL3-04	1	4	ZINC	1530	10600		FD	52500	ug/kg
EL3-04	4	8	ALUMINUM	3730	21000		REG	10300000	ug/kg
EL3-04	4	8	AROCLOR 1254	8.05	37.5	J	REG	246	ug/kg
EL3-04	4	8	AROCLOR 1260	8.24	37.5	J	REG	64	ug/kg
EL3-04	4	8	ARSENIC	789	4210		REG	5070	ug/kg
EL3-04	4	8	BARIIUM	999	4210	J	REG	8560	ug/kg
EL3-04	4	8	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	60.4	187	J	REG	135	ug/kg
EL3-04	4	8	CALCIUM	2950	63100		REG	2490000	ug/kg
EL3-04	4	8	CHROMIUM	2160	4210		REG	31000	ug/kg
EL3-04	4	8	COPPER	736	8420	J	REG	6840	ug/kg
EL3-04	4	8	CYANIDE	268	1100	J	REG	269	ug/kg
EL3-04	4	8	IRON	8840	21000		REG	26400000	ug/kg
EL3-04	4	8	LEAD	579	4210	J	REG	11300	ug/kg
EL3-04	4	8	MAGNESIUM	7050	42100		REG	147000	ug/kg
EL3-04	4	8	MANGANESE	4890	7890	J	REG	29600	ug/kg
EL3-04	4	8	MERCURY	3.26	10.9	J	REG	10.3	ug/kg
EL3-04	4	8	METHYL TERTIARY BUTYL ETHER (MTBE)	0.0764	1.09	J	REG	0.251	ug/kg
EL3-04	4	8	NICKEL	2100	10500	J	REG	2450	ug/kg
EL3-04	4	8	POTASSIUM	5790	84200		REG	94000	ug/kg
EL3-04	4	8	SELENIUM	684	10500	J	REG	1700	ug/kg
EL3-04	4	8	SODIUM	71200	231000	J	REG	190000	ug/kg
EL3-04	4	8	TOLUENE	0.197	1.09	J	REG	0.36	ug/kg
EL3-04	4	8	VANADIUM	736	4210		REG	61400	ug/kg
EL3-04	4	8	ZINC	1530	10500		REG	267000	ug/kg

Table A.1. ECODS L-3 Site Evaluation Results Above MDL (Continued)

Location ID	Sample Interval [ft bgs]		Analyte	MDL	PQL	Qualifier	Sample Type	Result	Result Units
	Top	Bottom							
EL3-05	0	1	1,1-DICHLOROETHYLENE	0.258	1.08		REG	2.62	ug/kg
EL3-05	0	1	ALUMINUM	3640	20500		REG	14700000	ug/kg
EL3-05	0	1	AROCLOR 1254	7.77	36.2	J	REG	24.9	ug/kg
EL3-05	0	1	AROCLOR 1260	7.95	36.2	J	REG	10.5	ug/kg
EL3-05	0	1	ARSENIC	770	4110	J	REG	2950	ug/kg
EL3-05	0	1	BARIUM	975	4110	J	REG	37300	ug/kg
EL3-05	0	1	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	58.3	181		REG	220	ug/kg
EL3-05	0	1	CALCIUM	2870	61600		REG	289000	ug/kg
EL3-05	0	1	CHROMIUM	2100	4110	J	REG	21100	ug/kg
EL3-05	0	1	COPPER	719	8210		REG	36200	ug/kg
EL3-05	0	1	IRON	8620	20500		REG	13500000	ug/kg
EL3-05	0	1	LEAD	565	4110		REG	21400	ug/kg
EL3-05	0	1	MAGNESIUM	6880	41100		REG	226000	ug/kg
EL3-05	0	1	MANGANESE	4770	7700	J	REG	37300	ug/kg
EL3-05	0	1	MERCURY	3.14	10.5		REG	95.6	ug/kg
EL3-05	0	1	METHYL TERTIARY BUTYL ETHER (MTBE)	0.0753	1.08	J	REG	0.237	ug/kg
EL3-05	0	1	NICKEL	2050	10300	J	REG	2680	ug/kg
EL3-05	0	1	POTASSIUM	5650	82100		REG	162000	ug/kg
EL3-05	0	1	VANADIUM	719	4110		REG	31000	ug/kg
EL3-05	0	1	ZINC	1490	10300	J	REG	46400	ug/kg
EL3-05	1	4	ALUMINUM	4080	23000		REG	21900000	ug/kg
EL3-05	1	4	ARSENIC	862	4600		REG	6930	ug/kg
EL3-05	1	4	BARIUM	1090	4600	J	REG	14700	ug/kg
EL3-05	1	4	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	63.5	197	J	REG	141	ug/kg
EL3-05	1	4	CALCIUM	3220	69000		REG	89700	ug/kg
EL3-05	1	4	CHROMIUM	2360	4600	J	REG	28300	ug/kg
EL3-05	1	4	COPPER	805	9200	J	REG	5370	ug/kg
EL3-05	1	4	IRON	9660	23000		REG	31300000	ug/kg
EL3-05	1	4	LEAD	632	4600		REG	6680	ug/kg
EL3-05	1	4	MAGNESIUM	7700	46000		REG	176000	ug/kg
EL3-05	1	4	MANGANESE	5350	8620	J	REG	9000	ug/kg
EL3-05	1	4	MERCURY	3.39	11.3		REG	82.2	ug/kg
EL3-05	1	4	METHYL TERTIARY BUTYL ETHER (MTBE)	0.0786	1.12	J	REG	0.18	ug/kg
EL3-05	1	4	POTASSIUM	6320	92000		REG	99800	ug/kg
EL3-05	1	4	VANADIUM	805	4600		REG	71400	ug/kg
EL3-05	4	8	ALUMINUM	3740	21100		REG	6720000	ug/kg
EL3-05	4	8	ARSENIC	791	4220		REG	5090	ug/kg
EL3-05	4	8	BARIUM	1000	4220	J	REG	3270	ug/kg
EL3-05	4	8	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	60.1	187		REG	287	ug/kg
EL3-05	4	8	CALCIUM	2950	63300		REG	486000	ug/kg
EL3-05	4	8	CHROMIUM	2160	4220	J	REG	17600	ug/kg
EL3-05	4	8	COPPER	738	8440	J	REG	2560	ug/kg
EL3-05	4	8	IRON	8860	21100		REG	21900000	ug/kg
EL3-05	4	8	LEAD	580	4220		REG	6200	ug/kg
EL3-05	4	8	MAGNESIUM	7070	42200	J	REG	31100	ug/kg
EL3-05	4	8	MANGANESE	4900	7910	J	REG	15300	ug/kg
EL3-05	4	8	MERCURY	3.3	11		REG	12.1	ug/kg
EL3-05	4	8	METHYL TERTIARY BUTYL ETHER (MTBE)	0.0754	1.08	J	REG	0.302	ug/kg
EL3-05	4	8	POTASSIUM	5800	84400	J	REG	62900	ug/kg
EL3-05	4	8	SODIUM	71400	232000	J	REG	140000	ug/kg
EL3-05	4	8	VANADIUM	738	4220		REG	40700	ug/kg
EL3-05	4	8	ZINC	1530	10500	J	REG	168000	ug/kg
EL3-06	0	1	ACETONE	0.724	10.2	J	FD	2.85	ug/kg
EL3-06	0	1	ALUMINUM	3570	20100		REG	3750000	ug/kg
EL3-06	0	1	ALUMINUM	3570	20100		FD	4420000	ug/kg
EL3-06	0	1	ANTIMONY	754	10100	J	REG	9110	ug/kg
EL3-06	0	1	ANTIMONY	754	10100	J	FD	9840	ug/kg
EL3-06	0	1	AROCLOR 1254	7.44	34.7	J	FD	158	ug/kg
EL3-06	0	1	AROCLOR 1254	7.43	34.6	J	REG	101	ug/kg
EL3-06	0	1	AROCLOR 1260	7.62	34.7	J	FD	51.6	ug/kg

Table A.1. ECODS L-3 Site Evaluation Results Above MDL (Continued)

Location ID	Sample Interval [ft bgs]		Analyte	MDL	PQL	Qualifier	Sample Type	Result	Result Units
	Top	Bottom							
EL3-06	0	1	AROCLOR 1260	7.6	34.6	J	REG	60.5	ug/kg
EL3-06	0	1	ARSENIC	754	4020	J	REG	3370	ug/kg
EL3-06	0	1	ARSENIC	754	4020	J	FD	3260	ug/kg
EL3-06	0	1	BARIIUM	955	4020	J	REG	61900	ug/kg
EL3-06	0	1	BARIIUM	955	4020	J	FD	84000	ug/kg
EL3-06	0	1	BENZENE	0.0714	1.02	J	FD	3.39	ug/kg
EL3-06	0	1	BENZENE	0.0694	0.991		REG	2.6	ug/kg
EL3-06	0	1	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	55.9	173		FD	232	ug/kg
EL3-06	0	1	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	55.8	173		REG	258	ug/kg
EL3-06	0	1	CADMIUM	302	6030		REG	10800	ug/kg
EL3-06	0	1	CADMIUM	302	6030		FD	8340	ug/kg
EL3-06	0	1	CALCIUM	2810	60300		REG	5360000	ug/kg
EL3-06	0	1	CALCIUM	2820	60300		FD	4520000	ug/kg
EL3-06	0	1	CARBON DISULFIDE	0.449	5.1	J	FD	1.37	ug/kg
EL3-06	0	1	CARBON DISULFIDE	0.436	4.95	J	REG	0.951	ug/kg
EL3-06	0	1	CHROMIUM	2060	4020	J	REG	71900	ug/kg
EL3-06	0	1	CHROMIUM	2060	4020	J	FD	26300	ug/kg
EL3-06	0	1	COPPER	704	8050		FD	44500	ug/kg
EL3-06	0	1	COPPER	704	8040		REG	43000	ug/kg
EL3-06	0	1	IRON	8440	20100		REG	6460000	ug/kg
EL3-06	0	1	IRON	8450	20100		FD	12300000	ug/kg
EL3-06	0	1	LEAD	553	4020		REG	1300000	ug/kg
EL3-06	0	1	LEAD	553	4020		FD	1220000	ug/kg
EL3-06	0	1	MAGNESIUM	6730	40200		REG	434000	ug/kg
EL3-06	0	1	MAGNESIUM	6740	40200		FD	412000	ug/kg
EL3-06	0	1	MANGANESE	4670	7540	J	REG	95200	ug/kg
EL3-06	0	1	MANGANESE	4680	7540	J	FD	111000	ug/kg
EL3-06	0	1	MERCURY	3.09	10.3		FD	58.4	ug/kg
EL3-06	0	1	MERCURY	3.03	10.1		REG	57.1	ug/kg
EL3-06	0	1	METHYL TERTIARY BUTYL ETHER (MTBE)	0.0714	1.02	J	FD	0.296	ug/kg
EL3-06	0	1	NICKEL	2010	10100		REG	37000	ug/kg
EL3-06	0	1	NICKEL	2010	10100	J	FD	8230	ug/kg
EL3-06	0	1	POTASSIUM	5530	80400		REG	82300	ug/kg
EL3-06	0	1	POTASSIUM	5530	80500		FD	98600	ug/kg
EL3-06	0	1	SILVER	805	4020	J	FD	1430	ug/kg
EL3-06	0	1	SODIUM	68100	221000	J	REG	76600	ug/kg
EL3-06	0	1	TOLUENE	0.184	1.02		FD	2.24	ug/kg
EL3-06	0	1	TOLUENE	0.178	0.991		REG	1.47	ug/kg
EL3-06	0	1	VANADIUM	704	4020		REG	7320	ug/kg
EL3-06	0	1	VANADIUM	704	4020		FD	10400	ug/kg
EL3-06	0	1	XYLENES	0.173	1.02	J	FD	0.449	ug/kg
EL3-06	0	1	XYLENES	0.168	0.991	J	REG	0.198	ug/kg
EL3-06	0	1	ZINC	1460	10100	J	REG	144000	ug/kg
EL3-06	0	1	ZINC	1460	10100	J	FD	184000	ug/kg
EL3-06	1	4	ALUMINUM	3740	21100		REG	5790000	ug/kg
EL3-06	1	4	ANTIMONY	790	10500		REG	14400	ug/kg
EL3-06	1	4	AROCLOR 1254	15.4	71.8	J	REG	414	ug/kg
EL3-06	1	4	AROCLOR 1260	15.8	71.8	J	REG	141	ug/kg
EL3-06	1	4	ARSENIC	790	4210		REG	8680	ug/kg
EL3-06	1	4	BARIIUM	1000	4210	J	REG	37700	ug/kg
EL3-06	1	4	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	579	1800		REG	37100	ug/kg
EL3-06	1	4	CADMIUM	316	6320		REG	11900	ug/kg
EL3-06	1	4	CALCIUM	2950	63200		REG	13600000	ug/kg
EL3-06	1	4	CHROMIUM	2160	4210	J	REG	72300	ug/kg
EL3-06	1	4	COBALT	842	4210	J	REG	2140	ug/kg
EL3-06	1	4	COPPER	737	8420		REG	3890000	ug/kg
EL3-06	1	4	IRON	8840	21100		REG	26200000	ug/kg
EL3-06	1	4	LEAD	579	4210		REG	102000	ug/kg
EL3-06	1	4	MAGNESIUM	7050	42100		REG	749000	ug/kg
EL3-06	1	4	MANGANESE	4900	7900	J	REG	144000	ug/kg

Table A.1. ECODS L-3 Site Evaluation Results Above MDL (Continued)

Location ID	Sample Interval [ft bgs]		Analyte	MDL	PQL	Qualifier	Sample Type	Result	Result Units
	Top	Bottom							
EL3-06	1	4	MERCURY	3.16	10.5		REG	156	ug/kg
EL3-06	1	4	METHYL TERTIARY BUTYL ETHER (MTBE)	0.0744	1.06	J	REG	0.425	ug/kg
EL3-06	1	4	NICKEL	2110	10500		REG	39500	ug/kg
EL3-06	1	4	POTASSIUM	5790	84200		REG	105000	ug/kg
EL3-06	1	4	PYRENE	28	180	J	REG	28.4	ug/kg
EL3-06	1	4	SODIUM	71300	232000	J	REG	76200	ug/kg
EL3-06	1	4	TOLUENE	0.191	1.06	J	REG	0.839	ug/kg
EL3-06	1	4	VANADIUM	737	4210		REG	24600	ug/kg
EL3-06	1	4	ZINC	1530	10500	J	REG	410000	ug/kg
EL3-06	4	8	1,1-DICHLOROETHYLENE	0.277	1.15		REG	2.79	ug/kg
EL3-06	4	8	ALUMINUM	3810	21500		REG	5540000	ug/kg
EL3-06	4	8	ARSENIC	804	4290	J	REG	2910	ug/kg
EL3-06	4	8	BARIUM	1020	4290	J	REG	1750	ug/kg
EL3-06	4	8	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	60.1	186		REG	389	ug/kg
EL3-06	4	8	CALCIUM	3000	64400		REG	300000	ug/kg
EL3-06	4	8	CHROMIUM	2200	4290	J	REG	9470	ug/kg
EL3-06	4	8	COPPER	751	8580		REG	31700	ug/kg
EL3-06	4	8	IRON	9010	21500		REG	10100000	ug/kg
EL3-06	4	8	LEAD	590	4290	J	REG	3420	ug/kg
EL3-06	4	8	MAGNESIUM	7190	42900	J	REG	19900	ug/kg
EL3-06	4	8	MANGANESE	4990	8040	J	REG	7530	ug/kg
EL3-06	4	8	MERCURY	3.31	11		REG	15.1	ug/kg
EL3-06	4	8	METHYL TERTIARY BUTYL ETHER (MTBE)	0.0807	1.15	J	REG	0.208	ug/kg
EL3-06	4	8	POTASSIUM	5900	85800	J	REG	23300	ug/kg
EL3-06	4	8	VANADIUM	751	4290		REG	20000	ug/kg
EL3-06	4	8	ZINC	1560	10700	J	REG	21300	ug/kg
EL3-06	8	12	1,1-DICHLOROETHYLENE	0.257	1.07	J	REG	0.354	ug/kg
EL3-06	8	12	ALUMINUM	3790	21300		REG	4100000	ug/kg
EL3-06	8	12	BARIUM	1010	4270	J	REG	1690	ug/kg
EL3-06	8	12	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	60.3	187	J	REG	166	ug/kg
EL3-06	8	12	CALCIUM	2990	64000	J	REG	57600	ug/kg
EL3-06	8	12	CHROMIUM	2190	4270	J	REG	6290	ug/kg
EL3-06	8	12	COPPER	747	8540	J	REG	4310	ug/kg
EL3-06	8	12	IRON	8970	21300		REG	17000000	ug/kg
EL3-06	8	12	LEAD	587	4270		REG	7410	ug/kg
EL3-06	8	12	MAGNESIUM	7150	42700	J	REG	28200	ug/kg
EL3-06	8	12	MANGANESE	4960	8010	J	REG	36900	ug/kg
EL3-06	8	12	MERCURY	3.3	11	J	REG	8.05	ug/kg
EL3-06	8	12	POTASSIUM	5870	85400	J	REG	50900	ug/kg
EL3-06	8	12	VANADIUM	747	4270		REG	36400	ug/kg
EL3-06	8	12	ZINC	1550	10700	J	REG	6640	ug/kg
EL3-07	0	1	ALUMINUM	337	1900		REG	3840000	ug/kg
EL3-07	0	1	ANTHRACENE	32.6	171	J	REG	42.3	ug/kg
EL3-07	0	1	ANTIMONY	71.3	950	J	REG	849	ug/kg
EL3-07	0	1	AROCLOL 1254	7.32	34.1	J	REG	183	ug/kg
EL3-07	0	1	AROCLOL 1260	7.49	34.1	J	REG	80.9	ug/kg
EL3-07	0	1	ARSENIC	71.3	380		REG	1130	ug/kg
EL3-07	0	1	BARIUM	90.3	380	J	REG	22900	ug/kg
EL3-07	0	1	BENZO(G,H,I)PERYLENE	30.7	171	J	REG	109	ug/kg
EL3-07	0	1	BENZO[A]ANTHRACENE	27.6	171	J	REG	147	ug/kg
EL3-07	0	1	BENZO[A]PYRENE	33	171		REG	182	ug/kg
EL3-07	0	1	BENZO[B]FLUORANTHENE	38.9	171		REG	260	ug/kg
EL3-07	0	1	BENZO[K]FLUORANTHENE	33.8	171	J	REG	101	ug/kg
EL3-07	0	1	CADMIUM	28.5	570	J	REG	113	ug/kg
EL3-07	0	1	CALCIUM	266	5700		REG	273000	ug/kg
EL3-07	0	1	CHROMIUM	195	380		REG	5170	ug/kg
EL3-07	0	1	CHRYSENE	28.2	171	J	REG	132	ug/kg
EL3-07	0	1	COBALT	76	380		REG	568	ug/kg
EL3-07	0	1	COPPER	66.5	760	J	REG	34400	ug/kg
EL3-07	0	1	FLUORANTHENE	29.1	171		REG	279	ug/kg

Table A.1. ECODS L-3 Site Evaluation Results Above MDL (Continued)

Location ID	Sample Interval [ft bgs]		Analyte	MDL	PQL	Qualifier	Sample Type	Result	Result Units
	Top	Bottom							
EL3-07	0	1	INDENO[1,2,3-CD]PYRENE	30.8	171	J	REG	98.6	ug/kg
EL3-07	0	1	IRON	798	1900		REG	3220000	ug/kg
EL3-07	0	1	LEAD	52.3	380	J	REG	13800	ug/kg
EL3-07	0	1	MAGNESIUM	637	3800		REG	109000	ug/kg
EL3-07	0	1	MANGANESE	442	713	J	REG	69300	ug/kg
EL3-07	0	1	MERCURY	2.87	9.57	J	REG	14.7	ug/kg
EL3-07	0	1	NICKEL	190	950		REG	2180	ug/kg
EL3-07	0	1	PHENANTHRENE	26.7	171	J	REG	160	ug/kg
EL3-07	0	1	POTASSIUM	523	7600		REG	51900	ug/kg
EL3-07	0	1	PYRENE	26.6	171		REG	217	ug/kg
EL3-07	0	1	VANADIUM	66.5	380		REG	5850	ug/kg
EL3-07	0	1	ZINC	138	950		REG	112000	ug/kg
EL3-07	1	4	ALUMINUM	358	2010		REG	4930000	ug/kg
EL3-07	1	4	ANTHRACENE	32.8	172	J	REG	69.4	ug/kg
EL3-07	1	4	ANTIMONY	75.5	1010	J	REG	30600	ug/kg
EL3-07	1	4	AROCLOR 1254	7.37	34.3	J	REG	116	ug/kg
EL3-07	1	4	AROCLOR 1260	7.54	34.3	J	REG	78.5	ug/kg
EL3-07	1	4	ARSENIC	75.5	403		REG	3190	ug/kg
EL3-07	1	4	BARIUM	95.7	403	J	REG	35900	ug/kg
EL3-07	1	4	BENZENE	0.0712	1.02	J	REG	0.947	ug/kg
EL3-07	1	4	BENZO(G,H,I)PERYLENE	30.9	172	J	REG	137	ug/kg
EL3-07	1	4	BENZO(A)ANTHRACENE	27.7	172		REG	272	ug/kg
EL3-07	1	4	BENZO(A)PYRENE	33.2	172		REG	257	ug/kg
EL3-07	1	4	BENZO(B)FLUORANTHENE	39.2	172		REG	411	ug/kg
EL3-07	1	4	BENZO(K)FLUORANTHENE	34	172	J	REG	128	ug/kg
EL3-07	1	4	CADMIUM	30.2	604		REG	5960	ug/kg
EL3-07	1	4	CALCIUM	282	6040		REG	15000000	ug/kg
EL3-07	1	4	CARBAZOLE	37.9	172	J	REG	54.6	ug/kg
EL3-07	1	4	CHROMIUM	206	403		REG	80100	ug/kg
EL3-07	1	4	CHRYSENE	28.4	172		REG	247	ug/kg
EL3-07	1	4	COBALT	80.6	403		REG	1660	ug/kg
EL3-07	1	4	COPPER	70.5	806	J	REG	54800	ug/kg
EL3-07	1	4	DIBENZ(AH)ANTHRACENE	33.8	172	J	REG	42.2	ug/kg
EL3-07	1	4	FLUORANTHENE	29.3	172		REG	458	ug/kg
EL3-07	1	4	INDENO[1,2,3-CD]PYRENE	31	172	J	REG	129	ug/kg
EL3-07	1	4	IRON	846	2010		REG	4920000	ug/kg
EL3-07	1	4	LEAD	55.4	403	J	REG	31200	ug/kg
EL3-07	1	4	MAGNESIUM	675	4030		REG	1410000	ug/kg
EL3-07	1	4	MANGANESE	468	755	J	REG	116000	ug/kg
EL3-07	1	4	MERCURY	2.91	9.69	J	REG	45.2	ug/kg
EL3-07	1	4	NICKEL	201	1010		REG	42400	ug/kg
EL3-07	1	4	PHENANTHRENE	26.9	172		REG	289	ug/kg
EL3-07	1	4	POTASSIUM	554	8060		REG	121000	ug/kg
EL3-07	1	4	PYRENE	26.8	172		REG	399	ug/kg
EL3-07	1	4	SODIUM	6820	22200	J	REG	102000	ug/kg
EL3-07	1	4	VANADIUM	70.5	403		REG	8900	ug/kg
EL3-07	1	4	XYLENES	0.173	1.02	J	REG	0.712	ug/kg
EL3-07	1	4	ZINC	146	1010		REG	88200	ug/kg
EL3-07	4	8	ALUMINUM	3990	22500		REG	9920000	ug/kg
EL3-07	4	8	ANTIMONY	843	11200	J	REG	24100	ug/kg
EL3-07	4	8	AROCLOR 1254	8.2	38.2	J	REG	156	ug/kg
EL3-07	4	8	AROCLOR 1260	8.39	38.2	J	REG	237	ug/kg
EL3-07	4	8	ARSENIC	843	4490		REG	5500	ug/kg
EL3-07	4	8	BARIUM	1070	4490	J	REG	72800	ug/kg
EL3-07	4	8	BENZO(A)ANTHRACENE	30.9	191	J	REG	47.4	ug/kg
EL3-07	4	8	BENZO(A)PYRENE	36.9	191	J	REG	47.4	ug/kg
EL3-07	4	8	BENZO(B)FLUORANTHENE	43.6	191	J	REG	64.2	ug/kg
EL3-07	4	8	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	61.5	191		REG	468	ug/kg
EL3-07	4	8	CALCIUM	3150	67400		REG	17100000	ug/kg
EL3-07	4	8	CHROMIUM	2300	4490		REG	36700	ug/kg

Table A.1. ECODS L-3 Site Evaluation Results Above MDL (Continued)

Location ID	Sample Interval [ft bgs]		Analyte	MDL	PQL	Qualifier	Sample Type	Result	Result Units
	Top	Bottom							
EL3-07	4	8	CHRYSENE	31.6	191	J	REG	38.2	ug/kg
EL3-07	4	8	COBALT	899	4490	J	REG	1880	ug/kg
EL3-07	4	8	COPPER	786	8990	J	REG	8370000	ug/kg
EL3-07	4	8	FLUORANTHENE	32.6	191	J	REG	57.7	ug/kg
EL3-07	4	8	IRON	9440	22500		REG	25300000	ug/kg
EL3-07	4	8	LEAD	618	4490	J	REG	39600	ug/kg
EL3-07	4	8	MAGNESIUM	7530	44900		REG	1260000	ug/kg
EL3-07	4	8	MANGANESE	5220	8430	J	REG	116000	ug/kg
EL3-07	4	8	MERCURY	3.34	11.1	J	REG	32.8	ug/kg
EL3-07	4	8	NICKEL	2250	11200		REG	17400	ug/kg
EL3-07	4	8	POTASSIUM	6180	89900		REG	216000	ug/kg
EL3-07	4	8	PYRENE	29.8	191	J	REG	49.7	ug/kg
EL3-07	4	8	SODIUM	76100	247000	J	REG	111000	ug/kg
EL3-07	4	8	VANADIUM	786	4490		REG	49300	ug/kg
EL3-07	4	8	ZINC	1630	11200		REG	166000	ug/kg
EL3-08	0	1	ALUMINUM	337	1900		REG	4220000	ug/kg
EL3-08	0	1	ANTIMONY	71.2	949	J	REG	1710	ug/kg
EL3-08	0	1	AROCLOR 1254	7.29	34	J	REG	47.7	ug/kg
EL3-08	0	1	AROCLOR 1260	7.46	34	J	REG	31.5	ug/kg
EL3-08	0	1	ARSENIC	71.2	380		REG	783	ug/kg
EL3-08	0	1	BARIUM	90.2	380	J	REG	19600	ug/kg
EL3-08	0	1	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	54.7	170		REG	222	ug/kg
EL3-08	0	1	CALCIUM	266	5700		REG	1650000	ug/kg
EL3-08	0	1	CHROMIUM	195	380		REG	4430	ug/kg
EL3-08	0	1	COBALT	75.9	380		REG	491	ug/kg
EL3-08	0	1	COPPER	66.4	759	J	REG	8360	ug/kg
EL3-08	0	1	IRON	797	1900		REG	3030000	ug/kg
EL3-08	0	1	LEAD	52.2	380	J	REG	6630	ug/kg
EL3-08	0	1	MAGNESIUM	636	3800		REG	166000	ug/kg
EL3-08	0	1	MANGANESE	441	712	J	REG	49100	ug/kg
EL3-08	0	1	MERCURY	3.05	10.2	J	REG	17.3	ug/kg
EL3-08	0	1	METHYL TERTIARY BUTYL ETHER (MTBE)	0.0714	1.02	J	REG	0.214	ug/kg
EL3-08	0	1	NICKEL	190	949		REG	1790	ug/kg
EL3-08	0	1	POTASSIUM	522	7590		REG	68800	ug/kg
EL3-08	0	1	TOLUENE	0.183	1.02	J	REG	0.285	ug/kg
EL3-08	0	1	VANADIUM	66.4	380		REG	6510	ug/kg
EL3-08	0	1	ZINC	138	949		REG	13200	ug/kg
EL3-08	1	4	ACETONE	0.713	10	J	REG	9.85	ug/kg
EL3-08	1	4	ALUMINUM	346	1950		REG	3760000	ug/kg
EL3-08	1	4	ANTIMONY	73.1	974		REG	2600	ug/kg
EL3-08	1	4	AROCLOR 1254	7.43	34.6		REG	38	ug/kg
EL3-08	1	4	ARSENIC	73.1	390		REG	1910	ug/kg
EL3-08	1	4	BARIUM	92.6	390	J	REG	20600	ug/kg
EL3-08	1	4	BENZENE	0.0703	1	J	REG	0.161	ug/kg
EL3-08	1	4	CADMIUM	29.2	585	J	REG	73.5	ug/kg
EL3-08	1	4	CALCIUM	273	5850		REG	2950000	ug/kg
EL3-08	1	4	CHROMIUM	200	390	J	REG	10400	ug/kg
EL3-08	1	4	COBALT	77.9	390		REG	939	ug/kg
EL3-08	1	4	COPPER	68.2	779	J	REG	101000	ug/kg
EL3-08	1	4	IRON	818	1950		REG	5320000	ug/kg
EL3-08	1	4	LEAD	53.6	390		REG	13000	ug/kg
EL3-08	1	4	MAGNESIUM	653	3900		REG	231000	ug/kg
EL3-08	1	4	MANGANESE	453	731	J	REG	79600	ug/kg
EL3-08	1	4	MERCURY	3.07	10.2		REG	10.7	ug/kg
EL3-08	1	4	METHYL ETHYL KETONE	0.392	5.02	J	REG	1.37	ug/kg
EL3-08	1	4	NICKEL	195	974	J	REG	6260	ug/kg
EL3-08	1	4	POTASSIUM	536	7790		REG	57100	ug/kg
EL3-08	1	4	TOLUENE	0.181	1	J	REG	0.462	ug/kg
EL3-08	1	4	VANADIUM	68.2	390		REG	7560	ug/kg
EL3-08	1	4	ZINC	141	974	J	REG	26000	ug/kg

