



**Department of Energy**  
Savannah River Operations Office  
P O Box A  
Aiken, South Carolina 29802

**JUN 13 2024**

Ms. Susan B. Fulmer, P. G., Manager  
Federal Remediation Section  
Division of Site Assessment, Remediation and Revitalization  
Bureau of Land and Waste Management  
South Carolina Department of Health and Environmental Control  
2600 Bull Street  
Columbia, South Carolina 29201

Mr. Jon Richards  
Savannah River Site Remedial Project Manager  
Superfund Division  
U. S. Environmental Protection Agency, Region 4  
61 Forsyth Street, SW  
Atlanta, Georgia 30303

Dear Ms. Fulmer and Mr. Richards:

**SUBJECT:** Seventh Five-Year Remedy Review Report for Savannah River Site Operable Units with Native Soil Covers and/or Land Use Controls (U) Aiken, South Carolina (SRNS-RP-2023-00715, Revision 1, June 2024) (Redline Pages), Seventh Five-Year Remedy Review Report for SRS Operable Units with Native Soil Covers and/or Land Use Controls Fact Sheet (SRNS-RP-2023-00717, June 2024) (Redline Page), and Savannah River Site's Responses to the Regulatory Comments on the Revision 0 Document, SEMS Number: 00

In accordance with the terms of the Federal Facility Agreement (FFA), the U.S. Department of Energy (DOE) is submitting the subject information for your review. The Savannah River Site (SRS) submitted the Seventh Five-Year Remedy Review Report for Savannah River Site Operable Units with Native Soil Covers and/or Land Use Controls (U) Aiken, South Carolina (SRNS-RP-2023-00715, Revision 0, December 2023) and supporting documentation to the regulators on December 21, 2023. The South Carolina Department of Health and Environmental Control (SCDHEC) and U.S. Environmental Protection Agency (EPA) provided comments on the report on March 20, 2024. SRS submitted the draft responses via email for regulatory review on May 16, 2024. The SCDHEC and EPA replied on May 29, 2024, and May 31, 2024, respectively, that the draft responses were acceptable. The final SRS' responses to the SCDHEC's and EPA's comments on the Revision 0 document were incorporated into the Redline Revision 1 pages changes for the report. While incorporating the responses into the report, SRS decided to delete Table A-1, Phased Five-Year Remedy Review Report Schedule, because it is no longer relevant to the remedy review process. The table was initially included in the remedy review reports to show the transitional period between the fourth, fifth, and sixth reports until the five-year cycle was fully established between the sixth and seventh remedy review reports. The five-year cycle has now been fully established.

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The Fact Sheet was also revised based on the responses to the regulatory comments.

Please review the enclosures and provide your response within forty-five (45) days of receipt. The effort and time that the SCDHEC and EPA have given on the subject report are greatly appreciated.

Questions from you or your staff may be directed to me at (803) 952-7805.

Sincerely,

**AVERY  
HAMMETT**

Digitally signed by AVERY  
HAMMETT  
Date: 2024.06.12 15:26:15 -04'00'

Avery G. Hammett  
FFA Project Manager, DOE-Savannah River  
Remediation and Deactivation & Decommissioning Division

RDDD-24-138

Enclosures:

1. Seventh Five-Year Remedy Review Report for Savannah River Site Operable Units with Native Soil Covers and/or Land Use Controls (U) Aiken, South Carolina (SRNS-RP-2023-00715, Revision 1, June 2024) (Redline Pages)
2. Seventh Five-Year Remedy Review Report for SRS Operable Units with Native Soil Covers and/or Land Use Controls Fact Sheet (SRNS-RP-2023-00717, June 2024) (Redline Page)
3. SRS Responses to South Carolina Department of Health and Environmental Control Comments on the Seventh Five-Year Remedy Review Report for Savannah River Site Operable Units with Native Soil Covers and/or Land Use Controls (U) (SRNS-RP-2023-00715, Revision 0, December 2023)
4. SRS Responses to United States Environmental Protection Agency Comments on the Seventh Five-Year Remedy Review Report for Savannah River Site Operable Units with Native Soil Covers and/or Land Use Controls (U) (SRNS-RP-2023-00715, Revision 0, December 2023)

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cc w/o encl:

