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Scoping Summary for the ECODS N-1 (NBN), Central Shops Scrap Lumber Pile (631-2G), and Building 690-N, Process Heat Exchanger Repair Facility (Ford Building) Operable Unit (U)

(Statement of Basis / Proposed Plan Scoping)

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DISCLAIMER

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1.0 PROJECT PHASE AND STATUS

This scoping summary supports Core Team discussion for the development of the Statement of Basis/Proposed Plan (SB/PP) for the Early Construction and Operational Disposal Site (ECODS) N-1 (South of N Area), No Building Number (NBN), Central Shops Scrap Lumber Pile (631-2G) (CSSLP), and Building 690-N, Process Heat Exchanger Repair Facility (aka Ford Building) Operable Unit (OU). These three OU subunits will be referred to as the ECODS N-1, CSSLP, and Ford Building (690-N) subunits (Figure 1). The OU is listed in Appendix C of the Federal Facility Agreement (FFA).

The Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI)/Remedial Investigation (RI)/Baseline Risk Assessment (BRA)/Corrective Measures Study (CMS)/Feasibility Study (FS) was scoped with the Core Team consisting of representatives from the United States Department of Energy (USDOE), United States Environmental Protection Agency (USEPA), and the South Carolina Department of Health and Environmental Control (SCDHEC) in August 2021. The RFI/RI/BRA/CMS/FS Revision 0 was submitted in October 2021. All comments on the Revision 0, RFI/RI/BRA/CMS/FS have been resolved with the Core Team and the Revision 1 document was submitted for final review and approval in April 2022 (SRNS 2022).

This scoping meeting supports Core Team agreement on the preferred response actions for the OU and rationale to be presented in the SB/PP. A remedial action (RA) is needed at each subunit because contaminants are present that may pose a threat to human receptors. A comparative alternative analysis was performed in the CMS/FS, and the USDOE proposes the preferred remedial alternative for each subunit as indicated below:

- ECODS N-1 subunit: Land use controls (LUCs) to prevent human exposure to friable asbestos that is present in the subsurface soil

- CSSLP subunit: Excavation (hot spot removal) and disposal of arsenic contaminated surface soil and sediment to prevent human exposure

- Ford Building subunit: LUCs to prevent human exposure to cesium-137 and polychlorinated biphenyls (PCBs) on the remnant concrete slab and cobalt-60 in surface soil

The SB/PP Revision 0 is due for submittal on August 3, 2022.

2.0 LAND USE

The ECODS N-1, CSSLP, and Ford Building (690-N) are located in an area designated for industrial use as defined by the Savannah River Site (SRS) Land Use Control Assurance Plan. No current or projected future development of the OU is planned. Unrestricted use of any subunit is not supported by the results of the RFI/RI/BRA/CMS/FS; therefore, a RA is necessary at all subunits to ensure prevention of unrestricted use (e.g., residential). Groundwater is not part of the OU and will be addressed as the Central Shops Groundwater OU. There is no current or projected future use of the groundwater as a drinking water source.

3.0 ECODS N-1 (NBN), CENTRAL SHOPS SCRAP LUMBER PILE (631-2G), AND FORD BUILDING (690-N) OPERABLE UNIT

This OU is comprised of three subunits: ECODS N-1, CSSLP and Ford Building (690-N) (Figure 1). Data collected in 2001, 2014, 2019 and 2020 has been evaluated using the RI/BRA protocols to support the problems warranting action determinations that are documented in the RFI/RI/BRA/CMS/FS. This combined document also includes the alternative screening and comparative alternative analysis for each subunit (SRNS 2022).

3.1 *ECODS N-1 (NBN) Subunit*

ECODS N-1 is located south of N Area (i.e., Central Shops) within the Pen Branch Watershed (Figure 1). The subunit is approximately (~) 107-meters (m) long by 15-m wide (350-feet [ft] long by 50-ft wide). The site was used from approximately August 1952 to June 1954 for disposal construction debris (potentially containing asbestos) and other non-radioactive waste materials from N Area. Waste disposed of in ECODS N-1 was buried in two trenches, each ~46-m (150-ft) long and located end-to-end. A portion of one trench may have been used as burn pit for disposal of combustible waste.

Characterization was conducted in three events: a Site Evaluation characterization effort in 2001, a pre-Work Plan characterization effort in 2019, and the 2020 RFI/RI Work Plan characterization focusing on sample locations with elevated metals from the 2019 pre-Work Plan characterization effort and subunit-specific background samples (Figure 2).

No human health (HH), ecological (Eco), contaminant migration (CM) or principal threat source material (PTSM) refined contaminants of concern (RCOCs) were identified for this unit. However, suspected asbestos-containing material (ACM) (fragments of cementitious paneling) was encountered during the 2020 characterization effort. The material was recovered by hand auger at a depth of about 1-m [3-ft] along with other construction debris. Three samples were collected, and two samples were verified positive for asbestos.

In support of the CMS/FS, the likely response actions identified in the table below were further evaluated in a comparative alternative analysis, shown in Appendix A, Table A-1 and described below. Three alternatives were originally developed for the CMS/FS and are identified as follows: Alternative A-1 No Action, Alternative A-2 Land Use Controls, Alternative A-3 Excavation and Disposal. Of the three alternatives that were developed, one alternative, Alternative A-3 Excavation and Disposal, was not retained for further evaluation. Alternative A-1, the No Action alternative, was carried forward as required by the National 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. No ARARs were identified for either of the alternatives. Alternative A-2 ranked higher than Alternative A-1 in all categories except implementability. Alternative A-2 is protective of human health by restricting the exposure to ACM and thereby achieving the RAO. Alternative A-2 was determined to be moderately effective in the long-term as long as LUCs are maintained and 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. Alternative A-2 is readily implementable, and relatively low in cost. Alternative A-2 is also very likely to be accepted by the public.

Table A-4 provides a summary of the comparative ranking analysis. It aids in selecting a RA 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, Alternative A-2 has been selected as the preferred remedial alternative at the ECODS N-1 subunit.

Problem(s) Warranting Action	RAOs	Scope of Problem(s)	Likely Response Actions
• No HH, Eco, CM, PTSM RCOCs were identified for the ECODS N-1.	• None	• None	• No Action • LUCs
• ACM is present in subsurface soil that may pose a risk to human receptors if exposed.	• Prevent residential and industrial exposure to friable asbestos that is present in the subsurface.	• Total surface area of the ECODS N-1 subunit is 1,821 square meters (m^2). The ECODS N-1 is 1.83- to 2.44-m (6- to 8-ft) deep, which yields a maximum volume of 4,441 cubic meters (m^3).	
Uncertainties			
• None			

3.2 *Central Shops Scrap Lumber Pile (631-2G) Subunit*

The CSSLP is located north of the N Area facility boundary within the Fourmile Branch watershed (Figure 1). Currently, the subunit is split into two separate areas, the Upland Area and the Surface Water Impoundment Area (Figure 3). The Upland Area is approximately

3.34 acres and the Surface Water Impoundment Area is approximately 1.02 acres. The entire area was cleared in 1951 and used for equipment laydown and rubble storage in addition to an area for burning construction-related material. Historically, the CSSLP was used to burn various unknown types and quantities of wood. These wood types may have included treated lumber and creosote-treated wood. Starting in 1975, operating procedures called for the CSSLP to receive inert, nonhazardous materials including such as nails, hinges, scrap lumber, poles, crates, pallets, and unsalvageable wood products. Active burning at the CSSLP ended in the mid-2000s. Prior to 1996, the Surface Water Impoundment Area was created to capture surface water runoff from the CSSLP.

