Savannah River NUCLEAR SOLUTIONS℠

Scoping Summary for the ECODS L-3 (East of L Area) (NBN), L-Area Rubble Pit (131-1L), and L-Area Rubble Pit (131-4L) Operable Unit

(Statement of Basis / Proposed Plan Scoping)

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DISCLAIMER

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U.S. Department of Energy
and
Savannah River Nuclear Solutions, LLC
Aiken, South Carolina

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1.0 PROJECT PHASE AND STATUS

This scoping summary was prepared to support project scoping for the development of the Statement of Basis (SB) / Proposed Plan (PP) for the Early Construction and Operational Disposal Site (ECODS) L-3, L-Area Rubble Pit (131-1L) (LRP 131-1L), and L-Area Rubble Pit (131-4L) (LRP 131-4L) Operable Unit (OU). The three OU subunits will be referred to as the ECODS L-3, LRP 131-1L, and LRP 131-4L Subunits (Figure 1). The Revision 0 Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) / Remedial Investigation (RI) / Baseline Risk Assessment (BRA) / Corrective Measure Study (CMS) / Feasibility Study (FS) was submitted to the U. S. Environmental Protection Agency (USEPA) and South Carolina Department of Environmental Services (SCDES) in July 2024. All comments on the Revision 0 RFI/RI/BRA/CMS/FS were resolved and the Redline Revision 1 document was submitted to the regulatory agencies for final review and approval on March 13, 2025 (SRNS 2025). The OU is currently listed in Appendix C of the Federal Facility Agreement (FFA) (FFA 1993).

This scoping summary supports Core Team (USEPA, SCDES, and U. S. Department of Energy [USDOE]) agreement on the preferred response actions for the ECODS L-3, LRP 131-1L, and LRP 131-4L OU. Remedial actions are needed at the ECODS L-3 and LRP 131-4L Subunits because contaminants exist that pose a threat to human health and the environment. A comparative analysis of remedial alternatives has been performed, and the USDOE proposes to implement land use controls (LUCs) for the ECODS L-3 and LRP 131-4L Subunits. For the LRP 131-1L Subunit, USDOE proposes No Action. The Revision 0 SB/PP is due for submittal on June 5, 2025.

2.0 OPERABLE UNIT HISTORY AND BACKGROUND

L Area is located in the southern portion of the Savannah River Site (SRS) (Figure 1). Prior to construction of L Area, the land was used as farmland. The ECODS L-3, LRP 131-1L, and LRP 131-4L OU is located in L Area 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.

2.1 ECODS L-3 (NBN) Subunit

The ECODS L-3 Subunit 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. Based on historical photographs and a ground-penetrating radar (GPR) survey completed in 2002 during a site evaluation (SE) of the subunit, it was estimated that waste disposed of in the ECODS L-3 Subunit was buried in two trenches located end-to-end (Figure 2). The original trench dimensions were determined to be 15 meters (m) (50 feet [ft]) wide by 27 m (90 ft) long and 4.6 m (15 ft) wide by 27 m (90 ft) long (WSRC 2003). The ECODS L-3 Subunit was used to dispose of trash and construction debris, such as rubble and concrete, and is estimated to have been in use from November 1953 to June 1954. Prior to use as a disposal site, the area was used as farmland. Sections of the trenches may have been used as a burn pit for disposal of combustible waste.

The ECODS L-3 Subunit SE characterization effort included soil sampling in 2002 (WSRC 2003). The SE soil sampling effort collected 81 samples from 5 depth intervals at 23 locations (Figure 2) and were analyzed for the complete list of Target Analyte List (TAL) constituents (inorganics) and the Target Compound List (TCL) of organic compounds, pesticides, and polychlorinated biphenyls (PCBs). The Core Team agreed at the December 2021 scoping meeting that the definitive level data from the SE Report was considered usable for the purposes of performing a BRA and to support remedial decision making.

2.2 L-Area Rubble Pit (131-1L) Subunit

The LRP 131-1L Subunit is a former waste disposal area reportedly used for various construction debris and operated from 1973 to 1982 (DuPont 1983a). The LRP 131-1L Subunit is a rectangular area (12 m [40 ft] by 46 m [150 ft]) (Figure 3). SRS records indicate that metal, lumber, poles, concrete, brick tile, asphalt, tires, rubber, scrap metal, fence posts, hard plastics, wallboard, asbestos, glass, batteries, paint cans, drums, and transite were disposed of at the LRP 131-1L Subunit (DuPont 1983a and DuPont 1983b). However,

the term "pit" may be a misnomer as characterization activities in 2022 did not indicate that a pit was constructed or that waste was placed below ground surface (SRNS 2022). There is no record of hazardous or radioactive material disposed of at the subunit.

The LRP 131-1L Subunit was characterized in 2022 to support the RFI/RI/BRA/CMS/FS for the subunit and remedial decision making. Characterization activities included soil boring, observation of core for waste material, and soil sampling. No identifiable waste or debris was observed during sampling activities, with the exception of one shallow interval at location LAP-1L-015, and therefore no pit was identified (Figure 3). Subsurface soil appeared to be native and undisturbed throughout. This was supported further by photos of waste that was placed on surface at the subunit between 1973-1982 (Figure 4). The waste material was later removed at some undetermined time. Soil sampling of the LRP 131-1L Subunit was completed according to the RFI/RI Work Plan (SRNS 2022). Eight boundary locations were chosen to aid in extent determination and thirteen locations were placed within the subunit boundary in a random, unbiased sampling pattern (Figure 3). The RFI/RI characterization collected 113 samples from the 21 locations, in accordance with the RFI/RI Work Plan (SRNS 2022).

Collected samples were analyzed for all constituents on the TAL and TCL, and all requested analyses were completed without deviation. In addition to TAL and TCL constituents, gross alpha and nonvolatile beta screening was performed on all samples. Exceedances of trigger levels for gross alpha (20 picocuries per gram [pCi/g]) and nonvolatile beta (50 pCi/g) prompted analyses of a contingent set of additional radiological analyses. Contingent radiological analyses were within the range of SRS background levels (WSRC 2006) and are indicative of naturally occurring radioactive material (NORM).

2.3 L-Area Rubble Pit (131-4L) Subunit

The LRP 131-4L Subunit was an unlined pit reported to have operated from 1973 to 1983 before it was filled and seeded in 1983. The area of the LRP 131-4L Subunit investigated was 36.6 m (120 ft) by 36.6 m (120 ft), which included the area where disturbed land was observed to the northwest and where debris was observed on ground surface to the northeast (Figure 5). SRS records indicate that the LRP 131-4L Subunit received inert rubble from the L-Area Powerhouse Stack and Silo demolition (DuPont 1983a and DuPont 1983b).

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.

The LRP 131-4L Subunit was characterized in 2022 to support the RFI/RI/BRA/CMS/FS for the subunit and remedial decision making. Characterization activities included soil boring, observation of core for waste material, and soil sampling. Estimation of the pit boundary and depth was determined through sampling activities. Based on observation of waste material at sample locations within the orange ball markers, within the expanded unit boundary to the northwest, and in step-out locations to the north; the RFI/RI investigation of the subunit did not define the extent of the buried waste to the northwest (Figure 5 and Figure 6). Material encountered at step-out locations, including LAP-4L-040, was consistent with material encountered at other sampling locations at the LRP 131-4L Subunit. Potential asbestos-containing material (ACM) was identified by technical oversight at one location (LAP4L-018). In accordance with the RFI/RI Work Plan, SRS subject matter experts confirmed the material was presumed ACM and is consistent with expected building materials and the time period that the LRP 131-4L Subunit was in operation.

Soil sampling of the LRP 131-4L Subunit consisted of 41 total sample locations and collection of 192 samples (Figure 5). All samples were analyzed for all constituents on the TAL and TCL, and all requested analyses were completed without deviation. In addition to TAL and TCL constituents, gross alpha and nonvolatile beta screening was performed on all samples. Exceedances of trigger levels for gross alpha (20 pCi/g) and nonvolatile beta (50 pCi/g) prompted analyses of a contingent set of additional radiological analyses. Contingent radiological analysis results were within the range of SRS background levels (WSRC 2006) and are indicative of NORM.