Table A.1. ECODS L-3 Site Evaluation Results Above MDL (Continued)

Location ID	Sample Interval [ft bgs]		Analyte	MDL	PQL	Qualifier	Sample Type	Result	Result Units
	Top	Bottom							
EL3-08	4	8	ACETONE	0.784	11	J	REG	1.92	ug/kg
EL3-08	4	8	ALUMINUM	4010	22600		REG	11700000	ug/kg
EL3-08	4	8	ANTIMONY	847	11300	J	REG	7560	ug/kg
EL3-08	4	8	AROCLOR 1254	8.15	38		REG	114	ug/kg
EL3-08	4	8	ARSENIC	847	4520		REG	6340	ug/kg
EL3-08	4	8	BARIUM	1070	4520	J	REG	14900	ug/kg
EL3-08	4	8	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	61.2	190	J	REG	68	ug/kg
EL3-08	4	8	CALCIUM	3160	67800		REG	4990000	ug/kg
EL3-08	4	8	CHROMIUM	2310	4520	J	REG	26900	ug/kg
EL3-08	4	8	COPPER	790	9030	J	REG	50200	ug/kg
EL3-08	4	8	IRON	9490	22600		REG	27300000	ug/kg
EL3-08	4	8	LEAD	621	4520		REG	11700	ug/kg
EL3-08	4	8	MAGNESIUM	7570	45200		REG	703000	ug/kg
EL3-08	4	8	MANGANESE	5250	8470	J	REG	46700	ug/kg
EL3-08	4	8	MERCURY	3.42	11.4		REG	17.3	ug/kg
EL3-08	4	8	NICKEL	2260	11300	J	REG	5990	ug/kg
EL3-08	4	8	POTASSIUM	6210	90300		REG	115000	ug/kg
EL3-08	4	8	TOLUENE	0.199	1.1	J	REG	0.298	ug/kg
EL3-08	4	8	VANADIUM	790	4520		REG	58600	ug/kg
EL3-08	4	8	ZINC	1640	11300	J	REG	85400	ug/kg
EL3-09	0	1	ACETONE	0.726	10.2	J	REG	1.71	ug/kg
EL3-09	0	1	ALUMINUM	3540	19900		REG	6320000	ug/kg
EL3-09	0	1	AROCLOR 1254	7.57	35.3		REG	113	ug/kg
EL3-09	0	1	BARIUM	947	3990	J	REG	16400	ug/kg
EL3-09	0	1	BENZALDEHYDE	39	176		REG	222	ug/kg
EL3-09	0	1	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	56.9	176		REG	570	ug/kg
EL3-09	0	1	CALCIUM	2790	59800		REG	629000	ug/kg
EL3-09	0	1	CHROMIUM	2040	3990	J	REG	5530	ug/kg
EL3-09	0	1	COPPER	698	7970	J	REG	8150	ug/kg
EL3-09	0	1	CYANIDE	256	1050	J	REG	1220	ug/kg
EL3-09	0	1	IRON	8370	19900		REG	7140000	ug/kg
EL3-09	0	1	LEAD	548	3990		REG	7170	ug/kg
EL3-09	0	1	MAGNESIUM	6680	39900		REG	74900	ug/kg
EL3-09	0	1	MANGANESE	4630	7470	J	REG	83800	ug/kg
EL3-09	0	1	MERCURY	3.1	10.3		REG	35.8	ug/kg
EL3-09	0	1	POTASSIUM	5480	79700	J	REG	64100	ug/kg
EL3-09	0	1	STYRENE	0.112	1.02	J	REG	0.368	ug/kg
EL3-09	0	1	TOLUENE	0.184	1.02	J	REG	0.256	ug/kg
EL3-09	0	1	VANADIUM	698	3990		REG	15200	ug/kg
EL3-09	0	1	ZINC	1450	9970	J	REG	9020	ug/kg
EL3-09	1	4	ACETONE	0.748	10.5	J	REG	1.17	ug/kg
EL3-09	1	4	ALUMINUM	3790	21300		REG	8500000	ug/kg
EL3-09	1	4	AROCLOR 1254	7.65	35.6		REG	109	ug/kg
EL3-09	1	4	BARIUM	1010	4270	J	REG	16200	ug/kg
EL3-09	1	4	BENZALDEHYDE	39.4	178	J	REG	52	ug/kg
EL3-09	1	4	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	57.4	178		REG	344	ug/kg
EL3-09	1	4	CALCIUM	2990	64000		REG	539000	ug/kg
EL3-09	1	4	CHROMIUM	2190	4270	J	REG	8970	ug/kg
EL3-09	1	4	COPPER	747	8540	J	REG	16700	ug/kg
EL3-09	1	4	IRON	8960	21300		REG	10400000	ug/kg
EL3-09	1	4	LEAD	587	4270		REG	9170	ug/kg
EL3-09	1	4	MAGNESIUM	7150	42700		REG	106000	ug/kg
EL3-09	1	4	MANGANESE	4960	8000	J	REG	82900	ug/kg
EL3-09	1	4	MERCURY	3.14	10.5		REG	27.3	ug/kg
EL3-09	1	4	POTASSIUM	5870	85400	J	REG	72300	ug/kg
EL3-09	1	4	TOLUENE	0.19	1.05	J	REG	0.211	ug/kg
EL3-09	1	4	VANADIUM	747	4270		REG	22200	ug/kg
EL3-09	1	4	ZINC	1550	10700	J	REG	16800	ug/kg
EL3-09	4	8	ACETONE	0.76	10.7	J	REG	1.32	ug/kg
EL3-09	4	8	ALUMINUM	3610	20300		REG	5990000	ug/kg

Table A.1. ECODS L-3 Site Evaluation Results Above MDL (Continued)

Location ID	Sample Interval [ft bgs]		Analyte	MDL	PQL	Qualifier	Sample Type	Result	Result Units
	Top	Bottom							
EL3-09	4	8	BARIUM	966	4070	J	REG	3020	ug/kg
EL3-09	4	8	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	59.3	184		REG	360	ug/kg
EL3-09	4	8	CALCIUM	2850	61000		REG	377000	ug/kg
EL3-09	4	8	CHROMIUM	2080	4070	J	REG	10000	ug/kg
EL3-09	4	8	IRON	8540	20300		REG	11800000	ug/kg
EL3-09	4	8	LEAD	559	4070	J	REG	3250	ug/kg
EL3-09	4	8	MAGNESIUM	6810	40700	J	REG	39800	ug/kg
EL3-09	4	8	MANGANESE	4730	7620	J	REG	13600	ug/kg
EL3-09	4	8	POTASSIUM	5590	81300	J	REG	41100	ug/kg
EL3-09	4	8	TOLUENE	0.193	1.07	J	REG	0.257	ug/kg
EL3-09	4	8	VANADIUM	712	4070		REG	27600	ug/kg
EL3-09	4	8	ZINC	1470	10200	J	REG	8160	ug/kg
EL3-10	0	1	1,1-DICHLOROETHYLENE	0.237	0.989	J	REG	0.514	ug/kg
EL3-10	0	1	ACETONE	0.702	9.89	J	REG	4.57	ug/kg
EL3-10	0	1	ALUMINUM	352	1980		REG	4130000	ug/kg
EL3-10	0	1	AROCLOR 1254	7.4	34.5	J	REG	12	ug/kg
EL3-10	0	1	ARSENIC	74.3	396		REG	821	ug/kg
EL3-10	0	1	BARIUM	94.1	396	J	REG	19400	ug/kg
EL3-10	0	1	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	55.6	172	J	REG	106	ug/kg
EL3-10	0	1	CALCIUM	277	5940		REG	209000	ug/kg
EL3-10	0	1	CHROMIUM	203	396	J	REG	3930	ug/kg
EL3-10	0	1	COBALT	79.2	396	J	REG	338	ug/kg
EL3-10	0	1	COPPER	69.3	792	J	REG	25600	ug/kg
EL3-10	0	1	IRON	832	1980		REG	3030000	ug/kg
EL3-10	0	1	LEAD	54.5	396		REG	4140	ug/kg
EL3-10	0	1	MAGNESIUM	664	3960		REG	76300	ug/kg
EL3-10	0	1	MANGANESE	461	743	J	REG	55900	ug/kg
EL3-10	0	1	MERCURY	2.96	9.87	J	REG	4.82	ug/kg
EL3-10	0	1	NICKEL	198	990	J	REG	1290	ug/kg
EL3-10	0	1	POTASSIUM	545	7920		REG	49300	ug/kg
EL3-10	0	1	TOLUENE	0.178	0.989	J	REG	0.326	ug/kg
EL3-10	0	1	VANADIUM	69.3	396		REG	6790	ug/kg
EL3-10	0	1	ZINC	144	990	J	REG	4780	ug/kg
EL3-10	1	4	1,1-DICHLOROETHYLENE	0.252	1.05	J	REG	0.526	ug/kg
EL3-10	1	4	ACETONE	0.747	10.5	J	REG	1.45	ug/kg
EL3-10	1	4	ALUMINUM	353	1990		REG	4560000	ug/kg
EL3-10	1	4	ANTIMONY	74.6	995	J	REG	611	ug/kg
EL3-10	1	4	AROCLOR 1254	7.45	34.7	J	REG	9.82	ug/kg
EL3-10	1	4	ARSENIC	74.6	398		REG	841	ug/kg
EL3-10	1	4	BARIUM	94.5	398	J	REG	21600	ug/kg
EL3-10	1	4	CALCIUM	279	5970		REG	208000	ug/kg
EL3-10	1	4	CHROMIUM	204	398	J	REG	4130	ug/kg
EL3-10	1	4	COBALT	79.6	398		REG	463	ug/kg
EL3-10	1	4	COPPER	69.7	796	J	REG	1770	ug/kg
EL3-10	1	4	IRON	836	1990		REG	3280000	ug/kg
EL3-10	1	4	LEAD	54.7	398		REG	4560	ug/kg
EL3-10	1	4	MAGNESIUM	667	3980		REG	82900	ug/kg
EL3-10	1	4	MANGANESE	463	746	J	REG	66700	ug/kg
EL3-10	1	4	MERCURY	2.94	9.81	J	REG	4.95	ug/kg
EL3-10	1	4	NICKEL	199	995	J	REG	1280	ug/kg
EL3-10	1	4	POTASSIUM	547	7960		REG	50300	ug/kg
EL3-10	1	4	TOLUENE	0.189	1.05	J	REG	0.252	ug/kg
EL3-10	1	4	VANADIUM	69.7	398		REG	7130	ug/kg
EL3-10	1	4	ZINC	144	995	J	REG	3360	ug/kg
EL3-10	4	8	ACETONE	0.711	10	J	REG	1.57	ug/kg
EL3-10	4	8	ALUMINUM	3450	19400		REG	5540000	ug/kg
EL3-10	4	8	ANTIMONY	729	9720	J	REG	6610	ug/kg
EL3-10	4	8	AROCLOR 1254	7.57	35.3	J	REG	180	ug/kg
EL3-10	4	8	AROCLOR 1260	7.75	35.3	J	REG	53.6	ug/kg
EL3-10	4	8	ARSENIC	729	3890		REG	13100	ug/kg

Table A.1. ECODS L-3 Site Evaluation Results Above MDL (Continued)

Location ID	Sample Interval [ft bgs]		Analyte	MDL	PQL	Qualifier	Sample Type	Result	Result Units
	Top	Bottom							
EL3-10	4	8	BARIUM	923	3890	J	REG	22200	ug/kg
EL3-10	4	8	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	56.8	176	J	REG	118	ug/kg
EL3-10	4	8	CADMIUM	292	5830	J	REG	622	ug/kg
EL3-10	4	8	CALCIUM	2720	58300		REG	783000	ug/kg
EL3-10	4	8	CHROMIUM	1990	3890	J	REG	15400	ug/kg
EL3-10	4	8	COBALT	778	3890	J	REG	1810	ug/kg
EL3-10	4	8	COPPER	680	7780	J	REG	65100	ug/kg
EL3-10	4	8	IRON	8170	19400		REG	31700000	ug/kg
EL3-10	4	8	LEAD	535	3890		REG	136000	ug/kg
EL3-10	4	8	MAGNESIUM	6510	38900		REG	150000	ug/kg
EL3-10	4	8	MANGANESE	4520	7290	J	REG	115000	ug/kg
EL3-10	4	8	NICKEL	1940	9720	J	REG	12700	ug/kg
EL3-10	4	8	POTASSIUM	5350	77800		REG	103000	ug/kg
EL3-10	4	8	SODIUM	65800	214000	J	REG	235000	ug/kg
EL3-10	4	8	TOLUENE	0.18	1	J	REG	0.271	ug/kg
EL3-10	4	8	VANADIUM	680	3890		REG	18300	ug/kg
EL3-10	4	8	ZINC	1410	9720	J	REG	1120000	ug/kg
EL3-10	8	12	ACETONE	0.756	10.7	J	REG	1.28	ug/kg
EL3-10	8	12	ALUMINUM	3750	21100		REG	8650000	ug/kg
EL3-10	8	12	AROCLOR 1254	7.91	36.9	J	REG	13.8	ug/kg
EL3-10	8	12	ARSENIC	793	4230	J	REG	3270	ug/kg
EL3-10	8	12	BARIUM	1000	4230	J	REG	4470	ug/kg
EL3-10	8	12	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	59.4	184		REG	244	ug/kg
EL3-10	8	12	CALCIUM	2960	63400		REG	1030000	ug/kg
EL3-10	8	12	CHROMIUM	2170	4230	J	REG	20700	ug/kg
EL3-10	8	12	COPPER	740	8460	J	REG	5560	ug/kg
EL3-10	8	12	IRON	8880	21100		REG	16100000	ug/kg
EL3-10	8	12	LEAD	581	4230		REG	6500	ug/kg
EL3-10	8	12	MAGNESIUM	7080	42300		REG	53300	ug/kg
EL3-10	8	12	MANGANESE	4920	7930	J	REG	16100	ug/kg
EL3-10	8	12	POTASSIUM	5810	84600		REG	111000	ug/kg
EL3-10	8	12	SODIUM	71600	233000	J	REG	107000	ug/kg
EL3-10	8	12	TOLUENE	0.192	1.07	J	REG	0.256	ug/kg
EL3-10	8	12	VANADIUM	740	4230		REG	37200	ug/kg
EL3-10	8	12	ZINC	1530	10600	J	REG	156000	ug/kg
EL3-11	0	1	ALUMINUM	348	1960		REG	4400000	ug/kg
EL3-11	0	1	AROCLOR 1254	7.4	34.5	J	REG	16.7	ug/kg
EL3-11	0	1	ARSENIC	73.5	392		REG	1040	ug/kg
EL3-11	0	1	BARIUM	93.1	392		REG	29800	ug/kg
EL3-11	0	1	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	55.5	172	J	REG	99.3	ug/kg
EL3-11	0	1	CALCIUM	274	5880	J	REG	444000	ug/kg
EL3-11	0	1	CHROMIUM	201	392		REG	4070	ug/kg
EL3-11	0	1	COBALT	78.4	392	J	REG	309	ug/kg
EL3-11	0	1	COPPER	68.6	784		REG	2080	ug/kg
EL3-11	0	1	IRON	823	1960		REG	2990000	ug/kg
EL3-11	0	1	LEAD	53.9	392		REG	4400	ug/kg
EL3-11	0	1	MAGNESIUM	657	3920	J	REG	80700	ug/kg
EL3-11	0	1	MANGANESE	456	735		REG	81100	ug/kg
EL3-11	0	1	MERCURY	3.02	10.1		REG	17.2	ug/kg
EL3-11	0	1	NICKEL	196	980		REG	1180	ug/kg
EL3-11	0	1	POTASSIUM	539	7840		REG	50600	ug/kg
EL3-11	0	1	TOLUENE	0.181	1.01	J	REG	0.352	ug/kg
EL3-11	0	1	VANADIUM	68.6	392		REG	6580	ug/kg
EL3-11	0	1	ZINC	142	980	J	REG	3140	ug/kg
EL3-11	1	4	ALUMINUM	362	2040		REG	3880000	ug/kg
EL3-11	1	4	ANTIMONY	76.6	1020		REG	1110	ug/kg
EL3-11	1	4	AROCLOR 1254	7.39	34.4		REG	144	ug/kg
EL3-11	1	4	ARSENIC	76.6	408		REG	869	ug/kg
EL3-11	1	4	BARIUM	97	408		REG	25300	ug/kg
EL3-11	1	4	BENZO[A]ANTHRACENE	27.8	172	J	REG	43.4	ug/kg

Table A.1. ECODS L-3 Site Evaluation Results Above MDL (Continued)

Location ID	Sample Interval [ft bgs]		Analyte	MDL	PQL	Qualifier	Sample Type	Result	Result Units
	Top	Bottom							
EL3-11	1	4	BENZO[A]PYRENE	33.3	172	J	REG	37.2	ug/kg
EL3-11	1	4	BENZO[B]FLUORANTHENE	39.3	172	J	REG	54.1	ug/kg
EL3-11	1	4	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	55.5	172		REG	433	ug/kg
EL3-11	1	4	CADMIUM	30.6	612	J	REG	103	ug/kg
EL3-11	1	4	CALCIUM	286	6120	J	REG	680000	ug/kg
EL3-11	1	4	CHROMIUM	209	408		REG	6270	ug/kg
EL3-11	1	4	CHRYSENE	28.5	172	J	REG	32	ug/kg
EL3-11	1	4	COBALT	81.7	408		REG	470	ug/kg
EL3-11	1	4	COPPER	71.4	817		REG	9920	ug/kg
EL3-11	1	4	FLUORANTHENE	29.4	172	J	REG	74.7	ug/kg
EL3-11	1	4	IRON	857	2040		REG	3200000	ug/kg
EL3-11	1	4	LEAD	56.1	408		REG	6370	ug/kg
EL3-11	1	4	MAGNESIUM	684	4080	J	REG	75800	ug/kg
EL3-11	1	4	MANGANESE	475	766		REG	120000	ug/kg
EL3-11	1	4	MERCURY	2.99	9.97		REG	25	ug/kg
EL3-11	1	4	NICKEL	204	1020		REG	2950	ug/kg
EL3-11	1	4	PHENANTHRENE	26.9	172	J	REG	49.3	ug/kg
EL3-11	1	4	POTASSIUM	561	8170		REG	41000	ug/kg
EL3-11	1	4	PYRENE	26.9	172	J	REG	57.5	ug/kg
EL3-11	1	4	TOLUENE	0.177	0.982	J	REG	0.314	ug/kg
EL3-11	1	4	VANADIUM	71.4	408		REG	5590	ug/kg
EL3-11	1	4	ZINC	148	1020	J	REG	25500	ug/kg
EL3-11	4	8	ALUMINUM	3680	20800		REG	10100000	ug/kg
EL3-11	4	8	AROCLOR 1254	7.99	37.2	J	REG	28	ug/kg
EL3-11	4	8	ARSENIC	778	4150	J	REG	3230	ug/kg
EL3-11	4	8	BARIUM	986	4150		REG	9530	ug/kg
EL3-11	4	8	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	60	186		REG	579	ug/kg
EL3-11	4	8	CALCIUM	2910	62300	J	REG	519000	ug/kg
EL3-11	4	8	CHROMIUM	2130	4150		REG	18500	ug/kg
EL3-11	4	8	COPPER	726	8300	J	REG	4150	ug/kg
EL3-11	4	8	IRON	8720	20800		REG	18500000	ug/kg
EL3-11	4	8	LEAD	571	4150	J	REG	3960	ug/kg
EL3-11	4	8	MAGNESIUM	6950	41500	J	REG	75000	ug/kg
EL3-11	4	8	MANGANESE	4830	7780		REG	35900	ug/kg
EL3-11	4	8	MERCURY	3.33	11.1	J	REG	8.94	ug/kg
EL3-11	4	8	POTASSIUM	5710	83000	J	REG	58300	ug/kg
EL3-11	4	8	TOLUENE	0.192	1.07	J	REG	0.469	ug/kg
EL3-11	4	8	VANADIUM	726	4150		REG	41300	ug/kg
EL3-11	4	8	ZINC	1500	10400	J	REG	28000	ug/kg
EL3-12	0	1	ALUMINUM	1810	10200		REG	4590000	ug/kg
EL3-12	0	1	ALUMINUM	1730	9740		FD	4340000	ug/kg
EL3-12	0	1	ANTHRACENE	33	173	J	FD	90.5	ug/kg
EL3-12	0	1	AROCLOR 1254	7.41	34.5		FD	41.5	ug/kg
EL3-12	0	1	AROCLOR 1254	7.4	34.5		REG	38.8	ug/kg
EL3-12	0	1	ARSENIC	383	2040	J	REG	1380	ug/kg
EL3-12	0	1	BARIUM	485	2040		REG	23500	ug/kg
EL3-12	0	1	BARIUM	463	1950		FD	22600	ug/kg
EL3-12	0	1	BENZALDEHYDE	38.1	172	J	REG	51.4	ug/kg
EL3-12	0	1	BENZO(G,H,I)PERYLENE	31.1	173	J	FD	104	ug/kg
EL3-12	0	1	BENZO[A]ANTHRACENE	27.9	173		FD	348	ug/kg
EL3-12	0	1	BENZO[A]ANTHRACENE	27.9	172	J	REG	41.4	ug/kg
EL3-12	0	1	BENZO[A]PYRENE	33.4	173		FD	251	ug/kg
EL3-12	0	1	BENZO[A]PYRENE	33.3	172	J	REG	40	ug/kg
EL3-12	0	1	BENZO[B]FLUORANTHENE	39.4	173		FD	359	ug/kg
EL3-12	0	1	BENZO[B]FLUORANTHENE	39.3	172	J	REG	55.9	ug/kg
EL3-12	0	1	BENZO[K]FLUORANTHENE	34.2	173	J	FD	129	ug/kg
EL3-12	0	1	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	55.7	173	J	FD	62.5	ug/kg
EL3-12	0	1	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	55.5	172	J	REG	95.5	ug/kg
EL3-12	0	1	CALCIUM	1430	30600		REG	587000	ug/kg
EL3-12	0	1	CALCIUM	1360	29200		FD	556000	ug/kg

Table A.1. ECODS L-3 Site Evaluation Results Above MDL (Continued)

Location ID	Sample Interval [ft bgs]		Analyte	MDL	PQL	Qualifier	Sample Type	Result	Result Units
	Top	Bottom							
EL3-12	0	1	CHROMIUM	1050	2040		REG	6420	ug/kg
EL3-12	0	1	CHROMIUM	998	1950		FD	4300	ug/kg
EL3-12	0	1	CHRYSENE	28.6	173		FD	277	ug/kg
EL3-12	0	1	CHRYSENE	28.5	172	J	REG	32.8	ug/kg
EL3-12	0	1	COPPER	357	4080	J	REG	3910	ug/kg
EL3-12	0	1	COPPER	341	3900	J	FD	2660	ug/kg
EL3-12	0	1	DIBENZ[AH]ANTHRACENE	34	173	J	FD	35.2	ug/kg
EL3-12	0	1	FLUORANTHENE	29.5	173		FD	776	ug/kg
EL3-12	0	1	FLUORANTHENE	29.4	172	J	REG	69	ug/kg
EL3-12	0	1	INDENO[1,2,3-CD]PYRENE	31.2	173	J	FD	97.1	ug/kg
EL3-12	0	1	IRON	4290	10200		REG	3800000	ug/kg
EL3-12	0	1	IRON	4090	9740		FD	3350000	ug/kg
EL3-12	0	1	LEAD	281	2040		REG	6180	ug/kg
EL3-12	0	1	LEAD	268	1950		FD	5820	ug/kg
EL3-12	0	1	MAGNESIUM	3420	20400	J	REG	79900	ug/kg
EL3-12	0	1	MAGNESIUM	3260	19500	J	FD	72900	ug/kg
EL3-12	0	1	MANGANESE	2370	3830		REG	130000	ug/kg
EL3-12	0	1	MANGANESE	2260	3650		FD	101000	ug/kg
EL3-12	0	1	MERCURY	3.05	10.2		FD	18.4	ug/kg
EL3-12	0	1	MERCURY	3.02	10.1		REG	10.7	ug/kg
EL3-12	0	1	NICKEL	1020	5100	J	REG	1210	ug/kg
EL3-12	0	1	PHENANTHRENE	27	173		FD	445	ug/kg
EL3-12	0	1	PHENANTHRENE	27	172	J	REG	34.1	ug/kg
EL3-12	0	1	POTASSIUM	2810	40800		REG	53500	ug/kg
EL3-12	0	1	POTASSIUM	2680	39000		FD	52500	ug/kg
EL3-12	0	1	PYRENE	26.9	173		FD	679	ug/kg
EL3-12	0	1	PYRENE	26.9	172	J	REG	62.1	ug/kg
EL3-12	0	1	TOLUENE	0.185	1.03	J	FD	0.441	ug/kg
EL3-12	0	1	TOLUENE	0.185	1.03	J	REG	0.4	ug/kg
EL3-12	0	1	VANADIUM	357	2040		REG	7910	ug/kg
EL3-12	0	1	VANADIUM	341	1950		FD	7440	ug/kg
EL3-12	0	1	ZINC	740	5100	J	REG	7250	ug/kg
EL3-12	0	1	ZINC	706	4870	J	FD	6450	ug/kg
EL3-12	1	4	ALUMINUM	3490	19700		REG	7380000	ug/kg
EL3-12	1	4	AROCLOR 1254	7.61	35.4	J	REG	35.2	ug/kg
EL3-12	1	4	AROCLOR 1260	7.79	35.4	J	REG	17.3	ug/kg
EL3-12	1	4	ARSENIC	738	3940	J	REG	2580	ug/kg
EL3-12	1	4	BARIUM	935	3940		REG	18300	ug/kg
EL3-12	1	4	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	57.1	177	J	REG	104	ug/kg
EL3-12	1	4	CALCIUM	2760	59100		REG	521000	ug/kg
EL3-12	1	4	CHROMIUM	2020	3940		REG	10800	ug/kg
EL3-12	1	4	COPPER	689	7880	J	REG	5900	ug/kg
EL3-12	1	4	IRON	8270	19700		REG	10700000	ug/kg
EL3-12	1	4	LEAD	541	3940		REG	9380	ug/kg
EL3-12	1	4	MAGNESIUM	6600	39400	J	REG	79400	ug/kg
EL3-12	1	4	MANGANESE	4580	7380		REG	82800	ug/kg
EL3-12	1	4	MERCURY	3.15	10.5		REG	21.9	ug/kg
EL3-12	1	4	NICKEL	1970	9840	J	REG	2140	ug/kg
EL3-12	1	4	POTASSIUM	5410	78800	J	REG	60200	ug/kg
EL3-12	1	4	TOLUENE	0.183	1.01	J	REG	0.396	ug/kg
EL3-12	1	4	VANADIUM	689	3940		REG	20400	ug/kg
EL3-12	1	4	ZINC	1430	9840	J	REG	11000	ug/kg
EL3-12	4	8	ALUMINUM	3730	21000		REG	9180000	ug/kg
EL3-12	4	8	ARSENIC	788	4200	J	REG	3000	ug/kg
EL3-12	4	8	BARIUM	998	4200		REG	6410	ug/kg
EL3-12	4	8	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	58.8	182	J	REG	157	ug/kg
EL3-12	4	8	CALCIUM	2940	63100		REG	309000	ug/kg
EL3-12	4	8	CHROMIUM	2150	4200		REG	16200	ug/kg
EL3-12	4	8	COPPER	736	8410	J	REG	1660	ug/kg
EL3-12	4	8	IRON	8830	21000		REG	14700000	ug/kg

Table A.1. ECODS L-3 Site Evaluation Results Above MDL (Continued)