Two separate characterization events took place at the CSSLP subunit:a pre-Work Plan characterization effort in 2019, and the 2020 RFI/RI Work Plan characterization, which focused on sample locations with elevated metals from the 2019 pre-Work Plan characterization effort and subunit-specific background samples (Figure 3).

For human receptors, arsenic is identified as a problem warranting action for the residential and industrial worker scenarios for the Upland Area (surface soil) and the Surface Water Impoundment Area (surface sediment) (Figure 4). No Eco, CM, or PTSM RCOCs were identified for this subunit. No RCOCs are identified for the surface water within the Surface Water Impoundment Area.

In support of the CMS/FS, the likely response actions identified in the table below were further evaluated in a comparative alternative analysis, as shown in Appendix A, Table A-2 and described below. The four alternatives are identified as follows: Alternative B-1 No Action, Alternative B-2 Land Use Controls, Alternative B-3 Soil Cover with LUCs, and Alternative B-4 Excavation (Hot Spot Removal and Disposal). Alternative B-1, the No Action alternative, was carried forward as required by the NCP to serve as a baseline for comparison with other remedial alternatives. All alternatives except Alternative B-1 are protective of human health by limiting or eliminating the exposure to contaminated media and thereby achieving the RAOs identified in the table below. No ARARs were identified in conjunction with Alternatives B-1 or B-2. Alternatives B-3 and B-4 comply with all applicable ARARs. Alternative B-4 was ranked most effective in the long term due to the removal of all contaminated media, thereby not requiring LUCs or five year

remedy reviews. Alternative B-3, was ranked slightly higher than Alternative B-2, in terms of long term effectiveness due to the additional coverage of any contaminated media. Alternative B-1 ranked the lowest in terms of long and short term effectiveness due to no action being taken to reduce exposure to the industrial worker. Alternative B-2 ranked the highest in the short term due to only requiring signage and administrative controls and because of the insignificant risk to the industrial worker during implementation. Alternatives B-3 and B-4 were ranked below Alternative B-2 in the short term due to the potential exposure to contaminated media during implementation and the length of time required to complete the alternatives. Alternative B-1 was deemed the most implementable due to requiring no action to complete, followed by Alternative B-2 and lastly Alternatives B-3 and B-4. The cost of each alternative is displayed in Table A-2. Table 3 identifies the most likely preliminary remedial goals (PRGs) for the OU. Figure 5 shows the area of excavation/hotspot removal associated with Alternative B-4.

Table A-4 provides a summary of the comparative ranking analysis. It aids in selecting a RA for each individual subunit by quantifying the alternatives in relation to the evaluation criteria. Although ranked equally Alternative B-4 is preferred over Alternative B-2 at the CSSLP due to the long term operation and maintenance required by Alternative B-2. Furthermore, Alternative B-2 requires five-year remedy reviews and inspections; in contrast Alternative B-4 would require no further action after completion of the RA.

Problem(s) Warranting Action	RAOs	Scope of Problem(s)	Likely Response Actions
• Arsenic is present in surface soil (0 to 0.3 m [0 to 1 ft]) (exposure point concentration [EPC] = 16.4 milligram per kilogram [mg/kg]) exceeding 1E-06 risk level for the resident (risk = 2.4E-05) and industrial worker (risk = 5.5E-06) scenarios.	• Prevent residential and industrial exposure to arsenic in surface soils at levels exceeding 1E-06 risk and/or SRS background concentration.	• The total surface area of the upland portion of the CSSLP is 13,517 m^2. The total volume of contaminated surface soil (based on a 0 to 0.3 m [0 to 1 ft] depth) is estimated to be 1,678 m^3.	• No Action • LUCs • Soil Cover/LUCs • Excavation (Hot Spot Removal) and Disposal
• Arsenic is present in surface sediment (0 to 0.3 m [0 to 1 ft]) (EPC = 8.27 mg/kg) exceeding 1E-06 risk level for the resident (risk = 1.2E-05) and industrial worker (risk = 2.8E-06) scenarios.	• Prevent residential and industrial exposure to arsenic in sediment at levels exceeding 1E-06 risk and/or SRS background concentration.	• Total surface area of the surface water impoundment area of CSSLP is 4,128 m^2. Total volume of contaminated sediment (based on a 0 to 0.3 m [0 to 1 ft] depth) is estimated to be 661 m^3.	
• No Eco, CM, or PTSM RCOCs were identified at the CSSLP for soil,sediment, or surface water media.	• None	• None	
Uncertainties			
• None			

3.3 *Ford Building Subunit*

The Ford Building (690-N) is located in the N Area facility boundary within the Pen Branch watershed (Figure 1). The Ford Building (690-N) was constructed in the 1950's as a one-story metal frame structure on a concrete pad, covering 900 m^2 (9,700 ft^2). The building operated from the 1950's until the early 2000's. It was initially used for testing control rod drive mechanisms prior to their installation in the SRS reactors, then modified to repair leaking contaminated process water heat exchangers from SRS reactors. It was also used to house construction crews and store miscellaneous equipment and supplies that were chemically and radiologically contaminated. (SRNS 2019a).

In 2014, a characterization effort occurred at the Ford Building (690-N) on the concrete slab and soils beneath the concrete slab. For human receptors, cesium-137 and PCBs present on the concrete slab were identified as a problem warranting action for the residential and industrial worker scenarios. No HH constituents of concern (COCs) were identified for underlying soils. No CM COCs were

identified from the evaluation for the Ford Building (690-N) concrete slab and underlying soils in support of facility Deactivation and Decommissioning (D&D). In 2021, the D&D phase of the Ford Building (690-N) was completed and documented in the *Decommissioning Project Final Report Building 690-N, Process Heat Exchanger Repair Facility* (SRNS 2020). The facility structure was demolished to its slab and an engineered concrete cap cover system was installed over the entire concrete remnant slab area extending out 0.3 m (1 ft) from the building edge (SRNS 2019b).

In 2019 pre-Work Plan characterization effort was conducted on the soils surrounding the Ford Building and additional ancillary areas (Figure 6).

For human receptors, cobalt-60 (half-life 5.3 years) in surface soil was identified as a problem warranting action for the residential and industrial worker scenarios (Figure 7). No Eco, CM or PTSM RCOCs were identified for this subunit.

In support of the CMS/FS, the likely response actions identified in the table below were further evaluated in a comparative analysis, as shown in Appendix A, Table A-3 and described below. The alternatives are identified as follows: Alternative C-1 No Action, Alternative C-2 Land Use Controls and Alternative C-3 Excavation (Hot Spot Removal) and Disposal with LUCs. Alternative C-1, the No Action alternative, was carried forward as required by the NCP to serve as a baseline for comparison with other remedial alternatives. With the exception of Alternative C-1 all other alternatives are protective of human health by limiting or eliminating the exposure to contaminated media. All alternatives except Alternative C-1 are in compliance with all applicable ARARs. Alternative C-3 was ranked the most effective in the long term due to the permanent removal of all contaminated media identified in the soils surrounding the slab, followed by the Alternative C-2 which requires only engineering and administrative controls. Alternative C-1 ranked the lowest in terms of long and short term effectiveness due to no action being taken to reduce exposure to the industrial worker. Alternative C-2 ranked the highest in the short term due to requiring only signage and administrative controls and because of the insignificant risk to the industrial worker during implementation. Alternative C-3 ranked slightly below Alternative C-2 in the short term due to the potential exposure to

contaminated media during implementation. Alternative C-1 was deemed the most implementable due to requiring no action to complete, followed by the Alternative C-2 and lastly Alternative C-3. The cost of each alternative is displayed in Table B-4. Table 3 identifies the PRGs for the OU.