J. Blalock, SCDHEC-Columbia  
G. K. Taylor, SCDHEC – Columbia  
S. French, SCDHEC-Columbia  
M. Reece, SCDHEC-Columbia  
G. Stewart, SCDHEC-Columbia  
T. R. Fuss, SCDHEC-Aiken Environmental Affairs Office  
G. N. O'Quinn, SCDHEC-Aiken Environmental Affairs Office  
B. A. Cameron, SCDHEC-Aiken Environmental Affairs Office  
H. L. Herlong, SCDHEC-Aiken Environmental Affairs Office

cc w/encl:

J. Dawson, EPA-Atlanta  
B. Martin, EPA-Atlanta  
M. McRae, TechLaw, Inc.

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**GENERAL COMMENTS**

1. The appropriateness of the protectiveness determination of “short-term protective” prepared for the C-, K-, and L-Reactor Complexes (CKL Rx) is unclear. According to the Seventh FYR Section III (Progress Since Last Review) and Appendix D (C-, K-, and L-Reactor Complexes) the previous protectiveness statements from the Sixth Five-Year Remedy Review Report (SRNS 2019) concluded that all Operable Units (OUs) were found to be protective except CKL Rx, which was found to be protective in the short-term (Table 5, Protectiveness Determinations/Statements from the Sixth Five Year Remedy Review for SRS OUs with Native Soil Covers and/or LUCs [Land Use Controls] (SRNS 2019)). Appendix D, Section V (Progress Since Last Review) indicates for the CKL Rx remedy to be protective in the long-term, the remainder of the remedy for implementing the in-situ decommissioning (ISD) must be completed according to the recommended follow-up actions to ensure long-term protectiveness. As such, since the remedial actions at the CKL Rx are not completed, the protectiveness determination of “will be protective” is appropriate and falls into the category of remedies where construction activities are ongoing per Environmental Protection Agency (EPA) guidance “Comprehensive Five-Year Review Guidance”, 19 EPA 540-R-01-007, OSWER No. 9355.7-03B-P, June 2001, and “Clarifying the Use of Protectiveness Determinations for Comprehensive Environmental 30 Response, Compensation, and Liability Act Five-Year Reviews”, OSWER Directive 9200.2-111, September 13, 2012. **Please revise the protectiveness determination from “short-term protective” to “will be protective” and the protectiveness statement as follows:** *“The remedy at the CKL Rx is expected to be protective of human health and the environment upon completion. In the interim, remedial activities completed to date have adequately addressed all exposure pathways that could present unacceptable risks in these areas”.*

**Response: Agree.**

**As stated above, the selected remedy for the C-, K-, and L-Reactor Complexes is LUCs with ISD, and only LUCs have been implemented. Therefore, in accordance with the referenced EPA guidance, the sections listed below will be revised to reflect the changes to the protectiveness determination and protectiveness statements, as applicable.**

**The text in Section V, Technical Assessment, Question C will be revised as follows:**

**~~“...C-, K-, and L-Reactor Complexes is ISD with LUCs. This remedy was determined to be protective in the short-term for the C-, K-, and L-Reactor Complexes because t~~The selected remedy component currently being implemented is LUCs; ~~while~~ the remainder of the remedy to implement ISD will be completed upon closure of the C-, K-, and L-Reactor Complexes. Therefore, the remedy will be protective of human health**

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**and the environment upon completion. In the interim, remedial activities completed to date (i.e., LUCs) have adequately addressed all exposure pathways that could present unacceptable risks in these areas.”**

The text in Section VII, Protectiveness Statement(s), will be revised as follows:

**“The remedy for the C-, K-, and L-Reactor Complexes ~~was determined to will~~ be protective ~~in the short term~~. ISD with LUCs has been chosen as the final remedy for the C-, K-, and L-Reactor Complexes. The ISD portion of the remedy will be implemented upon closure of the C-, K-, and L-Reactor Complexes. In the interim, exposure pathways that could result in unacceptable risks ~~are being controlled and~~ are adequately addressed by the LUCs that are in place.”**

No change to Table 5 is proposed since it reflects the Protectiveness Determinations / Statements from the Sixth Five Year Remedy Review Report for SRS OUs with Native Soil Covers and/or LUCs.

Table 8, Protectiveness Statements for the Seventh Five Year Remedy Review Report for SRS OUs with Native Soil Covers and/or LUCs, will be revised as follows for the C-, K-, and L-Reactor Complexes.