Location ID	Sample Interval [ft bgs]		Analyte	MDL	PQL	Qualifier	Sample Type	Result	Result Units
	Top	Bottom							
EL3-12	4	8	LEAD	578	4200	J	REG	3780	ug/kg
EL3-12	4	8	MAGNESIUM	7040	42000	J	REG	54800	ug/kg
EL3-12	4	8	MANGANESE	4890	7880		REG	23700	ug/kg
EL3-12	4	8	MERCURY	3.06	10.2	J	REG	9.34	ug/kg
EL3-12	4	8	POTASSIUM	5780	84100	J	REG	51600	ug/kg
EL3-12	4	8	TOLUENE	0.189	1.05	J	REG	0.421	ug/kg
EL3-12	4	8	VANADIUM	736	4200		REG	33300	ug/kg
EL3-13	0	1	ALUMINUM	1730	9740		REG	7860000	ug/kg
EL3-13	0	1	AROCLOR 1254	7.45	34.7	J	REG	9.18	ug/kg
EL3-13	0	1	BARIUM	463	1950		REG	24900	ug/kg
EL3-13	0	1	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	55.9	174	J	REG	120	ug/kg
EL3-13	0	1	CALCIUM	1360	29200		REG	56200	ug/kg
EL3-13	0	1	CHROMIUM	999	1950		REG	5540	ug/kg
EL3-13	0	1	COPPER	341	3900	J	REG	2020	ug/kg
EL3-13	0	1	IRON	4090	9740		REG	5090000	ug/kg
EL3-13	0	1	LEAD	268	1950		REG	5670	ug/kg
EL3-13	0	1	MAGNESIUM	3260	19500	J	REG	129000	ug/kg
EL3-13	0	1	MANGANESE	2270	3650		REG	18600	ug/kg
EL3-13	0	1	MERCURY	3.05	10.2		REG	24.3	ug/kg
EL3-13	0	1	NICKEL	974	4870	J	REG	1610	ug/kg
EL3-13	0	1	POTASSIUM	2680	39000		REG	107000	ug/kg
EL3-13	0	1	TOLUENE	0.18	1	J	REG	0.28	ug/kg
EL3-13	0	1	VANADIUM	341	1950		REG	11500	ug/kg
EL3-13	0	1	ZINC	706	4870	J	REG	4770	ug/kg
EL3-13	1	4	ALUMINUM	3770	21200		REG	16800000	ug/kg
EL3-13	1	4	ARSENIC	796	4250	J	REG	2720	ug/kg
EL3-13	1	4	BARIUM	1010	4250		REG	18100	ug/kg
EL3-13	1	4	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	58.7	182	J	REG	72.9	ug/kg
EL3-13	1	4	CALCIUM	2970	63700	J	REG	49700	ug/kg
EL3-13	1	4	CHROMIUM	2180	4250		REG	15700	ug/kg
EL3-13	1	4	COPPER	743	8490	J	REG	6560	ug/kg
EL3-13	1	4	IRON	8920	21200		REG	15500000	ug/kg
EL3-13	1	4	LEAD	584	4250		REG	6650	ug/kg
EL3-13	1	4	MAGNESIUM	7110	42500	J	REG	171000	ug/kg
EL3-13	1	4	MANGANESE	4940	7960		REG	10100	ug/kg
EL3-13	1	4	MERCURY	3.13	10.4		REG	73.3	ug/kg
EL3-13	1	4	POTASSIUM	5840	84900		REG	116000	ug/kg
EL3-13	1	4	TOLUENE	0.188	1.04	J	REG	0.324	ug/kg
EL3-13	1	4	VANADIUM	743	4250		REG	33800	ug/kg
EL3-13	1	4	ZINC	1540	10600	J	REG	6070	ug/kg
EL3-13	4	8	ALUMINUM	3660	20600		REG	9540000	ug/kg
EL3-13	4	8	ARSENIC	774	4130		REG	4320	ug/kg
EL3-13	4	8	BARIUM	981	4130		REG	4250	ug/kg
EL3-13	4	8	CALCIUM	2890	61900	J	REG	26200	ug/kg
EL3-13	4	8	CHROMIUM	2120	4130		REG	19200	ug/kg
EL3-13	4	8	COPPER	723	8260	J	REG	1630	ug/kg
EL3-13	4	8	IRON	8670	20600		REG	18800000	ug/kg
EL3-13	4	8	LEAD	568	4130	J	REG	3940	ug/kg
EL3-13	4	8	MAGNESIUM	6920	41300	J	REG	62500	ug/kg
EL3-13	4	8	MANGANESE	4800	7740		REG	9160	ug/kg
EL3-13	4	8	MERCURY	3.19	10.6	J	REG	5.98	ug/kg
EL3-13	4	8	POTASSIUM	5680	82600	J	REG	37100	ug/kg
EL3-13	4	8	STYRENE	0.119	1.08	J	REG	0.162	ug/kg
EL3-13	4	8	TOLUENE	0.194	1.08	J	REG	0.539	ug/kg
EL3-13	4	8	VANADIUM	723	4130		REG	40900	ug/kg
EL3-14	0	1	ALUMINUM	1810	10200		REG	3860000	ug/kg
EL3-14	0	1	AROCLOR 1254	7.32	34.1	J	REG	83.3	ug/kg
EL3-14	0	1	AROCLOR 1260	7.49	34.1	J	REG	30.3	ug/kg
EL3-14	0	1	ARSENIC	382	2040	J	REG	1530	ug/kg
EL3-14	0	1	BARIUM	484	2040		REG	23300	ug/kg

Table A.1. ECODS L-3 Site Evaluation Results Above MDL (Continued)

Location ID	Sample Interval [ft bgs]		Analyte	MDL	PQL	Qualifier	Sample Type	Result	Result Units
	Top	Bottom							
EL3-14	0	1	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	54.9	171		REG	416	ug/kg
EL3-14	0	1	CALCIUM	1430	30600		REG	251000	ug/kg
EL3-14	0	1	CHROMIUM	1040	2040		REG	4710	ug/kg
EL3-14	0	1	COPPER	357	4080		REG	41000	ug/kg
EL3-14	0	1	IRON	4280	10200		REG	2830000	ug/kg
EL3-14	0	1	LEAD	280	2040		REG	20100	ug/kg
EL3-14	0	1	MAGNESIUM	3410	20400	J	REG	89000	ug/kg
EL3-14	0	1	MANGANESE	2370	3820		REG	87700	ug/kg
EL3-14	0	1	MERCURY	3.02	10.1		REG	11.9	ug/kg
EL3-14	0	1	NICKEL	1020	5090	J	REG	1630	ug/kg
EL3-14	0	1	POTASSIUM	2800	40800		REG	67100	ug/kg
EL3-14	0	1	TOLUENE	0.186	1.03	J	REG	0.279	ug/kg
EL3-14	0	1	VANADIUM	357	2040		REG	5520	ug/kg
EL3-14	0	1	ZINC	739	5090	J	REG	49900	ug/kg
EL3-14	1	4	ALUMINUM	3550	20000		REG	7980000	ug/kg
EL3-14	1	4	ANTIMONY	751	10000		REG	40300	ug/kg
EL3-14	1	4	AROCLOR 1254	152	710		REG	2390	ug/kg
EL3-14	1	4	ARSENIC	751	4000		REG	9060	ug/kg
EL3-14	1	4	BARIUM	951	4000		REG	279000	ug/kg
EL3-14	1	4	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	57.2	177		REG	238	ug/kg
EL3-14	1	4	CADMIUM	300	6010	J	REG	4750	ug/kg
EL3-14	1	4	CALCIUM	2800	60100		REG	3730000	ug/kg
EL3-14	1	4	CHROMIUM	2050	4000		REG	46800	ug/kg
EL3-14	1	4	COBALT	801	4000	J	REG	2430	ug/kg
EL3-14	1	4	COPPER	701	8010		REG	1140000	ug/kg
EL3-14	1	4	IRON	8410	20000		REG	24300000	ug/kg
EL3-14	1	4	LEAD	550	4000		REG	396000	ug/kg
EL3-14	1	4	MAGNESIUM	6710	40000	J	REG	1030000	ug/kg
EL3-14	1	4	MANGANESE	4650	7510		REG	320000	ug/kg
EL3-14	1	4	MERCURY	3.09	10.3		REG	23.4	ug/kg
EL3-14	1	4	NICKEL	2000	10000		REG	25500	ug/kg
EL3-14	1	4	POTASSIUM	5500	80100		REG	251000	ug/kg
EL3-14	1	4	SODIUM	67800	220000		REG	270000	ug/kg
EL3-14	1	4	TOLUENE	0.183	1.02	J	REG	0.366	ug/kg
EL3-14	1	4	VANADIUM	701	4000		REG	19400	ug/kg
EL3-14	1	4	ZINC	1450	10000	J	REG	808000	ug/kg
EL3-14	4	8	ALUMINUM	4000	22600		REG	12700000	ug/kg
EL3-14	4	8	ALUMINUM	3980	22400		FD	13600000	ug/kg
EL3-14	4	8	AROCLOR 1254	8.3	38.7		REG	121	ug/kg
EL3-14	4	8	AROCLOR 1254	8.25	38.4		FD	150	ug/kg
EL3-14	4	8	ARSENIC	846	4510		REG	7070	ug/kg
EL3-14	4	8	ARSENIC	840	4480		FD	6970	ug/kg
EL3-14	4	8	BARIUM	1070	4510		REG	9370	ug/kg
EL3-14	4	8	BARIUM	1060	4480		FD	6050	ug/kg
EL3-14	4	8	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	62.3	193		REG	547	ug/kg
EL3-14	4	8	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	61.9	192		FD	693	ug/kg
EL3-14	4	8	CALCIUM	3160	67700		REG	329000	ug/kg
EL3-14	4	8	CALCIUM	3140	67200		FD	306000	ug/kg
EL3-14	4	8	CHROMIUM	2310	4510		REG	31300	ug/kg
EL3-14	4	8	CHROMIUM	2300	4480		FD	31000	ug/kg
EL3-14	4	8	COPPER	790	9020		REG	178000	ug/kg
EL3-14	4	8	COPPER	784	8960		FD	154000	ug/kg
EL3-14	4	8	IRON	9480	22600		REG	29000000	ug/kg
EL3-14	4	8	IRON	9410	22400		FD	29600000	ug/kg
EL3-14	4	8	LEAD	620	4510		REG	16200	ug/kg
EL3-14	4	8	LEAD	616	4480		FD	14000	ug/kg
EL3-14	4	8	MAGNESIUM	7560	45100	J	REG	109000	ug/kg
EL3-14	4	8	MAGNESIUM	7500	44800	J	FD	106000	ug/kg
EL3-14	4	8	MANGANESE	5250	8460		REG	15600	ug/kg
EL3-14	4	8	MANGANESE	5210	8400		FD	14500	ug/kg

Table A.1. ECODS L-3 Site Evaluation Results Above MDL (Continued)

Location ID	Sample Interval [ft bgs]		Analyte	MDL	PQL	Qualifier	Sample Type	Result	Result Units
	Top	Bottom							
EL3-14	4	8	MERCURY	3.37	11.2		FD	22.7	ug/kg
EL3-14	4	8	MERCURY	3.45	11.5		REG	16.8	ug/kg
EL3-14	4	8	POTASSIUM	6200	90200	J	REG	48200	ug/kg
EL3-14	4	8	POTASSIUM	6160	89600	J	FD	53400	ug/kg
EL3-14	4	8	TOLUENE	0.205	1.14	J	FD	0.422	ug/kg
EL3-14	4	8	TOLUENE	0.201	1.12	J	REG	0.39	ug/kg
EL3-14	4	8	VANADIUM	790	4510		REG	66000	ug/kg
EL3-14	4	8	VANADIUM	784	4480		FD	68600	ug/kg
EL3-14	4	8	ZINC	1640	11300	J	REG	22800	ug/kg
EL3-14	4	8	ZINC	1620	11200	J	FD	18200	ug/kg
EL3-15	0	1	ALUMINUM	342	1930		REG	3790000	ug/kg
EL3-15	0	1	AROCLOR 1254	7.29	34	J	REG	21.3	ug/kg
EL3-15	0	1	AROCLOR 1260	7.47	34	J	REG	7.59	ug/kg
EL3-15	0	1	ARSENIC	72.3	385		REG	588	ug/kg
EL3-15	0	1	BARIUM	91.5	385	J	REG	17200	ug/kg
EL3-15	0	1	CALCIUM	270	5780		REG	78700	ug/kg
EL3-15	0	1	CHROMIUM	198	385		REG	3520	ug/kg
EL3-15	0	1	COBALT	77.1	385		REG	395	ug/kg
EL3-15	0	1	COPPER	67.4	771	J	REG	2730	ug/kg
EL3-15	0	1	IRON	809	1930		REG	2620000	ug/kg
EL3-15	0	1	LEAD	53	385	J	REG	4080	ug/kg
EL3-15	0	1	MAGNESIUM	646	3850		REG	74900	ug/kg
EL3-15	0	1	MANGANESE	448	723	J	REG	49900	ug/kg
EL3-15	0	1	MERCURY	2.9	9.66	J	REG	5.24	ug/kg
EL3-15	0	1	METHYL TERTIARY BUTYL ETHER (MTBE)	0.0689	0.984	J	REG	0.256	ug/kg
EL3-15	0	1	NICKEL	193	963		REG	1110	ug/kg
EL3-15	0	1	POTASSIUM	530	7710		REG	50800	ug/kg
EL3-15	0	1	VANADIUM	67.4	385		REG	5730	ug/kg
EL3-15	0	1	ZINC	140	963		REG	3890	ug/kg
EL3-15	1	4	ALUMINUM	340	1920		REG	3610000	ug/kg
EL3-15	1	4	ANTIMONY	71.9	959	J	REG	1570	ug/kg
EL3-15	1	4	AROCLOR 1254	7.3	34	J	REG	19.2	ug/kg
EL3-15	1	4	AROCLOR 1260	7.47	34	J	REG	11	ug/kg
EL3-15	1	4	ARSENIC	71.9	384		REG	559	ug/kg
EL3-15	1	4	BARIUM	91.1	384	J	REG	19300	ug/kg
EL3-15	1	4	CALCIUM	268	5750		REG	141000	ug/kg
EL3-15	1	4	CHROMIUM	197	384		REG	3410	ug/kg
EL3-15	1	4	COBALT	76.7	384		REG	403	ug/kg
EL3-15	1	4	COPPER	67.1	767	J	REG	2640	ug/kg
EL3-15	1	4	IRON	805	1920		REG	2320000	ug/kg
EL3-15	1	4	LEAD	52.7	384	J	REG	3830	ug/kg
EL3-15	1	4	MAGNESIUM	642	3840		REG	74700	ug/kg
EL3-15	1	4	MANGANESE	446	719	J	REG	55100	ug/kg
EL3-15	1	4	METHYL TERTIARY BUTYL ETHER (MTBE)	0.0696	0.994	J	REG	0.209	ug/kg
EL3-15	1	4	NICKEL	192	959		REG	1210	ug/kg
EL3-15	1	4	POTASSIUM	527	7670		REG	48300	ug/kg
EL3-15	1	4	VANADIUM	67.1	384		REG	5080	ug/kg
EL3-15	1	4	ZINC	139	959		REG	5680	ug/kg
EL3-15	4	8	ALUMINUM	3660	20600		REG	12700000	ug/kg
EL3-15	4	8	ANTIMONY	773	10300	J	REG	18900	ug/kg
EL3-15	4	8	AROCLOR 1254	160	744	J	REG	3710	ug/kg
EL3-15	4	8	AROCLOR 1260	164	744	J	REG	1300	ug/kg
EL3-15	4	8	ARSENIC	773	4130		REG	9930	ug/kg
EL3-15	4	8	BARIUM	980	4130	J	REG	285000	ug/kg
EL3-15	4	8	BENZO(G,H,I)PERYLENE	33.5	186	J	REG	55.1	ug/kg
EL3-15	4	8	BENZO[A]ANTHRACENE	30.1	186	J	REG	58.1	ug/kg
EL3-15	4	8	BENZO[A]PYRENE	36	186	J	REG	65.1	ug/kg
EL3-15	4	8	BENZO[B]FLUORANTHENE	42.5	186	J	REG	111	ug/kg
EL3-15	4	8	BENZO[K]FLUORANTHENE	36.9	186	J	REG	40.9	ug/kg
EL3-15	4	8	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	60	186		REG	1540	ug/kg

Table A.1. ECODS L-3 Site Evaluation Results Above MDL (Continued)

Location ID	Sample Interval [ft bgs]		Analyte	MDL	PQL	Qualifier	Sample Type	Result	Result Units
	Top	Bottom							
EL3-15	4	8	CADMIUM	309	6190	J	REG	1030	ug/kg
EL3-15	4	8	CALCIUM	2890	61900		REG	24000000	ug/kg
EL3-15	4	8	CHROMIUM	2110	4130		REG	39300	ug/kg
EL3-15	4	8	CHRYSENE	30.8	186	J	REG	59.9	ug/kg
EL3-15	4	8	COBALT	825	4130	J	REG	2610	ug/kg
EL3-15	4	8	COPPER	722	8250	J	REG	4900000	ug/kg
EL3-15	4	8	DI-N-BUTYL PHTHALATE	34.1	186	J	REG	81.1	ug/kg
EL3-15	4	8	FLUORANTHENE	31.7	186	J	REG	100	ug/kg
EL3-15	4	8	INDENO[1,2,3-CD]PYRENE	33.6	186	J	REG	47.3	ug/kg
EL3-15	4	8	IRON	8660	20600		REG	31600000	ug/kg
EL3-15	4	8	LEAD	567	4130	J	REG	129000	ug/kg
EL3-15	4	8	MAGNESIUM	6910	41300		REG	1550000	ug/kg
EL3-15	4	8	MANGANESE	4800	7730	J	REG	209000	ug/kg
EL3-15	4	8	MERCURY	3.35	11.2	J	REG	3790	ug/kg
EL3-15	4	8	METHYL TERTIARY BUTYL ETHER (MTBE)	0.0744	1.06	J	REG	0.383	ug/kg
EL3-15	4	8	NICKEL	2060	10300		REG	16100	ug/kg
EL3-15	4	8	PHENANTHRENE	29.1	186	J	REG	53.6	ug/kg
EL3-15	4	8	POTASSIUM	5670	82500		REG	266000	ug/kg
EL3-15	4	8	PYRENE	29	186	J	REG	79.3	ug/kg
EL3-15	4	8	SODIUM	69800	227000	J	REG	171000	ug/kg
EL3-15	4	8	VANADIUM	722	4130		REG	51700	ug/kg
EL3-15	4	8	ZINC	1500	10300		REG	476000	ug/kg
EL3-16	0	1	ALUMINUM	341	1920		REG	3520000	ug/kg
EL3-16	0	1	AROCLOR 1254	147	687	J	REG	5630	ug/kg
EL3-16	0	1	AROCLOR 1260	151	687	J	REG	2170	ug/kg
EL3-16	0	1	ARSENIC	72.1	385		REG	781	ug/kg
EL3-16	0	1	BARIUM	91.4	385	J	REG	21000	ug/kg
EL3-16	0	1	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	55.4	172	J	REG	102	ug/kg
EL3-16	0	1	CALCIUM	269	5770		REG	114000	ug/kg
EL3-16	0	1	CHROMIUM	197	385	J	REG	3570	ug/kg
EL3-16	0	1	COBALT	76.9	385	J	REG	271	ug/kg
EL3-16	0	1	COPPER	67.3	769		REG	25900	ug/kg
EL3-16	0	1	IRON	808	1920		REG	2690000	ug/kg
EL3-16	0	1	LEAD	52.9	385		REG	5130	ug/kg
EL3-16	0	1	MAGNESIUM	644	3850		REG	69700	ug/kg
EL3-16	0	1	MANGANESE	447	721	J	REG	58600	ug/kg
EL3-16	0	1	MERCURY	3.03	10.1	J	REG	7.82	ug/kg
EL3-16	0	1	METHYL TERTIARY BUTYL ETHER (MTBE)	0.0691	0.987	J	REG	0.326	ug/kg
EL3-16	0	1	NICKEL	192	962		REG	1190	ug/kg
EL3-16	0	1	POTASSIUM	529	7690		REG	49900	ug/kg
EL3-16	0	1	VANADIUM	67.3	385		REG	5280	ug/kg
EL3-16	0	1	ZINC	139	962	J	REG	24600	ug/kg
EL3-16	1	4	1,1-DICHLOROETHYLENE	0.238	0.992	J	FD	7.65	ug/kg
EL3-16	1	4	ACETONE	0.704	9.92	J	FD	9.22	ug/kg
EL3-16	1	4	ALUMINUM	346	1950		REG	3920000	ug/kg
EL3-16	1	4	ALUMINUM	337	1900		FD	3690000	ug/kg
EL3-16	1	4	ANTIMONY	73.1	974		REG	1300	ug/kg
EL3-16	1	4	ANTIMONY	71.2	949		FD	1440	ug/kg
EL3-16	1	4	AROCLOR 1254	7.35	34.3	J	REG	244	ug/kg
EL3-16	1	4	AROCLOR 1254	7.35	34.3	J	FD	225	ug/kg
EL3-16	1	4	AROCLOR 1260	7.53	34.3	J	REG	160	ug/kg
EL3-16	1	4	AROCLOR 1260	7.53	34.3	J	FD	51.2	ug/kg
EL3-16	1	4	ARSENIC	73.1	390		REG	898	ug/kg
EL3-16	1	4	ARSENIC	71.2	380		FD	842	ug/kg
EL3-16	1	4	BARIUM	92.6	390	J	REG	23200	ug/kg
EL3-16	1	4	BARIUM	90.2	380	J	FD	22600	ug/kg
EL3-16	1	4	BENZENE	0.0695	0.992	J	FD	1	ug/kg
EL3-16	1	4	BENZENE	0.0734	1.05	J	REG	1.36	ug/kg
EL3-16	1	4	BENZO[A]ANTHRACENE	27.7	171	J	REG	34.6	ug/kg
EL3-16	1	4	BENZO[A]ANTHRACENE	27.7	171	J	FD	31.9	ug/kg

Table A.1. ECODS L-3 Site Evaluation Results Above MDL (Continued)

Location ID	Sample Interval [ft bgs]		Analyte	MDL	PQL	Qualifier	Sample Type	Result	Result Units
	Top	Bottom							
EL3-16	1	4	BENZO[A]PYRENE	33.1	171	J	REG	35.6	ug/kg
EL3-16	1	4	BENZO[B]FLUORANTHENE	39.1	171	J	REG	50.7	ug/kg
EL3-16	1	4	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	55.2	171		REG	330	ug/kg
EL3-16	1	4	CALCIUM	273	5850		REG	594000	ug/kg
EL3-16	1	4	CALCIUM	266	5690		FD	667000	ug/kg
EL3-16	1	4	CHROMIUM	200	390	J	REG	4740	ug/kg
EL3-16	1	4	CHROMIUM	195	380	J	FD	4870	ug/kg
EL3-16	1	4	COBALT	77.9	390	J	REG	369	ug/kg
EL3-16	1	4	COBALT	75.9	380		FD	385	ug/kg
EL3-16	1	4	COPPER	68.2	779		REG	12900	ug/kg
EL3-16	1	4	COPPER	66.4	759		FD	10700	ug/kg
EL3-16	1	4	DICHLOROMETHANE (METHYLENE CHLORIDE)	0.417	9.92	J	FD	0.447	ug/kg
EL3-16	1	4	FLUORANTHENE	29.2	171	J	REG	61.3	ug/kg
EL3-16	1	4	FLUORANTHENE	29.2	171	J	FD	57.2	ug/kg
EL3-16	1	4	IRON	818	1950		REG	2890000	ug/kg
EL3-16	1	4	IRON	797	1900		FD	2790000	ug/kg
EL3-16	1	4	LEAD	53.6	390		REG	8030	ug/kg
EL3-16	1	4	LEAD	52.2	380		FD	8490	ug/kg
EL3-16	1	4	MAGNESIUM	653	3900		REG	108000	ug/kg
EL3-16	1	4	MAGNESIUM	636	3800		FD	108000	ug/kg
EL3-16	1	4	MANGANESE	453	731	J	REG	69200	ug/kg
EL3-16	1	4	MANGANESE	441	712	J	FD	73400	ug/kg
EL3-16	1	4	MERCURY	3.01	10		REG	40.2	ug/kg
EL3-16	1	4	MERCURY	2.85	9.51		FD	35.6	ug/kg
EL3-16	1	4	METHYL TERTIARY BUTYL ETHER (MTBE)	0.0695	0.992	J	FD	0.288	ug/kg
EL3-16	1	4	METHYL TERTIARY BUTYL ETHER (MTBE)	0.0734	1.05	J	REG	0.43	ug/kg
EL3-16	1	4	NICKEL	195	974		REG	1660	ug/kg
EL3-16	1	4	NICKEL	190	949		FD	1840	ug/kg
EL3-16	1	4	PHENANTHRENE	26.8	171	J	REG	28.8	ug/kg
EL3-16	1	4	PHENANTHRENE	26.8	171	J	FD	35.3	ug/kg
EL3-16	1	4	POTASSIUM	536	7790		REG	50800	ug/kg
EL3-16	1	4	POTASSIUM	522	7590		FD	48900	ug/kg
EL3-16	1	4	PYRENE	26.7	171	J	REG	49.7	ug/kg
EL3-16	1	4	PYRENE	26.7	171	J	FD	45.2	ug/kg
EL3-16	1	4	VANADIUM	68.2	390		REG	5600	ug/kg
EL3-16	1	4	VANADIUM	66.4	380		FD	5500	ug/kg
EL3-16	1	4	XYLENES	0.178	1.05	J	REG	0.514	ug/kg
EL3-16	1	4	ZINC	141	974	J	REG	15500	ug/kg
EL3-16	1	4	ZINC	138	949	J	FD	16900	ug/kg
EL3-16	4	8	ALUMINUM	3520	19800		REG	7820000	ug/kg
EL3-16	4	8	ANTIMONY	744	9920	J	REG	13500	ug/kg
EL3-16	4	8	AROCLOR 1254	15.3	71.3	J	REG	399	ug/kg
EL3-16	4	8	AROCLOR 1260	15.7	71.3	J	REG	135	ug/kg
EL3-16	4	8	ARSENIC	744	3970	J	REG	3840	ug/kg
EL3-16	4	8	BARIUM	942	3970	J	REG	189000	ug/kg
EL3-16	4	8	BENZENE	0.0758	1.08		REG	1.67	ug/kg
EL3-16	4	8	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	57.5	178		REG	1240	ug/kg
EL3-16	4	8	CADMIUM	298	5950	J	REG	2380	ug/kg
EL3-16	4	8	CALCIUM	2780	59500		REG	9330000	ug/kg
EL3-16	4	8	CHROMIUM	2030	3970		REG	38500	ug/kg
EL3-16	4	8	COBALT	793	3970	J	REG	2070	ug/kg
EL3-16	4	8	COPPER	694	7930	J	REG	745000	ug/kg
EL3-16	4	8	FLUORANTHENE	30.4	178	J	REG	31.4	ug/kg
EL3-16	4	8	IRON	8330	19800		REG	20200000	ug/kg
EL3-16	4	8	LEAD	545	3970	J	REG	157000	ug/kg
EL3-16	4	8	MAGNESIUM	6640	39700		REG	1040000	ug/kg
EL3-16	4	8	MANGANESE	4610	7440	J	REG	154000	ug/kg
EL3-16	4	8	MERCURY	3.04	10.1	J	REG	88.3	ug/kg
EL3-16	4	8	NICKEL	1980	9920		REG	16200	ug/kg
EL3-16	4	8	POTASSIUM	5450	79300		REG	177000	ug/kg

Table A.1. ECODS L-3 Site Evaluation Results Above MDL (Continued)