Table A-4 provides a summary of the comparative ranking analysis. It aids in selecting a RA for each individual subunit by quantifying the alternatives in relation to the evaluation criteria. Alternative C-2 is proposed as the preferred remedial alternative for the Ford Building subunit over Alternative C-3 due to the shortened implementation time and ease of installation. Additionally, the hot spot area that would be removed under Alternative C-3 is near the edge of the remnant slab underneath approximately 23 centimeters (9 inches) of gravel that was put in place during the installation of the concrete cover. This area would be covered by LUCs due to its close proximity to the slab whether the contaminated media is removed or not. Furthermore, cobalt-60 has a relatively short half-life (5.3 years) and will be less than the industrial worker threshold of 1E-06 within 20 years, thereby eliminating any long term requirements other than LUCs (to prevent residential/unrestricted use/exposure) within the soils surrounding the slab.

Problem(s) Warranting Action	RAOs	Scope of Problem(s)	Likely Response Actions
• Ford Building (690-N) slab – Prior to placement of an engineered concrete cover system in 2021, PCBs (Aroclor 1254 and 1260) and cesium-137 (+D) were present at the Ford Building (690-N) remnant concrete slab that exceeds the 1E-06 risk level of concern for the resident and industrial worker scenarios.	• Prevent residential and industrial exposure to PCBs and cesium-137 at the Ford Building (690-N) remnant concrete slab that exceed 1E-06 risk and PCB ARAR of 1 mg/kg for free release.	• Ford Building (690-N) remnant concrete slab.	• No Action • LUCs • Excavation (soil hot spot) and Disposal/ LUCs
• Cobalt-60 is present in surface soil (0 to 1 ft) (EPC = 0.545 pCi/g) exceeding the 1E-06 level of concern for the resident scenario (risk = 1.7E-05) and industrial worker (risk = 1.1E-05).	• Prevent residential and industrial exposure to cobalt-60 in surface soils at levels that exceed 1E-06 risk.	• Total surface area of the soils surrounding the Ford Building (690-N) subunit is 9,466 m^2. Total volume of contaminated surface soil (based on a 0- to 0.3-m [0- to 1-ft] depth) is estimated to be 0.3 m^3.	
Uncertainties			
• None			

4.0 OPERABLE UNIT STRATEGY

A summary of the of the Comparative Alternative Analysis for the ECODS N-1, CSSLP and Ford Building OU is provided in Appendix A, Table A-4. The project team proposes to develop a SB/PP for the ECODS N-1, CSSLP, and the Ford Building (690-N) OU that summarizes the remedial alternatives evaluated in the RFIRI/BRA/CMS/FS document and identifies the following preferred alternatives for each subunit:

- ECODS N-1 subunit: Alternative A-2, LUCs to prevent human exposure to friable asbestos that is present in the subsurface. Implementation of this preferred alternative requires five-year remedy reviews.

- CSSLP subunit: Alternative B-4, Excavation (Hot Spot Removal) and disposal of arsenic contaminated surface soil and sediment to prevent human exposure. Implementation of this preferred alternative would result in no residual contamination identified above the allowable thresholds left in place. Although Alternatives B-2 and B-4 were ranked equally, Alternative B-4 has significantly better long term effectivesness as it will not require continued operations and maintenance of LUCs and no five year remedy reviews will be required.

- Ford Building subunit: Alternative C-2, LUCs to prevent human exposure to cesium-137 and PCBs on the remnant concrete slab and cobalt-60 in surface soil. Implementation of this preferred alternative requires five-year remedy reviews and includes O&M of the Ford Building engineered concrete cover system.

The SB/PP Revision 0 is due for submittal on August 3, 2022

Deliverable	Submittal Date
Submit Rev. 0, Statement of Basis/Proposed Plan	August 3, 2022
Submit Rev. 0, Record of Decision	March 20, 2023
Submit Rev. 0, Corrective Measures Implementation/RA Implementation Plan	August 15, 2023
Submit Rev. 0, Land Use Control Implementation Plan	August 15, 2023
Issuance of the Record of Decision	December 12, 2023
Remedial Action Start	December 16, 2024

5.0 REFERENCES

SRNS, 2019a. *Facility Decommissioning Evaluation Building 690-N, Process Heat Exchanger Repair Facility,* G-FDE-N-00013, Revision 2, May 2019, Savannah River Site, Aiken, SC,

SRNS, 2019b. *Closure Cap Design for the 690-N Process Heat Exchanger Repair Facility*, T-CLC-N-00005, Revision 0, November 2019, Savannah River Nuclear Solutions, LLC., Savannah River Site, Aiken, SC

SRNS, 2020. *Decommissioning Project Final Report Building 690-N, Process Heat Exchanger Repair Facility*, V-PCOR-N-00025, Revision 0, May 18, 2021, Savannah River Nuclear Solutions, LLC., Savannah River Site, Aiken, SC

SRNS, 2022. *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 N-1 (NBN), Central Shops Scrap Lumber Pile (631-2G), and Building 690-N, Process Heat Exchanger Repair Facility (aka Ford Building) Operable Unit (U),* SRNS-RP-2021-00548, Revision 1, April 2022, Savannah River Nuclear Solutions, LLC., Savannah River Site, Aiken, SC

WSRC, 2001. *Site Evaluation Report for Early Construction and Operational Disposal Site (ECODS) N-1 (NBN)*, WSRC-RP-2001-4185, Revision 0, December 2001, Westinghouse Savannah River Company, Aiken, SC

WSRC, 2002. *Record of Decision Remedial Alternative Selection for the Central Shops Burning/Rubble Pits (CSBRP) (631-1G and 631-3G) Operable Unit (U),* WSRC-RP-200-4265, Rev. 1.1, October 2002, Westinghouse Savannah River Company, Aiken, SC