<i>Operable Unit</i>	<i>Protectiveness Determination</i>	<i>Planned Addendum Completion Date (if applicable)</i>
C-, K-, AND L-REACTOR COMPLEXES, SEMS # 79, 90, 91 <sup>a</sup>	<del>Short-term</del> <u>Will be</u> Protective	N/A
<b><i>Protectiveness Statement:</i></b> The remedy at the C-, K-, and L-Reactor Complexes is <u>expected to be protective of human health and the environment upon completion by implementing LUCs to prevent exposure. However, in order for the remedy to be protective in the long term, the remainder of the remedy in the EAROD to implement ISD for C-, K-, and L-Reactor Building Complexes must be completed. In the interim, remedial activities completed to date (i.e., LUCs) have adequately addressed all exposure pathways that could present unacceptable risks in these areas.</u>		

Appendix D, Section X, Protectiveness Statement(s), will be revised as follows:

**“The selected remedies for CKL Rx are ~~currently~~ expected to be protective of human health and the environment upon completion. In the interim, remedial activities completed to date (i.e., LUCs) have adequately addressed all exposure pathways that could present unacceptable risks in these areas.**

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**Exposure pathways that could result in unacceptable risks are being controlled by LUCs...However, for the remedy to be protective in the long-term, the remainder of the remedy in the EAROD to implement ISD for the Reactor Complexes must be completed implemented.**"

**Responsible Party: Shelia McFalls, shelia.mcfalls@srs.gov, 803-952-6819**

- 2. The evaluation of emerging contaminants presented in Section VII (Technical Assessment) of the appendices for each of the OUs is unclear. For example, the Seventh FYR does not list the emerging contaminants that were evaluated as part of the Technical Assessment or provide the rationale to substantiate the assertion that the emerging contaminants are not applicable to the OUs. In addition, it is unclear what fact sheets provided on the EPA webpage were reviewed during the evaluation. **Please revise the Seventh FYR to clarify which emerging contaminants were evaluated and provide the rationale to substantiate why the emerging contaminants are not applicable to the subject OU.****

**Response: Agree.**

**Technical fact sheets for emerging contaminants at federal facility sites are provided by the USEPA for the following contaminants: 1,2,3-trichloropropane (TCP), 1,4-dioxane, 2,4,6-trinitrotoluene (TNT), 2,4-dinitrotoluene (DNT), hexahydro-1,3,5-tri-nitro-1,3,5-triazine (RDX), nanomaterials, N-nitroso-dimethylamine (NDMA), perchlorate, perfluorooctane sulfonic acid (PFOS) and other per- and polyfluoroalkyl substances (PFAS), polybrominated biphenyls, polybrominated diphenyl ethers (PBDEs), and tungsten. Each fact sheet provides a description of the contaminant, known uses (i.e., military related manufacturing/explosives, industrial applications/consumer products, degreasers, flame retardant, etc.), and physical/chemical properties.**

**None of the emerging constituents reviewed were identified as applicable to the OUs evaluated in this report based on the OU history of contamination. Section VII Technical Assessment will be revised in Appendices C through N to identify the emerging contaminants that were evaluated and the rational why these emerging contaminants are not applicable to the subject OUs as follows:**

**"Fact sheets provided on the USEPA webpage (<https://19january2021snapshot.epa.gov/fedfac/emerging-contaminants-and-federal-facility-contaminants-concern.html>) regarding emerging contaminants were reviewed for applicability to this site. The USEPA webpage provides a link to fact sheets for the following emerging contaminants: 1,2,3-trichloropropane (TCP), 1,4-dioxane, 2,4,6-trinitrotoluene (TNT), 2,4-dinitrotoluene (DNT), hexahydro-1,3,5-tri-nitro-1,3,5-triazine (RDX), nanomaterials, N-nitroso-dimethylamine (NDMA), perchlorate, perfluorooctane sulfonic acid (PFOS) and**

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**other per- and polyfluoroalkyl substances (PFAS), polybrominated biphenyls, polybrominated diphenyl ethers (PBDEs), and tungsten. None of these listed-emerging contaminants were identified as applicable to this OU based on the OU history of contamination.**