3.0 LAND USE

The ECODS L-3, LRP 131-1L, and LRP 131-4L Subunits are 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 projected future development of the OU is planned. LUCs are part of proposed remedial actions for the ECODS L-3 and LRP 131-4L Subunits to ensure prevention of unrestricted use (e.g., residential). LUCs are not needed for the LRP 131-1L Subunit as the conclusions of the RFI/RI/BRA support a No Action

response for this subunit (Table 1). Groundwater is not part of the OU and is addressed by the L-Area Southern Groundwater OU monitored natural attenuation and L-Area Northern Groundwater no action final remedy. There is no current or projected future use of the groundwater as a drinking water source.

4.0 ECODS L-3, LRP 131-1L, AND LRP 131-4L SUBUNITS

4.1 ECODS L-3 (NBN) Subunit

The dataset from the 2002 SE Report (WSRC 2003) was evaluated per the approved RFI/RI/BRA protocols (SRNS 2023). The results are shown in Table 1. The cleanup levels for ECODS L-3 are included in Table 2.

For human receptors, PCBs (Aroclor 1254 and 1260) are identified as a human health (HH) problem warranting action (i.e., refined constituent of concern [RCOCs]) for the hypothetical residential scenario in surface soil (Figures 7 and 8). PCBs also exceed the Toxic Substances Control Act (TSCA) Applicable or Relevant and Appropriate Requirements (ARAR) concentration of 1 milligram per kilogram (mg/kg) for high occupancy (i.e., unrestricted use). No problems warranting action for the industrial worker (IW) were identified. No ecological (ECO), contaminant migration (CM), or principal threat source material (PTSM) RCOCs were identified for this subunit (SRNS 2025).

Although no asbestos characterization was conducted, potential ACM may be present in unit soils of the ECODS L-3 Subunit based on the disposal history of SRS ECODS units and the dates of operation for the ECODS L-3 Subunit. Therefore, asbestos is identified as a problem warranting action for the ECODS L-3 Subunit.

In support of the CMS/FS, the likely response actions identified below were further evaluated in a comparative alternative analysis as shown in Table 3.

Four alternatives were developed for the CMS/FS and are identified as follows: Alternative A-1 No Action, Alternative A-2 LUCs, Alternative A-3 Soil Cover with LUCs, and Alternative A-4 Excavate and Disposal. Alternative A-1, the No Action alternative, was

carried forward and is required by the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) to serve as a baseline for comparison with other remedial alternatives. Under Alternative A-1, contaminated media would remain in place and no active remediation would be conducted to control or eliminate current and/or future potential risk to the contaminated media. Therefore, the Remedial Action Objective (RAO) identified in the table below would not be achieved under Alternative A-1. Alternative A-2 ranked higher than Alternative A-1 in all categories except implementability. Alternatives A-2, A-3, and A-4 are protective of human health by restricting exposure to contaminated media and thereby achieving the RAO and achieving compliance with ARARs. Alternative A-4 was determined to be very effective in the long-term because contaminated media is removed and disposed of offsite and no LUCs are required. Alternatives A-2 and A-3 were determined to be moderately effective in the long-term as long as LUCs are maintained. Alternative A-2 was very effective in the short-term as it can be implemented in a short period of time and poses very little risk to the industrial worker during implementation. Alternatives A-3 and A-4 were moderately effective in the short-term since they can be implemented in a reasonable period of time and pose little risk to the industrial worker during implementation. Alternative A-2 is readily implementable, and relatively low in cost. Alternative A-2 is also very likely to be accepted by the public. Alternatives A-3 and A-4 would require longer time frames to implement and are three to four times more expensive to implement.

Table 5 provides a summary of the comparative ranking analysis for ECODS L-3 Subunit. It aids in selecting a remedial action for each individual subunit by quantifying the alternatives in relation to the evaluation criteria. Due to the ineffectiveness of Alternative A-1 and the inability to achieve the RAO, this alternative was not selected as the preferred remedial alternative. Likewise, Alternatives A-3 and A-4 were not selected due to the increased timeframes for implementability and the increased cost. Alternative A-2 is proposed as the preferred remedial alternative at the ECODS L-3 Subunit.

Problems Warranting Action for the ECODS L-3 Subunit

Problem(s) Warranting Action	Remedial Action Objectives	Scope of Problem(s)	Likely Response Actions
• ACM is likely present in unit soils that may pose a risk to human receptors if exposed.	• Prevent exposure of human receptors to presumed ACM that is likely present in unit soils.	• The estimated surface area of the ECODS L-3 Subunit proposed LUC boundary is 1,530 m^2 (16,500 ft^2) • The total volume of contaminated media within the ECODS L-3 Subunit is estimated to be 6,728 cubic meters (m^3) (8,800 cubic yards [yd^3]).	• No Action • LUCs* • Soil Cover/LUCs • Excavation and Disposal
• PCBs are present in the surface soil (0-0.3 m [0-1 ft]) that pose a risk greater than 1.0E-06 and a Hazard Quotient (HQ) greater than 1 to the hypothetical resident receptor scenario. Aroclor 1254 (exposure point concentration [EPC] = 1.28 mg/kg) has a residential risk = 5.4E-06 and Aroclor 1260 (EPC = 0.356 mg/kg) has a residential risk of 1.5E-06. PCB total cumulative risk (TCR) = 6.9E-06. Aroclor 1254 also has a HQ = 1.1 for a residential scenario.	• Prevent exposure of a future resident to Aroclor 1254 and 1260 in surface soils at levels exceeding 1E-06 risk and HQ of 1.	• The total surface area of the ECODS L-3 Subunit is 1,530 m^2 (16,500 ft^2). • The volume of unit media in the surface soil (0-0.3 m [0-1 ft]) is estimated to be 467 m^3 (16,500 ft^3).	
• PCBs are present in surface soil (0-0.3 m [0-1 ft]) that exceed the TSCA ARAR threshold of 1 mg/kg for high occupancy (i.e., unrestricted land use). Aroclor 1254 maximum detected concentration = 5.63 mg/kg and Aroclor 1260 maximum detected concentration = 2.17 mg/kg.	• Prevent exposure of human receptors to Aroclor 1254 and 1260 in surface soils at levels exceeding ARAR threshold of 1 mg/kg.	• The total surface area of the ECODS L-3 Subunit is 1,533 m^2 (16,500 ft^2). The volume of unit media in the surface soil (0-0.3 m [0-1 ft]) is estimated to be 467 m^3 (16,500 ft^3).	
• No HH IW, ECO, CM, PTSM RCOCs were identified for the ECODS L-3 Subunit.	None	None	
Uncertainties			
• None.			

* Proposed preferred alternative

4.2 L-Area Rubble Pit (131-1L) Subunit

The RFI/RI Work Plan (SRNS 2022) dataset was evaluated per the approved RFI/RI/BRA protocols (SRNS 2023). The results are shown in Table 1. No HH, ECO, CM or PTSM RCOCs were identified for the LRP 131-1L Subunit (SRNS 2025).

There are no problems warranting action at this subunit and the No Action alternative has been proposed as the preferred alternative.

Problems Warranting Action for the LRP 131-1L Subunit

Problem(s) Warranting Action	Remedial Action Objectives	Scope of Problem(s)	Likely Response Actions
No HH, ECO, CM or PTSM RCOCs were identified.	None	None	No Action
Uncertainties			
None			

4.3 L-Area Rubble Pit (131-4L) Subunit

The RFI/RI Work Plan (SRNS 2022) dataset was evaluated per the approved RFI/RI/BRA protocols (SRNS 2023). The results are shown in Table 1. The cleanup levels for LRP 131-4L Subunit are included in Table 2.

For human receptors, benzo[a]pyrene is identified as a problem warranting action (i.e., RCOC) for the hypothetical residential scenario in surface soil Figure 9. During RFI/RI characterization activities, presumed ACM was identified in soil core from a sampling location within the LRP 131-4L Subunit and was identified as a problem warranting action. No problems warranting action for the IW were identified. No ECO, CM or PTSM RCOCs were identified for this unit (SRNS 2025).

In support of the CMS/FS, the likely response actions identified below were further evaluated in a comparative alternative analysis as shown in Table 4.