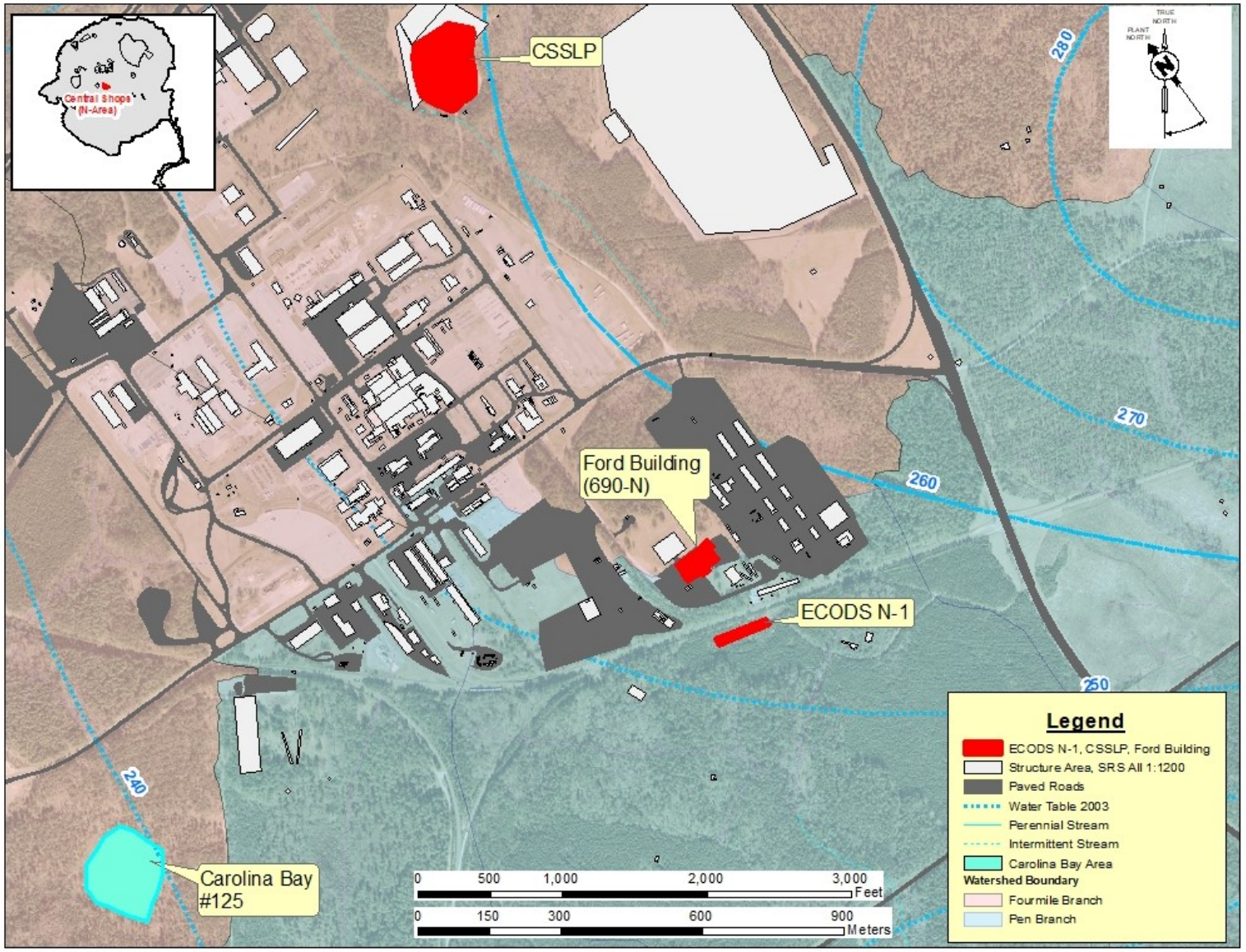

Figure 1. Location of the ECODS N-1, Scrap Lumber Pile (631-2G) and the Ford Building (690-N)