**Responsible Party: Sadika O'Quinn, (803) 952-6697, sadika.oquinn@srs.gov**

- 3. It is uncertain which Regional Screening Level (RSL) is being referred to in both the text and Table B-1, Comparison of Nonradiological Standards in Soil Media, of Appendix B, Evaluation of Changes in Standards and Toxicity, i.e., Threshold Risk (TR) = 1E-06, Threshold Hazard Quotient (THQ) = 1.0 or TR = 1E-06 and THQ = 0.1. Please revise Appendix B text and tables to identify the RSLs used to evaluate potential changes to toxicity of the constituents of concern (COCs); note that the THQ = 0.1 RSL should be used for comparative purposes for sites with detections of multiple constituents.**

**Response: Agree with clarification.**

**Regional Screening Levels (RSLs) corresponding to an hazard quotient (HQ) of 0.1 are used for the initial screening of sites where more than one chemical with the same toxic endpoint might be present in the baseline risk assessment. With the exception of antimony and uranium, all of the constituents listed on Table B-1 are based on carcinogenic risk. Although antimony and uranium are considered noncarcinogens, they are not co-located at the same OU nor have the same toxic endpoint. Therefore, a comparison of RSL HQ = 0.1 is not warranted, and the RSL thresholds presented in Table B-1 are correct.**

**For clarity, the fourth paragraph of Appendix B will be revised to identify the RSL thresholds (HQ = 1.0, risk = 1E-06) used to evaluate potential changes to toxicity of the COCs as indicated below.**

**“An evaluation was performed for analytes that were identified as constituents of concern (COCs) for the SRS OUs discussed in Appendix C through Appendix N. Table B-1 shows the nonradiological (i.e., chemical) soil RSLs available in 2018 compared to the 2023 nonradiological soil RSLs. The RSLs presented in the table correspond to an HQ = 1.0 and/or risk = 1E-06, as appropriate. Table B-2...”**

**The footnotes in Table B-1 Comparison of Nonradiological Standards in Soil Media will be revised as shown below.**

**“a = USEPA Nonradiological RSLs for soil media (HQ = 1.0 or risk = 1E-06, as appropriate), May 2018**

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**b = USEPA Nonradiological RSLs for soil media (HQ = 1.0 or risk = 1E-06, as appropriate), May 2023”**

**Responsible Party: Sadika O’Quinn, (803) 952-6697, sadika.oquinn@srs.gov**

4. Appendix D, Page D-1 of D-23 refers to the consideration of the decommissioning and remediation options for the reactor complexes at SRS, which are stated to include C, K, L, and R as follows: “The three Reactor Complexes were first evaluated together with the R-Reactor Complex to obtain regulatory approval for in situ decommissioning (ISD) as an early remedial action (SRNS 2009a).” It should be noted, however, that P-Reactor was included in the regulatory consideration for in situ decommissioning and was actually the first of the reactors to undergo early remedial actions for ISD. **This text should be revised to include reference to the P-reactor complex.**

**Response: Agree.**

**Section I, Introduction, will be revised to include the P-Reactor Complex in the history of in situ decommissioning for reactor complexes at SRS as follows:**

**“The first Savannah River Site (SRS) reactor complex to select ISD as the final remedy was the P-Reactor Complex (WSRC 2008). In 2009, the U.S. Department of Energy (USDOE) decided to proceed with removal actions to support accelerated remediation of several subunits of the R-Area Operable Unit (RAOU) under the American Recovery and Reinvestment Act of 2009. These removal actions included implementation of ISD for the R-Reactor Complex as described in the Non-Time Critical Removal Action (SRNS 2009c). The remedy review for the R-Reactor Complex is ~~will be~~ presented with the RAOU in a subsequent phase of the Sixth Five-Year Remedy Review Report for SRS OUs with Groundwater Remedies. The remedy review for the P-Reactor Complex is presented in the P-Area Operable Unit in the Five-Year Remedy Review Report for SRS OUs with Geosynthetic or Solidification/ Stabilization Cover Systems. The remedy review in this report will focus on the CKL Rx.”**

**The following reference will be added to Section XII, Documents Reviewed:**

**WSRC, 2008. *Early Action Record of Decision Remedial Alternative Selection for the P Area Operable Unit (U)*, WSRC-RP-2008-4037, Revision 1.1, Savannah River Nuclear Solutions, LLC, Savannah River Site, Aiken, SC**

**Responsible Party: Sadika O’Quinn, (803) 952-6697, sadika.oquinn@srs.gov**

5. Subsequent text describes the DOE decision to proceed with accelerated remediation of several subunits of the R-Area Operable Unit (RAOU) under the American Recovery and