Four alternatives were originally developed for the CMS/FS and are identified as follows: Alternative B-1 No Action, Alternative B-2 LUCs, Alternative B-3 Soil Cover with LUCs, and Alternative B-4 Excavate and Disposal. Alternative B-1, the No Action alternative, was carried forward and is required by the NCP to serve as a baseline for comparison with other remedial alternatives. Under Alternative B-1, contaminated media would remain in place and no active remediation would be conducted to control or eliminate current and/or future potential risk to the contaminated media. Therefore, the RAO identified in the table below would not be achieved under Alternative B-1. Alternative B-2 ranked higher than Alternative B-1 in all categories except implementability. Alternatives B-2, B-3, and B-4 are protective of human health by restricting exposure to contaminated media and thereby achieving the RAO and remaining compliance with ARARs. Alternative B-4 was determined to be very effective in the long-term because contaminated media is removed and disposed of offsite and no LUCs are required. Alternative B-2 was very effective in the short-term as it can be implemented in a short period of time and poses very little risk to industrial worker during implementation. Alternatives B-3 and B-4 were moderately effective in the short-term since they can be implemented in a reasonable period of time and pose little risk to the industrial worker during implementation. Alternative B-2 is readily implementable and is relatively low in cost. Alternative B-2 is also very likely to be

accepted by the public. Alternative B-3 and B-4 would require longer time frames to implement and are three to fourteen times more expensive to implement, respectively.

Table 6 provides a summary of the comparative ranking analysis for LRP 131-4L Subunit. It aids in selecting a remedial action for each individual subunit by quantifying the alternatives in relation to the evaluation criteria. Due to the ineffectiveness of Alternative B-1 and the inability to achieve the RAO, this alternative was not selected as the preferred remedial alternative. Likewise, Alternatives B-3 and B-4 were not selected due to the increased timeframes for implementability and the increased cost. Alternative B-2 has been selected as the preferred remedial alternative at the LRP 131-4L Subunit.

Problems Warranting Action for the LRP 131-4L Subunit

Problem(s) Warranting Action	Remedial Action Objectives	Scope of Problem(s)[A]	Likely Response Actions
• ACM is present in unit soils that may pose a risk to human receptors if exposed.	• Prevent exposure of human receptors to presumed ACM that is present in the unit soils.	• The estimated surface area of the LRP 131-4L Subunit proposed LUC boundary is 3,557 m^2 (38,290 ft^2). • The total volume of contaminated media within the LRP 131-4L Subunit is estimated to be 21,592 m^3 (23,613 yd^3).	• No Action • LUCs* • Soil Cover/LUCs • Excavation and Disposal
• Benzo[a]pyrene (EPC = 0.164 mg/kg) is present in the surface soil (0-0.3 m [0-1 ft]) that poses a risk greater than 1.0E-06 for the hypothetical resident receptor scenario (risk = 1.4E-06).	• Prevent exposure of a future resident to benzo[a]pyrene in surface soils (0-0.3 m [0-1 ft]) at levels exceeding 1E-06 risk.	• The estimated surface area of the LRP 131-4L Subunit proposed LUC boundary is 3,557 m^2 (38,290 ft^2). • The total estimated volume of the surface soil (0-0.3 m [0-1 ft]) at the LRP 131-4L Subunit is 1,075 m^3 (1,400 yd^3).	
• No HH IW, ECO, CM or PTSM RCOCs were identified.	None	None	
Uncertainties			
• None.			

* Proposed preferred alternative

5.0 OPERABLE UNIT STRATEGY

The problems warranting action and likely response actions have been finalized following completion of the HH and ECO risk assessment, CM analysis, and PTSM evaluation implementing the protocols in the approved EC&ACP Regulatory Document Handbook (SRNS 2023). The Redline Revision 1 RFI/RI/BRA/CMS/FS for the ECODS L-3, LRP 131-1L, and LRP 131-4L OU was submitted to the regulatory agencies on March 13, 2025 (SRNS 2025). As a result of the CMS/FS analysis, SRS proposes that the preferred alternative for the ECODS L-3 and LRP 131-4L Subunits is LUCs (Tables 5 and 6, respectively). The preferred alternative for the LRP 131-1L Subunit is proposed to be No Action.

The implementation schedule for the ECODS L-3, LRP 131-1L and LRP 131-4L OU is shown in Table 7. A summary of the remedial alternatives evaluated in the RFI/RI/BRA/CMS/FS document and the preferred alternatives proposed will be documented in the SB/PP for the OU.

A record of Core Team agreements and key changes to the scoping summary is documented in the following tables.

RECORD OF CORE TEAM AGREEMENTS	
Date	**Description of Agreement**
12/13/2021	*Core Team is in agreement that there are no additional data needs for the ECODS L-3 Subunit.*
	Core Team is in agreement that the proposed sampling strategy for the LRP 131-1L Subunit is sufficient in meeting data needs.
	Core Team is in agreement that the proposed sampling strategy for the LRP 131-4L Subunit is sufficient in meeting data needs.
11/9/2023	*The Core Team is in agreement that lead should not be identified as a HH or ARAR RCOC for the ECODS L-3 Subunit.*
	The Core Team is in agreement that hexavalent chromium should not be identified as a HH RCOC for the ECODS L-3 Subunit.
	The Core Team is in agreement that data collection is not necessary for hexavalent chromium and that existing total chromium data is adequate for baseline risk assessment and remedial decision making at the LRP 131-1L and LRP 131-4L Subunits.
	The Core Team is in agreement that characterization is adequate to proceed to Problem ID at the LRP 131-1L and LRP 131-4L Subunits and the 2022 RFI/RI Work Plan characterization dataset is adequate for baseline risk assessment and for remedial decision making.
	The Core Team is in agreement that further alpha spectroscopy is unnecessary at the LRP 131-1L and LRP 131-4L Subunits.
	The Core Team is in agreement that the nature of the contamination at the LRP 131-4L Subunit is defined and the extent of buried waste will be defined during remedy design in the CMIP/RAIP by confirmatory coring for visual observation of waste.
3/19/2024	*The Core Team is in agreement to exclude Aroclor 1254 as a HH RCOC for the IW scenario for the ECODS L-3 Subunit.*
	The Core Team is in agreement that there are no Problems Warranting Action for the LRP 131-1L Subunit.
4/29/2025	*The Core Team is in agreement with the preferred alternative of Land Use Controls for the ECODS L-3 Subunit and the LRP 131-4L Subunit.*
	The Core Team is in agreement with the preferred alternative of No Action for the LRP 131-1L Subunit.
	The Core Team is in agreement that confirmatory borings are not required for the LRP 131-4L Subunit preferred remedy of Land Use Controls.

KEY CHANGES TO THE SCOPING SUMMARY			
Date	**Section**	**Description of Change**	**Rational for Change**
04/2025	*All*	*Updated the March 2024 scoping summary to discuss the preferred alternatives to be discussed in the SB/PP.*	*Updated all sections to reflect the SB/PP scoping phase.*

6.0 REFERENCES

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SRNS, 2022. *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),* SRNS-RP-2021-05602, Revision 1, Savannah River Nuclear Solutions, LLC, Savannah River Site, Aiken, SC.

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SRNS, 2025. *Resource Conservation and Recovery Act Facility Investigation / Remedial Investigation Report with Baseline Risk Assessment and Corrective Measures Study / Feasibility Study for the Early Construction and Operational Disposal Site L-3 (East of L Area) (NBN), L-Area Rubble Pit (131-1L) and L-Area Rubble Pit (131-4L) Operable Unit (U)*, SRNS-RP-2023-01365, Revision 1, Savannah River Nuclear Solutions, LLC, Savannah River Site, Aiken, SC