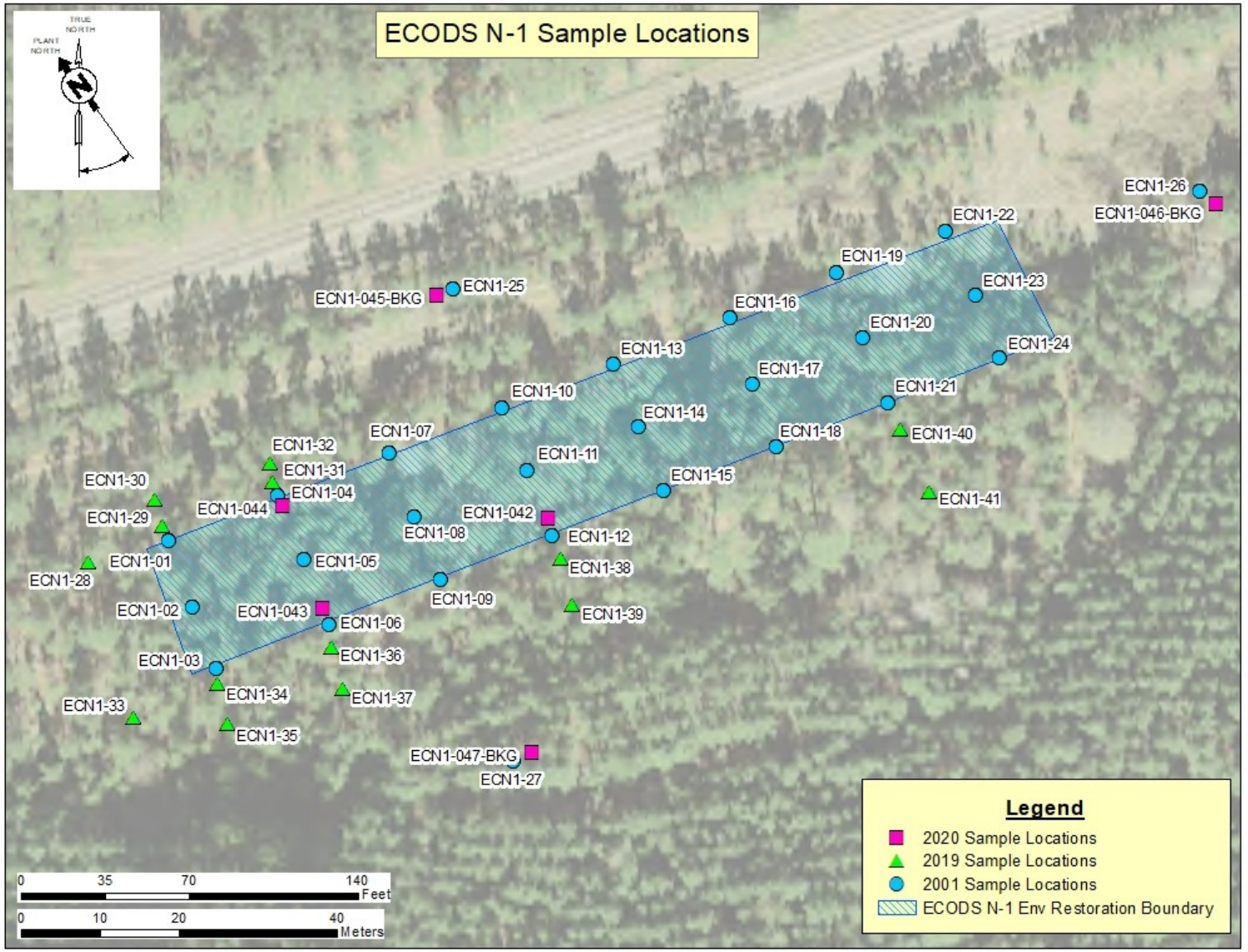

Figure 2. ECODS N-1 Subunit 2001, 2019 and 2020 Sample Locations

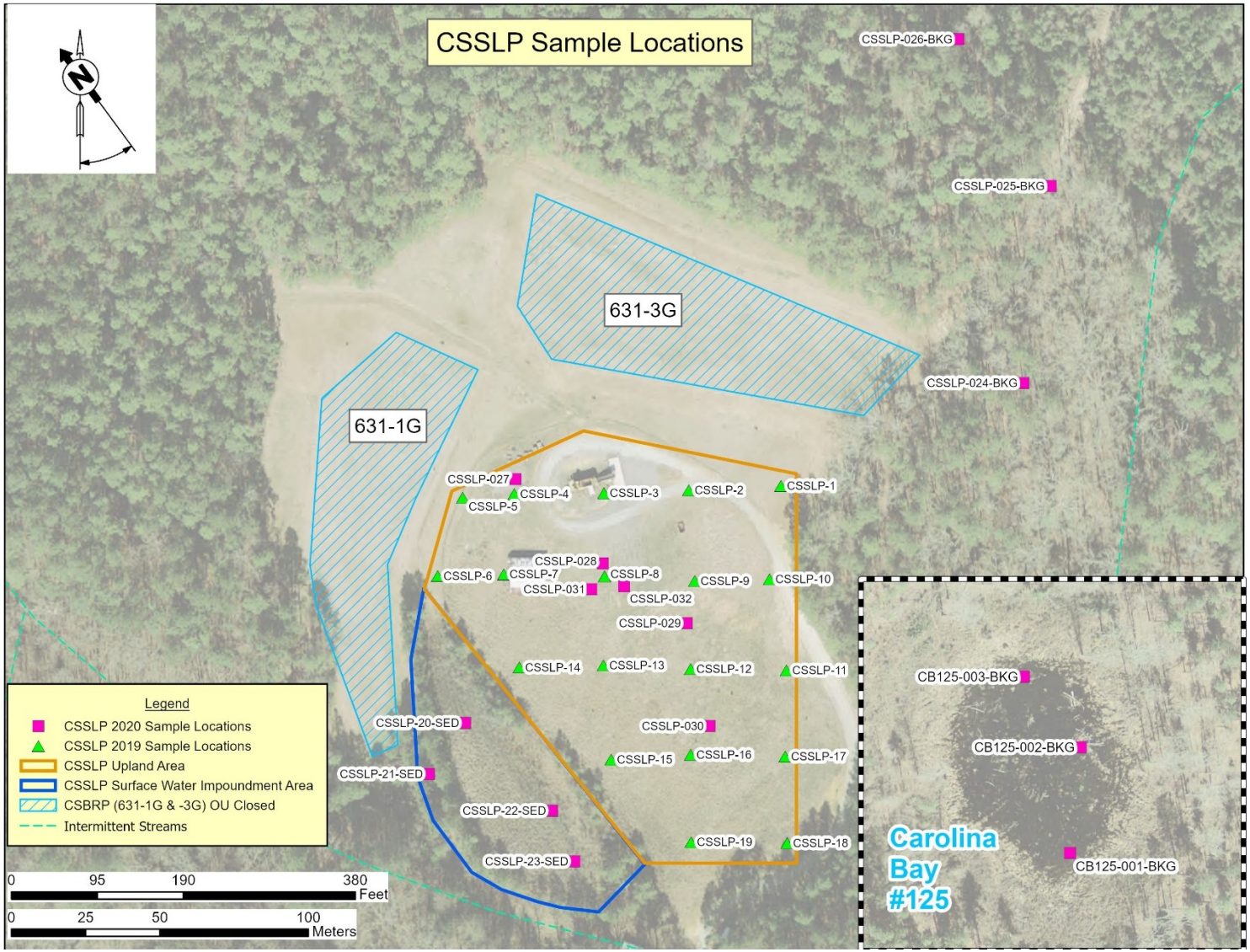

Figure 3. CSSLP Subunit 2019 and 2020 Sample Locations

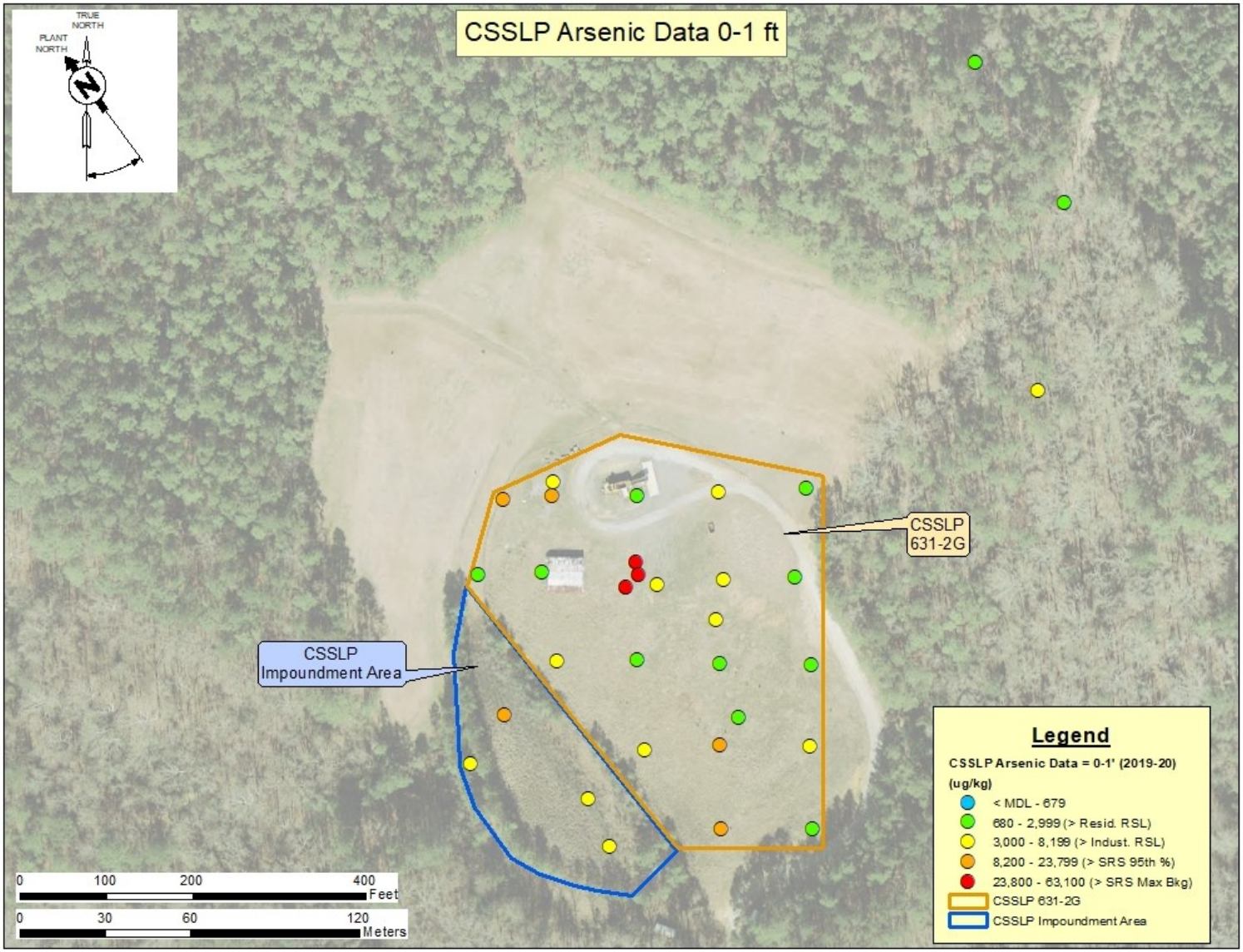

Figure 4. CSSLP Subunit Arsenic Data (0-1 ft)