Location ID	Sample Interval [ft bgs]		Analyte	MDL	PQL	Qualifier	Sample Type	Result	Result Units
	Top	Bottom							
EL3-16	4	8	SODIUM	67100	218000	J	REG	160000	ug/kg
EL3-16	4	8	VANADIUM	694	3970		REG	21800	ug/kg
EL3-16	4	8	XYLENES	0.184	1.08	J	REG	0.292	ug/kg
EL3-16	4	8	ZINC	1440	9920		REG	648000	ug/kg
EL3-16	8	12	ALUMINUM	3560	20100		REG	5020000	ug/kg
EL3-16	8	12	ANTIMONY	753	10000	J	REG	4680	ug/kg
EL3-16	8	12	AROCLOR 1254	15.2	70.9	J	REG	354	ug/kg
EL3-16	8	12	AROCLOR 1260	15.6	70.9	J	REG	102	ug/kg
EL3-16	8	12	BARIUM	954	4020	J	REG	73100	ug/kg
EL3-16	8	12	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	57.1	177		REG	616	ug/kg
EL3-16	8	12	CADMIUM	301	6020	J	REG	1190	ug/kg
EL3-16	8	12	CALCIUM	2810	60200		REG	2230000	ug/kg
EL3-16	8	12	CHROMIUM	2060	4020		REG	14500	ug/kg
EL3-16	8	12	COPPER	703	8030	J	REG	153000	ug/kg
EL3-16	8	12	IRON	8430	20100		REG	13500000	ug/kg
EL3-16	8	12	LEAD	552	4020	J	REG	50900	ug/kg
EL3-16	8	12	MAGNESIUM	6730	40200		REG	361000	ug/kg
EL3-16	8	12	MANGANESE	4670	7530	J	REG	88200	ug/kg
EL3-16	8	12	MERCURY	3.19	10.6	J	REG	56.9	ug/kg
EL3-16	8	12	NICKEL	2010	10000	J	REG	4800	ug/kg
EL3-16	8	12	POTASSIUM	5520	80300		REG	94000	ug/kg
EL3-16	8	12	SODIUM	68000	221000	J	REG	223000	ug/kg
EL3-16	8	12	VANADIUM	703	4020		REG	16200	ug/kg
EL3-16	8	12	ZINC	1460	10000		REG	581000	ug/kg
EL3-17	0	1	ACETONE	0.747	10.5		REG	28.6	ug/kg
EL3-17	0	1	ALUMINUM	351	1980		REG	5560000	ug/kg
EL3-17	0	1	AROCLOR 1254	7.43	34.6	J	REG	12.2	ug/kg
EL3-17	0	1	AROCLOR 1260	7.61	34.6	J	REG	7.65	ug/kg
EL3-17	0	1	ARSENIC	74.2	396		REG	997	ug/kg
EL3-17	0	1	BARIUM	94	396	J	REG	24000	ug/kg
EL3-17	0	1	CALCIUM	277	5940		REG	77500	ug/kg
EL3-17	0	1	CHROMIUM	203	396	J	REG	4660	ug/kg
EL3-17	0	1	COBALT	79.2	396	J	REG	340	ug/kg
EL3-17	0	1	COPPER	69.3	792		REG	7980	ug/kg
EL3-17	0	1	DDE	0.106	1.73	J	REG	0.584	ug/kg
EL3-17	0	1	DDT	0.131	1.73	J	REG	1.07	ug/kg
EL3-17	0	1	IRON	831	1980		REG	3560000	ug/kg
EL3-17	0	1	LEAD	54.4	396		REG	5430	ug/kg
EL3-17	0	1	MAGNESIUM	663	3960		REG	97700	ug/kg
EL3-17	0	1	MANGANESE	460	742	J	REG	28200	ug/kg
EL3-17	0	1	MERCURY	3.06	10.2		REG	28	ug/kg
EL3-17	0	1	METHYL ETHYL KETONE	0.41	5.26	J	REG	1.57	ug/kg
EL3-17	0	1	METHYL TERTIARY BUTYL ETHER (MTBE)	0.0736	1.05	J	REG	0.4	ug/kg
EL3-17	0	1	NICKEL	198	990		REG	1900	ug/kg
EL3-17	0	1	POTASSIUM	544	7920		REG	62900	ug/kg
EL3-17	0	1	VANADIUM	69.3	396		REG	7730	ug/kg
EL3-17	0	1	ZINC	143	990	J	REG	4880	ug/kg
EL3-17	1	4	1,1-DICHLOROETHYLENE	0.254	1.06		REG	2.88	ug/kg
EL3-17	1	4	ACETONE	0.751	10.6		REG	11.4	ug/kg
EL3-17	1	4	ALUMINUM	3700	20800		REG	10700000	ug/kg
EL3-17	1	4	ARSENIC	782	4170	J	REG	2700	ug/kg
EL3-17	1	4	BARIUM	990	4170	J	REG	12200	ug/kg
EL3-17	1	4	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	58	180		REG	1290	ug/kg
EL3-17	1	4	CALCIUM	2920	62500	J	REG	59200	ug/kg
EL3-17	1	4	CHROMIUM	2140	4170	J	REG	13400	ug/kg
EL3-17	1	4	COPPER	729	8340	J	REG	2570	ug/kg
EL3-17	1	4	IRON	8750	20800		REG	13900000	ug/kg
EL3-17	1	4	LEAD	573	4170		REG	5140	ug/kg
EL3-17	1	4	MAGNESIUM	6980	41700		REG	108000	ug/kg
EL3-17	1	4	MANGANESE	4850	7820	J	REG	11000	ug/kg

Table A.1. ECODS L-3 Site Evaluation Results Above MDL (Continued)

Location ID	Sample Interval [ft bgs]		Analyte	MDL	PQL	Qualifier	Sample Type	Result	Result Units
	Top	Bottom							
EL3-17	1	4	MERCURY	3.14	10.5		REG	35.2	ug/kg
EL3-17	1	4	METHYL TERTIARY BUTYL ETHER (MTBE)	0.0741	1.06	J	REG	0.307	ug/kg
EL3-17	1	4	POTASSIUM	5730	83400	J	REG	77600	ug/kg
EL3-17	1	4	VANADIUM	729	4170		REG	30900	ug/kg
EL3-17	1	4	ZINC	1510	10400	J	REG	8530	ug/kg
EL3-17	4	8	ALUMINIUM	3680	20700		REG	7700000	ug/kg
EL3-17	4	8	ARSENIC	777	4140	J	REG	3410	ug/kg
EL3-17	4	8	BARIUM	984	4140	J	REG	2950	ug/kg
EL3-17	4	8	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	60.2	187		REG	527	ug/kg
EL3-17	4	8	CALCIUM	2900	62100	J	REG	5010	ug/kg
EL3-17	4	8	CHROMIUM	2120	4140	J	REG	11000	ug/kg
EL3-17	4	8	IRON	8700	20700		REG	16900000	ug/kg
EL3-17	4	8	LEAD	570	4140	J	REG	4040	ug/kg
EL3-17	4	8	MAGNESIUM	6940	41400	J	REG	30700	ug/kg
EL3-17	4	8	MANGANESE	4820	7770	J	REG	9840	ug/kg
EL3-17	4	8	MERCURY	3.11	10.4		REG	21.3	ug/kg
EL3-17	4	8	METHYL TERTIARY BUTYL ETHER (MTBE)	0.0767	1.1	J	REG	0.361	ug/kg
EL3-17	4	8	POTASSIUM	5700	82900	J	REG	31900	ug/kg
EL3-17	4	8	VANADIUM	725	4140		REG	32500	ug/kg
EL3-17	4	8	ZINC	1500	10400	J	REG	9700	ug/kg
EL3-18	0	1	ACETONE	0.722	10.2	J	REG	0.916	ug/kg
EL3-18	0	1	ALUMINIUM	3510	19800		REG	6180000	ug/kg
EL3-18	0	1	AROCLOR 1254	7.57	35.3	J	REG	16	ug/kg
EL3-18	0	1	BARIUM	938	3950	J	REG	13100	ug/kg
EL3-18	0	1	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	56.8	176	J	REG	70.9	ug/kg
EL3-18	0	1	CALCIUM	2770	59300		REG	898000	ug/kg
EL3-18	0	1	CHROMIUM	2020	3950	J	REG	7510	ug/kg
EL3-18	0	1	COPPER	691	7900	J	REG	3060	ug/kg
EL3-18	0	1	IRON	8300	19800		REG	7760000	ug/kg
EL3-18	0	1	LEAD	543	3950		REG	4880	ug/kg
EL3-18	0	1	MAGNESIUM	6620	39500		REG	82900	ug/kg
EL3-18	0	1	MANGANESE	4590	7410	J	REG	37400	ug/kg
EL3-18	0	1	MERCURY	3.1	10.3		REG	24.4	ug/kg
EL3-18	0	1	METHYL TERTIARY BUTYL ETHER (MTBE)	0.0712	1.02	J	REG	0.376	ug/kg
EL3-18	0	1	POTASSIUM	5430	79000	J	REG	72000	ug/kg
EL3-18	0	1	TOLUENE	0.183	1.02	J	REG	0.346	ug/kg
EL3-18	0	1	VANADIUM	691	3950		REG	17200	ug/kg
EL3-18	0	1	ZINC	1430	9880	J	REG	10000	ug/kg
EL3-18	1	4	ACETONE	0.757	10.7	J	REG	2.34	ug/kg
EL3-18	1	4	ALUMINIUM	3790	21300		REG	13000000	ug/kg
EL3-18	1	4	ARSENIC	801	4270	J	REG	3330	ug/kg
EL3-18	1	4	BARIUM	1010	4270	J	REG	19600	ug/kg
EL3-18	1	4	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	59	183		REG	237	ug/kg
EL3-18	1	4	CALCIUM	2990	64000		REG	784000	ug/kg
EL3-18	1	4	CHROMIUM	2190	4270	J	REG	14600	ug/kg
EL3-18	1	4	COPPER	747	8540	J	REG	3710	ug/kg
EL3-18	1	4	IRON	8970	21300		REG	14500000	ug/kg
EL3-18	1	4	LEAD	587	4270		REG	4860	ug/kg
EL3-18	1	4	MAGNESIUM	7150	42700		REG	148000	ug/kg
EL3-18	1	4	MANGANESE	4960	8010	J	REG	33800	ug/kg
EL3-18	1	4	MERCURY	3.08	10.3		REG	30.1	ug/kg
EL3-18	1	4	POTASSIUM	5870	85400		REG	110000	ug/kg
EL3-18	1	4	TOLUENE	0.192	1.07	J	REG	0.384	ug/kg
EL3-18	1	4	VANADIUM	747	4270		REG	33400	ug/kg
EL3-18	1	4	ZINC	1550	10700	J	REG	16200	ug/kg
EL3-18	4	8	ACETONE	0.752	10.6	J	REG	1.01	ug/kg
EL3-18	4	8	ALUMINIUM	3970	22300		REG	8130000	ug/kg
EL3-18	4	8	ALUMINIUM	3720	20900		FD	7170000	ug/kg
EL3-18	4	8	ARSENIC	838	4470	J	REG	3630	ug/kg
EL3-18	4	8	BARIUM	1060	4470	J	REG	3640	ug/kg

Table A.1. ECODS L-3 Site Evaluation Results Above MDL (Continued)

Location ID	Sample Interval [ft bgs]		Analyte	MDL	PQL	Qualifier	Sample Type	Result	Result Units
	Top	Bottom							
EL3-18	4	8	BARIUM	995	4190	J	FD	3410	ug/kg
EL3-18	4	8	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	60	186		REG	323	ug/kg
EL3-18	4	8	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	59.6	185		FD	259	ug/kg
EL3-18	4	8	CALCIUM	3130	67000		REG	414000	ug/kg
EL3-18	4	8	CALCIUM	2930	62800		FD	387000	ug/kg
EL3-18	4	8	CHROMIUM	2290	4470	J	REG	15600	ug/kg
EL3-18	4	8	CHROMIUM	2150	4190	J	FD	12700	ug/kg
EL3-18	4	8	COPPER	733	8380	J	FD	2030	ug/kg
EL3-18	4	8	COPPER	782	8940	J	REG	1980	ug/kg
EL3-18	4	8	IRON	9380	22300		REG	16700000	ug/kg
EL3-18	4	8	IRON	8800	20900		FD	14800000	ug/kg
EL3-18	4	8	LEAD	614	4470	J	REG	3910	ug/kg
EL3-18	4	8	LEAD	576	4190	J	FD	3340	ug/kg
EL3-18	4	8	MAGNESIUM	7480	44700		REG	65900	ug/kg
EL3-18	4	8	MAGNESIUM	7020	41900		FD	59700	ug/kg
EL3-18	4	8	MANGANESE	5190	8380	J	REG	12900	ug/kg
EL3-18	4	8	MANGANESE	4870	7850	J	FD	13400	ug/kg
EL3-18	4	8	METHYL TERTIARY BUTYL ETHER (MTBE)	0.0741	1.06	J	REG	0.191	ug/kg
EL3-18	4	8	POTASSIUM	6140	89400	J	REG	67200	ug/kg
EL3-18	4	8	POTASSIUM	5760	83800	J	FD	67600	ug/kg
EL3-18	4	8	TOLUENE	0.192	1.07	J	FD	0.31	ug/kg
EL3-18	4	8	TOLUENE	0.191	1.06	J	REG	0.275	ug/kg
EL3-18	4	8	VANADIUM	782	4470		REG	41200	ug/kg
EL3-18	4	8	VANADIUM	733	4190		FD	33500	ug/kg
EL3-18	4	8	ZINC	1620	11200	J	REG	5930	ug/kg
EL3-18	4	8	ZINC	1520	10500	J	FD	7760	ug/kg
EL3-19	0	1	ALUMINUM	1770	9970		REG	8700000	ug/kg
EL3-19	0	1	AROCLOR 1254	7.49	34.9	J	REG	21.2	ug/kg
EL3-19	0	1	AROCLOR 1260	7.66	34.9	J	REG	11.8	ug/kg
EL3-19	0	1	ARSENIC	374	1990		REG	2300	ug/kg
EL3-19	0	1	BARIUM	473	1990		REG	30100	ug/kg
EL3-19	0	1	BENZO[A]ANTHRACENE	28.2	174	J	REG	36.3	ug/kg
EL3-19	0	1	BENZO[B]FLUORANTHENE	39.8	174	J	REG	46.7	ug/kg
EL3-19	0	1	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	56.2	174	J	REG	137	ug/kg
EL3-19	0	1	CALCIUM	1400	29900		REG	503000	ug/kg
EL3-19	0	1	CHROMIUM	1020	1990		REG	8400	ug/kg
EL3-19	0	1	COPPER	349	3990		REG	8840	ug/kg
EL3-19	0	1	FLUORANTHENE	29.8	174	J	REG	61.4	ug/kg
EL3-19	0	1	IRON	4190	9970		REG	8170000	ug/kg
EL3-19	0	1	LEAD	274	1990		REG	7530	ug/kg
EL3-19	0	1	MAGNESIUM	3340	19900	J	REG	126000	ug/kg
EL3-19	0	1	MANGANESE	2320	3740		REG	71000	ug/kg
EL3-19	0	1	MERCURY	3.12	10.4		REG	33.7	ug/kg
EL3-19	0	1	NICKEL	997	4980	J	REG	1640	ug/kg
EL3-19	0	1	PHENANTHRENE	27.3	174	J	REG	32.1	ug/kg
EL3-19	0	1	POTASSIUM	2740	39900		REG	100000	ug/kg
EL3-19	0	1	PYRENE	27.2	174	J	REG	55.5	ug/kg
EL3-19	0	1	TOLUENE	0.187	1.04	J	REG	0.311	ug/kg
EL3-19	0	1	VANADIUM	349	1990		REG	18000	ug/kg
EL3-19	0	1	ZINC	723	4980	J	REG	6220	ug/kg
EL3-19	1	4	ALUMINUM	3770	21200		REG	19200000	ug/kg
EL3-19	1	4	ARSENIC	796	4240		REG	4950	ug/kg
EL3-19	1	4	BARIUM	1010	4240		REG	32600	ug/kg
EL3-19	1	4	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	58.9	183	J	REG	178	ug/kg
EL3-19	1	4	CALCIUM	2970	63600		REG	731000	ug/kg
EL3-19	1	4	CHROMIUM	2170	4240		REG	15700	ug/kg
EL3-19	1	4	COPPER	743	8490	J	REG	3760	ug/kg
EL3-19	1	4	IRON	8910	21200		REG	17900000	ug/kg
EL3-19	1	4	LEAD	583	4240		REG	6730	ug/kg
EL3-19	1	4	MAGNESIUM	7110	42400	J	REG	208000	ug/kg

Table A.1. ECODS L-3 Site Evaluation Results Above MDL (Continued)

Location ID	Sample Interval [ft bgs]		Analyte	MDL	PQL	Qualifier	Sample Type	Result	Result Units
	Top	Bottom							
EL3-19	1	4	MANGANESE	4930	7960		REG	27500	ug/kg
EL3-19	1	4	MERCURY	3.29	11		REG	55.1	ug/kg
EL3-19	1	4	NICKEL	2120	10600	J	REG	3370	ug/kg
EL3-19	1	4	POTASSIUM	5830	84900		REG	165000	ug/kg
EL3-19	1	4	SODIUM	71800	233000	J	REG	86000	ug/kg
EL3-19	1	4	TOLUENE	0.189	1.05	J	REG	0.483	ug/kg
EL3-19	1	4	VANADIUM	743	4240		REG	37000	ug/kg
EL3-19	1	4	ZINC	1540	10600	J	REG	4480	ug/kg
EL3-19	8	12	ALUMINUM	3840	21600		REG	10100000	ug/kg
EL3-19	8	12	BARIUM	1030	4330		REG	5600	ug/kg
EL3-19	8	12	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	61.2	190		REG	1810	ug/kg
EL3-19	8	12	CALCIUM	3030	64900		REG	523000	ug/kg
EL3-19	8	12	CHROMIUM	2220	4330		REG	12400	ug/kg
EL3-19	8	12	IRON	9090	21600		REG	9830000	ug/kg
EL3-19	8	12	LEAD	595	4330	J	REG	2430	ug/kg
EL3-19	8	12	MAGNESIUM	7250	43300	J	REG	67200	ug/kg
EL3-19	8	12	MANGANESE	5030	8110		REG	34000	ug/kg
EL3-19	8	12	MERCURY	3.2	10.7		REG	11.6	ug/kg
EL3-19	8	12	POTASSIUM	5950	86500	J	REG	71200	ug/kg
EL3-19	8	12	TOLUENE	0.208	1.16	J	REG	0.463	ug/kg
EL3-19	8	12	VANADIUM	757	4330		REG	24200	ug/kg
EL3-19	8	12	ZINC	1570	10800	J	REG	2690	ug/kg
EL3-19	12	16	ALUMINUM	3750	21100		REG	6910000	ug/kg
EL3-19	12	16	BARIUM	1000	4220	J	REG	3780	ug/kg
EL3-19	12	16	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	60.2	187		REG	1020	ug/kg
EL3-19	12	16	CALCIUM	2960	63300		REG	291000	ug/kg
EL3-19	12	16	CHROMIUM	2160	4220		REG	10300	ug/kg
EL3-19	12	16	IRON	8870	21100		REG	12300000	ug/kg
EL3-19	12	16	LEAD	581	4220	J	REG	3380	ug/kg
EL3-19	12	16	MAGNESIUM	7070	42200	J	REG	52400	ug/kg
EL3-19	12	16	MANGANESE	4910	7920		REG	15400	ug/kg
EL3-19	12	16	MERCURY	3.18	10.6	J	REG	5.19	ug/kg
EL3-19	12	16	POTASSIUM	5810	84400	J	REG	69000	ug/kg
EL3-19	12	16	TOLUENE	0.194	1.08	J	REG	0.367	ug/kg
EL3-19	12	16	VANADIUM	739	4220		REG	29100	ug/kg
EL3-20	0	1	ACETONE	0.703	9.9		REG	149	ug/kg
EL3-20	0	1	ALUMINUM	1710	9630		REG	5100000	ug/kg
EL3-20	0	1	BARIUM	458	1930		REG	19300	ug/kg
EL3-20	0	1	CALCIUM	1350	28900		REG	51500	ug/kg
EL3-20	0	1	CHROMIUM	987	1930		REG	4280	ug/kg
EL3-20	0	1	COPPER	337	3850	J	REG	865	ug/kg
EL3-20	0	1	IRON	4050	9630		REG	3320000	ug/kg
EL3-20	0	1	LEAD	265	1930		REG	4480	ug/kg
EL3-20	0	1	MAGNESIUM	3230	19300	J	REG	115000	ug/kg
EL3-20	0	1	MANGANESE	2240	3610		REG	23400	ug/kg
EL3-20	0	1	MERCURY	2.98	9.93	J	REG	8.38	ug/kg
EL3-20	0	1	METHYL ETHYL KETONE	0.386	4.95		REG	8.11	ug/kg
EL3-20	0	1	NICKEL	963	4820	J	REG	1340	ug/kg
EL3-20	0	1	POTASSIUM	2650	38500		REG	82900	ug/kg
EL3-20	0	1	VANADIUM	337	1930		REG	7330	ug/kg
EL3-20	0	1	ZINC	698	4820	J	REG	3090	ug/kg
EL3-20	1	4	ALUMINUM	1810	10200		REG	18300000	ug/kg
EL3-20	1	4	ARSENIC	382	2040		REG	3030	ug/kg
EL3-20	1	4	BARIUM	484	2040		REG	15300	ug/kg
EL3-20	1	4	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	58.8	182		REG	197	ug/kg
EL3-20	1	4	CALCIUM	1430	30500		REG	112000	ug/kg
EL3-20	1	4	CHROMIUM	1040	2040		REG	18100	ug/kg
EL3-20	1	4	COPPER	356	4070	J	REG	3740	ug/kg
EL3-20	1	4	IRON	4280	10200		REG	16600000	ug/kg
EL3-20	1	4	LEAD	280	2040		REG	6110	ug/kg

Table A.1. ECODS L-3 Site Evaluation Results Above MDL (Continued)

Location ID	Sample Interval [ft bgs]		Analyte	MDL	PQL	Qualifier	Sample Type	Result	Result Units
	Top	Bottom							
EL3-20	1	4	MAGNESIUM	3410	20400	J	REG	223000	ug/kg
EL3-20	1	4	MANGANESE	2370	3820		REG	14400	ug/kg
EL3-20	1	4	MERCURY	3.12	10.4	J	REG	41.7	ug/kg
EL3-20	1	4	NICKEL	1020	5090	J	REG	2820	ug/kg
EL3-20	1	4	POTASSIUM	2800	40700		REG	145000	ug/kg
EL3-20	1	4	VANADIUM	356	2040		REG	36300	ug/kg
EL3-20	1	4	ZINC	738	5090	J	REG	4680	ug/kg
EL3-20	8	12	1,1-DICHLOROETHYLENE	0.265	1.1		REG	1.65	ug/kg
EL3-20	8	12	1,1-DICHLOROETHYLENE	0.277	1.16	J	FD	0.728	ug/kg
EL3-20	8	12	ALUMINUM	3910	22000		REG	12100000	ug/kg
EL3-20	8	12	ALUMINUM	3980	22400		FD	15100000	ug/kg
EL3-20	8	12	ARSENIC	826	4400		REG	6000	ug/kg
EL3-20	8	12	ARSENIC	840	4480		FD	8840	ug/kg
EL3-20	8	12	BARIUM	1050	4400	J	REG	3470	ug/kg
EL3-20	8	12	BARIUM	1060	4480	J	FD	4230	ug/kg
EL3-20	8	12	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	62.3	193		REG	524	ug/kg
EL3-20	8	12	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	63	195		FD	881	ug/kg
EL3-20	8	12	CALCIUM	3080	66100	J	REG	52100	ug/kg
EL3-20	8	12	CALCIUM	3140	67200	J	FD	63100	ug/kg
EL3-20	8	12	CHROMIUM	2260	4400		REG	24900	ug/kg
EL3-20	8	12	CHROMIUM	2300	4480		FD	35400	ug/kg
EL3-20	8	12	COPPER	784	8960	J	FD	2990	ug/kg
EL3-20	8	12	COPPER	771	8810	J	REG	2270	ug/kg
EL3-20	8	12	IRON	9250	22000		REG	28100000	ug/kg
EL3-20	8	12	IRON	9410	22400		FD	39000000	ug/kg
EL3-20	8	12	LEAD	606	4400		REG	5000	ug/kg
EL3-20	8	12	LEAD	616	4480		FD	6160	ug/kg
EL3-20	8	12	MAGNESIUM	7380	44000	J	REG	74600	ug/kg
EL3-20	8	12	MAGNESIUM	7510	44800	J	FD	95000	ug/kg
EL3-20	8	12	MANGANESE	5120	8260		REG	10700	ug/kg
EL3-20	8	12	MANGANESE	5210	8400		FD	10100	ug/kg
EL3-20	8	12	POTASSIUM	6060	88100	J	REG	55900	ug/kg
EL3-20	8	12	POTASSIUM	6160	89600	J	FD	61000	ug/kg
EL3-20	8	12	VANADIUM	771	4400		REG	64200	ug/kg
EL3-20	8	12	VANADIUM	784	4480		FD	89800	ug/kg
EL3-20	12	16	ALUMINUM	1870	10500		REG	5030000	ug/kg
EL3-20	12	16	ARSENIC	395	2110	J	REG	1630	ug/kg
EL3-20	12	16	BARIUM	501	2110	J	REG	1680	ug/kg
EL3-20	12	16	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	60.3	187		REG	451	ug/kg
EL3-20	12	16	CHROMIUM	1080	2110		REG	4060	ug/kg
EL3-20	12	16	COPPER	369	4220	J	REG	1150	ug/kg
EL3-20	12	16	IRON	4430	10500		REG	6400000	ug/kg
EL3-20	12	16	LEAD	290	2110		REG	5110	ug/kg
EL3-20	12	16	MAGNESIUM	3530	21100	J	REG	34300	ug/kg
EL3-20	12	16	MANGANESE	2450	3950		REG	7340	ug/kg
EL3-20	12	16	POTASSIUM	2900	42200	J	REG	37200	ug/kg
EL3-20	12	16	VANADIUM	369	2110		REG	19400	ug/kg
EL3-20	12	16	ZINC	764	5270	J	REG	928	ug/kg
EL3-21	0	1	ALUMINUM	1780	10100		REG	7260000	ug/kg
EL3-21	0	1	BARIUM	478	2010		REG	28500	ug/kg
EL3-21	0	1	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	56.2	174	J	REG	121	ug/kg
EL3-21	0	1	CALCIUM	1410	30200		REG	73400	ug/kg
EL3-21	0	1	CHROMIUM	1030	2010		REG	5680	ug/kg
EL3-21	0	1	COPPER	352	4020	J	REG	1910	ug/kg
EL3-21	0	1	IRON	4220	10100		REG	5030000	ug/kg
EL3-21	0	1	LEAD	276	2010		REG	4850	ug/kg
EL3-21	0	1	MAGNESIUM	3370	20100	J	REG	139000	ug/kg
EL3-21	0	1	MANGANESE	2340	3770		REG	30000	ug/kg
EL3-21	0	1	MERCURY	3.1	10.3		REG	14.3	ug/kg
EL3-21	0	1	NICKEL	1010	5030	J	REG	1690	ug/kg

Table A.1. ECODS L-3 Site Evaluation Results Above MDL (Continued)

Location ID	Sample Interval [ft bgs]		Analyte	MDL	PQL	Qualifier	Sample Type	Result	Result Units
	Top	Bottom							
EL3-21	0	1	POTASSIUM	2760	40200		REG	95900	ug/kg
EL3-21	0	1	TOLUENE	0.19	1.06	J	REG	0.296	ug/kg
EL3-21	0	1	VANADIUM	352	2010		REG	10300	ug/kg
EL3-21	0	1	ZINC	729	5030	J	REG	3080	ug/kg
EL3-21	1	4	ALUMINUM	3740	21100		REG	18900000	ug/kg
EL3-21	1	4	BARIUM	1000	4210		REG	17300	ug/kg
EL3-21	1	4	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	59.3	184	J	REG	60.3	ug/kg
EL3-21	1	4	CALCIUM	2950	63200		REG	66400	ug/kg
EL3-21	1	4	CHROMIUM	2160	4210		REG	17900	ug/kg
EL3-21	1	4	COPPER	737	8420	J	REG	3290	ug/kg
EL3-21	1	4	IRON	8850	21100		REG	16300000	ug/kg
EL3-21	1	4	LEAD	579	4210		REG	5970	ug/kg
EL3-21	1	4	MAGNESIUM	7060	42100	J	REG	206000	ug/kg
EL3-21	1	4	MANGANESE	4900	7900		REG	13400	ug/kg
EL3-21	1	4	MERCURY	3.23	10.8	J	REG	76	ug/kg
EL3-21	1	4	NICKEL	2110	10500	J	REG	2410	ug/kg
EL3-21	1	4	POTASSIUM	5790	84200		REG	139000	ug/kg
EL3-21	1	4	VANADIUM	737	4210		REG	36600	ug/kg
EL3-21	1	4	ZINC	1530	10500	J	REG	3900	ug/kg
EL3-21	8	12	1,1-DICHLOROETHYLENE	0.273	1.14		REG	2.37	ug/kg
EL3-21	8	12	ALUMINUM	3680	20700		REG	6790000	ug/kg
EL3-21	8	12	BARIUM	986	4150	J	REG	3770	ug/kg
EL3-21	8	12	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	60.2	187		REG	516	ug/kg
EL3-21	8	12	CHROMIUM	2130	4150		REG	10600	ug/kg
EL3-21	8	12	IRON	8710	20700		REG	11900000	ug/kg
EL3-21	8	12	LEAD	571	4150	J	REG	3610	ug/kg
EL3-21	8	12	MAGNESIUM	6950	41500	J	REG	48000	ug/kg
EL3-21	8	12	MANGANESE	4820	7780		REG	19900	ug/kg
EL3-21	8	12	POTASSIUM	5710	83000	J	REG	49800	ug/kg
EL3-21	8	12	VANADIUM	726	4150		REG	27500	ug/kg
EL3-21	8	12	ZINC	1500	10400	J	REG	1640	ug/kg
EL3-21	12	16	1,1-DICHLOROETHYLENE	0.283	1.18	J	REG	0.648	ug/kg
EL3-21	12	16	ALUMINUM	4000	22500		REG	14900000	ug/kg
EL3-21	12	16	ARSENIC	845	4510		REG	5500	ug/kg
EL3-21	12	16	BARIUM	1070	4510		REG	5040	ug/kg
EL3-21	12	16	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	65.2	203		REG	683	ug/kg
EL3-21	12	16	CHROMIUM	2310	4510		REG	26900	ug/kg
EL3-21	12	16	COPPER	789	9010	J	REG	3720	ug/kg
EL3-21	12	16	IRON	9460	22500		REG	26700000	ug/kg
EL3-21	12	16	LEAD	620	4510		REG	6300	ug/kg
EL3-21	12	16	MAGNESIUM	7550	45100	J	REG	86400	ug/kg
EL3-21	12	16	MANGANESE	5240	8450		REG	19300	ug/kg
EL3-21	12	16	MERCURY	3.54	11.8	J	REG	8.23	ug/kg
EL3-21	12	16	NICKEL	2250	11300	J	REG	4060	ug/kg
EL3-21	12	16	POTASSIUM	6200	90100	J	REG	66800	ug/kg
EL3-21	12	16	VANADIUM	789	4510		REG	67300	ug/kg
EL3-21	12	16	ZINC	1630	11300	J	REG	3680	ug/kg
EL3-22	0	1	1,1-DICHLOROETHYLENE	0.248	1.03	J	REG	0.362	ug/kg
EL3-22	0	1	ALUMINUM	1750	9840		REG	7250000	ug/kg
EL3-22	0	1	BARIUM	467	1970		REG	30900	ug/kg
EL3-22	0	1	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	55.8	173		REG	262	ug/kg
EL3-22	0	1	CALCIUM	1380	29500		REG	110000	ug/kg
EL3-22	0	1	CHROMIUM	1010	1970		REG	5830	ug/kg
EL3-22	0	1	COPPER	344	3930	J	REG	1300	ug/kg
EL3-22	0	1	IRON	4130	9840		REG	5460000	ug/kg
EL3-22	0	1	LEAD	271	1970		REG	4500	ug/kg
EL3-22	0	1	MAGNESIUM	3300	19700	J	REG	137000	ug/kg
EL3-22	0	1	MANGANESE	2290	3690		REG	56600	ug/kg
EL3-22	0	1	MERCURY	2.99	9.96	J	REG	13.1	ug/kg
EL3-22	0	1	NICKEL	984	4920	J	REG	1460	ug/kg