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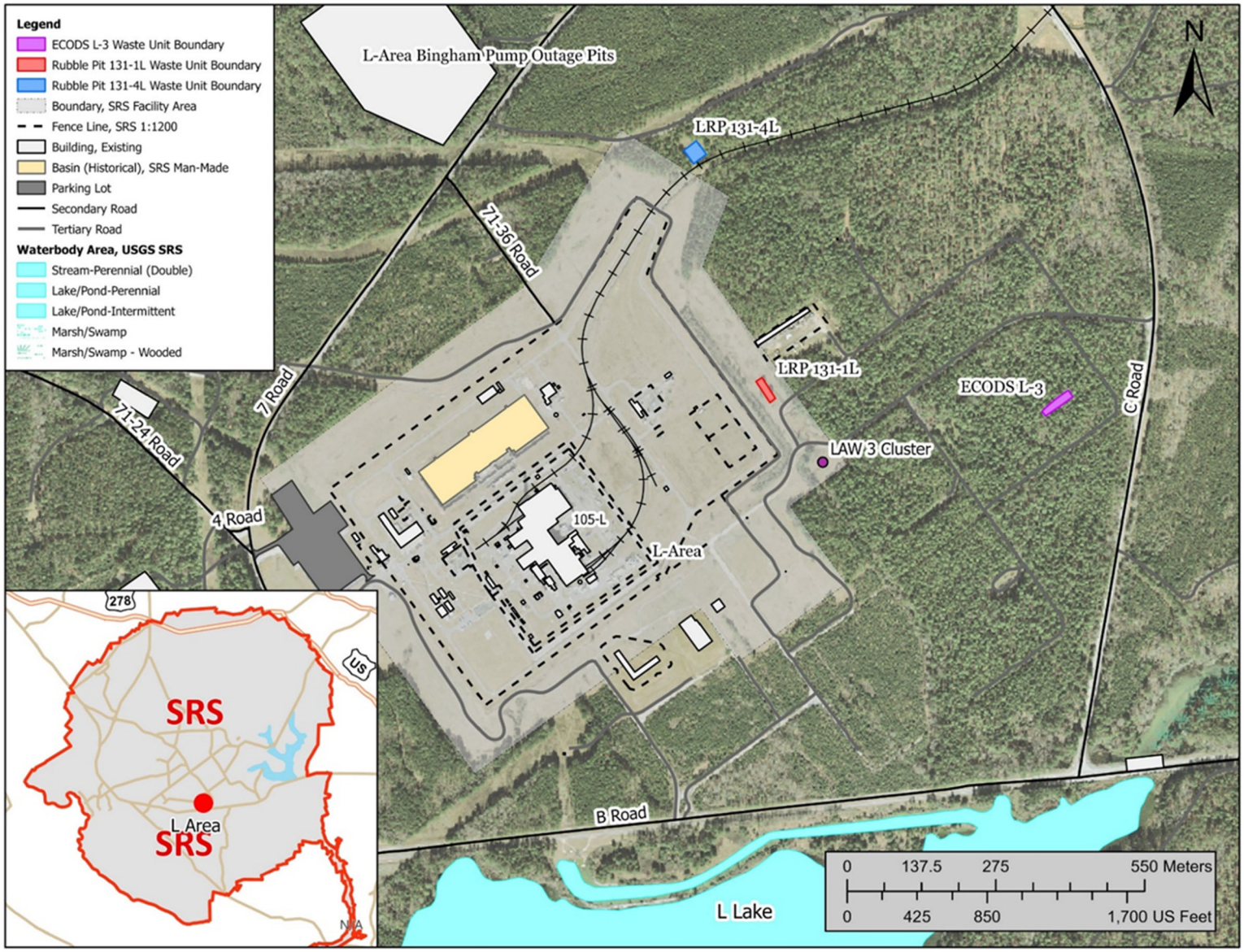