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Reinvestment Act of 2009, and implementation of ISD for the R-reactor complex, but does not mention the P-reactor complex which was remediated prior to the R-reactor complex. **This text should also refer to the P-reactor complex which was remediated prior to the R-reactor complex.**

**Response: Agree.**

**Please see the response to General Comment #4.**

**Responsible Party: Sadika O'Quinn, (803) 952-6697, sadika.oquinn@srs.gov**

6. The last part of this paragraph states “the remedy review for the R-Reactor Complex will be presented with the RAOU in a subsequent phase of the Sixth Five-Year Remedy Review.” This sixth five-year review was completed previously and included a review of operating equipment. **This statement should be revised to list the actual version of the subsequent five-year review and to be more specific about which components of the remedy will be reviewed.**

**Response: Agree.**

**Please see the response to General Comment #4.**

**Responsible Party: Sadika O'Quinn, (803) 952-6697, sadika.oquinn@srs.gov**

## **SPECIFIC COMMENTS**

1. **Section II, Response Action Summary, Page 7:** It is unclear whether the environmental database that is used to track sampling and analysis is available for public access via a web link. The text states, “Technical and administrative protocols have been established to promote the consistent implementation of USEPA guidance at OUs across SRS. An environmental database is used to track sampling, analysis, and results of environmental characterization and monitoring.” However, no discussion is presented regarding public access to the environmental database. Please revise Section II to discuss whether the public has access to the environmental database or whether the access is limited (e.g., only available to the Department of Energy [DOE] and/or their contractors).

**Response: Agree with Clarification.**

**The environmental database that tracks sampling, analysis, and results of environmental characterization and monitoring is an internal database and not available to the public directly. However, the information retained in the database is published in the regulatory**

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documents that are submitted to USEPA and SCDHEC and available to the public in the SRS Administrative Record File.

The text in Section II, Response Action Summary, Initial Response, 3<sup>rd</sup> paragraph will be revised as follows: “An environmental database is used to track sampling, analysis, and results of environmental characterization and monitoring. The environmental database is not available to the public directly. However, the information retained in the database is provided in regulatory documents that are submitted to USEPA and SCDHEC for review and approval and available to the public in the SRS Administrative Record File.”

**Responsible Party: Shelia McFalls, shelia.mcfalls@srs.gov, 803-952-6819**

- 2. Appendix C, C-Area Operable Unit, Section VI, Five-Year Review Process, Page C-9:** The text states that interviews with the Savannah River Nuclear Solutions, LLC (SRNS) Environmental Compliance and Area Completion Project (EC & ACP) Post-Closure Leads were conducted on August 23, 2023. However, Attachment C-1, Five-Year Review Site Inspection Checklist – C-Area Operable Unit, II, Interviews, shows that these interviews were conducted on August 3, 2023. **Please verify the date that these interviews occurred and correct the text accordingly.**

**Response: Agree.**

**The date in Appendix C, Section VI, Five-Year Review Process, will be changed to August 3, 2023.**

**Responsible Party: Sadika O’Quinn, (803) 952-6697, sadika.oquinn@srs.gov**

- 3. Appendix E, Early Construction and Operational Disposal Site [ECODS], L-1, N-2, P-2, R-1A, R-1B, and R-1C, Section IV, Remedial Actions, Page E-5:** The text states that the actual operation and maintenance (O&M) cost for the four ECOD areas from fiscal year (FY) 2019 until the end of FY2023 was \$34,124. However, Table E-2, Actual versus Estimated O&M Costs, shows that actual O&M costs from FY2019 until the end of FY2023 was \$39,582. **Please verify the correct cost and revise the Seventh FYR accordingly.**

**Response: Agree.**

**The text will be changed to show the actual O&M costs for ECODS L-1, N-2, P-2, and R-1A, R-1B, and R-1C OU as \$39,582.**

**Responsible Party: Sadika O’Quinn, (803) 952-6697, sadika.oquinn@srs.gov**

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- 4. Appendix I, K-Area Bingham Pump Outage Pit, Section IV, Remedial Actions, Page I-5:** The text states that the estimated O&M cost for the K-Area Bingham Pump Outage Pit from fiscal year FY2019 until the end of FY2023 was \$5,636. However, Table I-3, Actual versus Estimated O&M Costs, shows that estimated O&M costs from FY2019 until the end of FY2023 was \$16,036. **Please verify the correct cost and revise the Seventh FYR accordingly.**

**Response: Agree.**

The text will be changed to show the estimated O&M costs for K-Area Bingham Pump Outage Pits OU is \$16,036.