Table A.1. ECODS L-3 Site Evaluation Results Above MDL (Continued)

Location ID	Sample Interval [ft bgs]		Analyte	MDL	PQL	Qualifier	Sample Type	Result	Result Units
	Top	Bottom							
EL3-22	0	1	POTASSIUM	2710	39300		REG	99400	ug/kg
EL3-22	0	1	VANADIUM	344	1970		REG	11800	ug/kg
EL3-22	0	1	ZINC	713	4920	J	REG	3320	ug/kg
EL3-22	1	4	1,1-DICHLOROETHYLENE	0.265	1.11		REG	2.12	ug/kg
EL3-22	1	4	1,1-DICHLOROETHYLENE	0.257	1.07		FD	2.25	ug/kg
EL3-22	1	4	ALUMINUM	3710	20900		REG	17300000	ug/kg
EL3-22	1	4	ALUMINUM	1840	10300		FD	16000000	ug/kg
EL3-22	1	4	ARSENIC	784	4180	J	REG	3470	ug/kg
EL3-22	1	4	ARSENIC	388	2070		FD	4160	ug/kg
EL3-22	1	4	BARIUM	993	4180		REG	23700	ug/kg
EL3-22	1	4	BARIUM	491	2070		FD	21600	ug/kg
EL3-22	1	4	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	58.9	183		REG	232	ug/kg
EL3-22	1	4	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	58.9	183	J	FD	114	ug/kg
EL3-22	1	4	CALCIUM	2930	62700		REG	73000	ug/kg
EL3-22	1	4	CALCIUM	1450	31000		FD	63500	ug/kg
EL3-22	1	4	CHROMIUM	2140	4180		REG	17800	ug/kg
EL3-22	1	4	CHROMIUM	1060	2070		FD	17800	ug/kg
EL3-22	1	4	COPPER	362	4140	J	FD	3360	ug/kg
EL3-22	1	4	COPPER	732	8360	J	REG	2990	ug/kg
EL3-22	1	4	IRON	8780	20900		REG	16900000	ug/kg
EL3-22	1	4	IRON	4340	10300		FD	16600000	ug/kg
EL3-22	1	4	LEAD	575	4180		REG	5710	ug/kg
EL3-22	1	4	LEAD	284	2070		FD	5890	ug/kg
EL3-22	1	4	MAGNESIUM	7000	41800	J	REG	234000	ug/kg
EL3-22	1	4	MAGNESIUM	3460	20700	J	FD	217000	ug/kg
EL3-22	1	4	MANGANESE	4860	7840		REG	16400	ug/kg
EL3-22	1	4	MANGANESE	2400	3880		FD	16100	ug/kg
EL3-22	1	4	MERCURY	3.26	10.9	J	REG	62.2	ug/kg
EL3-22	1	4	MERCURY	3.23	10.8	J	FD	51.3	ug/kg
EL3-22	1	4	NICKEL	2090	10500	J	REG	2690	ug/kg
EL3-22	1	4	NICKEL	1030	5170	J	FD	2650	ug/kg
EL3-22	1	4	POTASSIUM	5750	83600		REG	150000	ug/kg
EL3-22	1	4	POTASSIUM	2840	41400		FD	142000	ug/kg
EL3-22	1	4	VANADIUM	732	4180		REG	36100	ug/kg
EL3-22	1	4	VANADIUM	362	2070		FD	35600	ug/kg
EL3-22	1	4	ZINC	1520	10500	J	REG	4770	ug/kg
EL3-22	1	4	ZINC	750	5170	J	FD	4430	ug/kg
EL3-22	8	12	ALUMINUM	3810	21400		REG	12200000	ug/kg
EL3-22	8	12	ARSENIC	804	4290		REG	5870	ug/kg
EL3-22	8	12	BARIUM	1020	4290	J	REG	3410	ug/kg
EL3-22	8	12	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	61.5	191		REG	484	ug/kg
EL3-22	8	12	CHROMIUM	2200	4290		REG	24000	ug/kg
EL3-22	8	12	COPPER	750	8570	J	REG	2140	ug/kg
EL3-22	8	12	IRON	9000	21400		REG	23800000	ug/kg
EL3-22	8	12	LEAD	590	4290		REG	4420	ug/kg
EL3-22	8	12	MAGNESIUM	7180	42900	J	REG	51800	ug/kg
EL3-22	8	12	MANGANESE	4980	8040		REG	10000	ug/kg
EL3-22	8	12	MERCURY	3.29	11	J	REG	3.41	ug/kg
EL3-22	8	12	POTASSIUM	5900	85700	J	REG	40500	ug/kg
EL3-22	8	12	VANADIUM	750	4290		REG	54700	ug/kg
EL3-22	12	16	ALUMINUM	3910	22000		REG	9410000	ug/kg
EL3-22	12	16	ARSENIC	826	4400	J	REG	2810	ug/kg
EL3-22	12	16	BARIUM	1050	4400	J	REG	2780	ug/kg
EL3-22	12	16	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	62.8	195		REG	329	ug/kg
EL3-22	12	16	CHROMIUM	2260	4400		REG	19300	ug/kg
EL3-22	12	16	COPPER	771	8810	J	REG	2350	ug/kg
EL3-22	12	16	IRON	9250	22000		REG	19300000	ug/kg
EL3-22	12	16	LEAD	606	4400		REG	4900	ug/kg
EL3-22	12	16	MAGNESIUM	7380	44000	J	REG	37400	ug/kg
EL3-22	12	16	MANGANESE	5120	8260		REG	9380	ug/kg

Table A.1. ECODS L-3 Site Evaluation Results Above MDL (Continued/End)

Location ID	Sample Interval [ft bgs]		Analyte	MDL	PQL	Qualifier	Sample Type	Result	Result Units
	Top	Bottom							
EL3-22	12	16	POTASSIUM	6060	88100	J	REG	41600	ug/kg
EL3-22	12	16	VANADIUM	771	4400		REG	49400	ug/kg
EL3-23	0	1	ALUMINUM	1720	9690		REG	3400000	ug/kg
EL3-23	0	1	ARSENIC	363	1940	J	REG	1720	ug/kg
EL3-23	0	1	BARIIUM	460	1940		REG	12200	ug/kg
EL3-23	0	1	CALCIUM	1360	29100		REG	32200	ug/kg
EL3-23	0	1	CHROMIUM	993	1940		REG	3720	ug/kg
EL3-23	0	1	IRON	4070	9690		REG	3220000	ug/kg
EL3-23	0	1	LEAD	266	1940		REG	3650	ug/kg
EL3-23	0	1	MAGNESIUM	3250	19400	J	REG	70900	ug/kg
EL3-23	0	1	MANGANESE	2250	3630		REG	27300	ug/kg
EL3-23	0	1	MERCURY	2.86	9.53	J	REG	5.61	ug/kg
EL3-23	0	1	POTASSIUM	2660	38800		REG	57600	ug/kg
EL3-23	0	1	VANADIUM	339	1940		REG	6690	ug/kg
EL3-23	0	1	ZINC	702	4840	J	REG	2250	ug/kg
EL3-23	1	4	1,1-DICHLOROETHYLENE	0.278	1.16		REG	2.63	ug/kg
EL3-23	1	4	ALUMINUM	4010	22600		REG	18900000	ug/kg
EL3-23	1	4	ARSENIC	847	4520		REG	7880	ug/kg
EL3-23	1	4	BARIIUM	1070	4520		REG	14800	ug/kg
EL3-23	1	4	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	62.5	194		REG	638	ug/kg
EL3-23	1	4	CALCIUM	3160	67800		REG	77700	ug/kg
EL3-23	1	4	CHROMIUM	2320	4520		REG	29300	ug/kg
EL3-23	1	4	COPPER	791	9040	J	REG	3750	ug/kg
EL3-23	1	4	IRON	9490	22600		REG	31800000	ug/kg
EL3-23	1	4	LEAD	621	4520		REG	6210	ug/kg
EL3-23	1	4	MAGNESIUM	7570	45200	J	REG	215000	ug/kg
EL3-23	1	4	MANGANESE	5250	8470		REG	11200	ug/kg
EL3-23	1	4	MERCURY	3.38	11.3	J	REG	53.7	ug/kg
EL3-23	1	4	POTASSIUM	6210	90400		REG	116000	ug/kg
EL3-23	1	4	VANADIUM	791	4520		REG	73800	ug/kg
EL3-23	1	4	ZINC	1640	11300	J	REG	2790	ug/kg
EL3-23	8	12	ALUMINUM	1900	10700		REG	5710000	ug/kg
EL3-23	8	12	ARSENIC	401	2140	J	REG	1610	ug/kg
EL3-23	8	12	BARIIUM	508	2140		REG	2440	ug/kg
EL3-23	8	12	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	61.2	190	J	REG	1580	ug/kg
EL3-23	8	12	CHROMIUM	1100	2140		REG	6860	ug/kg
EL3-23	8	12	COPPER	374	4280	J	REG	1030	ug/kg
EL3-23	8	12	IRON	4490	10700		REG	8060000	ug/kg
EL3-23	8	12	LEAD	294	2140		REG	4280	ug/kg
EL3-23	8	12	MAGNESIUM	3580	21400	J	REG	34400	ug/kg
EL3-23	8	12	MANGANESE	2490	4010		REG	9430	ug/kg
EL3-23	8	12	POTASSIUM	2940	42800	J	REG	33600	ug/kg
EL3-23	8	12	VANADIUM	374	2140		REG	21100	ug/kg
EL3-23	8	12	ZINC	775	5350	J	REG	1240	ug/kg
EL3-23	12	16	ALUMINUM	1960	11100		REG	6550000	ug/kg
EL3-23	12	16	ARSENIC	415	2210	J	REG	1910	ug/kg
EL3-23	12	16	BARIIUM	526	2210		REG	3350	ug/kg
EL3-23	12	16	BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	60.1	187	J	REG	193	ug/kg
EL3-23	12	16	CHROMIUM	1130	2210		REG	9710	ug/kg
EL3-23	12	16	COPPER	387	4430	J	REG	1290	ug/kg
EL3-23	12	16	IRON	4650	11100		REG	8260000	ug/kg
EL3-23	12	16	LEAD	304	2210		REG	3760	ug/kg
EL3-23	12	16	MAGNESIUM	3710	22100	J	REG	55400	ug/kg
EL3-23	12	16	MANGANESE	2570	4150		REG	10900	ug/kg
EL3-23	12	16	POTASSIUM	3040	44300		REG	47900	ug/kg
EL3-23	12	16	VANADIUM	387	2210		REG	20100	ug/kg
EL3-23	12	16	ZINC	802	5530	J	REG	1920	ug/kg

ft bgs - feet below ground surface

MDL - method detection limit

PQL - practical quantification limit

J - estimated result (above MDL; below PQL)

REG - regular sample

FD - field duplicate sample

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APPENDIX B

1994 LRP 131-4L Subunit Site Evaluation Results Above Method Detection Limits

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Table B.1. LRP 131-4L Site Evaluation Results Above MDL

Customer ID	RFW #	Analyte	Qualifier	Result	Units
Semi-Volatiles					
94174-8	004	2-Methylnaphthalene	J	58	ug/kg
94174-3-2	008	2-Methylnaphthalene	J	41	ug/kg
94174-6	002	Acenaphthlene		390	ug/kg
94174-11	007	Acenaphthlene		390	ug/kg
94174-7	003	Acenaphthlene	J	72	ug/kg
94174-3-2	008	Acenaphthylene	J	170	ug/kg
94174-3-2	008	Anthracene		2600	ug/kg
94174-6	002	Anthracene		1100	ug/kg
94174-7	003	Anthracene	J	110	ug/kg
94174-6	002	Benzo(a)anthracene		3300	ug/kg
94174-3-2	008	Benzo(a)anthracene		1500	ug/kg
94174-7	003	Benzo(a)anthracene	J	260	ug/kg
94174-5	001	Benzo(a)anthracene	J	150	ug/kg
94174-10	006	Benzo(a)anthracene	J	72	ug/kg
94174-3-7	009	Benzo(a)anthracene	J	56	ug/kg
94174-8	004	Benzo(a)anthracene	J	44	ug/kg
94174-9	005	Benzo(a)anthracene	J	37	ug/kg
94174-6	002	Benzo(a)pyrene		2300	ug/kg
94174-3-2	008	Benzo(a)pyrene		780	ug/kg
94174-7	003	Benzo(a)pyrene	J	260	ug/kg
94174-5	001	Benzo(a)pyrene	J	150	ug/kg
94174-10	006	Benzo(a)pyrene	J	62	ug/kg
94174-3-7	009	Benzo(a)pyrene	J	47	ug/kg
94174-8	004	Benzo(a)pyrene	J	40	ug/kg
94174-6	002	Benzo(b)fluoranthene		3800	ug/kg
94174-3-2	008	Benzo(b)fluoranthene		2100	ug/kg
94174-7	003	Benzo(b)fluoranthene	J	350	ug/kg
94174-5	001	Benzo(b)fluoranthene	J	230	ug/kg
94174-10	006	Benzo(b)fluoranthene	J	120	ug/kg
94174-3-7	009	Benzo(b)fluoranthene	J	82	ug/kg
94174-8	004	Benzo(b)fluoranthene	J	71	ug/kg
94174-11	007	Benzo(b)fluoranthene	J	58	ug/kg
94174-6	002	Benzo(g,h,i)perylene		670	ug/kg
94174-3-2	008	Benzo(g,h,i)perylene	J	180	ug/kg
94174-7	003	Benzo(g,h,i)perylene	J	110	ug/kg
94174-5	001	Benzo(g,h,i)perylene	J	84	ug/kg
94174-6	002	Benzo(k)fluoranthene		1400	ug/kg
94174-3-2	008	Benzo(k)fluoranthene	J	360	ug/kg
94174-9	005	Benzo(k)fluoranthene	J	360	ug/kg
94174-5	001	Benzo(k)fluoranthene	J	89	ug/kg
94174-10	006	Benzo(k)fluoranthene	J	59	ug/kg
94174-2-7	007	bis(2-Ethylhexyl)phthalate	J	400	ug/kg
94174-3-7	009	bis(2-Ethylhexyl)phthalate	J	390	ug/kg
94174-B-7	002	bis(2-Ethylhexyl)phthalate	J	380	ug/kg
94174-B-7	002 RE	bis(2-Ethylhexyl)phthalate	J	380	ug/kg
94174-3-2	008	bis(2-Ethylhexyl)phthalate	J	380	ug/kg
94174-5	001	bis(2-Ethylhexyl)phthalate	J	380	ug/kg
94174-1-2	004	bis(2-Ethylhexyl)phthalate	J	370	ug/kg
94174-2-2	006	bis(2-Ethylhexyl)phthalate	J	370	ug/kg
94174-4-2	010	bis(2-Ethylhexyl)phthalate	J	370	ug/kg

Table B.1. LRP 131-4L Site Evaluation Results Above MDL (Continued)

Customer ID	RFW #	Analyte	Qualifier	Result	Units
94174-B-2	001 RE	bis(2-Ethylhexyl)phthalate	J	360	ug/kg
94174-7	003	bis(2-Ethylhexyl)phthalate	J	360	ug/kg
94174-9	005	bis(2-Ethylhexyl)phthalate	J	360	ug/kg
SBLKFB	94GB0560-MB1	bis(2-Ethylhexyl)phthalate	J	330	ug/kg
94174-1-7	005	bis(2-Ethylhexyl)phthalate	J	85	ug/kg
94174-B-2	001	bis(2-Ethylhexyl)phthalate	J	47	ug/kg
94174-6	002	Chrysene		2500	ug/kg
94174-3-2	008	Chrysene		1500	ug/kg
94174-7	003	Chrysene	J	200	ug/kg
94174-5	001	Chrysene	J	160	ug/kg
94174-10	006	Chrysene	J	92	ug/kg
94174-3-7	009	Chrysene	J	58	ug/kg
94174-8	004	Chrysene	J	46	ug/kg
94174-6	002	Dibenzo(a,h)anthracene	J	200	ug/kg
94174-3-2	008	Dibenzo(a,h)anthracene	J	89	ug/kg
94174-6	002	Dibenzofuran	J	160	ug/kg
94174-11	007	Dibenzofuran	J	160	ug/kg
SBLKFB	94GB0560-MB1	Di-n-butylphthalate		410	ug/kg
94174-1-2	004	Di-n-butylphthalate	JB	340	ug/kg
94174-2-2	006	Di-n-butylphthalate	JB	290	ug/kg
94174-3-7	009	Di-n-butylphthalate	JB	270	ug/kg
94174-4-2	010	Di-n-butylphthalate	JB	270	ug/kg
94174-3-2	008	Di-n-butylphthalate	JB	260	ug/kg
94174-8	004	Di-n-butylphthalate	JB	170	ug/kg
94174-11	007	Di-n-butylphthalate	JB	150	ug/kg
94174-9	005	Di-n-butylphthalate	JB	140	ug/kg
94174-10	006	Di-n-butylphthalate	JB	130	ug/kg
94174-7	003	Di-n-butylphthalate	JB	120	ug/kg
SBLKFP BSD	94GB0566-MB1	Di-n-butylphthalate	JB	110	ug/kg
94174-6	002	Di-n-butylphthalate	JB	100	ug/kg
94174-5	001	Di-n-butylphthalate	JB	90	ug/kg
SBLKFP BS	94GB0566-MB1	Di-n-butylphthalate	JB	90	ug/kg
SBLKFP	94GB0566-MB1	Di-n-butylphthalate	J	80	ug/kg
94174-6	002 DL	Fluoranthene		6600	ug/kg
94174-3-2	008	Fluoranthene		1800	ug/kg
94174-7	003	Fluoranthene		670	ug/kg
94174-5	001	Fluoranthene	J	270	ug/kg
94174-10	006	Fluoranthene	J	190	ug/kg
94174-3-7	009	Fluoranthene	J	120	ug/kg
94174-8	004	Fluoranthene	J	79	ug/kg
94174-11	007	Fluoranthene	J	70	ug/kg
94174-9	005	Fluoranthene	J	60	ug/kg
94174-4-2	010	Fluoranthene	J	45	ug/kg
SBLKFP BS	94GB0566-MB1	Fluorene	J	330	ug/kg
SBLKFP BSD	94GB0566-MB1	Fluorene	J	330	ug/kg
94174-6	002	Fluorene	J	250	ug/kg
94174-11	007	Fluorene	J	250	ug/kg
94174-7	003	Fluorene	J	51	ug/kg
94174-6	002	Indeno(1,2,3-cd)pyrene		1000	ug/kg
94174-3-2	008	Indeno(1,2,3-cd)pyrene	J	270	ug/kg
94174-7	003	Indeno(1,2,3-cd)pyrene	J	160	ug/kg

Table B.1. LRP 131-4L Site Evaluation Results Above MDL (Continued)

Customer ID	RFW #	Analyte	Qualifier	Result	Units
94174-5	001	Indeno(1,2,3-cd)pyrene	J	81	ug/kg
94174-6	002	Phenanthrene		3900	ug/kg
94174-7	003	Phenanthrene		490	ug/kg
94174-3-2	008	Phenanthrene		420	ug/kg
94174-5	001	Phenanthrene	J	120	ug/kg
94174-10	006	Phenanthrene	J	110	ug/kg
94174-3-7	009	Phenanthrene	J	64	ug/kg
94174-11	007	Phenanthrene	J	37	ug/kg
94174-6	002	Pyrene		5000	ug/kg
94174-3-2	008	Pyrene		1800	ug/kg
94174-7	003	Pyrene		510	ug/kg
94174-5	001	Pyrene	J	260	ug/kg
94174-10	006	Pyrene	J	150	ug/kg
94174-3-7	009	Pyrene	J	100	ug/kg
94174-8	004	Pyrene	J	65	ug/kg
94174-9	005	Pyrene	J	55	ug/kg
94174-11	007	Pyrene	J	51	ug/kg
94174-4-2	010	Pyrene	J	46	ug/kg
Volatiles					
VBLK	94GVF323-MB1	Methylene Chloride		5	ug/Kg
94174-9	005	Toluene	J	6	ug/Kg
94174-1-7	005	Toluene	J	4	ug/Kg
Pesticides and PCBs					
94174-5	001	4,4'-DDD		34	ug/Kg
94174-5	001	4,4'-DDT		16	ug/Kg
Inorganics					
94174-8	004	Aluminum, Total		16700	mg/Kg
94174-4-2	010	Aluminum, Total		16000	mg/Kg
94174-3-2	008	Aluminum, Total		13800	mg/Kg
94174-10	006	Aluminum, Total		13600	mg/Kg
94174-B-2	001	Aluminum, Total		13400	mg/Kg
94174-5	001	Aluminum, Total		12200	mg/Kg
94174-9	005	Aluminum, Total		11200	mg/Kg
94174-7	003	Aluminum, Total		9180	mg/Kg
94174-11	007	Aluminum, Total		7150	mg/Kg
94174-B-7	002	Aluminum, Total		6920	mg/Kg
94174-6	002	Aluminum, Total		6820	mg/Kg
94174-1-7	005	Aluminum, Total		6540	mg/Kg
94174-2-2	006	Aluminum, Total		6470	mg/Kg
94174-1-2	004	Aluminum, Total		5510	mg/Kg
94174-3-7	009	Aluminum, Total		3510	mg/Kg
94174-4-2	010	Arsenic, Total		7.9	mg/Kg
94174-3-2	008	Arsenic, Total		5.4	mg/Kg
94174-10	006	Arsenic, Total		3.9	mg/Kg
94174-1-2	004	Arsenic, Total		3.8	mg/Kg
94174-B-7	002	Arsenic, Total		3.3	mg/Kg
94174-8	004	Arsenic, Total		3.3	mg/Kg
94174-5	001	Arsenic, Total		3.1	mg/Kg
94174-1-7	005	Arsenic, Total		2.6	mg/Kg
94174-6	002	Arsenic, Total		2.5	mg/Kg
94174-9	005	Arsenic, Total		2.5	mg/Kg

Table B.1. LRP 131-4L Site Evaluation Results Above MDL (Continued)

Customer ID	RFW #	Analyte	Qualifier	Result	Units
94174-B-2	001	Arsenic, Total		2.2	mg/Kg
94174-2-2	006	Arsenic, Total		2.2	mg/Kg
94174-7	003	Arsenic, Total		2.2	mg/Kg
94174-3-7	009	Arsenic, Total		1.5	mg/Kg
94174-11	007	Arsenic, Total		1.3	mg/Kg
94174-B-2	001	Barium, Total		47.3	mg/Kg
94174-6	002	Barium, Total		22.5	mg/Kg
94174-11	007	Barium, Total		22.5	mg/Kg
94174-8	004	Barium, Total		22.4	mg/Kg
94174-10	006	Barium, Total		19.2	mg/Kg
94174-3-2	008	Barium, Total		19.1	mg/Kg
94174-9	005	Barium, Total		18.4	mg/Kg
94174-7	003	Barium, Total		18	mg/Kg
94174-5	001	Barium, Total		15.9	mg/Kg
94174-4-2	010	Barium, Total		14.7	mg/Kg
94174-3-7	009	Barium, Total		8.2	mg/Kg
94174-1-7	005	Barium, Total		6.2	mg/Kg
94174-2-2	006	Barium, Total		5	mg/Kg
94174-1-2	004	Barium, Total		4.5	mg/Kg
94174-11	007	Beryllium, Total		0.44	mg/Kg
94174-11	007	Cadmium, Total		0.88	mg/Kg
94174-3-2	008	Calcium, Total		3630	mg/Kg
94174-5	001	Calcium, Total		3510	mg/Kg
94174-3-7	009	Calcium, Total		2830	mg/Kg
94174-7	003	Calcium, Total		1730	mg/Kg
94174-8	004	Calcium, Total		1690	mg/Kg
94174-10	006	Calcium, Total		887	mg/Kg
94174-4-2	010	Calcium, Total		709	mg/Kg
94174-9	005	Calcium, Total		675	mg/Kg
94174-6	002	Calcium, Total		337	mg/Kg
94174-2-2	006	Calcium, Total		314	mg/Kg
94174-11	007	Calcium, Total		312	mg/Kg
94174-B-2	001	Calcium, Total		170	mg/Kg
94174-1-7	005	Calcium, Total		134	mg/Kg
94174-1-2	004	Calcium, Total		129	mg/Kg
94174-B-7	002	Calcium, Total		39.3	mg/Kg
94174-4-2	010	Chromium, Total		29.6	mg/Kg
94174-8	004	Chromium, Total		18.9	mg/Kg
94174-10	006	Chromium, Total		17.6	mg/Kg
94174-5	001	Chromium, Total		17	mg/Kg
94174-3-2	008	Chromium, Total		16	mg/Kg
94174-9	005	Chromium, Total		16	mg/Kg
94174-7	003	Chromium, Total		12.6	mg/Kg
94174-1-7	005	Chromium, Total		11.4	mg/Kg
94174-6	002	Chromium, Total		10.9	mg/Kg
94174-2-2	006	Chromium, Total		10.7	mg/Kg
94174-B-7	002	Chromium, Total		10.2	mg/Kg
94174-B-2	001	Chromium, Total		9	mg/Kg
94174-11	007	Chromium, Total		8.4	mg/Kg
94174-1-2	004	Chromium, Total		8.2	mg/Kg
94174-3-7	009	Chromium, Total		4.9	mg/Kg

Table B.1. LRP 131-4L Site Evaluation Results Above MDL (Continued)