Figure 1. Location of the ECODS L-3, LRP 131-1L, and LRP 131-4L Operable Unit

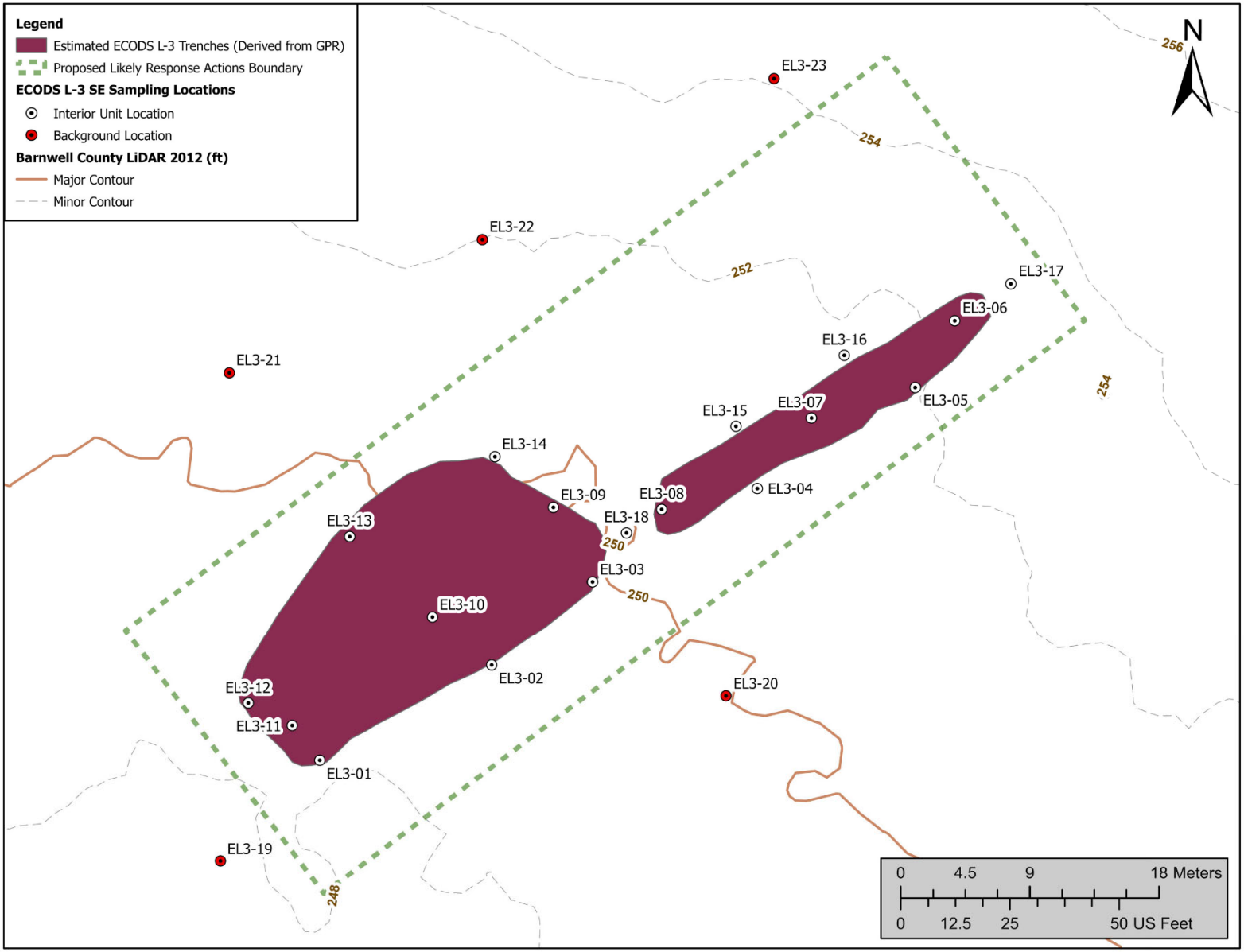

Figure 2. ECODS L-3 Subunit Boundaries and Site Evaluation Sampling Locations

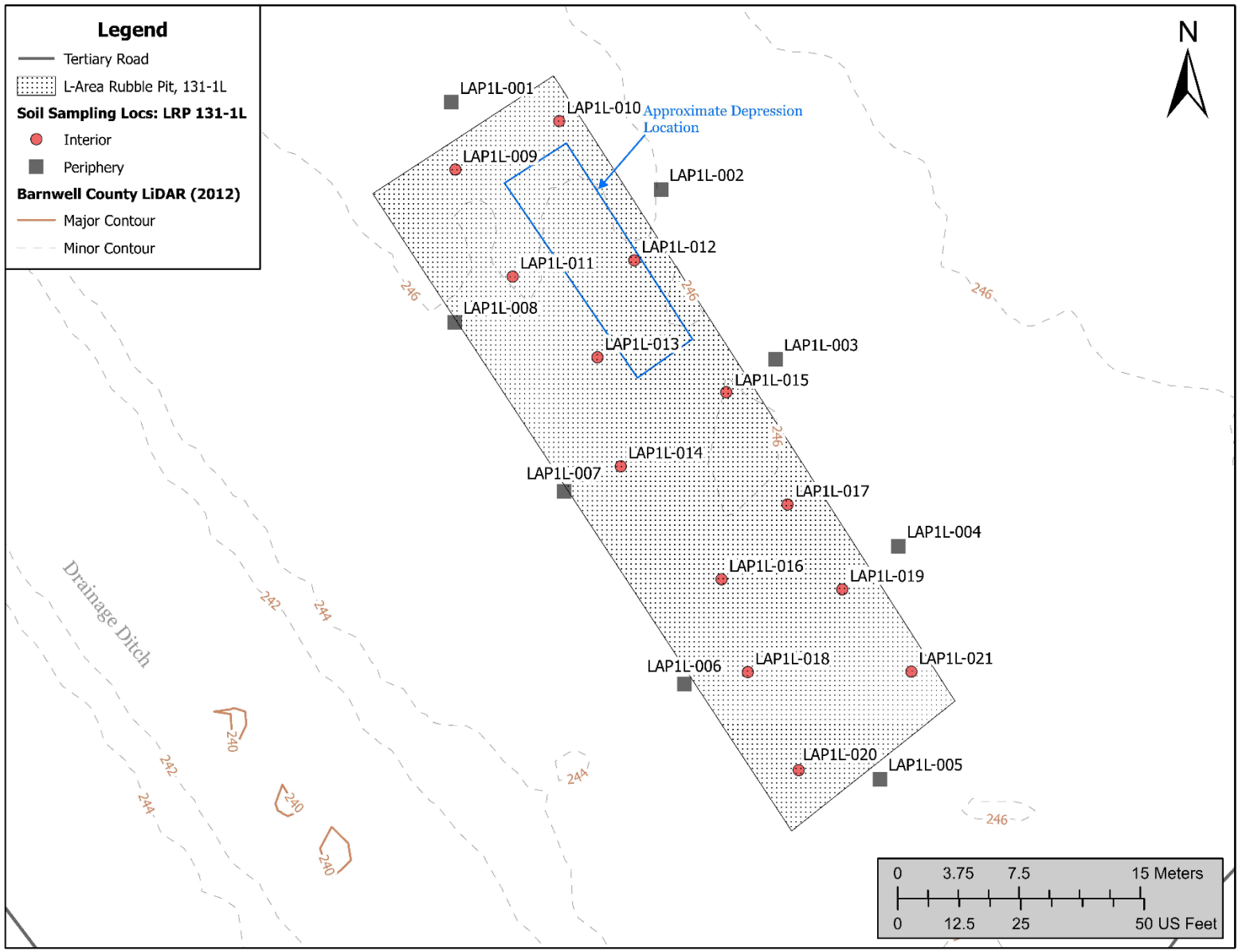

Figure 3. L-Area Rubble Pit 131-1L Subunit RFI/RI Work Plan Sampling Locations

Figure 4. Photo of Rubble on Surface of LRP 131-1L Subunit

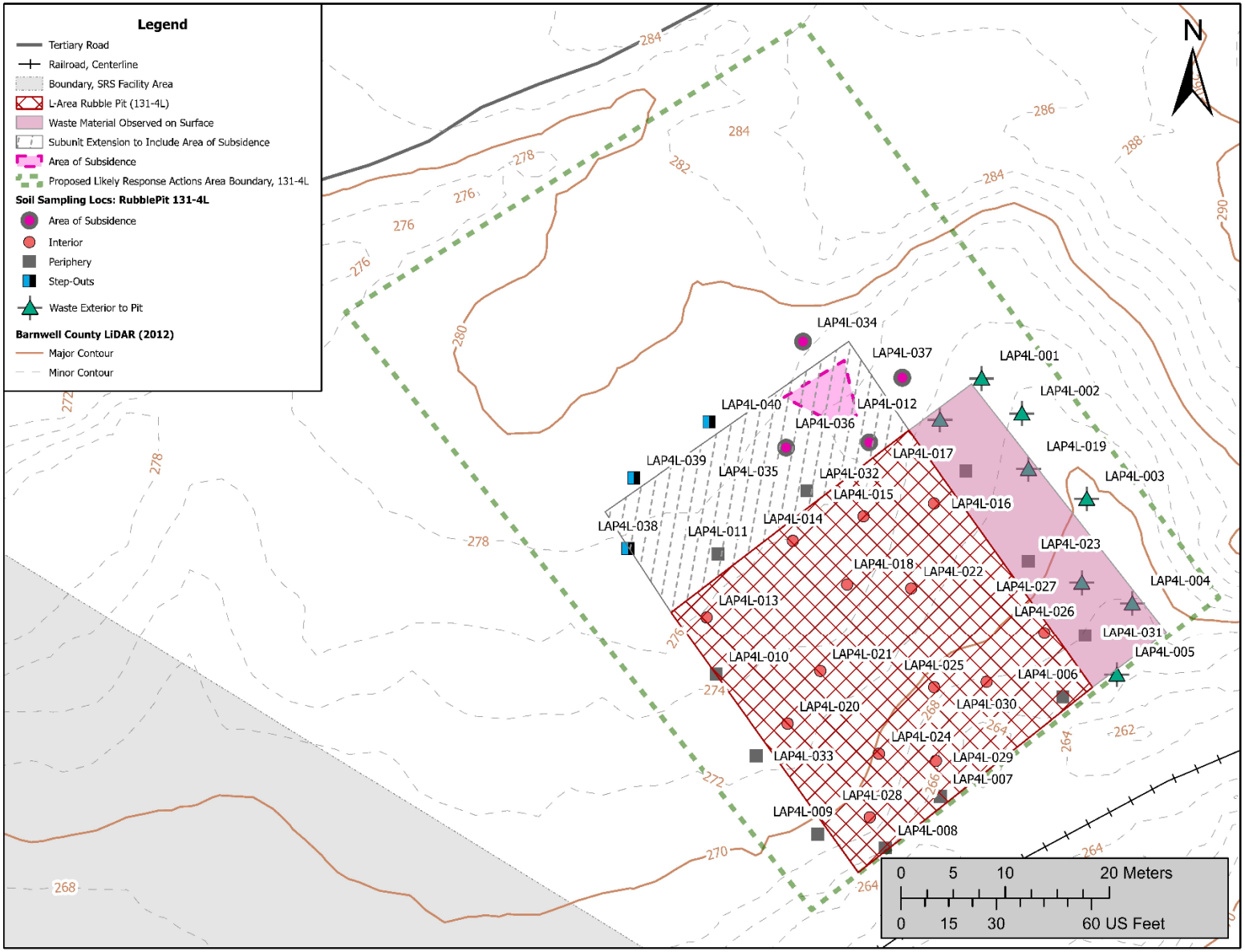