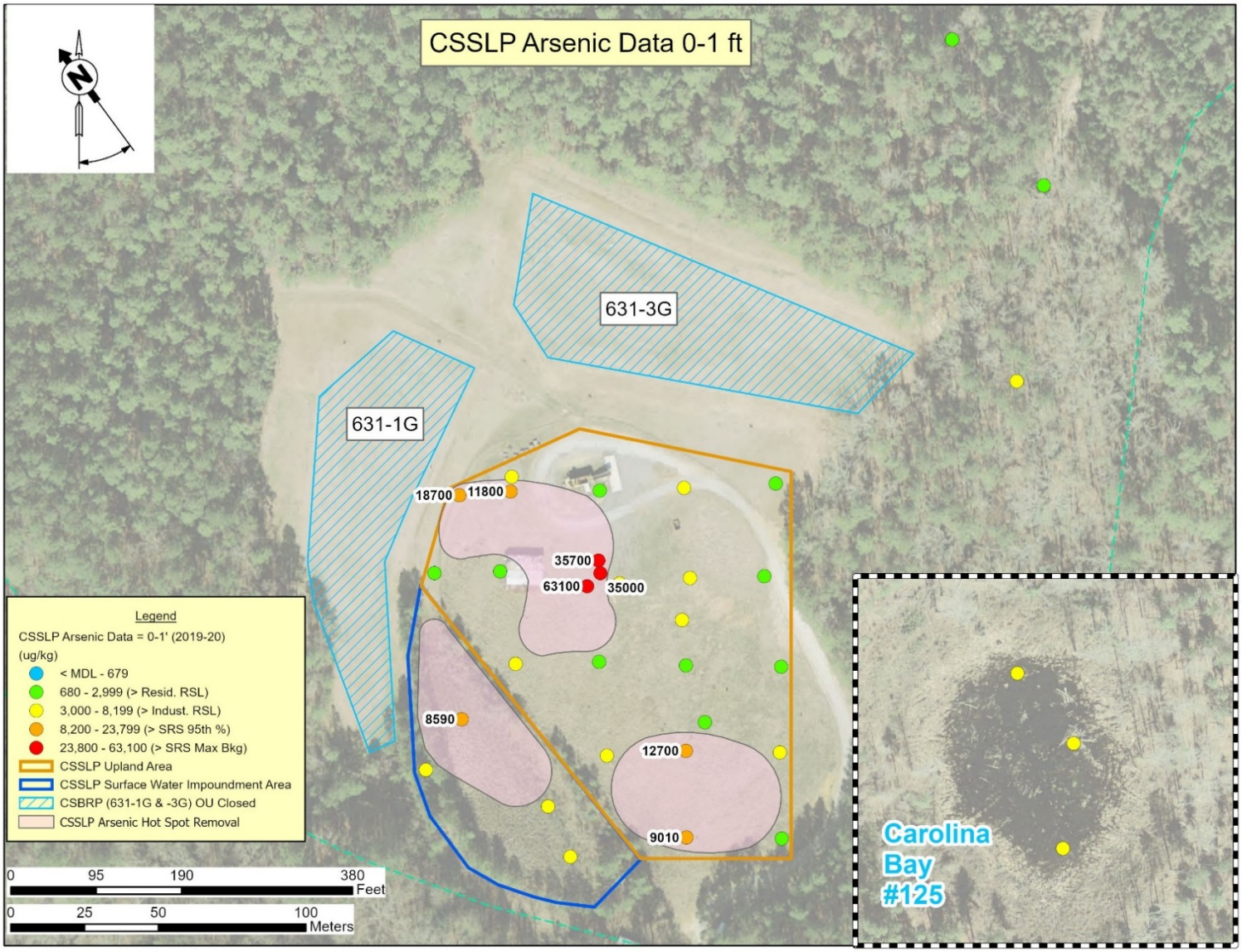

Figure 5. CSSLP Subunit Alternative B-4 Excavation (Hot Spot Removal) and Disposal