Customer ID	RFW #	Analyte	Qualifier	Result	Units
94174-2-7	007	Chromium, Total		3.7	mg/Kg
94174-8	004	Cobalt, Total		1.8	mg/Kg
94174-11	007	Cobalt, Total		1.8	mg/Kg
94174-5	001	Copper, Total		11.7	mg/Kg
94174-8	004	Copper, Total		9	mg/Kg
94174-3-2	008	Copper, Total		7.4	mg/Kg
94174-7	003	Copper, Total		7.4	mg/Kg
94174-4-2	010	Copper, Total		7.1	mg/Kg
94174-10	006	Copper, Total		5.8	mg/Kg
94174-9	005	Copper, Total		5.4	mg/Kg
94174-11	007	Copper, Total		4	mg/Kg
94174-3-7	009	Copper, Total		3.9	mg/Kg
94174-B-2	001	Copper, Total		3.3	mg/Kg
94174-6	002	Copper, Total		3	mg/Kg
94174-3-2	008	Cyanide, Total		5100	ug/L
94174-4-2	010	Iron, Total		23500	mg/Kg
94174-8	004	Iron, Total		15800	mg/Kg
94174-3-2	008	Iron, Total		14500	mg/Kg
94174-5	001	Iron, Total		14500	mg/Kg
94174-10	006	Iron, Total		13600	mg/Kg
94174-9	005	Iron, Total		13000	mg/Kg
94174-7	003	Iron, Total		12400	mg/Kg
94174-1-2	004	Iron, Total		8030	mg/Kg
94174-B-7	002	Iron, Total		7800	mg/Kg
94174-1-7	005	Iron, Total		7620	mg/Kg
94174-2-2	006	Iron, Total		7550	mg/Kg
94174-B-2	001	Iron, Total		7170	mg/Kg
94174-6	002	Iron, Total		6710	mg/Kg
94174-11	007	Iron, Total		6130	mg/Kg
94174-3-7	009	Iron, Total		4950	mg/Kg
94174-2-7	007	Iron, Total		2390	mg/Kg
94174-8	004	Lead, Total		20.7	mg/Kg
94174-6	002	Lead, Total		17.4	mg/Kg
94174-1-2	004	Lead, Total		15.5	mg/Kg
94174-5	001	Lead, Total		13	mg/Kg
94174-11	007	Lead, Total		11.9	mg/Kg
94174-7	003	Lead, Total		10.6	mg/Kg
94174-10	006	Lead, Total		10.5	mg/Kg
94174-9	005	Lead, Total		9.5	mg/Kg
94174-3-2	008	Lead, Total		9.3	mg/Kg
94174-4-2	010	Lead, Total		7.6	mg/Kg
94174-B-7	002	Lead, Total		6.6	mg/Kg
94174-B-2	001	Lead, Total		6.2	mg/Kg
94174-3-7	009	Lead, Total		5.7	mg/Kg
94174-2-2	006	Lead, Total		3.8	mg/Kg
94174-2-7	007	Lead, Total		3.1	mg/Kg
94174-1-7	005	Lead, Total		3	mg/Kg
94174-8	004	Magnesium, Total		329	mg/Kg
94174-4-2	010	Magnesium, Total		324	mg/Kg
94174-5	001	Magnesium, Total		310	mg/Kg
94174-3-2	008	Magnesium, Total		231	mg/Kg

Table B.1. LRP 131-4L Site Evaluation Results Above MDL (Continued)

Customer ID	RFW #	Analyte	Qualifier	Result	Units
94174-B-2	001	Magnesium, Total		222	mg/Kg
94174-10	006	Magnesium, Total		209	mg/Kg
94174-7	003	Magnesium, Total		199	mg/Kg
94174-9	005	Magnesium, Total		193	mg/Kg
94174-11	007	Magnesium, Total		182	mg/Kg
94174-6	002	Magnesium, Total		122	mg/Kg
94174-3-7	009	Magnesium, Total		101	mg/Kg
94174-1-7	005	Magnesium, Total		58.9	mg/Kg
94174-2-2	006	Magnesium, Total		53.6	mg/Kg
94174-B-7	002	Magnesium, Total		43.2	mg/Kg
94174-1-2	004	Magnesium, Total		34.9	mg/Kg
94174-2-7	007	Magnesium, Total		20.4	mg/Kg
94174-B-2	001	Manganese, Total		209	mg/Kg
94174-4-2	010	Manganese, Total		67.3	mg/Kg
94174-11	007	Manganese, Total		59.3	mg/Kg
94174-9	005	Manganese, Total		48	mg/Kg
94174-8	004	Manganese, Total		45.5	mg/Kg
94174-3-2	008	Manganese, Total		44.7	mg/Kg
94174-7	003	Manganese, Total		43.7	mg/Kg
94174-10	006	Manganese, Total		41.5	mg/Kg
94174-6	002	Manganese, Total		40.9	mg/Kg
94174-5	001	Manganese, Total		35.1	mg/Kg
94174-3-7	009	Manganese, Total		23.7	mg/Kg
94174-1-2	004	Manganese, Total		11	mg/Kg
94174-B-7	002	Manganese, Total		9.6	mg/Kg
94174-2-2	006	Manganese, Total		9.5	mg/Kg
94174-1-7	005	Manganese, Total		5.2	mg/Kg
94174-2-7	007	Manganese, Total		1.8	mg/Kg
94174-11	007	Mercury, Total		0.099	mg/Kg
94174-6	002	Mercury, Total		0.092	mg/Kg
94174-B-2	001	Nickel, Total		5.2	mg/Kg
94174-8	004	Nickel, Total		4.8	mg/Kg
94174-10	006	Nickel, Total		4.7	mg/Kg
94174-4-2	010	Nickel, Total		4	mg/Kg
94174-3-2	008	Nickel, Total		3.8	mg/Kg
94174-9	005	Nickel, Total		3.8	mg/Kg
94174-5	001	Nickel, Total		3.4	mg/Kg
94174-7	003	Nickel, Total		3.3	mg/Kg
94174-11	007	Nickel, Total		2.7	mg/Kg
94174-6	002	Nickel, Total		2.2	mg/Kg
94174-B-7	002	Nickel, Total		1.9	mg/Kg
94174-B-2	001	Percent Solids		92.9	%
94174-11	007	Percent Solids		91.5	%
94174-1-2	004	Percent Solids		90.9	%
94174-6	002	Percent Solids		90.9	%
94174-10	006	Percent Solids		90.3	%
94174-7	003	Percent Solids		90.2	%
94174-9	005	Percent Solids		89.8	%
94174-1-7	005	Percent Solids		89.6	%
94174-4-2	010	Percent Solids		89.6	%
94174-2-2	006	Percent Solids		88.9	%

Table B.1. LRP 131-4L Site Evaluation Results Above MDL (Continued)

Customer ID	RFW #	Analyte	Qualifier	Result	Units
94174-3-2	008	Percent Solids		88.2	%
94174-5	001	Percent Solids		88.1	%
94174-8	004	Percent Solids		87.3	%
94174-B-7	002	Percent Solids		86.6	%
94174-3-7	009	Percent Solids		83.5	%
94174-2-7	007	Percent Solids		82.8	%
94174-4-2	010	Potassium, Total		237	mg/Kg
94174-8	004	Potassium, Total		213	mg/Kg
94174-3-2	008	Potassium, Total		210	mg/Kg
94174-2-7	007	Potassium, Total		195	mg/Kg
94174-11	007	Potassium, Total		176	mg/Kg
94174-B-7	002	Selenium, Total		1.3	mg/Kg
94174-1-7	005	Selenium, Total		0.28	mg/Kg
94174-2-2	006	Selenium, Total		0.26	mg/Kg
94174-3-2	008	Selenium, Total		0.26	mg/Kg
94174-1-2	004	Selenium, Total		0.21	mg/Kg
94174-9	005	Selenium, Total		0.19	mg/Kg
94174-11	007	Silver, Total		0.88	mg/Kg
94174-3-7	009	Sodium, Total		38.8	mg/Kg
94174-8	004	Sodium, Total		30.8	mg/Kg
94174-5	001	Sodium, Total		29.9	mg/Kg
94174-7	003	Sodium, Total		25.8	mg/Kg
94174-3-2	008	Sodium, Total		23.4	mg/Kg
94174-2-2	006	Sodium, Total		21.3	mg/Kg
94174-10	006	Sodium, Total		20.8	mg/Kg
94174-11	007	Sodium, Total		17.6	mg/Kg
94174-4-2	010	Vanadium, Total		56.5	mg/Kg
94174-8	004	Vanadium, Total		40.6	mg/Kg
94174-5	001	Vanadium, Total		36.1	mg/Kg
94174-3-2	008	Vanadium, Total		35.9	mg/Kg
94174-10	006	Vanadium, Total		33.9	mg/Kg
94174-9	005	Vanadium, Total		30.5	mg/Kg
94174-7	003	Vanadium, Total		28.7	mg/Kg
94174-2-2	006	Vanadium, Total		21.9	mg/Kg
94174-1-7	005	Vanadium, Total		21.5	mg/Kg
94174-1-2	004	Vanadium, Total		20.4	mg/Kg
94174-B-7	002	Vanadium, Total		19.7	mg/Kg
94174-6	002	Vanadium, Total		16.6	mg/Kg
94174-B-2	001	Vanadium, Total		16.5	mg/Kg
94174-11	007	Vanadium, Total		14.9	mg/Kg
94174-2-7	007	Vanadium, Total		11.6	mg/Kg
94174-3-7	009	Vanadium, Total		10.9	mg/Kg
94174-4-2	010	Zinc, Total		16.3	mg/Kg
94174-8	004	Zinc, Total		15.4	mg/Kg
94174-11	007	Zinc, Total		13.9	mg/Kg
94174-9	005	Zinc, Total		13.1	mg/Kg
94174-3-2	008	Zinc, Total		12.7	mg/Kg
94174-5	001	Zinc, Total		12.7	mg/Kg
94174-10	006	Zinc, Total		10.8	mg/Kg
94174-7	003	Zinc, Total		9.9	mg/Kg
94174-B-2	001	Zinc, Total		7.6	mg/Kg

Table B.1. LRP 131-4L Site Evaluation Results Above MDL (Continued/End)

Customer ID	RFW #	Analyte	Qualifier	Result	Units
94174-6	002	Zinc, Total		7.6	mg/Kg
94174-3-7	009	Zinc, Total		4.9	mg/Kg
94174-1-2	004	Zinc, Total		3.9	mg/Kg
94174-2-2	006	Zinc, Total		3.7	mg/Kg
94174-B-7	002	Zinc, Total		3.6	mg/Kg
94174-1-7	005	Zinc, Total		3.2	mg/Kg
94174-2-7	007	Zinc, Total		2.9	mg/Kg

APPENDIX C

Preliminary Risk Screening Tables for the ECODS L-3 Subunit

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Table C.1. ECODS L-3 Preliminary PTSM Screening (All Soil Depths)

Analyte	Maximum Concentration ¹ (mg/kg)	Noncarcinogenic Hazard Estimate		Carcinogenic Risk Estimate	
		Industrial RSL ² (mg/kg)	Industrial HQ Estimate ³	Industrial RSL ² (mg/kg)	Industrial Risk Estimate ⁴
<i>Inorganics</i>					
ALUMINUM	21900	1.1E+06	2.0E-02	--	--
ANTIMONY	56.6	4.7E+02	1.2E-01	--	--
ARSENIC	13.1	--	--	3.0E+00	4.4E-06
BARIUM	285	2.2E+05	1.3E-03	--	--
CADMIUM	11.9	9.8E+02	1.2E-02	--	--
CALCIUM	52800	EN ⁵	--	--	--
CHROMIUM ⁶	80.1	1.8E+06	4.5E-05	6.3E+00	1.3E-05
COBALT	4.67	3.5E+02	1.3E-02	--	--
COPPER	8370	4.7E+04	1.8E-01	--	--
IRON	31800	8.2E+05	3.9E-02	--	--
LEAD	1300	8.0E+02	1.6E+00	--	--
MAGNESIUM	2520	EN ⁵	--	--	--
MANGANESE	447	2.6E+04	1.7E-02	--	--
MERCURY	3.79	4.6E+01	8.2E-02	--	--
NICKEL	42.6	2.2E+04	1.9E-03	--	--
POTASSIUM	266	EN ⁵	--	--	--
SELENIUM	1.7	5.8E+03	2.9E-04	--	--
SILVER	1.43	5.8E+03	2.5E-04	--	--
SODIUM	270	EN ⁵	--	--	--
VANADIUM	73.8	5.8E+03	1.3E-02	--	--
ZINC	1120	3.5E+05	3.2E-03	--	--
<i>Organics</i>					
1,1-DICHLOROETHYLENE	0.00765	1.0E+03	7.7E-06	--	--
ACETONE	0.0286	6.7E+05	4.3E-08	--	--
BENZENE	0.00339	--	--	5.1E+00	6.6E-10
CARBON DISULFIDE	0.00137	3.5E+03	3.9E-07	--	--
DICHLOROMETHANE (METHYLENE CHLORIDE)	0.000696	--	--	1.0E+03	7.0E-13
METHYL ETHYL KETONE	0.00157	1.9E+05	8.3E-09	--	--
METHYL TERTIARY BUTYL ETHER (MTBE)	0.00043	--	--	2.1E+02	2.0E-12
STYRENE	0.000368	3.5E+04	1.1E-08	--	--
TOLUENE	0.00237	4.7E+04	5.0E-08	--	--
XYLENES	0.000712	2.5E+03	2.8E-07	--	--
1,1'-BIPHENYL	0.692	2.0E+02	3.5E-03	--	--
2-METHYLNAPHTHALENE	2	3.0E+03	6.7E-04	--	--
ACENAPHTHENE	9.27	4.5E+04	2.1E-04	--	--
ANTHRACENE	17.6	2.3E+05	7.7E-05	--	--
BENZALDEHYDE	0.222	--	--	8.2E+02	2.7E-10
BENZO(G,H,I)PERYLENE	9.67	NA ⁷	--	NA ⁷	--
BENZO[A]ANTHRACENE	25.9	--	--	2.1E+01	1.2E-06
BENZO[A]PYRENE	20.6	--	--	2.1E+00	9.8E-06
BENZO[B]FLUORANTHENE	26.9	--	--	2.1E+01	1.3E-06
BENZO[K]FLUORANTHENE	9.72	--	--	2.1E+02	4.6E-08
BIS(2-ETHYLHEXYL)PHTHALATE	37.1	--	--	1.6E+02	2.3E-07
CARBAZOLE	13.8	NA ⁷	--	NA ⁷	--
CHRYSENE	21.4	--	--	2.1E+03	1.0E-08
DIBENZ[AH]ANTHRACENE	2.7	--	--	2.1E+00	1.3E-06
DI-N-BUTYL PHTHALATE	0.0811	8.2E+04	9.9E-07	--	--
FLUORANTHENE	35	3.0E+04	1.2E-03	--	--
FLUORENE	10.5	3.0E+04	3.5E-04	--	--
INDENO[1,2,3-CD]PYRENE	8.91	--	--	2.1E+01	4.2E-07
NAPHTHALENE	5.66	--	--	8.6E+00	6.6E-07
PHENANTHRENE	33.9	NA ⁷	--	NA ⁷	--

Table C.1. ECODS L-3 Preliminary PTSM Screening (All Soil Depths) (Continued/End)

Analyte	Maximum Concentration ¹ (mg/kg)	Noncarcinogenic Hazard Estimate		Carcinogenic Risk Estimate	
		Industrial RSL ² (mg/kg)	Industrial HQ Estimate ³	Industrial RSL ² (mg/kg)	Industrial Risk Estimate ⁴
PYRENE	34	2.3E+04	1.5E-03	--	--
CYANIDE	1.22	1.5E+02	8.1E-03	--	--
<i>Pesticides/PCBs</i>					
DDE	0.000584	--	--	9.3E+00	6.3E-11
DDT	0.00107	--	--	8.5E+00	1.3E-10
AROCLOR 1254	5.63	--	--	9.7E-01	5.8E-06
AROCLOR 1260	2.17	--	--	9.9E-01	2.2E-06
		Hazard Index	2.1E+00	Cumulative Risk	4.0E-05
		PTSM?⁸	NO	PTSM?⁹	NO

1 - Maximum detected concentration from all soil sample depth intervals (samples EL3-1 through EL3-18).

2 - Nonradiological RSLs are default industrial worker soil values from the *EPA Regional Screening Levels Table*, dated May 2021.

3 - Hazard Estimate = maximum concentration / RSL concentration

4 - Risk Estimate = (maximum concentration / RSL concentration) x 1E-06

5 - EN = essential nutrient, RSL not available for this constituent.

6 - Chemical analysis for total chromium. A total chromium RSL is not available; both the trivalent chromium (noncarcinogen) and hexavalent chromium (carcinogenic) RSLs used for screening.

7 - NA = not available; RSL for this constituent is not available.

8 - Subunit potentially has PTSM if HI ≥ 10 for noncarcinogenic constituents.

9 - Subunit potentially has PTSM if cumulative risk ≥ 1E-03 for carcinogenic constituents.

Table C.2. ECODS L-3 Preliminary HH COPC Screening (Soil 0 to 1 ft)

Analyte	Maximum Concentration ¹ (mg/kg)	Qual	Human Health Screening Value (mg/kg)	Human Health Screening Value Source ²	Exceeds Human Health Screening Value?	2X Average Background Concentration ³ (mg/kg)	Exceeds 2X Average Background ⁴	COPC ⁵
<i>Inorganics</i>								
ALUMINUM	14700		7.7E+03	0.1xRSL	YES	1.05E+04	YES	YES
ANTIMONY	21.7		3.1E+00	0.1xRSL	YES	2.69E+00	YES	YES
ARSENIC	4.1		6.8E-01	RSL	YES	4.28E+00	NO	NO
BARIUM	84	J	1.5E+03	0.1xRSL	NO	3.91E+01	YES	NO
CADMIUM	10.8		7.1E+00	0.1xRSL	YES	4.83E-01	YES	YES
CALCIUM	14700		EN ⁶	Nutrient	NO	4.76E+02	YES	NO
CHROMIUM ⁷	71.9	J	3.0E-01	RSL	YES	1.54E+01	YES	YES
COBALT	0.677		2.3E+00	0.1xRSL	NO	1.55E+00	NO	NO
COPPER	53.6	J	3.1E+02	0.1xRSL	NO	4.34E+00	YES	NO
IRON	13500		5.5E+03	0.1xRSL	YES	1.27E+04	YES	YES
LEAD	1300		4.0E+01	0.1xRSL	YES	1.03E+01	YES	YES
MAGNESIUM	1150		EN ⁶	Nutrient	NO	2.75E+02	YES	NO
MANGANESE	139		1.8E+02	0.1xRSL	NO	1.53E+02	NO	NO
MERCURY	0.361		1.1E+00	0.1xRSL	NO	7.10E-02	YES	NO
NICKEL	37		1.5E+02	0.1xRSL	NO	3.48E+00	YES	NO
POTASSIUM	212		EN ⁶	Nutrient	NO	2.16E+02	NO	NO
SELENIUM	1.51	J	3.9E+01	0.1xRSL	NO	2.99E+00	NO	NO
SILVER	1.43	J	3.9E+01	0.1xRSL	NO	7.28E-01	YES	NO
SODIUM	76.6	J	EN ⁶	Nutrient	NO	4.02E+01	YES	NO
VANADIUM	31		3.9E+01	0.1xRSL	NO	3.91E+01	NO	NO
ZINC	321	J	2.3E+03	0.1xRSL	NO	9.47E+00	YES	NO
<i>Organics</i>								
1,1-DICHLOROETHYLENE	0.00262		2.3E+01	0.1xRSL	NO	--	--	NO
ACETONE	0.0286		6.1E+03	0.1xRSL	NO	--	--	NO
BENZENE	0.00339	J	1.2E+00	RSL	NO	--	--	NO
CARBON DISULFIDE	0.00137	J	7.7E+01	0.1xRSL	NO	--	--	NO
DICHLOROMETHANE (METHYLENE CHLORIDE)	0.000696	J	5.7E+01	RSL	NO	--	--	NO
METHYL ETHYL KETONE	0.00157	J	2.7E+03	0.1xRSL	NO	--	--	NO
METHYL TERTIARY BUTYL ETHER (MTBE)	0.0004	J	4.7E+01	RSL	NO	--	--	NO
STYRENE	0.000368	J	6.0E+02	0.1xRSL	NO	--	--	NO
TOLUENE	0.00224		4.9E+02	0.1xRSL	NO	--	--	NO
XYLENES	0.000449	J	5.8E+01	0.1xRSL	NO	--	--	NO
ANTHRACENE	0.0905	J	1.8E+03	0.1xRSL	NO	--	--	NO
BENZALDEHYDE	0.222		1.7E+02	RSL	NO	--	--	NO
BENZO(G,H,I)PERYLENE	0.109	J	NA ⁸	NA ⁸	NO	--	--	NO
BENZO(A)ANTHRACENE	0.348		1.1E+00	RSL	NO	--	--	NO
BENZO(A)PYRENE	0.251		1.1E-01	RSL	YES	--	--	YES
BENZO(B)FLUORANTHENE	0.359		1.1E+00	RSL	NO	--	--	NO
BENZO(K)FLUORANTHENE	0.129	J	1.1E+01	RSL	NO	--	--	NO
BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	16.3		3.9E+01	RSL	NO	--	--	NO
CHRYSENE	0.277		1.1E+02	RSL	NO	--	--	NO
DIBENZ(AH)ANTHRACENE	0.0352	J	1.1E-01	RSL	NO	--	--	NO
FLUORANTHENE	0.776		2.4E+02	0.1xRSL	NO	--	--	NO
INDENO(1,2,3-CD)PYRENE	0.0986	J	1.1E+00	RSL	NO	--	--	NO
PHENANTHRENE	0.445	J	NA ⁸	NA ⁸	NO	--	--	NO
PYRENE	0.679		1.8E+02	0.1xRSL	NO	--	--	NO
CYANIDE	1.22	J	2.3E+00	0.1xRSL	NO	--	--	NO
<i>Pesticides/PCBs</i>								
DDE	0.000584	J	2.0E+00	RSL	NO	--	--	NO
DDT	0.00107	J	1.9E+00	RSL	NO	--	--	NO
AROCLOR 1254	5.63	J	2.4E-01	RSL	YES	--	--	YES
AROCLOR 1260	2.17	J	2.4E-01	RSL	YES	--	--	YES

1 - Maximum detected concentration from 0-1 ft soil interval (samples EL3-1 through EL3-18).
2 - Nonradiological RSLs are default residential soil values from the *EPA Regional Screening Levels Table*, dated May 2021.
3 - Background screening values obtained from *Background Soils Statistical Summary Report for Savannah River Site*, ERD-EN-2005,0223, Rev. 1, 10/06.
4 - For screening purposes, maximum concentration of only the naturally-occurring (nonanthropogenic) constituents are compared to 2X average background concentration.
5 - Constituents are identified as COPCs if the maximum detected concentration exceeds the human health screening value and the 2X average background concentration.
6 - EN = essential nutrient, RSL not available for this constituent.
7 - Chemical analysis for total chromium. A total chromium RSL is not available; hexavalent chromium RSL used as a conservative screen.
8 - NA = not available, RSL for this constituent is not available.

Table C.3. ECODS L-3 Preliminary ECO COPEC Screening (Soil 0 to 1 ft)

Analyte	Maximum Concentration ¹ (mg/kg)	Qual	Ecological Screening Value (mg/kg)	Ecological Screening Value Source ²	Screening Level HQ ³	Exceeds Ecological Screening Value?	2X Average Background Concentration ⁴ (mg/kg)	Exceeds 2X Average Background ⁵	COPEC? ⁶
<i>Inorganics</i>									
ALUMINUM	14700		NA ⁷	NA ⁷	--	NO	1.05E+04	YES	NO
ANTIMONY	21.7		2.7E-01	a	80.4	YES	2.69E+00	YES	YES
ARSENIC	4.1		1.5E+01	b	0.3	NO	4.28E+00	NO	NO
BARIUM	84	J	3.3E+02	b	0.3	NO	3.91E+01	YES	NO
CADMIUM	10.8		2.7E-01	b	40	YES	4.83E-01	YES	YES
CALCIUM	14700		EN ⁸	Nutrient	--	NO	4.76E+02	YES	NO
CHROMIUM ⁷	71.9	J	2.3E+01	a	3.1	YES	1.54E+01	YES	YES
COBALT	0.677		1.3E+01	ab	0.1	NO	1.55E+00	NO	NO
COPPER	53.6	J	1.4E+01	b	3.8	YES	4.34E+00	YES	YES
IRON	13500		NA ⁷	NA ⁷	--	NO	1.27E+04	YES	NO
LEAD	1300		1.1E+01	a	118.2	YES	1.03E+01	YES	YES
MAGNESIUM	1150		EN ⁸	Nutrient	--	NO	2.75E+02	YES	NO
MANGANESE	139		2.2E+02	ab	0.6	NO	1.53E+02	NO	NO
MERCURY	0.361		1.3E-02	ab	27.8	YES	7.10E-02	YES	YES
NICKEL	37		1.0E+01	b	3.7	YES	3.48E+00	YES	YES
POTASSIUM	212		EN ⁸	Nutrient	--	NO	2.16E+02	NO	NO
SELENIUM	1.51	J	5.2E-01	ab	2.9	YES	2.99E+00	NO	NO
SILVER	1.43	J	2.6E+00	b	0.6	NO	7.28E-01	YES	NO
SODIUM	76.6	J	EN ⁸	Nutrient	--	NO	4.02E+01	YES	NO
VANADIUM	31		4.7E+00	b	6.6	YES	3.91E+01	NO	NO
ZINC	321	J	4.6E+01	a	7.0	YES	9.47E+00	YES	YES
<i>Organics</i>									
1,1-DICHLOROETHYLENE	0.00262		4.0E-02	a	0.1	NO	--	--	NO
ACETONE	0.0286		1.2E+00	ab	0.02	NO	--	--	NO
BENZENE	0.00339	J	1.2E-01	a	0.03	NO	--	--	NO
CARBON DISULFIDE	0.00137	J	5.3E-03	a	0.26	NO	--	--	NO
DICHLOROMETHANE (METHYLENE CHLORIDE)	0.000696	J	2.1E-01	a	0.00	NO	--	--	NO
METHYL ETHYL KETONE	0.00157	J	1.0E+00	a	0.00	NO	--	--	NO
METHYL TERTIARY BUTYL ETHER (MTBE)	0.0004	J	NA ⁷	NA ⁷	--	NO	--	--	NO
STYRENE	0.000368	J	1.2E+00	a	0.0003	NO	--	--	NO
TOLUENE	0.00224		1.5E-01	a	0.01	NO	--	--	NO
XYLENES	0.000449	J	1.0E-01	a	0.004	NO	--	--	NO
ANTHRACENE	0.0905	J	2.9E+01	a	0.003	NO	--	--	NO
BENZ ALDEHYDE	0.222		NA ⁷	NA ⁷	--	NO	--	--	NO
BENZ[O,G,H,I]PERYLENE	0.109	J	1.1E+00	a	0.1	NO	--	--	NO
BENZO[A]ANTHRACENE	0.348		7.3E-01	b	0.5	NO	--	--	NO
BENZO[A]PYRENE	0.251		1.1E+00	a	0.2	NO	--	--	NO
BENZO[B]FLUORANTHENE	0.359		1.1E+00	a	0.3	NO	--	--	NO
BENZO[K]FLUORANTHENE	0.129	J	1.1E+00	a	0.1	NO	--	--	NO
BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	16.3		2.0E-02	a	815.0	YES	--	--	YES
CHRYSENE	0.277		1.1E+00	a	0.3	NO	--	--	NO
DIBENZ[AH]ANTHRACENE	0.0352	J	1.1E+00	a	0.03	NO	--	--	NO
FLUORANTHENE	0.776		1.1E+00	a	0.7	NO	--	--	NO
INDENO[1,2,3-CD]PYRENE	0.0986	J	1.1E+00	a	0.1	NO	--	--	NO
PHENANTHRENE	0.445	J	1.1E+01	b	0.04	NO	--	--	NO
PYRENE	0.679		1.1E+00	a	0.6	NO	--	--	NO
CYANIDE	1.22	J	9.8E-02	b	12.4	YES	--	--	YES
<i>Pesticides/PCBs</i>									
DDE	0.000584	J	2.1E-02	a	0.03	NO	--	--	NO
DDT	0.00107	J	2.1E-02	ab	0.1	NO	--	--	NO
AROCLOR 1254	5.63	J	4.1E-02	a	137.3	YES	--	--	YES
AROCLOR 1260	2.17	J	4.1E-02	a	52.9	YES	--	--	YES

1 - Maximum detected concentration from 0-1 ft soil interval (samples EL3-1 through EL3-18).
2 - ESV source: a = Table 3 in EPA Region 4 Ecological Risk Assessment Supplemental Guidance March Update (2018).
2 - ESV source: b = Los Alamos National Laboratory No Effect ESL for soil media (2017).
3 - Screening Level Hazard Quotient (HQ) = maximum detected concentration / ESV
4 - Background screening values obtained from *Background Soils Statistical Summary Report for Savannah River Site*, ERD-EN-2005,0223, Rev. 1, 10/06.
5 - For screening purposes, maximum concentration of only the naturally-occurring (nonanthropogenic) constituents are compared to 2X average background concentration.
6 - COPEC = constituent of potential ecological concern. Analyte identified as a COPEC if the maximum detected concentration exceeds the ecological screening value (i.e., HQ>1), if available, and exceeds 2X average background concentration
7 - NA = not available, ESV for this constituent is not available.
8 - EN = essential nutrient, not subject to further evaluation

Table C.4. ECODS L-3 Preliminary ECO COPEC Screening (Soil 1 to 4 ft)