Figure 5. L-Area Rubble Pit 131-4L Subunit RFI/RI Work Plan Sampling Locations

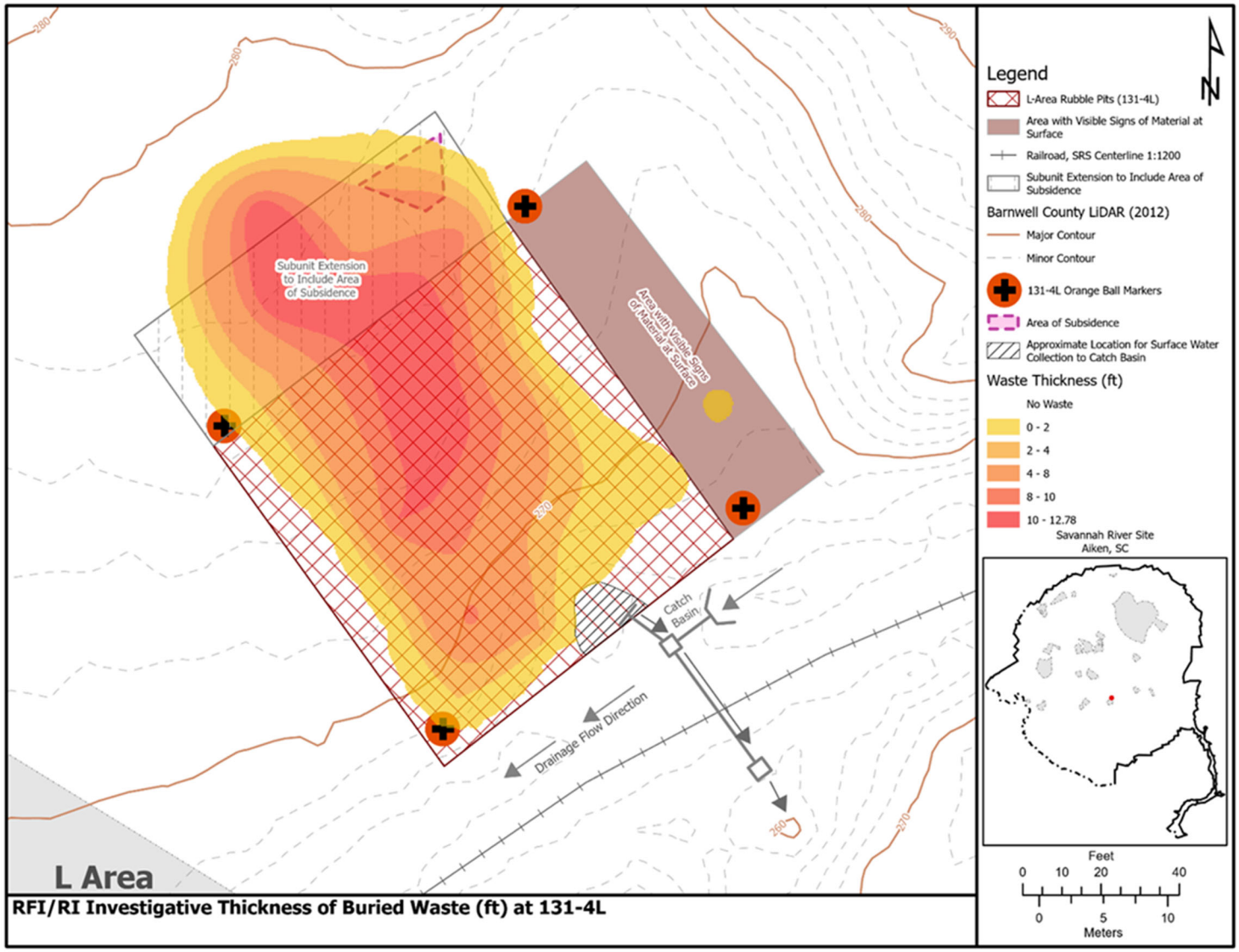

Figure 6. Waste Thickness Observed at LRP 131-4L Subunit as Outcome of RFI/RI Characterization

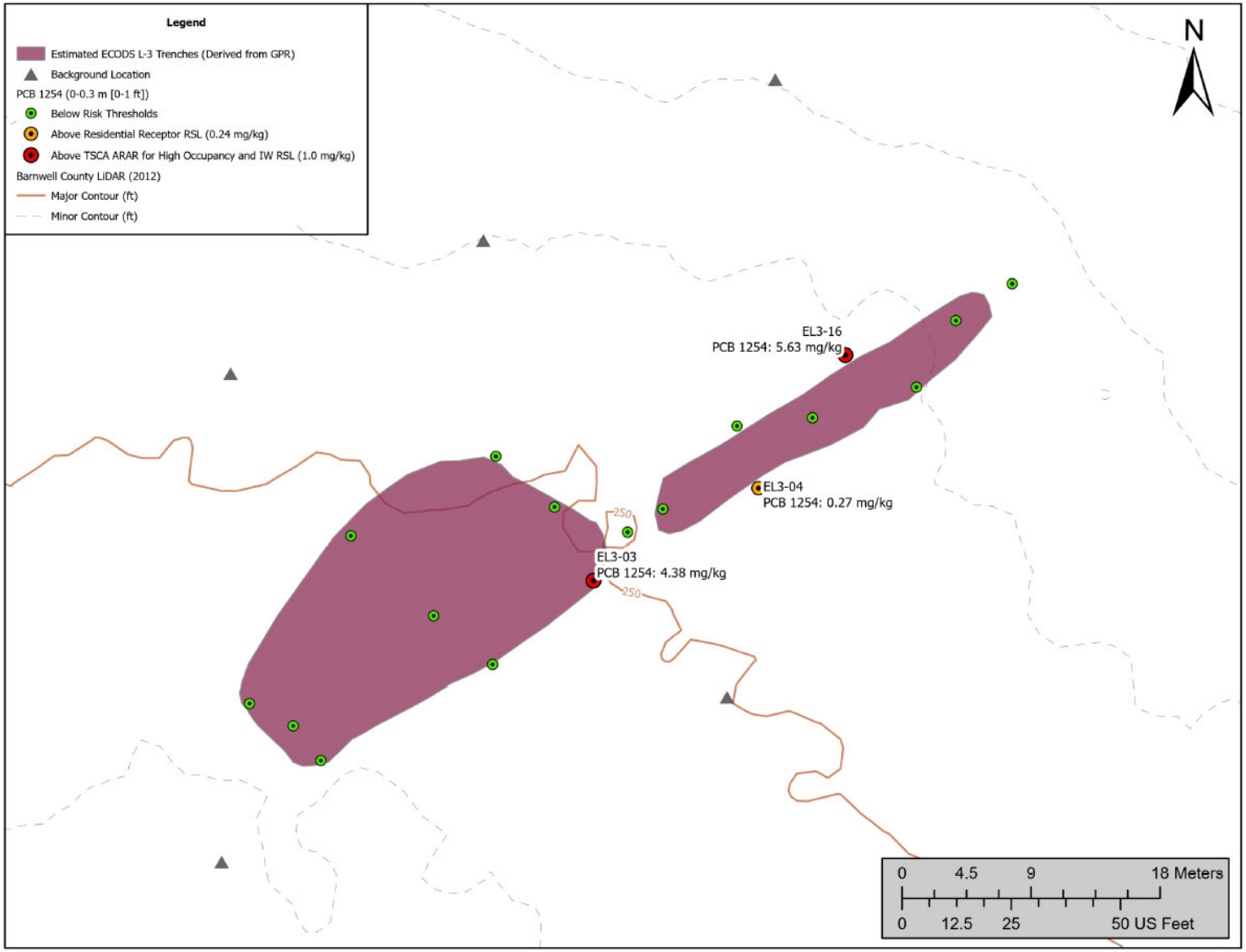

Figure 7. Aroclor 1254 Data for Soil Media (0 to 0.3 m [0 to 1 ft]) at the ECODS L-3

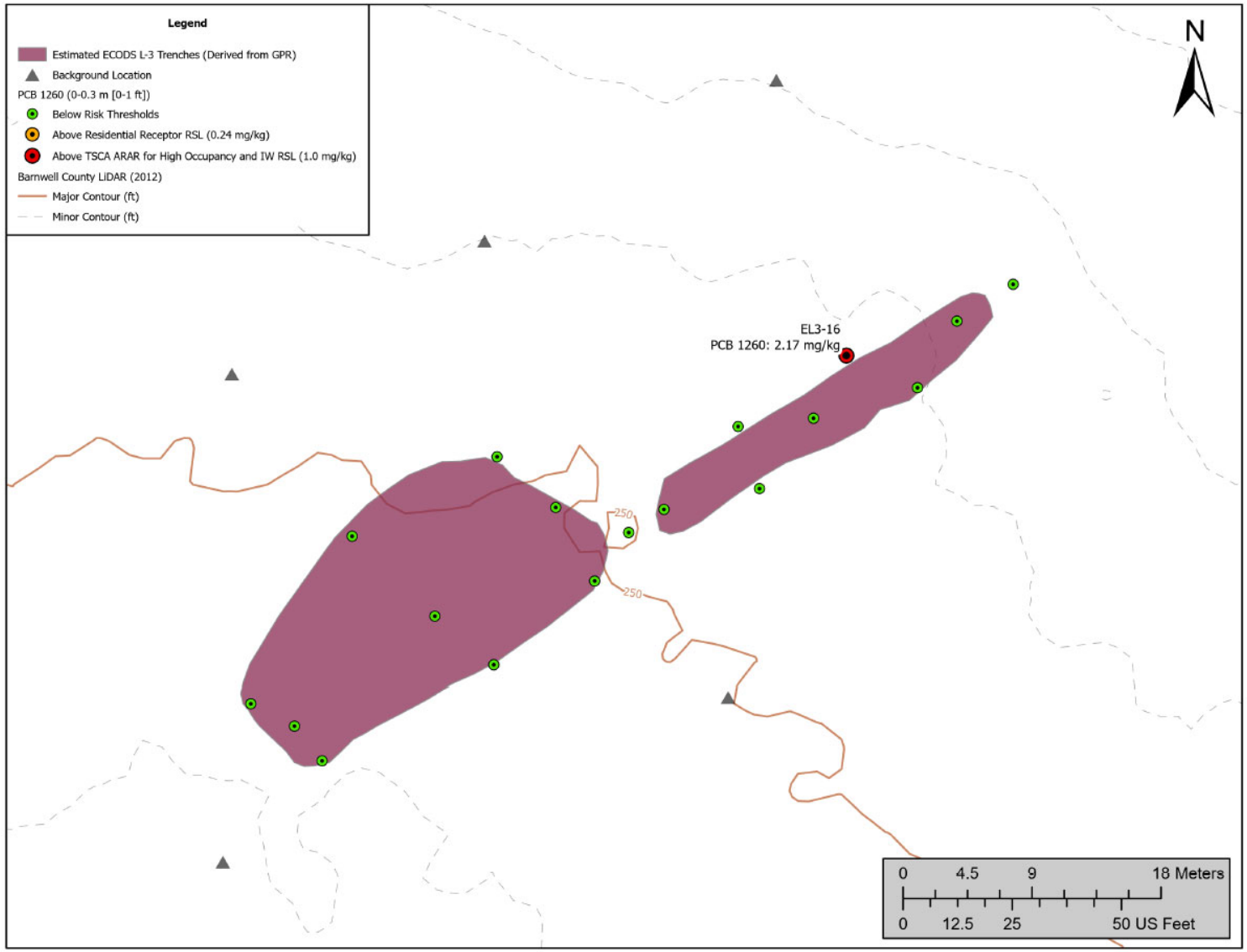

Figure 8. Aroclor 1260 Data for Soil Media (0 to 0.3 m [0 to 1 ft]) at the ECODS L-3