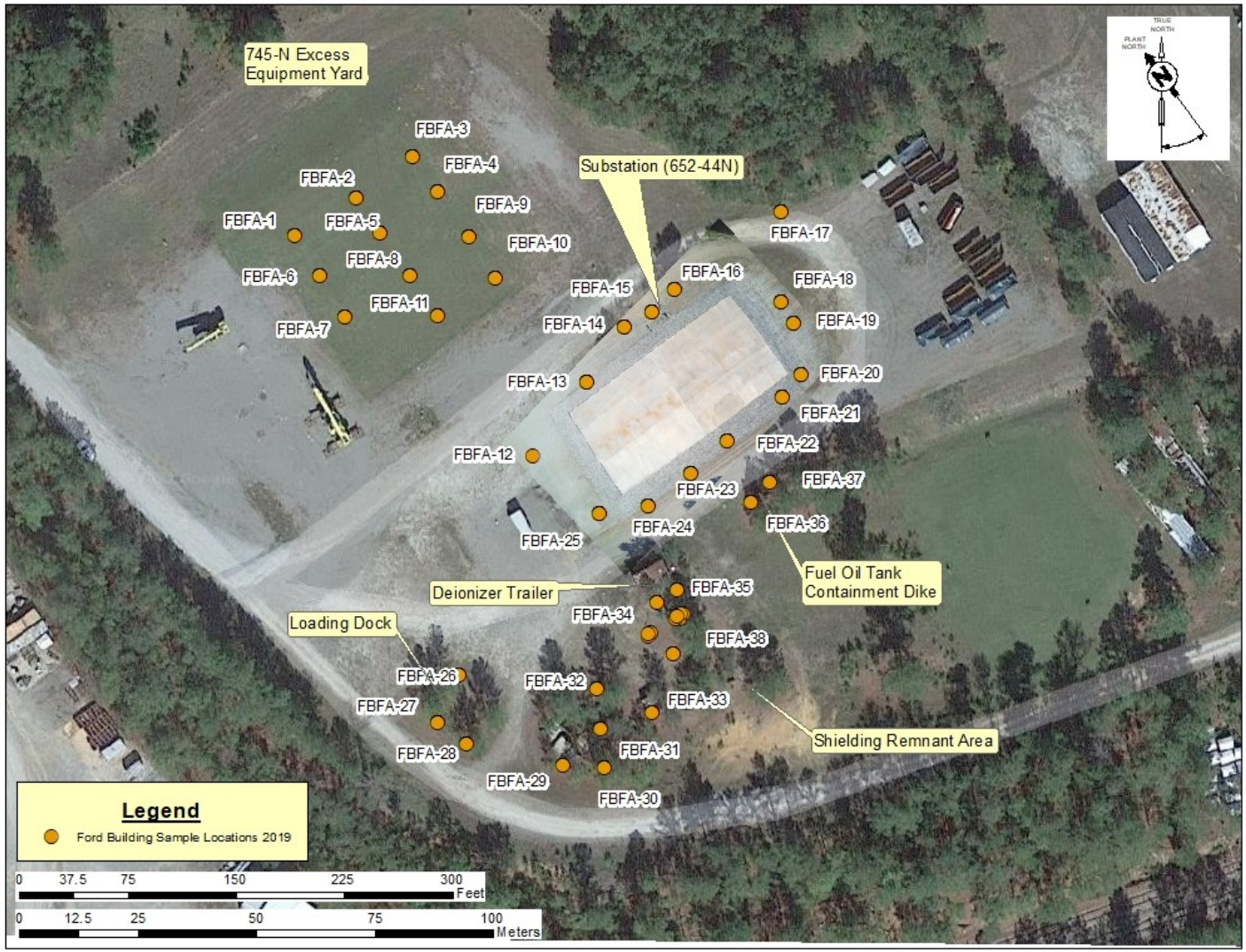

Figure 6. Ford Building Subunit 2019 Sample Locations

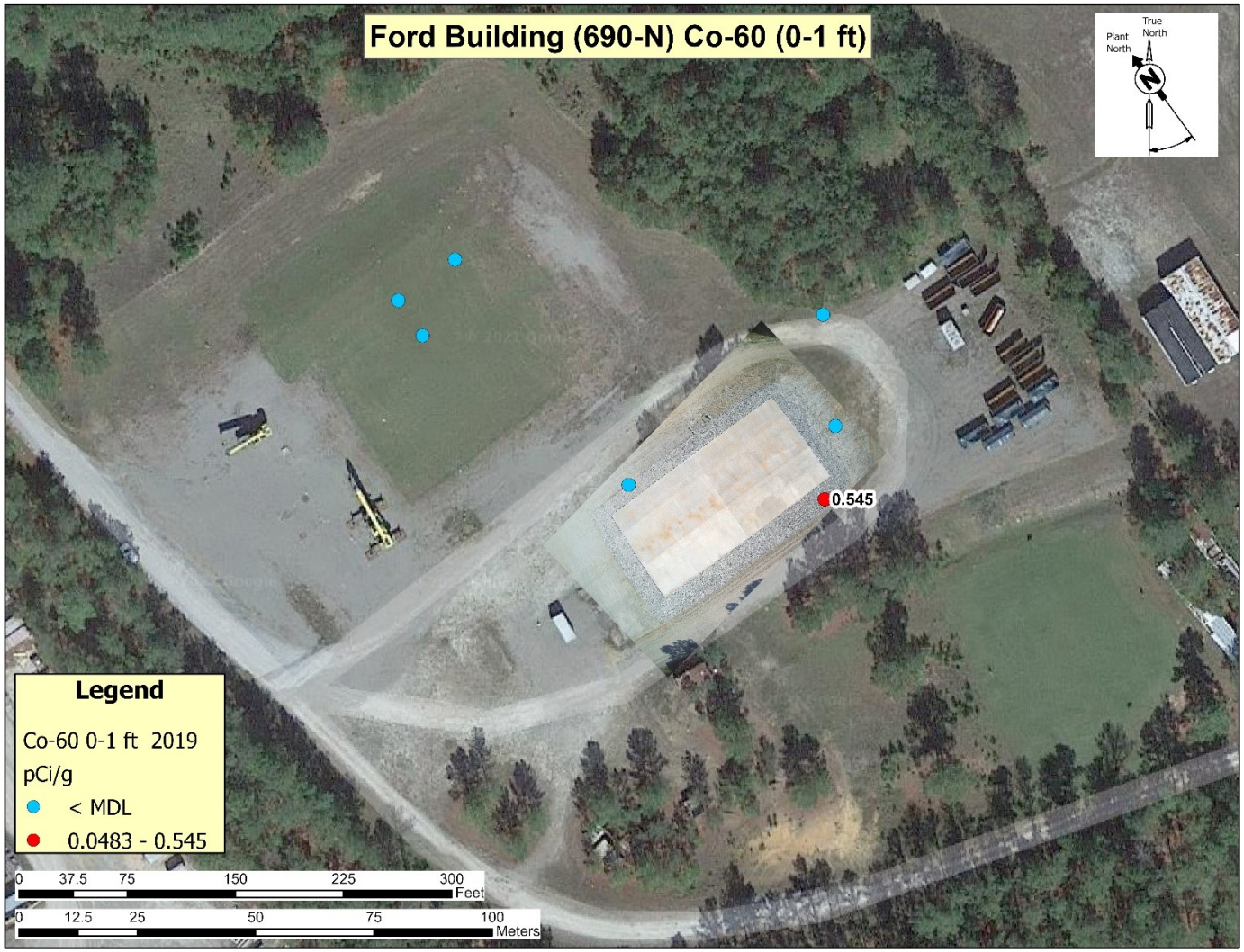

Figure 7. Ford Building Subunit Cobalt-60 Data (0-1 ft)

Table 1. Record of Core Team Agreements[1]

RECORD OF CORE TEAM AGREEMENTS	
Date	**Description of Agreement**
12/18/2019	*Core Team agrees six additional soil sample locations with four sample intervals are needed at the ECODS N-1 subunit, and these samples will receive total metals and Cr^{+6} analyses.*
12/18/2019	*If no other problem warranting action is found at the ECODS N-1 subunit, the Core Team agrees that an asbestos investigation is necessary to determine whether asbestos is present that poses a problem warranting action.*
12/18/2019	*Core Team agrees that Castor Bay (or equivalent unimpacted bay) will be sampled for three sediment/surface water background locations for the surface water impoundment area within the Scrap Lumber Pile (631-2G) subunit.*
12/18/2019	*Core Team agrees to take additional soil samples at four locations and at four sample intervals within the Scrap Lumber Pile for total metals and Cr^{+6} analyses. Three background soil locations will also be sampled at four intervals for total metals and Cr^{+6} analyses.*
12/18/2019	*Core Team agrees to use the 2014 concrete data during the contaminant migration evaluation for the Ford Building (690-N) subunit.*
12/18/2019	*Core Team agrees to the additional contingent surface (0-1 ft) samples (pending radiological survey) around the Ford Building (690-N) concrete pad prior to installation of the concrete cap.*
08/11/2021	*Core Team agrees* Cr(VI) *should not be retained as a human health RCOC and lead should not be retained as a ARAR RCOC for the ECODS N-1 subunit.*
08/11/2021	*Core Team agrees* Cr(VI) *should not be retained as a human health RCOC for the CSSLP subunit Upland Area soil and Surface Water Impoundment Area sediment.*
08/11/2021	*Core Team agrees* Cr(VI) *should not be retained as a human health RCOC for the CSSLP subunit Surface Water Impoundment Area surface water.*
08/11/2021	*Core Team agrees that arsenic in CSSLP Surface Water Impoundment Area will be eliminated as an RCOC in the risk uncertainty discussion.*
08/11/2021	*The Core Team agrees that the Excavation and Disposal remedy for CSSLP would include sufficient excavation to require no LUCs.*
08/11/2021	*Core Team agrees thallium should not be retained as a human health RCOC for the Ford Building subunit.*
08/11/2021	*Core Team agrees chromium (total) should not be retained as a human health RCOC for the Ford Building subunit.*
08/11/2021	*Core Team agrees thorium-232 should not be retained as a PTSM RCOC for the Ford Building subunit.*
06/07/2022	*Core Team agrees on the preferred remedy for the ECODS N-1, CSSLP and Ford Building OU.*

[1] Core team agreements should be documented at each phase and should be retained for each successive phase in order to maintain a comprehensive list for the life of the project.