Analyte	Maximum Concentration ¹ (mg/kg)	Qual	Ecological Screening Value (mg/kg)	Ecological Screening Value Source ²	Screening Level HQ ³	Exceeds Ecological Screening Value?	2X Average Background Concentration ⁴ (mg/kg)	Exceeds 2X Average Background ⁵	COPEC? ⁶
<i>Inorganics</i>									
ALUMINUM	21900		NA ⁷	NA ⁷	--	NO	1.05E+04	YES	NO
ANTIMONY	56.6		2.7E-01	a	209.6	YES	2.69E+00	YES	YES
ARSENIC	9.06		1.5E+01	b	0.6	NO	4.28E+00	YES	NO
BARIUM	279		3.3E+02	b	0.8	NO	3.91E+01	YES	NO
CADMIUM	11.9		2.7E-01	b	44.1	YES	4.83E-01	YES	YES
CALCIUM	52800	J	EN ⁸	Nutrient	--	NO	4.76E+02	YES	NO
CHROMIUM ⁷	80.1		2.3E+01	a	3.5	YES	1.54E+01	YES	YES
COBALT	4.67		1.3E+01	ab	0.4	NO	1.55E+00	YES	NO
COPPER	3890		1.4E+01	b	277.9	YES	4.34E+00	YES	YES
IRON	31300		NA ⁷	NA ⁷	--	NO	1.27E+04	YES	NO
LEAD	396		1.1E+01	a	36.0	YES	1.03E+01	YES	YES
MAGNESIUM	2520	J	EN ⁸	Nutrient	--	NO	2.75E+02	YES	NO
MANGANESE	447		2.2E+02	ab	2.0	YES	1.53E+02	YES	YES
MERCURY	0.161		1.3E-02	ab	12.4	YES	7.10E-02	YES	YES
NICKEL	42.4		1.0E+01	b	4.2	YES	3.48E+00	YES	YES
POTASSIUM	251		EN ⁸	Nutrient	--	NO	2.16E+02	YES	NO
SODIUM	270	J	EN ⁸	Nutrient	--	NO	4.02E+01	YES	NO
VANADIUM	71.4		4.7E+00	b	15.2	YES	3.91E+01	YES	YES
ZINC	917	J	4.6E+01	a	19.9	YES	9.47E+00	YES	YES
<i>Organics</i>									
1,1-DICHLOROETHYLENE	0.00765	J	4.0E-02	a	0.2	NO	--	--	NO
ACETONE	0.0114		1.2E+00	ab	0.01	NO	--	--	NO
BENZENE	0.00136	J	1.2E-01	a	0.01	NO	--	--	NO
DICHLOROMETHANE (METHYLENE CHLORIDE)	0.000447	J	2.1E-01	a	0.002	NO	--	--	NO
METHYL ETHYL KETONE	0.00137	J	1.0E+00	a	0.001	NO	--	--	NO
METHYL TERTIARY BUTYL ETHER (MTBE)	0.00043	J	NA ⁷	NA ⁷	--	NO	--	--	NO
STYRENE	0.000193	J	1.2E+00	a	0.0002	NO	--	--	NO
TOLUENE	0.00237		1.5E-01	a	0.02	NO	--	--	NO
XYLENES	0.000712	J	1.0E-01	a	0.007	NO	--	--	NO
1,1'-BIPHENYL	0.629	J	2.0E-01	a	3.145	YES	--	--	YES
2-METHYLNAPHTHALENE	2		2.9E+01	a	0.069	NO	--	--	NO
ACENAPHTHENE	9.27		2.9E+01	a	0.320	NO	--	--	NO
ANTHRACENE	17.6		2.9E+01	a	0.607	NO	--	--	NO
BENZALDEHYDE	0.052	J	NA ⁷	NA ⁷	--	NO	--	--	NO
BENZO(G,H,I)PERYLENE	9.67		1.1E+00	a	8.8	YES	--	--	YES
BENZO(A)ANTHRACENE	25.9		7.3E-01	b	35.5	YES	--	--	YES
BENZO(A)PYRENE	20.6		1.1E+00	a	18.7	YES	--	--	YES
BENZO(B)FLUORANTHENE	26.9		1.1E+00	a	24.5	YES	--	--	YES
BENZO(K)FLUORANTHENE	9.72		1.1E+00	a	8.8	YES	--	--	YES
BIS(2-ETHYLHEXYL)PHTHALATE (DEHP)	37.1		2.0E-02	a	1855.0	YES	--	--	YES
CARBAZOLE	13.8		7.0E-02	a	197.1	YES	--	--	YES
CHRYSENE	21.4		1.1E+00	a	19.5	YES	--	--	YES
DIBENZ(AH)ANTHRACENE	2.7		1.1E+00	a	2.45	YES	--	--	YES
FLUORANTHENE	35		1.1E+00	a	31.8	YES	--	--	YES
FLUORENE	10.5		2.9E+01	a	0.4	NO	--	--	NO
INDENO(1,2,3-CD)PYRENE	8.91		1.1E+00	a	8.1	YES	--	--	YES
NAPHTHALENE	5.66		2.9E+01	a	0.2	NO	--	--	NO
PHENANTHRENE	33.9	J	1.1E+01	b	3.08	YES	--	--	YES
PYRENE	34		1.1E+00	a	30.9	YES	--	--	YES
<i>Pesticides/PCBs</i>									
DDE	0.000584	J	2.1E-02	a	0.03	NO	--	--	NO
DDT	0.00107	J	2.1E-02	ab	0.1	NO	--	--	NO
AROCLOR 1254	2.39		4.1E-02	a	58.3	YES	--	--	YES
AROCLOR 1260	0.16	J	4.1E-02	a	3.9	YES	--	--	YES

1 - Maximum detected concentration from 1-4 ft soil interval (samples EL3-1 through EL3-18).
2 - ESV source: a = Table 3 in EPA Region 4 Ecological Risk Assessment Supplemental Guidance March Update (2018).
2 - ESV source: b = Los Alamos National Laboratory No Effect ESL for soil media (2017).
3 - Screening Level Hazard Quotient (HQ) = maximum detected concentration / ESV
4 - Background screening values obtained from *Background Soils Statistical Summary Report for Savannah River Site*, ERD-EN-2005,0223, Rev. 1, 10/06.
5 - For screening purposes, maximum concentration of only the naturally-occurring (nonanthropogenic) constituents are compared to 2X average background concentration.
6 - COPEC = constituent of potential ecological concern. Analyte identified as a COPEC if the maximum detected concentration exceeds the ecological screening value (i.e., HQ>1), if available, and exceeds 2X average background concentration
7 - NA = not available, ESV for this constituent is not available
8 - EN = essential nutrient, not subject to further evaluation

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Table C.5. ECODS L-3 Preliminary Tier II CM Screening (All Soil Depths)

Analyte	Retardation	Mean Travel Time	Predicted Concentration in Aquifer	Action Level	Failing Analytes ¹	Tier II SSL _{T1/2}	Tier II MLSSL _{T1/2}
	[unitless]	[years]	[µg/L]			[mg/kg]	
1,1',-Biphenyl	1.01E+02	4.07E+02		8.30E-01		Infinite	Infinite
2-Methylnaphthalene	1.28E+02	5.16E+02		3.60E+01		Infinite	Infinite
Acenaphthene	7.91E+01	3.20E+02		5.30E+02		Infinite	Infinite
Benzaldehyde	1.28E+00	5.19E+00		1.90E+01		Infinite	Infinite
Benzo(a)anthracene	5.71E+03	2.31E+04		3.00E-02		Infinite	Infinite
Benzo(a)pyrene	1.54E+04	6.25E+04		2.00E-01		Infinite	Infinite
Benzo(b)fluoranthene	1.96E+04	7.93E+04		2.50E-01		Infinite	Infinite
Benzo(k)fluoranthene	1.96E+04	7.93E+04		2.50E+00		Infinite	Infinite
Bis(2-ethylhexyl) phthalate	1.77E+03	7.16E+03		6.00E+00		Infinite	Infinite
Dibenz(a,h)anthracene	2.85E+04	1.15E+05		2.50E-02		Infinite	1.89E+04
Dibenzofuran	1.46E+02	5.92E+02		7.90E+00		Infinite	Infinite
Fluorene	1.24E+02	5.01E+02		2.90E+02		Infinite	Infinite
Indeno(1,2,3-c,d)pyrene	5.96E+04	2.41E+05		2.50E-01		Infinite	Infinite
Naphthalene	2.00E+01	8.08E+01		1.20E-01		Infinite	Infinite
Pyrene	1.08E+03	4.39E+03		1.20E+02		Infinite	6.96E+03
PCB 1254	4.93E+03	1.99E+04	1.96E+00	7.80E-03		2.24E-02	4.02E-05
PCB 1260	4.93E+03	1.99E+04	7.56E-01	7.80E-03		2.24E-02	4.02E-05
Antimony (metallic)	3.19E+04	1.29E+05	4.56E+00	6.00E+00		7.44E+01	
Arsenic, Inorganic	3.12E+02	1.26E+03	1.08E+02	1.00E+01		1.21E+00	
Barium	3.28E+02	1.33E+03	2.23E+03	2.00E+03		2.55E+02	
Cadmium	5.99E+02	2.42E+03	5.11E+01	5.00E+00		1.17E+00	
Cobalt	3.20E+02	1.29E+03	3.75E+01	6.00E+00		7.47E-01	
Copper, Total	3.99E+02	1.62E+03	5.38E+04	1.30E+03		2.02E+02	
Iron	1.75E+03	7.09E+03	4.64E+04	1.40E+04		9.56E+03	
Lead and compounds	2.15E+03	8.71E+03	1.55E+03	1.50E+01		1.26E+01	
Manganese	3.99E+02	1.62E+03	2.87E+03	4.30E+02		6.69E+01	
Mercury (elemental)	4.15E+02	1.68E+03	2.34E+01	2.00E+00		3.24E-01	
Nickel Soluble Salts	5.19E+02	2.10E+03	2.10E+02	3.90E+02		7.88E+01	
Zinc (metallic)	4.95E+02	2.00E+03	5.81E+03	6.00E+03		1.16E+03	

1 - Failing Analytes were identified as Tier II COPCs and were evaluated further to determine Tier II COCs.

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APPENDIX D

Preliminary Risk Screening Tables for the LRP 131-4L Subunit

<u>Table</u>	<u>Page Number</u>
Table D.1 LRP 131-4L Preliminary PTSM Screening (All Soil Depths).....	D-3
Table D.2 LRP 131-4L Preliminary Tier II Contaminant Migration Screening (All Soil Depths)	D-4

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Table D.1. LRP 131-4L Preliminary PTSM Screening (All Soil Depths)

Analyte	Maximum Concentration ¹ (mg/kg)	Noncarcinogenic Hazard Estimate		Carcinogenic Risk Estimate	
		Industrial RSL ² (mg/kg)	Industrial HQ Estimate ³	Industrial RSL ² (mg/kg)	Industrial Risk Estimate ⁴
<i>Inorganics</i>					
ALUMINUM	16700	1.1E+06	1.5E-02	--	--
ARSENIC	7.9	--	--	3.0E+00	2.6E-06
BARIUM	47.3	2.2E+05	2.2E-04	--	--
CALCIUM	3630	EN ⁵	--	--	--
CHROMIUM ⁶	29.6	1.8E+06	1.6E-05	6.3E+00	4.7E-06
COPPER	11.7	4.7E+04	2.5E-04	--	--
IRON	23500	8.2E+05	2.9E-02	--	--
LEAD	20.7	8.0E+02	2.6E-02	--	--
MAGNESIUM	329	EN ⁵	--	--	--
MANGANESE	209	2.6E+04	8.0E-03	--	--
NICKEL	5.2	2.2E+04	2.4E-04	--	--
POTASSIUM	237	EN ⁵	--	--	--
SELENIUM	1.3	5.8E+03	2.2E-04	--	--
SODIUM	38.8	EN ⁵	--	--	--
VANADIUM	56.5	5.8E+03	9.7E-03	--	--
ZINC	16.3	3.5E+05	4.7E-05	--	--
<i>Organics</i>					
DICHLOROMETHANE (METHYLENE CHLORIDE)	0.005	--	--	1.0E+03	5.0E-12
TOLUENE	0.006	4.7E+04	1.3E-07	--	--
2-METHYLNAPHTHALENE	0.058	3.0E+03	1.9E-05	--	--
ACENAPHTHENE	0.39	4.5E+04	8.7E-06	--	--
ANTHRACENE	2.6	2.3E+05	1.1E-05	--	--
BENZO(G,H,I)PERYLENE	0.67	NA ⁷	--	NA ⁷	--
BENZO[A]ANTHRACENE	3.3	--	--	2.1E+01	1.6E-07
BENZO[A]PYRENE	2.3	--	--	2.1E+00	1.1E-06
BENZO[B]FLUORANTHENE	3.8	--	--	2.1E+01	1.8E-07
BENZO[K]FLUORANTHENE	1.4	--	--	2.1E+02	6.7E-09
BIS(2-ETHYLHEXYL)PHTHALATE	0.4	--	--	1.6E+02	2.5E-09
CHRYSENE	2.5	--	--	2.1E+03	1.2E-09
DIBENZ[AH]ANTHRACENE	0.2	--	--	2.1E+00	9.5E-08
DIBENZOFURAN	0.16	1.2E+03	1.3E-04	--	--
DI-N-BUTYL PHTHALATE	0.41	8.2E+04	5.0E-06	--	--
FLUORANTHENE	6.6	3.0E+04	2.2E-04	--	--
FLUORENE	0.33	3.0E+04	1.1E-05	--	--
INDENO[1,2,3-CD]PYRENE	1	--	--	2.1E+01	4.8E-08
PHENANTHRENE	3.9	NA ⁷	--	NA ⁷	--
PYRENE	5	2.3E+04	2.2E-04	--	--
<i>Pesticides/PCBs</i>					
DDD	0.034	--	--	9.6E+00	3.5E-09
DDT	0.016	--	--	8.5E+00	1.9E-09
		Hazard Index	8.9E-02	Cumulative Risk	8.9E-06
		PTSM?⁸	NO	PTSM?⁹	NO

1 - Maximum detected concentration from all soil sample depth intervals (samples RFW-001 through RFW-010).
2 - Nonradiological RSLs are default industrial worker soil values from the *EPA Regional Screening Levels Table*, dated May 2021.
3 - Hazard Estimate = maximum concentration / RSL concentration
4 - Risk Estimate = (maximum concentration / RSL concentration) x 1E-06
5 - EN = essential nutrient, RSL not available for this constituent.
6 - Chemical analysis for total chromium. A total chromium RSL is not available; both the trivalent chromium (noncarcinogen) and hexavalent chromium (carcinogenic) RSLs used for screening.
7 - NA = not available; RSL for this constituent is not available.
8 - Subunit potentially has PTSM if HI ≥ 10 for noncarcinogenic constituents.
9 - Subunit potentially has PTSM if cumulative risk ≥ 1E-03 for carcinogenic constituents.

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Table D.2. LRP 131-4L Preliminary Tier II CM Screening (All Soil Depths)

Analyte	Retardation	Mean Travel Time	Predicted Concentration in Aquifer	Action Level	Failing Analytes ¹	Tier II SSL _{T1/2}	Tier II MLSSL _{T1/2}
	[unitless]	[years]	[µg/L]			[mg/kg]	
Benzo(a)anthracene	5.46E+03	1.58E+04		3.00E-02		Infinite	Infinite
Benzo(a)pyrene	1.48E+04	4.28E+04		2.00E-01		Infinite	Infinite
Benzo(b)fluoranthene	1.87E+04	5.43E+04		2.50E-01		Infinite	Infinite
Dibenz(a,h)anthracene	2.73E+04	7.90E+04		2.50E-02		Infinite	31319.72109
p,p'-DDD	6.99E+02	2.02E+03		3.20E-02		Infinite	6.13E-03
Arsenic, Inorganic	7.63E+02	2.21E+03	2.37E+01	1.00E+01		3.33E+00	
Cadmium	5.73E+02	1.66E+03	3.52E+00	5.00E+00		1.25E+00	
Iron	1.68E+03	4.86E+03	3.21E+04	1.40E+04		1.02E+04	
Lead and compounds	2.06E+03	5.96E+03	2.31E+01	1.50E+01		1.35E+01	
Manganese	3.82E+02	1.11E+03	1.25E+03	4.30E+02		7.17E+01	

1 - Failing Analytes were identified as Tier II COPCs and were evaluated further to determine Tier II COCs.

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ATTACHMENT A

Field Geologic Log for LSW020 Boring

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Field Geologic Log

Run Number	Depth Below Ground Surface (Feet)	Lithology	Percent Recovery	Sample Description	Drilling Comments/Remarks
<p>Project: L-Area Southern Groundwater Date: 6/17/02 Sheet: 1 of 20</p> <p>Well Number: LSW-20 Location: Drilling Subcontractor: Prosonic</p> <p>Logs Prepared By: Jim Furlow Driller: Dave Wilson</p> <p>Company: SAIC Drilling Method: Rotasonic Core</p>					
1	0		100	0'-6.0' SANDY CLAY to CLAYEY SAND: dark yellowish orange (10R6/8) to moderate reddish brown (10R 4/6), fine grained, subangular, poorly sorted, firm, low permeability, dry.	
	1				
	2				
	3				
	4				
	5				
2	6		100	6.0'-16.0' CLAYEY SAND: moderate reddish orange (10R6/8), very fine to fine grained, angular to subangular, poorly sorted, soft to firm, low to fair permeability, dry.	
	7				
	8				
	9				
	10				
	11				
3	16		100	16.0'-16.5' CLAYEY SAND: as above	
	17				
	18				
	19				
	20				
	21				

Field Geologic Log

Project		Date	Sheet
L-Area Southern Groundwater		6/17/02	2 of 20
Well Number	Location	Drilling Subcontractor	
LSW-20		Prosonic	
Logs Prepared By	Driller		Drilling Method
Jim Furlow	Dave Wilcox		Rotasonic Core
Company			
SAIC			

Run Number	Depth Below Ground Surface (Feet)	Lithology	Percent Recovery	Sample Description	Drilling Comments/Remarks	
3	2.0		100	16.5' - 26.0' See previous page for description		
	1					
	2					
	3					
	4					
	5					
4	6		100	26.0' - 36.0' CLAY; pale red (10R6/2) to yellowish gray (5YR/1), clean, moderate to high plasticity, firm, very low permeability, dry.		
	7					
	8					
	9					
	3.0					
	1					
5	2		100	36.0' - 46.0' SANDY CLAY to SILTY CLAY; moderate reddish orange (10R6/2) to yellowish gray (5YR/1), sandy (10-40%), (sand is very fine grained), moderate plasticity, soft, very low permeability,		
	3					
	4					
	5					
	6					
	7					
	8					
	9					
	4.0					

Field Geologic Log

Run Number	Depth Below Ground Surface (Feet)	Lithology	Percent Recovery	Sample Description	Drilling Comments/Remarks	
<p>Project: L-Area Southern Groundwater Date: 6/17/02 Sheet: 3 of 20</p> <p>Well Number: LSW-20 Location: Drilling Subcontractor: Prosonic</p> <p>Logs Prepared By: Jim Furlow Driller: Dave Wilcox</p> <p>Company: SAIC Drilling Method: Rotasonic Core</p>						
5	40		100	36.0' - 46.0' see previous page for description		
	1					
	2					
	3					
	4					
6	50		100	46.0' - 51.0' CLAY: yellowish gray (5Y 8/1), clean to sandy (0-20% sand), mostly clean, moderate to high plasticity, very low permeability, dry.		
	1					
	2					
	3					
	4					
7	56.0		100	51.0' - 56.0' CLAYEY SAND to SANDY CLAY: pale yellowish orange (10YR 8/6) to pale red purple (5R 6/2), fine to coarse grained, subangular, poorly sorted, fair permeability, damp.		
	1					
	2					
	3					
	4					
7	60		100	56.0' - 66.0' CLAYEY SAND to SILTY SAND: light red (5R 6/1) to very pale orange (10YR 8/2), medium to coarse grained, subangular, poorly sorted, clayey (5-15%), silty (5-10%), soft to loose, fair to good permeability, wet. Tight, clean clay 58.0' - 58.75'.	Fair to good sand 59.0' - 66.0'	
	1					
	2					
	3					
	4					

Field Geologic Log

Project		L - Area Southern Groundwater		Date	6/17/02 <th>Sheet</th> <td>4 of 20</td>	Sheet	4 of 20
Well Number		LSW-20 <th colspan="2">Location</th> <th colspan="2">Drilling Subcontractor</th>		Location		Drilling Subcontractor	
Logs Prepared By		Jim Furlow		Driller		Dave Wilcox	
Company		SAIC		Drilling Method		Rotasonic Core	
Run Number	Depth Below Ground Surface (Feet)	Lithology	Percent Recovery	Sample Description		Drilling Comments/Remarks	
7	6.0		100	56.0' - 66.0' See previous page for description		Fair to good sand 56.0' - 66.0'	
	1						
	2						
	3						
	4			Some gravel 1/4" - 3/8" 63.0' - 66.0'			
	5						
8	6		100	66.0' - 76.0' CLAYEY SAND to SILTY SAND: moderate orange pink (10R 7/4), medium to coarse grained, subangular, poorly sorted, clayey (5-15%), silty (5-10%), soft, fair to good permeability, wet. Abundant gravel 1/4" - 3/8" throughout		Fair to good sand 66.0' - 76.0'	
	7						
	8						
	9						
	7.0						
	1						
9	2		100	76.0' - 86.0' CLAYEY SAND to SILTY SAND: moderate reddish orange (10R 6/6) to pale yellowish orange (10R 8/6), medium to coarse grained, subangular, poorly sorted, clayey (5-10%), silty (5-10%), fair to good permeability, wet. Abundant gravel 1/4" - 3/8" throughout		Fair to good sand 76.0' - 86.0'	
	3						
	4						
	5						
	6						
	7						
	8.0						

Field Geologic Log

Project		Date	Sheet
L - Area Southern Groundwater		6/17/02	5 of 20
Well Number	Location	Drilling Subcontractor	
LSW - 20		Prosonic	
Logs Prepared By		Driller	
Jim Furlow		Dave Wilcox	
Company		Drilling Method	
SAIC		Rotasonic Core	

Run Number	Depth Below Ground Surface (Feet)	Lithology	Percent Recovery	Sample Description	Drilling Comments/Remarks
9	8.0	[Diagram: Stippled pattern representing sand]	100		
	1				
	2				
	3				
	4				
	5				
10	6	[Diagram: Stippled pattern representing sand]	60	86.0' - 87.0' SILTY SAND to CLAYEY SAND: as above.	
	7				
	8				
	9				
	9.0			87.0' - 92.0' SILTY SAND: dark yellowish orange (10YR 6/6), very fine to fine grained, angular to subangular, well sorted, silty (5-10%), loose, fair to good permeability, wet.	Fair to good sand 86.0' - 92.0'
	1				
	2				
	3			No recovery 92.0' - 96.0'; probably silty sand as above.	
	4				
	5				
11	6	[Diagram: Stippled pattern representing sand]	100		
	7				
	8				
	9				
	100		96.0' - 101.0' SILTY SAND: dark yellowish orange (10YR 6/6), very fine to fine grained, subangular, well sorted, silty (10-20%), loose, fair to good permeability, wet.	Fair to good sand 96.0' - 101.0'	

Field Geologic Log

Project		Date	Sheet
L-Area Southern Groundwater		6/17/02	6 of 20
Well Number	Location	Drilling Subcontractor	
LSW-20		Prosonic	
Logs Prepared By		Driller	
Jim Furlow		Dave Wilcox	
Company		Drilling Method	
SAIC		Rotasonic Core	

Run Number	Depth Below Ground Surface (Feet)	Lithology	Percent Recovery	Sample Description	Drilling Comments/Remarks
11	100	[Lithology: Clayey Sand]	100	101.0'-106.0' CLAYEY SAND: dark yellowish orange (10YR 6/6), very fine to fine grained, subangular, well sorted, clayey (10-20%), soft, moderate plasticity, low permeability, wet.	
	102				
	103				
	104				
	105				
	106				
12	106.0	[Lithology: Silty Sand to Clayey Sand]	100	106.0'-116.0' SILTY SAND to CLAYEY SAND: dark yellowish orange (10YR 6/6), fine to medium grained, subangular, fairly well sorted, silty (10-15%), clayey (5-10%), soft, fair permeability, wet.	fair sand 106.0'-116.0'
	107				
	108				
	109				
	110				
	111				
13	116.0	[Lithology: Silty Sand]	100	116.0'-123.0' SILTY SAND: dark yellowish orange (10YR 6/6) to moderate reddish orange (10R 6/6), fine to medium grained, subangular, well sorted, silty (5-15%), good permeability, wet.	Good Sand 116.0'-123.0'
	117				
	118				
	119				
	120				
	120				

Field Geologic Log

Run Number	Depth Below Ground Surface (Feet)	Lithology	Percent Recovery	Sample Description	Drilling Comments/Remarks
<p>Project: <u>L-Area Southern Groundwater</u> Date: <u>6/17/02</u> Sheet: <u>7 of 20</u></p> <p>Well Number: <u>LSW-20</u> Location: Drilling Subcontractor: <u>Prosonic</u></p> <p>Logs Prepared By: <u>Jim Furlow</u> Driller: Drilling Method: <u>Rotasonic Core</u></p> <p>Company: <u>SAIC</u></p>					
13	12.0		100	116.0' - 123.0' See previous page for description	
	1				
	2				
	3			123.0' - 124.0' CLAYEY SAND: greyish orange (10R 7/6) to light red (5R 6/6), medium grained, subangular, poorly sorted, with frequent stringers of clay throughout interval.	Tan Clay at 124.0'
	4			124.0' - 126.0' CLAY: moderate reddish orange (10YR 6/6), clean, with sandy pods/lenses, moderate to high plasticity, firm, very low permeability, dry.	
	5				
14	6		100	126.0' - 136.0' CLAYEY SAND: moderate reddish brown (10R 4/6) to dark yellowish orange (10YR 6/6), fine grained, subangular, well sorted, clayey (10-40%), fair to low permeability, wet to dry.	
	7				
	8				
	9				
	13.0				
	14.0				
15	13.0		100	136.0' - 146.0' CLAYEY SAND to SANDY CLAY: dark yellowish orange (10YR 6/6), fine to medium grained, subangular, moderately well sorted, clayey (15-20%), low to moderate plasticity, low permeability, wet to dry.	
	1				
	2				
	3				
	4				
	5				

Field Geologic Log

Run Number	Depth Below Ground Surface (Feet)	Limnology	Percent Recovery	Sample Description	Drilling Comments/Remarks
<p>Project: L - Area Southern Groundwater Date: 6/18/02 Sheet: 8 of 20</p> <p>Well Number: LSW-20 Location: Drilling Subcontractor: ProSonic</p> <p>Logs Prepared By: Jim Furlow Driller: Wayne Smith</p> <p>Company: SAIC Drilling Method: Rotasonic Core</p>					
15	14.0		100	136.0' - 146.0' SANDY CLAY to CLAYEY SAND: see previous page for description.	
	1				
	2				
	3			Becomes sandy clay 143.0' - 144.5'	
	4				
16	15.0		100	146.0' - 149.0' CLAYEY SAND: dark yellowish orange (10YR 6/6), fine to medium grained, angular to subangular, well sorted, clayey (15-25%), soft, low to moderate plasticity, fair permeability, wet.	
	1				
	2				
	3				
	4				
17	16.0		100	156.0' - 162.0' CLAYEY SAND: pale yellowish orange (10YR 8/6), fine to medium grained, angular to subangular, well sorted, clayey (10-20%), fair permeability, wet.	
	1				
	2				
	3				
	4				

Field Geologic Log

Project		Date	Sheet		
Well Number		Location	Drilling Subcontractor		
Logs Prepared By		Driller	Drilling Method		
Company					
Run Number	Depth Below Ground Surface (Feet)	Lithology	Percent Recovery	Sample Description	Drilling Comments/Remarks
Project: L-area Southern Groundwater		Date: 6/19/02	Sheet: 9 of 20		
Well Number: LSW-20		Location:	Drilling Subcontractor: Prosonic		
Logs Prepared By: Jim Furlow		Driller: Wayne Smith	Drilling Method: Rotasonic Core		
Company: SAIC					
17	16.0	[Lithology: Sand]	100		
	1				
	2				
	3			162.0' - 166.0' SAND: pale yellowish orange (10 YR 8/6), fine to medium grained, angular to subangular, well sorted, clean to slightly silty (0-2%), good permeability, loose, wet.	Good Sand 162.0' - 166.0'
	4				
	5				
18	6	[Lithology: Sand]	100	166.0' - 168.0' SAND: as above	Good Sand 166.0' - 168.0'
	7				
	8				
	9			168.0' - 176.0' CLAYEY SAND: grayish yellow (5YR/4), fine to coarse grained, subangular, poorly sorted, clayey (10-30%), fair to low permeability, soft, with abundant sandstone gravel 1/2" - 4" throughout.	
	17.0				
	1				
19	2	[Lithology: Sand]	100		
	3				
	4				
	5				
	6				
	7			176.0' - 181.0' CLAYEY SAND: grayish yellow (5YR/4), fine to medium grained, subangular, poorly sorted, clayey (10-40%), soft, fair permeability, with abundant sandstone gravel throughout.	
8					
9					
	18.0				