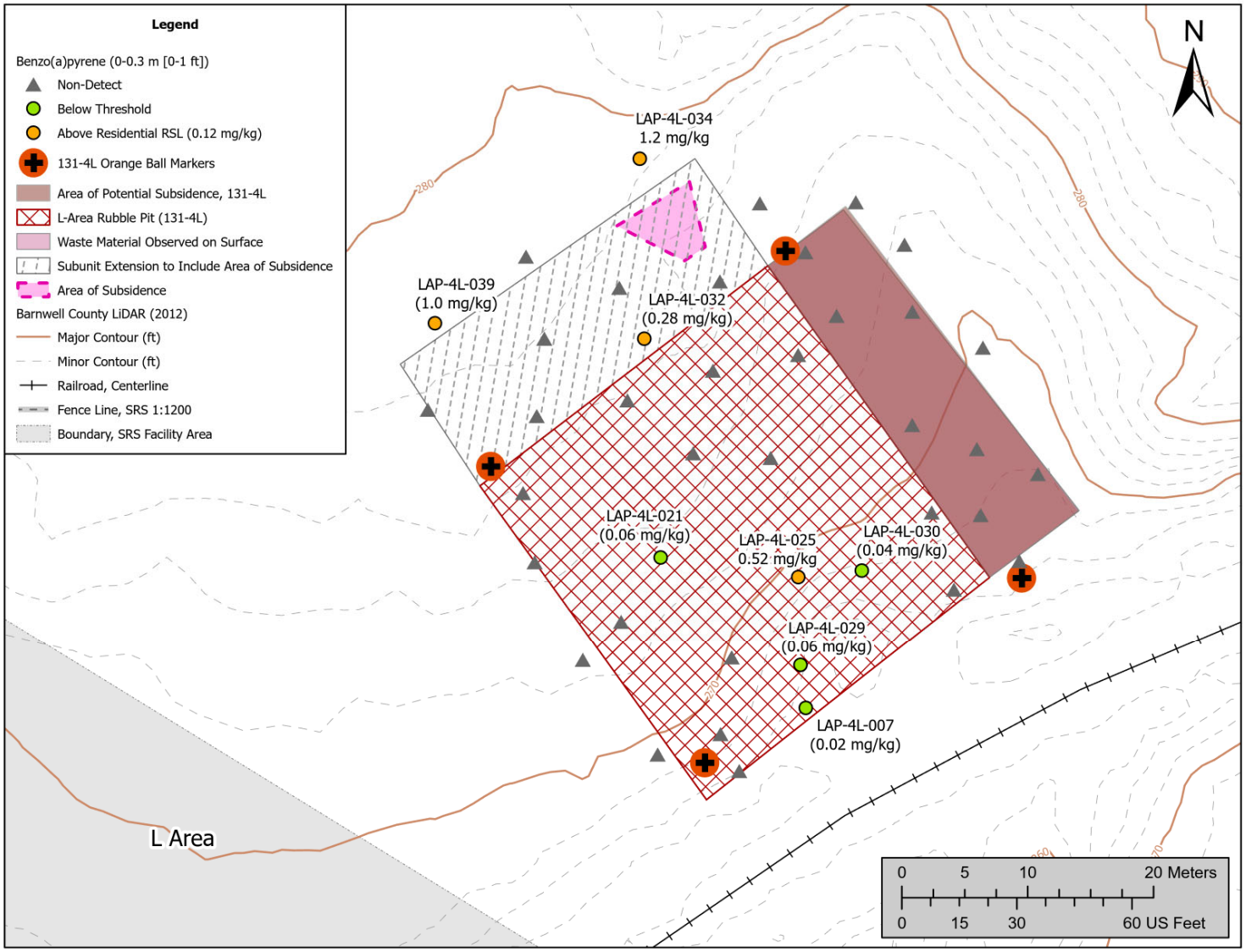

Figure 9. Benzo(a)pyrene Data for Soil Media (0 to 0.3 m [0 to 1 ft]) at the LRP 131-4L

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Table 1. Summary of Risk Assessment Results for the ECODS L-3, LRP 131-1L, and LRP 131-4L OU

Subunit	Refined Constituent of Concerns (RCOCs)				
	Contaminant Migration	Human Health Risk Assessment		Ecological Risk Assessment	Principal Threat Source Material
		Residential	Industrial		
ECODS L-3[1]	Soil All depths None	Soil 0 to 0.3 m (0 to 1 ft) *Aroclor 1254* ***Risk = 5.4E-06*** ***HQ = 1.1*** *Aroclor 1260* ***Risk = 1.5E-06*** *PCBs*[3] ***TCR = 6.9E-06***	Soil 0 to 0.3 m (0 to 1 ft) None	Soil 0 to 0.3 m & 0.3 to 1.2 m (0 to 1 ft & 1 to 4 ft) None	Soil All depths None
L-Area Rubble Pit (LRP) (131-1L)	Soil All depths None	Soil 0 to 0.3 m (0 to 1 ft) None	Soil 0 to 0.3 m (0 to 1 ft) None	Soil 0 to 0.3 m & 0.3 to 1.2 m (0 to 1 ft & 1 to 4 ft) None	Soil All depths None
LRP (131-4L)[2]	Soil All depths None	Soil 0 to 0.3 m (0 to 1 ft) *Benzo[a]pyrene* ***Risk = 1.4E-06***	Soil 0 to 0.3 m (0 to 1 ft) None	Soil 0 to 0.3 m & 0.3 to 1.2 m (0 to 1 ft & 1 to 4 ft) None	Soil All depths None

1 – Asbestos Containing Material (ACM) is likely to be present at ECODS L-3 Subunit
2 – ACM is present at LRP (131-4L) Subunit
3 – Polychlorinated biphenyls (PCBs) also identified as Applicable or Relevant Appropriate Requirements (ARAR) (Toxic Substance Control Act [TSCA]) RCOCs

Table 2. Cleanup Levels (PRGs) for the ECODS L-3, LRP 131-1L, and LRP 131-4L OU

Media	HH RCOC	Units	Resident PRG[1]	ARAR PRG[2]	SRS Background 2X Average Concentration	SRS Background 95th Percentile[3]	SRS Background Maximum[3]	Most Likely PRG[4]
ECODS L-3 Subunit								
Soil	Aroclor 1254	mg/kg	*0.24*	1.0	NA[5]	NA[5]	NA[5]	0.24
Soil	Aroclor 1260	mg/kg	*0.24*	1.0	NA[5]	NA[5]	NA[5]	0.24
LRP 131-4L Subunit								
Soil	Benzo(a)pyrene	mg/kg	*0.12*	N/A[6]	0.025	0.036	0.008	0.12

The LRP 131-1L Subunit did not have any RCOCs and therefore is not included in this table.

1 – Resident PRGs are identified at risk = 1E-06 or HQ = 1. For Aroclor 1254, the more conservative carcinogenic PRG is shown.

2 – For comparison purposes, the PCB TSCA ARAR threshold for high-occupancy is presented for Aroclor 1254 and Aroclor 1260.

3 – SRS background concentrations from Background Soils Statistical Summary Report for the Savannah River Site (WSRC 2006), Appendix B-2 (all depths interval).

4 – Most Likely PRG is the most restrictive (i.e., residential) risk-based concentration. If the risk-based PRG is less than SRS background, then the SRS 95th percentile is identified as the Most Likely PRG. Source of the Most Likely PRG is identified in *italics*.

5 – Not available; SRS background concentrations not available for PCBs.

6 – Not applicable; not identified as an ARAR RCOC.