Table 2. Key Changes to the Scoping Summary

CHANGES TO SCOPING SUMMARY			
Date	**Section**	**Description of Change**	**Rationale for Change**
May 2022	1.0	Revised to support development of the SB/PP.	Updated to reflect current project phase.
	3.0 – 3.3	Revised to summarize characterization data, risk assessment, and likely response actions and remove uncertainties addressed by the RFI/RI/BRA/CMS/FS document.	Updated to remove details of characterization data previously needed to support development of the RFI/RI/BRA/CMS/FS document. Updated to support development of the SB/PP.
	4.0	Revised to identify the preferred remedial alternative for each subunit.	Updated to reflect the current strategy for the development of the SB/PP.
	Figures	Deleted figures for constituents that were not identified as RCOCs. Added figure that shows excavation of hotspots at the CSSLP.	Removed figures previously needed to support development of the RFI/RI/BRA/CMS/FS and identify problems warranting action. Added CSSLP figure to support Core Team agreement on preferred remedial alternative.
	Appendix	Deleted Risk Summary Table. Added cost estimates and comparative alternative analysis from the RFI/RI/BRA/CMS/FS.	Updated to support Core Team agreement on the preferred alternative.

Table 3. Most Likely Preliminary Remedial Goals (PRGs) for ECODS N-1, CSSLP, and Ford Building OU

Media	HH RCOC	Units	Resident PRG[1]	Industrial Worker PRG[1]	SRS Background 2X Average Concentration[2]	SRS Background 95th percentile[2]	SRS Background Maximum[2]	Most Likely PRG[3]
Central Shops Scrap Lumber Pile (631-2G)								
Soil and Sediment	Arsenic	mg/kg	0.68	3.0	4.5	*8.2*	22.9	**8.2**
Ford Building								
Soil	Cobalt-60	pCi/g	*0.033*	0.048	NA[4]	NA[4]	NA[4]	**0.033**

1 – Resident and Industrial Worker PRGs are identified at risk = 1E-06
2 – SRS background concentrations from Background Soils Statistical Summary Report for the Savannah River Site (WSRC 2006), Appendix B-2 (all depths interval).
3 – 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.
4 - Not applicable; SRS background concentration not available for Cobalt-60

APPENDIX A

Comparative Analysis

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Table A-1. Comparison of the ECODS N-1 Subunit Alternatives to the CERCLA Criteria

Criterion	A-1 No Action	A-2 Land Use Controls
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.
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
Location-Specific	No ARARs exist	No ARARs exist
Action-Specific	No ARARs exist	No ARARs exist
Long Term Effectiveness		
Adequacy of Controls	None	Controls are adequate to limit exposure as long as controls are maintained
Permanence	None	LUCs are permanent as long as controls are maintained
Reduction of Mobility, Toxicity, or Volume		
Type of Reduction	No reduction	No reduction
Short-Term Effectiveness		
Amount of Hazardous Material Destroyed or Treated	No reduction	No reduction
Risk to Remedial Worker	No risk	No risk
Risk to Community	None	None
Risk to Environment	None	None
Time to Implement and achieve RAO	Never	6 Months
Implementability Short-Term Effectiveness		
Availability of Materials, Equipment, Contractors	N/A	Readily available
Ability to Construct and Operate the Technology	N/A	Proven technology at SRS
Ability to Obtain Permits/Approvals from Other Agencies	N/A	Prior history with similar permits/approvals at SRS
Cost		
Total Capital Cost	$0	$27,225
Present Worth O&M Cost	$0	$244,170
Total Cost	$0	$271,396

Table A-2. Comparison of the CSSLP 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 (Hot Spot Removal) 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 through Treatment				
Type of Reduction	No reduction	No reduction	No reduction	No reduction

Table A-2. Comparison of the CSSLP 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 (Hot Spot Removal) 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	$27,759	$2,613,143	$889,606
Present Worth O&M Cost	$0	$317,802	$423,908	$11,322
Total Cost	$0	$345,561	$3,037,051	900,928

Table A-3. Comparison of the Ford Building Subunit Alternatives to the CERCLA Criteria

Criterion	C-1 No Action	C-2 Land Use Controls	C-3 Excavation (Hot Spot Removal) and Disposal with LUCs
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 and maintaining the integrity of the existing concrete cover.	Meets the requirement by extraction of the contaminated media to eliminate the direct exposure pathways and the use of administrative and engineering controls to maintain the integrity of the existing concrete cover.
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	ARAR for sampling, storage and/or disposal of PCB waste is not achieved.	ARAR for sampling, storage and/or disposal of PCB waste can be achieved.	ARAR for sampling, storage and/or disposal of PCB waste can be achieved.
Location-Specific	No ARARs exist	No ARARs exist	No ARARs exist
Action-Specific	No ARARs exist	No ARARs exist	ARAR for transportation of solid waste and characterization of low-level waste can be achieved.
Long Term Effectiveness			
Adequacy of Controls	None	Controls are adequate as long as they are maintained	No controls required because contaminated media removed
Permanence	No	LUCs are permanent as long as controls are maintained	Excavation of media will be permanent
Reduction of Mobility, Toxicity, or Volume through Treatment			
Type of Reduction	No reduction	No reduction	No reduction
Short-Term Effectiveness			
Amount of Hazardous Material Destroyed or Treated	No reduction	No reduction	No reduction
Risk to Remedial Worker	No risk	No risk	Minimal; Health and Safety Plan will be implemented to protect remedial workers
Risk to Community	None	None	None
Risk to Environment	None	None	None
Time to Implement and achieve RAO	Never	6 Months	9 Months

Table A-3. Comparison of the Ford Building Subunit Alternatives to the CERCLA Criteria *(continued/end)*

Criterion	C-1 No Action	C-2 Land Use Controls	C-3 Excavation (Hot Spot Removal) and Disposal with LUCs
Implementability			
Availability of Materials, Equipment, Contractors	N/A	Readily available	Readily available
Ability to Construct and Operate the Technology	N/A	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
Cost			
Total Capital Cost	$0	$27,225	$63,358
Present Worth O&M Cost	$0	$650,388	$650,388
Total Cost	$0	$677,613	$713,746

Table A-4. Comparative Alternative Analysis for ECODS N-1, CSSLP and Ford Building OU

Alternatives	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)
ECODS N-1 Subunit									
A-1) No Action	No	No	N/A	1	1	1	5	$0	8
A-2) Land Use Controls	Yes	Yes	N/A	3	1	5	4	$271,396	13
CSSLP Subunit									
B-1) No Action	No	No	N/A	1	1	1	5	$0	8
B-2) Land Use Controls	Yes	Yes	N/A	3	1	5	4	$345,561	13
B-3) Soil Cover with LUCs	Yes	Yes	Yes	4	1	4	3	$3,037,051	12
B-4) Excavation (Hot Spot Removal) and Disposal	Yes	Yes	Yes	5	1	4	3	$900,928	13
Ford Building Subunit									
C-1) No Action	No	No	N/A	1	1	1	5	$0	8
C-2) Land Use Controls	Yes	Yes	N/A	3	1	5	4	$677,613	13
C-3) Excavation (Hot Spot Removal) and Disposal with LUCs	Yes	Yes	Yes	4	1	4	3	$713,746	12

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