**Responsible Party: Sadika O'Quinn, (803) 952-6697, sadika.oquinn@srs.gov**

- 5. Appendix K, Lower Three Runs Integrator Operable Unit (IOU), Section VI, Five Year Review Process, Summary of Inspections and Interviews, Page K-16:** The text states that the Lower Three Runs IOU Tail Portion was inspected by SRNS EC&ACP on July 6, 2023; however, Attachment K-1, Five-Year Review Site Inspection Checklist – Lower Three Runs Integrator Operable Unit, shows that the SRNS EC&ACP inspection of the Lower Three Runs IOU occurred on July 13, 2023. **Please verify the correct date that the inspection occurred and revise the Seventh FYR accordingly.**

**Response: Agree.**

The text will be changed to state that the Lower Three Runs IOU was inspected on July 13, 2023.

**Responsible Party: Sadika O'Quinn, (803) 952-6697, sadika.oquinn@srs.gov**

- 6. Figure K-3, Lower Three Runs Integrator Operable Unit Ponds and Canal System, Page K-25:** Pond 2 is included in a list of areas that are part of the Upper Subunit in Appendix K, Lower Three Runs IOU, Section III, Background; however, it is not shown in Figure K-3. **Please revise Figure K-3 to show the location of Pond 2.**

**Response: Agree.**

Figure K-3 will be updated to include the location of Pond 2. The updated figure is included at the end of these responses.

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- 7. Appendix K, Lower Three Runs IOU, Section IV, Remedial Actions, System Operation and Maintenance, Page K-36:** The text states that the estimated O&M cost for the Lower Three Runs IOU from fiscal year FY2019 until the end of FY2023 was \$614,600. However, Table K-3, O&M Costs - Actual versus Estimated, shows that estimated O&M costs from FY2019 until the end of FY2023 was \$327,500. Please verify the correct cost and revise the Seventh FYR accordingly.

**Response: Agree.**

The text will be changed to show the estimated O&M costs for Lower Three Runs IOU is \$327,500.

**Responsible Party: Sadika O'Quinn, (803) 952-6697, sadika.oquinn@srs.gov**

- 8. Appendix L, R-Area Bingham Pump Outage Pits (643-8G, 643-9G, and 643-10G) and R-Area Unknown Pits Operable Unit, Attachment L-1, Five-Year Review Site Inspection Checklist – R-Area Bingham Pump Outage Pits (643-8G, 643-9G, and 643-10G) (RBPOPs) and R-Area Unknown Pits #1, #2, and #3 (RUNKs) OU, Page L-19:** Appendix L, Section VI, Five-Year Review Process, Summary of Inspections and Interviews, states that interviews were conducted with Phil Carter, SRNS EC&ACP, and Brian Hanshew, SRNS EC&ACP Post-Closure Lead, on August 3, 2023; however, Attachment L-1 shows that interviews were conducted with George Joyner, SRNS EC&ACP, and Richard Feagin, SRNS EC&ACP, on October 26, 2018. Please verify that the most recent information/year for Attachment L-1 is used and revise the Seventh FYR accordingly.

**Response: Agree.**

Attachment L-1 will be updated to indicate that interviews were conducted with Phil Carter, SRNS EC&ACP, and Brian Hanshew, SRNS EC&ACP Post-Closure Lead, on August 3, 2023.

**Responsible Party: Sadika O'Quinn, (803) 952-6697, sadika.oquinn@srs.gov**

## **MINOR SPECIFIC COMMENTS**

- 1. List of Acronyms and Abbreviations, Page iii:** There are several acronyms and abbreviations that are not used in the text; specifically, 2,4-Dinitrotoluene (DNT), Hazard Index (HI), Polybrominated diphenyl ethers (PBDE), Polyfluoroalkyl substances [sic] (PFOS), Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX), and 2,4,6-Trinitrotoluene. Conversely, there are three abbreviations used in the text that are not listed in the List of Acronyms and

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Abbreviations; specifically, Monitored Natural Recovery (MNR), National Environmental Protection Act (NEPA), and River Water System (RWS). **Please add the acronyms and abbreviations that are used in the text and remove the acronyms and abbreviations that are not used in the text from the List of Acronyms and Abbreviations.**