Table 3. Comparison of the ECODS L-3 Subunit Alternatives to the CERCLA Criteria

Criterion	A-1 No Action	A-2 Land Use Controls	A-3 Soil Cover with LUCs	A-4 Excavation and Disposal
Overall Protection of Human Health and the Environment				
Human Health	Not protective of the future resident or on-site worker because there are no controls or remediation.	Meets the requirement by limiting exposure to the contaminated media through the use of administrative and engineering controls.	Meets the requirement by placement of a soil cover to eliminate the direct exposure pathways	Meets the requirement by excavation of the contaminated media to eliminate the direct exposure pathways.
Environment	Not applicable as contaminants are not at levels that pose a threat to the environment.	Not applicable as contaminants are not at levels that pose a threat to the environment.	Not applicable as contaminants are not at levels that pose a threat to the environment.	Not applicable as contaminants are not at levels that pose a threat to the environment.
Compliance with ARARs				
Chemical-Specific	Not compliant.	Meets the requirement by limiting exposure to the contaminated media through the use of administrative and engineering controls.	Meets the requirement by placement of a soil cover to eliminate the direct exposure pathways.	Meets the requirement by excavation of the contaminated media to eliminate the direct exposure pathways.
Location-Specific	No ARARs exist	No ARARs exist	No ARARs exist	No ARARs exist
Action-Specific	No ARARs exist	No ARARs exist	ARARs for control of the minimization of sediment erosion and management of storm water can be achieved.	ARARs for control of the minimization of sediment erosion, management of storm water and transportation of solid and PCB waste can be achieved.
Long Term Effectiveness				
Adequacy of Controls	None	Controls are adequate as long as they are maintained	Controls are adequate as long as they are maintained	No controls are required because contaminated media removed
Permanence	No	LUCs are permanent as long as controls are maintained	Cover system is permanent as long as it is maintained	Excavation of media will be permanent
Reduction of Mobility, Toxicity, or Volume				
Type of Reduction	No reduction	No reduction	No reduction	No reduction

Table 3. Comparison of the ECODS L-3 Subunit Alternatives to the CERCLA Criteria *(continued/end)*

Criterion	A-1 No Action	A-2 Land Use Controls	A-3 Soil Cover with LUCs	A-4 Excavation and Disposal
Short-Term Effectiveness				
Amount of Hazardous Material Destroyed or Treated	No reduction	No reduction	No reduction	No reduction
Risk to Remedial Worker	No risk	No risk	Minimal; Health and Safety Plan will be implemented to minimize potential for injury to remedial workers	Minimal; Health and Safety Plan will be implemented to minimize potential for injury to remedial workers
Risk to Community	None	None	None	None
Risk to Environment	None	None	None	None
Time to Implement and achieve RAO	Never	6 Months	12 Months	12 Months
Implementability				
Availability of Materials, Equipment, Contractors	N/A	Readily available	Readily available	Readily available
Ability to Construct and Operate the Technology	N/A	Proven technology at SRS	Proven technology at SRS	Proven technology at SRS
Ability to Obtain Permits/Approvals from Other Agencies	N/A	Prior history with similar permits/approvals at SRS	Prior history with similar permits/approvals at SRS	Prior history with similar permits/approvals at SRS
Cost				
Total Capital Cost	$0	$32,030	$1,006,950	$1,654,216
Present Worth O&M Cost	$0	$350,528	$221,762	$0
Total Cost	$0	$382,558	$1,228,712	$1,654,216

Table 4. Comparison of the LRP 131-4L Subunit Alternatives to the CERCLA Criteria

Criterion	B-1 No Action	B-2 Land Use Controls	B-3 Soil Cover with LUCs	B-4 Excavation and Disposal
Overall Protection of Human Health and the Environment				
Human Health	Not protective of the future resident or on-site worker because there are no controls or remediation.	Meets the requirement by limiting exposure to the contaminated media through the use of administrative and engineering controls.	Meets the requirement by placement of a soil cover to eliminate the direct exposure pathways	Meets the requirement by excavation of the contaminated media to eliminate the direct exposure pathways.
Environment	Not applicable as contaminants are not at levels that pose a threat to the environment.	Not applicable as contaminants are not at levels that pose a threat to the environment.	Not applicable as contaminants are not at levels that pose a threat to the environment.	Not applicable as contaminants are not at levels that pose a threat to the environment.
Compliance with ARARs				
Chemical-Specific	No ARARs exist	No ARARs exist	No ARARs exist	No ARARs exist
Location-Specific	No ARARs exist	No ARARs exist	No ARARs exist	No ARARs exist
Action-Specific	No ARARs exist	No ARARs exist	ARARs for control of the minimization of sediment erosion and management of storm water can be achieved.	ARARs for control of the minimization of sediment erosion, management of storm water and transportation of solid waste can be achieved.
Long Term Effectiveness				
Adequacy of Controls	None	Controls are adequate as long as they are maintained	Controls are adequate as long as they are maintained	No controls are required because contaminated media removed
Permanence	No	LUCs are permanent as long as controls are maintained	Cover system is permanent as long as it is maintained	Excavation of media will be permanent
Reduction of Mobility, Toxicity, or Volume				
Type of Reduction	No reduction	No reduction	No reduction	No Reduction

Table 4. Comparison of the LRP 131-4L Subunit Alternatives to the CERCLA Criteria *(continued/end)*

Criterion	B-1 No Action	B-2 Land Use Controls	B-3 Soil Cover with LUCs	B-4 Excavation and Disposal
Short-Term Effectiveness				
Amount of Hazardous Material Destroyed or Treated	No reduction	No reduction	No reduction	No reduction
Risk to Remedial Worker	No risk	No risk	Minimal; Health and Safety Plan will be implemented to minimize potential for injury to remedial workers	Minimal; Health and Safety Plan will be implemented to minimize potential for injury to remedial workers
Risk to Community	None	None	None	None
Risk to Environment	None	None	None	None
Time to Implement and achieve RAO	Never	6 Months	12 Months	12 Months
Implementability				
Availability of Materials, Equipment, Contractors	N/A	Readily available	Readily available	Readily available
Ability to Construct and Operate the Technology	N/A	Proven technology at SRS	Proven technology at SRS	Proven technology at SRS
Ability to Obtain Permits/Approvals from Other Agencies	N/A	Prior history with similar permits/approvals at SRS	Prior history with similar permits/approvals at SRS	Prior history with similar permits/approvals at SRS
Cost				
Total Capital Cost	$0	$32,030	$1,294,659	$7,671,286
Present Worth O&M Cost	$0	$386,406	$248,679	$0
Total Cost	$0	$418,436	$1,543,338	7,671,286

Table 5. Comparative Alternative Analysis for ECODS L-3 Subunit

Response Action	Overall Protection of Human Health	Compliance with RAOs	Compliance with ARARs	Long-Term Effectiveness and Permanence	Reduction of Toxicity, Mobility, or Volume	Short-Term Effectiveness	Implementability	Cost	Overall Ranking (1-20)
A-1) No Action	No	No	No	1	1	1	5	$0	8
A-2) Land Use Controls	Yes	Yes	Yes	4	1	5	5	$382,558	15
A-3) Soil Cover with LUCs	Yes	Yes	Yes	4	1	4	3	$1,228,712	12
A-4) Excavation and Disposal	Yes	Yes	Yes	5	1	4	3	$1,654,216	13

Note: Numeric range 1 through 5, where 1= worst and 5 = best

Table 6. Comparative Alternative Analysis for LRP 131-4L Subunit

Response Action	Overall Protection of Human Health	Compliance with RAOs	Compliance with ARARs	Long-Term Effectiveness and Permanence	Reduction of Toxicity, Mobility, or Volume Through Treatment	Short-Term Effectiveness	Implementability	Cost	Overall Ranking (1-20)
B-1) No Action	No	No	N/A	1	1	1	5	$0	8
B-2) Land Use Controls	Yes	Yes	N/A	4	1	5	5	$418,436	15
B-3) Soil Cover with LUCs	Yes	Yes	Yes	4	1	4	3	$1,543,338	12
B-4) Excavation and Disposal	Yes	Yes	Yes	5	1	4	3	$7,671,286	13

Note: Numeric range 1 through 5, where 1= worst and 5 = best

Table 7. Implementation Schedule List of Submittals

Deliverable	Date
Revision 0 SB/PP	6/5/2025
Revision 0 Record of Decision (ROD)	1/5/2026
Revision 0 Corrective Measures Implementation Plan/ Remedial Action Implementation Plan	7/22/2026
Revision 0 Land Use Control Implementation Plan	7/22/2026
ROD Issuance	9/24/2026
Remedial Action Start	12/28/2027

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