Field Geologic Log

Project		Date	Sheet		
L - Area Southern Groundwater		6/19/02	10 of 20		
Well Number	Location	Drilling Subcontractor			
LSW-20		Prosonic			
Logs Prepared By	Driller		Drilling Method		
Jim Furlow	Wayne Smith		Rotasonic Core		
Company					
SAIC					
Run Number	Depth Below Ground Surface (Feet)	Lithology	Percent Recovery	Sample Description	Drilling Comments/Remarks
19	18.0	[Lithology: Silty Sand to Clayey Sand]	100	181.0' - 186.0' SILTY SAND to CLAYEY SAND: dark yellowish orange (10YR6/6), very fine to fine grained, subangular, well sorted, silty (5-10%), clayey (5-10%), soft to loose, good permeability, wet.	Good sand 181.0' - 186.0'
	1				
	2				
	3				
	4				
	5				
20	6	[Lithology: Silty Sand to Clayey Sand]	100	186.0' - 194.0' SILTY SAND to CLAYEY SAND: pale yellowish orange (10YR8/6), fine grained, subangular, well sorted, silty (5-10%)	Good Sand 186.0' - 190.0'
	7				
	8				
	9				
	19.0				
	1				
21	2	[Lithology: Silty Sand to Clayey Sand]	100	186.0' - 190.0', then clayey to very clayey (15-50%) 190.0' - 194.0', good permeability 186.0' - 190.0', fair to low permeability 190.0' - 194.0, wet.	
	3				
	4				
	5				
	6				
	7				
21	8	[Lithology: Silty Sand to Clayey Sand]	100	194.0' - 196.0' SANDY CLAY: dark greenish gray (5GY4/1), soft to firm, moderate to high plasticity, sandy (10-30%), low to very low permeability, wet to dry	Green Clay at 194.0'
	9				
	20.0				
	1				
	2				
	3				
21	4	[Lithology: Silty Sand to Clayey Sand]	100	196.0' - 206.0' SANDY CLAY to CLAYEY SAND: dark greenish gray (5GY4/1), soft to hard, low to high plasticity, sandy (5-30%) (very fine to fine grained) to clayey (5-70%), low to very low permeability, wet to dry.	
	5				
	6				
	7				
	8				
	9				

Field Geologic Log

Project		L - Area Southern Groundwater		Date	6/19/02	Sheet	11 of 20
Well Number		LSW-20		Location		Drilling Subcontractor	
Logs Prepared By		Jim Furlow		Driller		Wayne Smith	
Company		SAIC		Drilling Method		Rotasonic Core	

Run Number	Depth Below Ground Surface (Feet)	Lithology	Percent Recovery	Sample Description	Drilling Comments/Remarks
21	200	[Lithology: Sandy Clay to Clayey Sand]	100	196.0' - 206.0' SANDY CLAY to CLAYEY SAND: see previous page for description.	
	1				
	2				
	3				
	4				
	5				
22	6	[Lithology: Silty Sand]	100	206.0' - 216.0' SILTY SAND: dark greenish gray (SGY4/1), very fine grained, subangular, very well sorted, silty (5-15%), soft to loose, good permeability, wet.	Grind Sand 206.0-216.0'
	7				
	8				
	9				
	210				
	1				
23	2	[Lithology: Silty Sand]	100	216.0' - 226.0' SILTY SAND: dark greenish gray (SGY4/1), very fine to fine grained, angular to subangular, very well sorted, silty (5-20%), some partings slightly clayey (5-10%), soft to loose, good permeability, wet.	Grind Sand 216.0-226.0'
	3				
	4				
	5				
	6				
	7				
	8				
	9				
	220				

Field Geologic Log

Project		Date	Sheet		
L- Area Southern Groundwater		6/19/02	12 of 20		
Well Number	Location	Drilling Subcontractor			
LSW-20		Prosonic			
Logs Prepared By		Driller			
Jim Furlow		Wayne Smith			
Company		Drilling Method			
SAIC		Rotasonic Core			
Run Number	Depth Below Ground Surface (Feet)	Lithology	Percent Recovery	Sample Description	Drilling Comments/Remarks
23	22.0	[Lithology: Silty Sand]	100	216.0'-226.0' SILTY SAND: see previous page for description.	
	1				
	2				
	3				
	4				
	5				
24	6	[Lithology: Silty Sand]	100	226.0'-236.0' SILTY SAND: dark greenish gray (SGY4/1), very fine grained, subangular, very well sorted, soft to loose, good permeability, wet, silty (5-15%).	Good Sand 226.0'-236.0'
	7				
	8				
	9				
	23.0				
	1				
25	2	[Lithology: Silty Sand]	100	236.0'-241.0' SILTY SAND: dark greenish gray (SGY4/1), very fine grained, subangular, very well sorted, silty (5-15%), soft, good permeability, wet.	Good Sand 236.0'-241.0'
	3				
	4				
	5				
	6				
	7				
	8				
	9				
	24.0				

Field Geologic Log

Project		Date		Sheet	
L - Area Southern Groundwater				13 of 20	
Well Number		Location		Drilling Subcontractor	
LSW-20				Prosonic	
Logs Prepared By		Driller			
Jim Furlow		Wayne Smith			
Company		Drilling Method			
SAIC		Rotasonic Core			
Run Number	Depth Below Ground Surface (Feet)	Lithology	Percent Recovery	Sample Description	Drilling Comments/Remarks
25	240		100		
	1				
	2			241.0' - 246.0' SAND: medium gray (N5), fine grained, subangular, very well sorted, slightly silty (2-5%), loose, very good permeability, wet.	Very Good Sand 241.0' - 246.0'
	3				
	4				
	5				
26	6		100		
	7				
	8			246.0' - 256.0' SAND: medium gray (N5) to medium light gray (N6), fine to medium grained, well sorted, slightly silty (2-5%), loose, very good permeability, wet.	Very Good Sand 246.0' - 256.0'
	9				
	250				
	1				
27	2		100		
	3				
	4				
	5				
	6				
	7			256.0' - 264.0' SAND: medium gray (N5), medium grained, well sorted, slightly silty (2-5%), loose, very good permeability, wet.	Very Good Sand 256.0' - 264.0'
8					
9					
	260				

Field Geologic Log

Project		L - Area Southern Groundwater		Date	6/20/02	Sheet	14 of 20
Well Number		LSW-20		Location		Drilling Subcontractor	Prosonic
Logs Prepared By		Jim Furlow		Driller	Wayne Smith		
Company		SAIC		Drilling Method	Rotasonic Core		
Run Number	Depth Below Ground Surface (Feet)	Lithology	Percent Recovery	Sample Description		Drilling Comments/Remarks	
27	26.0	[Dotted pattern]	100	256.0' - 264.0' SAND: see previous page for description.			
	1						
	2						
	3						
28	4	[Dotted pattern]	100	264.0' - 266.0' SILTY SAND: medium gray (NS), very fine grained, subangular, very well sorted, silty (10-15%), well compacted, fair permeability, wet.			
	5						
	6						
	7						
29	27.0	[Dotted pattern]	100	266.0' - 276.0' CLAYEY SAND: medium gray (NS), very fine to fine grained, angular to subangular, poorly sorted, fair to low permeability, clayey (10-50%), wet. Clay is mostly in form of thin stringers and lenses throughout the sand.			
	1						
	2						
	3						
29	4	[Dotted pattern]	100	276.0' - 286.0' CLAYEY SAND to SILTY SAND: medium gray (NS), very fine to fine grained, angular to subangular, moderately well sorted, clayey (5-20%), fair permeability, wet. Clay is mostly in thin stringers throughout sand, but also mixed in with the sand.			
	5						
	6						
	7						
	28.0						

Field Geologic Log

Project		L - Area Southern Groundwater		Date	6/20/02	Sheet	15 of 20
Well Number		LSW-20		Location		Drilling Subcontractor	
Logs Prepared By		Jim Furlow		Driller		Prosonic Wayne Smith	
Company		SAIC		Drilling Method		Rotasonic Core	

Run Number	Depth Below Ground Surface (Feet)	Lithology	Percent Recovery	Sample Description	Drilling Comments/Remarks
29	280		100	276.0' - 286.0' CLAYEY SAND to SILTY SAND: See previous page for description.	
	1				
	2				
	3				
	4				
	5				
30	290		100	286.0' - 296.0' CLAYEY SAND to SILTY SAND: medium gray (NS), very fine to fine grained, angular to subangular, well sorted, clayey (5-15%), silty (5-10%), soft, fair permeability, wet.	
	1				
	2				
	3				
	4				
	5				
31	300		100	296.0' - 306.0' CLAYEY SAND to SILTY SAND: medium gray (NS), fine to medium grained, subangular, poorly sorted, clayey (5-30%), silty (5-10%), soft, fair to low permeability, wet to dry.	
	1				
	2				
	3				
	4				
	5				

Field Geologic Log

Project		L - Area Southern Groundwater		Date	6/20/02	Sheet	16 of 20
Well Number		LSW-20		Location		Drilling Subcontractor	
Logs Prepared By		Jim Furlow		Driller		Wayne Smith	
Company		SAIC		Drilling Method		Rotasonic Core	

Run Number	Depth Below Ground Surface (Feet)	Lithology	Percent Recovery	Sample Description	Drilling Comments/Remarks	
31	300		100	296.0' - 306.0' CLAYEY SAND to SILTY SAND: see previous page for description.		
	1					
	2					
	3					
	4					
	5					
	6					
32	306		100	306.0' - 316.0' SAND: medium gray (NS), fine to medium grained, subangular, well sorted, silty (5-10%), loose, very good permeability, wet.	Very good sand 306'-316'	
	1					
	2					
	3					
	4					
	5					
	6					
33	316		100	316.0' - 326.0' SAND: medium gray (NS) to medium light gray (N6), medium to coarse grained, subangular, well sorted, silty to slightly silty (2-5%), loose, very good permeability, wet.	Very Good Sand 316'-326'	
	1					
	2					
	3					
	4					
	5					
	6					
	320					

Field Geologic Log

Project		Date	Sheet		
L - Area Southern Groundwater		6/20/02	17 of 20		
Well Number	Location	Drilling Subcontractor			
LSW - 20		Prosonic			
Logs Prepared By		Driller			
Jim Furlow		Wayne Smith			
Company		Drilling Method			
SALC		Rotasonic Core			
Run Number	Depth Below Ground Surface (Feet)	Lithology	Percent Recovery	Sample Description	Drilling Comments/Remarks
33	32.0		100	316.0' - 326.0' SAND: see previous page for description.	
	1				
	2				
	3				
	4				
	5				
34	35.0		100	326.0' - 336.0' SILTY SAND: light gray (N7) to medium gray (N5), medium to coarse grained, subangular, poorly sorted, silty (10-20%), very good permeability, wet. Sand contains fossil tree trunks at 332.0' - 333.0' and 334.0' - 335.0'.	Very good sand 326.0' - 336.0'
	1				
	2				
	3			Solid lignite 332.0' - 333.0' and 334.0' - 335.0'; fossil tree trunks.	
	4				
	5				
35	34.0		100	336.0' - 346.0' CLAYEY SAND to SILTY SAND: dark gray (N5) to light gray (N7), very fine to fine grained, subangular, poorly sorted, clayey (10-30%), silty (10-20%), fair to low permeability, wet.	
	1				
	2				
	3				
	4				
	5				

Field Geologic Log

Project		L - Area Southern Groundwater		Date	6/20/02	Sheet	18 of 20
Well Number		LSG-20		Location		Drilling Subcontractor	
Logs Prepared By		Jim Furlow		Driller		Prosonic Wayne Smith	
Company		SAIC		Drilling Method		Rotasonic Core	

Run Number	Depth Below Ground Surface (Feet)	Lithology	Percent Recovery	Sample Description	Drilling Comments/Remarks
35	340	[Lithology: Dotted pattern]	100	336.0' - 346.0' CLAYEY SAND to SILTY SAND: see previous page for description.	
	1				
	2				
	3				
	4				
	5				
36	350	[Lithology: Dotted pattern]	100	346.0' - 356.0' SILTY SAND: medium gray (NS), very fine to fine grained, subangular, well-sorted, silty (20-30%), with thin lenses and beds of sandy clay throughout; soft, fair to low permeability, wet.	
	1				
	2				
	3				
	4				
	5				
37	360	[Lithology: Dotted pattern]	100	356.0' - 366.0' SILTY SAND: medium gray (NS), very fine to fine grained, angular to subangular, poorly sorted, silty (20-30%), with thin stringers of sandy clay decreasing downward; soft fair permeability, wet.	
	1				
	2				
	3				
	4				
	5				

Field Geologic Log

Project		L - Area Southern Groundwater		Date	6/21/02	Sheet	19 of 20
Well Number		LSW-20		Location		Drilling Subcontractor	
Logs Prepared By		Jim Furlow		Driller		Wayne Smith	
Company		SAIC		Drilling Method		Rotasonic Core	

Run Number	Depth Below Ground Surface (Feet)	Lithology	Percent Recovery	Sample Description	Drilling Comments/Remarks	
37	36.0	[Dotted pattern]	100	366.0' - 366.0' SILTY SAND: see previous page for description.		
	1					
	2					
	3					
	4					
	5					
38	37.0	[Dotted pattern]	100	366.0' - 374.0' SILTY SAND: medium gray (M5), very fine to fine grained, subangular, moderately well sorted, silty (20-30%), soft to loose, good permeability, wet.		
	1					
	2					
	3					
	4					
	5					
39	376.0	[Horizontal lines]	100	374.0' - 376.0' CLAY: yellowish gray (5YR/1), hard, dense, friable, low plasticity, very low permeability, sandy (20%), silty (10%), dry.	Ellenton Clay at 374.0'	
	1					
	2					
	3					
	4					
	5					
39	386.0	[Horizontal lines]	100	376.0' - 386.0' CLAY: yellowish gray (5YR/1) to very light gray (N8), hard, dense, low to moderate plasticity, very low permeability, sandy (20-30%), silty (10%), small grains of pyrite, dry.		
	1					
	2					
	3					
	380					

Field Geologic Log

Project		L - Area Southern Groundwater		Date	6/21/02	Sheet	20 of 20
Well Number		LSW-20		Location		Drilling Subcontractor	
Logs Prepared By		Jim Furlow		Driller		Praxonic Dave Wilson	
Company		SAR		Drilling Method		Rotasonic Core	

Run Number	Depth Below Ground Surface (Feet)	Lithology	Percent Recovery	Sample Description	Drilling Comments/Remarks
39	38.0	[Lithology symbols]	100	376.0' - 386.0' See previous page for description	
	1				
	2				
	3				
	4			383.0' - 386.0' Clay becomes sandier (30-50%), siltier (25%), softer.	
	5				
	6			Small gravel to 1/4 inch	
	7			T.D. of Boring 386.0'	
	8			6/21/02	
	9				
	39.0				
	1				
	2				
	3				
	4				
	5				
	6				
	7				
	8				
	9				
	40.0				

ATTACHMENT B

Field Geologic Log for LSW 4C Boring

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OSR 30-3

FIELD GEOLOGIC LOG

PROJECT		L-Area Southern Groundwater Characterization		DATE	9/14/01		SHEET	1 of 9	
WELL NO.		LSW-04		REFERENCE DATUM	DILLING CONTRACTOR Prosonic				
LOGGED BY		Jim Furlow		SAP COORDINATES	DRILLER Michael Coleman				
				COMPANY	SAIC				
						DRILLING METHOD Rotasonic			
RUN NUMBER	DEPTH, FEET	LITHOLOGY	PERCENT RECOVERY	SAMPLE DESCRIPTION				DRILLING COMMENTS	
1	0	[Lithology: Clayey Sand]	100	0-7.5' Clayey Sand: grayish orange (10YR 7/4), fine to medium grained, subangular, some gravel to 1/2", soft to firm, low plasticity, damp.					
	1								
	2								
	3								
	4								
	5								
	6								
	7								
2	8	[Lithology: Clayey Sand]	100	7.5'-17.5' Clayey Sand: yellowish gray (5Y 5/1) to dark yellowish orange (10YR 6/6) to moderate reddish brown (10R 4/6), fine to coarse grained, mostly fine grained, subangular to subrounded, very clayey, 7.5'-10', low plasticity, faintly laminated, damp to dry.					
	9								
	10								
	11								
	12								
	13								
	14								
	15								
3	16	[Lithology: Clayey Sand]	100						
	17								
	18								
	20								

OSR 30-3

FIELD GEOLOGIC LOG

PROJECT		DATE		SHEET	
L-Area Southern Groundwater Characterization		9/14/01		2 of 9	
WELL NO.		SRP COORDINATES		DRILLING CONTRACTOR	
LSW-04				Prosonic	
LOGGED BY		COMPANY		DRILLER	
Jim Furlow		SAIC		Michael Coleman	
				DRILLING METHOD	
				Rotasonic	
RUN NUMBER	DEPTH, FEET	LITHOLOGY	PERCENT RECOVERY	SAMPLE DESCRIPTION	DRILLING COMMENTS
3	20	[Dotted pattern]	100	17.5'-27.5' Clayey Sand: white (N9) to moderate reddish brown (10R 4/6) to dark yellowish orange (10YR 6/6), fine to very fine grained, subangular, low plasticity, dry to damp.	
	1				
	2				
	3				
	4				
	5				
	6				
4	8	[Dotted pattern]	100	27.5'-37.5' Clayey Sand: moderate reddish brown (10R 4/6) to dark yellowish orange (10YR 6/6), fine grained, subangular, highly laminated, soft, low plasticity, damp.	
	9				
	30				
	1				
	2				
	3				
	4				
5	8	[Dotted pattern]	100	37.5'-40.0' Clayey Sand: as above	
	9				
	40				

OSR 30-3

FIELD GEOLOGIC LOG

PROJECT		DATE		SHEET	
L-Area Southern Groundwater Characterization		9/14/01		3 of 9	
WELL NO.		REFERENCE DATUM		DRILLING CONTRACTOR	
L5W-04				Prosonic	
LOGGED BY		SRP COORDINATES		DRILLER	
Jim Furtow				Michael Coleman	
		COMPANY		DRILLING METHOD	
		SAIC		Rotasonic	
RUN NUMBER	DEPTH, FEET	LITHOLOGY	PERCENT RECOVERY	SAMPLE DESCRIPTION	DRILLING COMMENTS
5	4.0	[Lithology: Silty Sand]	100	40.0'-47.5' Silty Sand: moderate reddish brown (10R 4 1/6) to white (N9) to dark yellowish orange (10YR 6/6), fine grained, subangular to subrounded, slightly clayey, soft, damp, highly laminated to mottled.	
	1				
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	4				
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	6				
	7				
6	8	[Lithology: Clayey Sand to Sandy Clay]	100	47.5'-56.0' Clayey Sand to Sandy Clay: pale yellowish orange (10YR 8/6) to pale red purple (5R 6/2) to grayish orange pink (5YR 7/2), very fine to fine grained, silty, soft, damp, highly laminated, moderate to high plasticity.	
	9				
	5.0				
	1				
	2				
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	5				
7	6.0	[Lithology: Sandy Clay]	100	56.0'-57.5' Sandy Clay: light brownish gray (5YR 6/1) to moderate orange pink (10R 7/4), fine grained, soft to firm, highly laminated, high plasticity.	
	8				
	9				
	6.0				

OSR 30-3

FIELD GEOLOGIC LOG

PROJECT		DATE		SHEET	
L - Area Southern Groundwater Characterization		9/14/01		4 of 9	
WELL NO.		REFERENCE DATUM		DRILLING CONTRACTOR	
LSW-04				Prosonic	
LOGGED BY		COMPANY		DRILLER	
Jim Furlow		SAIC		Michael Coleman	
LITHOLOGY		PERCENT RECOVERY		SAMPLE DESCRIPTION	
RUN NUMBER	DEPTH, FEET				DRILLING COMMENTS
7	6 0	[Lithology: Clayey Sand]	100	57.5'-67.5' Clayey Sand: grayish pink (SRP/2) to pale red (SR6/2), very fine to coarse grained, mostly fine grained, subangular, becomes silty and less clayey 66'-67.5'; soft, low plasticity, laminated, damp.	
	1				
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	6				
8	7 0	[Lithology: Clayey Sand]	100	67.5'-70.0' Clayey Sand: moderate orange pink (10R 2/4) to pale yellowish orange (10YR 8/6), very fine to medium grained, mostly very fine grained, subangular, silty, laminated, soft, damp to wet.	
	1				
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9	8 0	[Lithology: Silty Sand]	100	70.0'-77.5' Silty Sand: pale yellowish orange (10YR 8/4) to dark yellowish orange (10YR 6/6), fine grained, subangular, soft to loose, wet, becomes only slightly silty 75.0'-77.5'.	
	9				
	8 0				

DSR 30-3

FIELD GEOLOGIC LOG

PROJECT L-Area Southern Groundwater Characterization		DATE 9/14/01	SHEET 5 of 9
WELL NO. LSW-04		REFERENCE DATUM	DRILLING CONTRACTOR Prosonic
LOGGED BY Jim Furlow		SRP COORDINATES	DRILLER Michael Coleman
		COMPANY SAIC	DRILLING METHOD Rotasonic

RUN NUMBER	DEPTH, FEET	LITHOLOGY	PERCENT RECOVERY	SAMPLE DESCRIPTION	DRILLING COMMENTS
9	80		100	77.5'-85.5' Sand: dark yellowish orange (10YR6/6), fine grained, subangular, slightly silty to silty, loose to soft, wet.	
	1				
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	6				
10	7		100	85.5'-87.5' Clayey Sand: dark yellowish orange (10YR6/6), fine to medium grained, subangular to subrounded, silty, soft, laminated, wet.	
	8				
	9				
	90				
	1				
	2				
	3				
11	4		100	87.5'-97.5' Clayey Sand to Silty Sand: dark yellowish orange (10YR6/6) to pale reddish brown (10R5/4) to yellowish gray (5Y 3/1), fine to medium grained, subangular, laminated, soft to firm, wet.	
	5				
	6				
	7				
	8				
	9				
	100				

OSR 30-3

FIELD GEOLOGIC LOG

PROJECT		DATE		SHEET	
L-Area Southern Groundwater Characterization		9/14/01		6 of 9	
WELL NO.		SRP COORDINATES		DRILLING CONTRACTOR	
LSW-04				Prosonic	
LOGGED BY		COMPANY		DRILLER	
Jim Furlow		SAIC		Michael Coleman	
				DRILLING METHOD	
				Rotasonic	
RUN NUMBER	DEPTH, FEET	LITHOLOGY	PERCENT RECOVERY	SAMPLE DESCRIPTION	DRILLING COMMENTS
11	100	[Dotted pattern]	100	97.5'-107.5' Silty Sand to Clayey Sand: very pale orange (10YR 8/2) to dark yellowish orange (10YR 6/6), fine to medium grained, subangular, soft to stiff, low plasticity, laminated, wet.	
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	6				
12	8	[Dotted pattern]	100	107.5'-109.5' Alternating Clayey Sand and Clay: pale yellowish orange (10YR 8/6) to dark yellowish orange (10YR 6/6), fine grained, subangular, laminated, soft, low to high plasticity, wet to dry.	
	9				
	110			109.5'-114.0' Sand: dark yellowish orange (10YR 6/6), fine to medium grained, clean to slightly silty, subangular, loose, wet.	
	1				
	2				
	3			114.0'-115.5' Clayey Sand: dark yellowish orange (10YR 6/6) to grayish brown (5YR 3/2), fine to medium grained, soft, plastic, wet.	
	4				
5	115.5'-117.5' Clay: dark yellowish orange (10YR 6/6), silty to sandy, stiff to hard, low to moderate plasticity, dense, dry, laminated.	Tan Clay			
6					
7					
120	8	[Dotted pattern]		117.5'-118.5' Clayey Sand: dark yellowish orange (10YR 6/6), fine grained, subangular, stiff, dense, lignitic, laminated, damp.	
	9				
	120				

OSR 30-3

FIELD GEOLOGIC LOG

PROJECT		DATE		SHEET	
L-Area Southern Groundwater Characterization		9/17/01		7 of 9	
WELL NO.		REFERENCE DATUM		DRILLING CONTRACTOR	
LSW-04				Prosonic	
LOGGED BY		SRP COORDINATES		DRILLER	
Jim Furlow				Michael Coleman	
		COMPANY		DRILLING METHOD	
		SAIC		Rotasonic	
RUN NUMBER	DEPTH, FEET	LITHOLOGY	PERCENT RECOVERY	SAMPLE DESCRIPTION	DRILLING COMMENTS
13	12 0		100	119.5'-127.5' Clayey Sand to Sandy Clay: yellowish gray (5Y8/1) to grayish orange (10YR 7/4), very fine to fine grained, subangular, soft, dense, laminated, becomes silty and sandier in lower portion, fine to medium grained.	
	1				
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	6				
14	13 0		100	127.5'-137.5' Sand: yellowish gray (5Y8/1) to pale yellowish orange (10YR 8/4), fine grained, subangular, slightly silty; 127.5'-132.0' then silty 132.0'-137.5'; loose to soft, wet, faintly laminated 135.0'-137.5'.	
	1				
	2				
	3				
	4				
	5				
	6				
15	14 0		100		
	8				
	9				

OSR 30-3 FIELD GEOLOGIC LOG

PROJECT L-Area Southern Groundwater Characterization		DATE 9/17/01	SHEET 8 of 9
WELL NO. LSW-04		REFERENCE DATUM	DRILLING CONTRACTOR Prosonic
LOGGED BY Jim Furlow		SPP COORDINATES	DRILLER Michael Coleman
		COMPANY SAIC	DRILLING METHOD Rotasonic

RUN NUMBER	DEPTH, FEET	LITHOLOGY	PERCENT RECOVERY	SAMPLE DESCRIPTION	DRILLING COMMENTS
15	140	[Lithology: Silty Sand to Clayey Sand]	100	137.5'-144.0' Silty Sand to Clayey Sand; pale yellowish orange (10YR 8/6), fine to medium grained, subangular, soft, faintly laminated, locally lignitic, wet.	
	1				
	2				
	3				
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	6				
16	150	[Lithology: Silty Sand to Clayey Sand]	100	144.0'-147.5' Clayey Sand; dark yellowish brown (10YR 4/2), very fine to fine grained, subangular to subrounded, soft, low to moderate plasticity, locally lignitic/calcareous, wet because white (N9), very clayey, laminated in last 3 inches of run.	
	1				
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	6				
17	160	[Lithology: Sand]	100	147.5'-155.0' Silty Sand to Clayey Sand; yellowish gray (5YR 1) to dark yellowish orange (10YR 6/6), very fine to fine grained, soft to loose, locally very clayey, lignitic, wet.	
	1				
	2				
	3				
	4			155.0'-157.5' Sand; dark yellowish orange (10YR 6/6), very fine grained, subangular, loose, slightly silty, wet.	
	5				
	6				
	7				
	8			157.5'-162.5' Sand; pale yellowish orange (10YR 8/6), very fine grained, angular to subangular, loose, clean to slightly silty, wet.	
	9				

OSR 30-3

FIELD GEOLOGIC LOG

PROJECT		DATE		SHEET	
L-Area Southern Groundwater Characterization		9/17/01		9 of 9	
WELL NO.		REFERENCE DATUM		DRILLING CONTRACTOR	
LSW-04				Prosonic	
LOGGED BY		SRP COORDINATES		DRILLER	
Jim Furlow				Michael Coleman	
		COMPANY		DRILLING METHOD	
		SAIC		Rotasonic	
RUN NUMBER	DEPTH, FEET	LITHOLOGY	PERCENT RECOVERY	SAMPLE DESCRIPTION	DRILLING COMMENTS
17	16.0	[Dotted pattern]	100		
	1				
	2				
18	3	[Dotted pattern]	100	162.5'-167.5' Sand: yellowish gray (5YR/1) to dark yellowish orange (10YR 6/6) very fine to fine grained, angular to subangular, clean to slightly silty, loose, wet.	
	4				
	5				
	6				
	7				
19	8	[Dotted pattern]	100	167.5'-170.5' Sand: dark yellowish orange (10YR 6/6), fine grained, subangular, silty to slightly clayey, soft, lignitic, wet.	
	9				
	17.0			170.5'-172.5' Clayey Sand: dark yellowish orange (10YR 6/6), very fine to fine grained, subangular, stiff, low to moderate plasticity, laminated, wet.	
	1				
20	2	[Dotted pattern]	100	172.5'-174.0' Silty Clay: dark yellowish orange (10YR 6/6), stiff to hard, low plasticity, dense, dry	
	3				
	4				
	5			174.0'-177.5' Sandy Clay to Clayey Sand: grayish black (N2), fine grained to silty, stiff to soft, low plasticity, some small gravel to 1/2" dia.; wet.	
	6				
180	7	[Dotted pattern]			
	8			T.D. 177.5' 9/17/01	
	9				
	18.0				

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