**Response: Agree.**

**The acronym list will be updated as suggested.**

**Responsible Party: Sadika O'Quinn, (803) 952-6697, sadika.oquinn@srs.gov**

- 2. Attachment C-1, Five-Year Review Site Inspection Checklist – C-Area Operable Unit, Page C-30: Section D. General, 1, Vandalism/Trespassing is not completed. Please complete Section D. General, 1, Vandalism/Trespassing.**

**Response: Agree.**

**Attachment C-1 will be updated for Section D, General, 1, Vandalism/Trespassing, to check the “No vandalism is evident” box.**

**Responsible Party: Sadika O'Quinn, (803) 952-6697, sadika.oquinn@srs.gov**

- 3. Table D-2, PAOU Refined COCs and Cleanup Levels (used for CKL Rx evaluations) (continued/end), Page D-26: The abbreviation “CMCOC” [Contaminant Migration Constituent of Concern] is used for the first time in the footnote for Table D-2 but is not defined. Please define the abbreviation “CMCOC” upon first use.**

**Response: Agree.**

**The footnote will be updated to define CMCOC as suggested.**

**Responsible Party: Sadika O'Quinn, (803) 952-6697, sadika.oquinn@srs.gov**

- 4. Appendix G, Gunsite 012 (NBN) Operable Unit, Section VII, Technical Assessment, Page G-9: The text lists the LUCs that are in place; however, the sentence provides insufficient detail on the media being protected by the use restrictions. The sentence currently states, “...use restriction to prevent unauthorized contact, removal or excavation of, and restrictions to prevent disturbance of the Gunsite 012 OU.” Please revise the text to clarify what type of media is being prevented from removal or excavation.**

**Response: Agree.**

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**The third paragraph in Section VII. Technical Assessment, Is the Remedy Functioning as Intended by the Decision Document, will be modified as follows:**

**“The LUCs that are in place include physical access controls to prevent unauthorized entry to SRS (fences, guards, security patrols, etc.), use restriction to prevent unauthorized contact, removal or excavation of soils, and restrictions to prevent disturbance of the Gunsite 012 OU.”**

**Responsible Party: Sadika O’Quinn, (803) 952-6697, sadika.oquinn@srs.gov**

- 5. Appendix J, L-Area Bingham Pum Outage Pits (643-2G and 643-3G) (LBPOP) and P-Area Bingham Pump Outage Pits (643-4G) (PBPOP), Section VI, Five-Year Review Process, Page J-6:** The text states, “During the meeting, the participants will view drone footage of CAOU and will be provided an opportunity to walk down the OU.” However, this sentence should be revised to state that drone footage of the L- and P-Area Bingham Pump Outage Pits will be viewed. **Please revise the sentence accordingly.**

**Response: Agree with Clarification.**

**Since the walkdown meeting has already taken place, the sentence will be updated in the Revision 1 document to indicate that the drone footage was viewed as follows: “A regulatory field inspection meeting with USDOE, U.S. Environmental Protection Agency (USEPA), and South Carolina Department of Health and Environmental Control (SCDHEC) was held on February 28, 2024. SRNS personnel were ~~will~~ also ~~be~~ present in the meeting. During the meeting, the participants will-viewed drone footage of LBPOP and were ~~will be~~ provided an opportunity to walk down the OU. The USEPA and SCDHEC elected not to perform a walk down because the drone video provided them better views of the OU.”**

**Appendices C through I and K through N, Section VI, Five-Year Review Process, Summary of Inspections and Interviews, will also be revised to include text regarding the February 28, 2024, viewing of the drone footage.**

**Responsible Party: Sadika O’Quinn, (803) 952-6697, sadika.oquinn@srs.gov**

- 6. Appendix K, Lower Three Runs Integrator Operable Unit (NBN), Section VII, Technical Assessment, Page K-17:** The abbreviation “RG” [Remedial Goal] is used for the first time but is not defined. **Please define the abbreviation “RG” upon first use.**

**Response: Agree with clarification.**

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**Cleanup levels were formerly referred to as remedial goals. For consistency, the text will be revised to use the term “cleanup levels” in place of RGs as follows:**

**“The above remedial activities are meeting the RGscleanup levels established for PAR Pond and...”**

**Responsible Party: Sadika O’Quinn, (803) 952-6697, sadika.oquinn@srs.gov**

- 7. Figure K-11, PAR Pond Water Surface Profiles (2023), Page K-33:** Figure K-11 shows PAR Pond Water Surface Profiles for years 2021 and 2022; however, the title states that 2023 water surface profiles are shown. **Please correct the title of Figure K-11 to state that 2021 and 2022 water surface profiles are shown.**

**Response: Agree.**

**The title will be updated to state that the 2021 and 2022 water surface profiles are shown as follows:**

**“Figure K-11. PAR Pond Water Surface Profiles (~~2023~~2021-2022)”**

**Responsible Party: Sadika O’Quinn, (803) 952-6697, sadika.oquinn@srs.gov**

**EPA HQ COMMENTS BELOW:**

1	Community Outreach	Community Notification and Involvement states that the public will be informed through a public notice in local newspapers and through the mailing list. Newspaper notices are not very effective in encouraging community involvement and Administrative Records are often confusing for the average person to navigate. <b>Have other efforts to inform and involve the public been considered such as social media posts, website announcements, mass postcard mailers, fact sheet etc?</b>  <b>Response: Clarification.</b>	Community involvement and Interviews
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		<p><b>The SRS Environmental Bulletin is distributed via email and mail and is posted on the SRS external web page. The email distribution includes DOE and SRS contractor personnel, SRS Citizens Advisory Board, members of the public surrounding SRS, community leaders and organizations, etc.</b></p> <p><b>At the conclusion of the remedy review process, a Fact Sheet, which summarizes the results of the review, and the USDOE, USEPA, and SCDHEC signed remedy review report, are made available to the public. They are posted on the SRS external web page and are available in the Administrative Record File.</b></p> <p><b>Section IV, Community Notification and Involvement will be revised as shown:</b></p> <p><b><u>“Additionally, the availability of the report will be announced in <i>The Savannah River Site Environmental Bulletin</i>, which will be sent (postal service and email) to the SRS mailing list. The SRS mailing list consists of DOE and SRS contractor personnel, SRS Citizens Advisory Board, members of the public surrounding SRS, community leaders and organizations, etc. The report and Fact Sheet will be posted on the SRS external web page and will be made available to the public at the four information repositories listed in the <i>Environmental Bulletin</i>.</u></b></p> <p><b>Responsible Party: Shelia McFalls, 803-952-6819, shelia.mcfalls@srs.gov</b></p>	
2	3	<p>“The trigger date for submittal of the next five-year remedy review report to the regulatory agencies is based on the USEPA signature date of the previous report. Therefore, the final signature for the last grouping of the Seventh</p>	Triggers and Inspections

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		<p>Five-Year Remedy Review Report is due no later than January 21, 2029.” -The date the report is due is based on the statutory date, December 21. Not the date of a previous FYR signature.</p> <p><b>Response: Clarification.</b></p> <p>Through the FFA process, DOE, EPA, and SCDHEC review and approve implementation schedules for the five-year remedy review reports for the OU groupings submitted annually on a five-year cycle. SRS OUs are grouped into five separate five-year remedy review reports by the following remedy types: (1) Native Soil Covers and/or LUCs, (2) Groundwater, (3) Engineered Cover Systems, (4) Geosynthetic (Geo) or Stabilization / Solidification (S/S) Cover Systems, and (5) Operating Equipment. The remedy review cycle is not complete until all groupings are complete and USEPA’s signature is received on the last report (i.e., Operating Equipment).</p> <p>The USEPA signed the Sixth Five-Year Remedy Review Report for SRS OUs with Engineered Cover Systems on December 2, 2021. The USEPA signed the Sixth Five-Year Remedy Review Report for SRS OUs with Geo or S/S Cover Systems on December 13, 2022. The Sixth Five-Year Remedy Review Report for SRS OUs with Operating Equipment on December 6, 2023.</p> <p>The USEPA’s <i>Comprehensive Five-Year Review Guidance</i> states in Section 1.2.3 that “As a matter of policy, you should complete subsequent statutory or policy five-year reviews no later than five years following the signature of the previous Five-Year Review report.”.</p>	
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		<p>Since the remedy reviews at SRS are conducted by groupings and the review cycle is not complete until all groupings are complete, and USEPA's signature was obtained on various dates in December during the sixth remedy reviews, SRS proposes to revise the trigger date from January 21 to December 31. This proposed date will meet the requirement to complete the five-year remedy reviews for the Seventh Five Year Remedy Report within the five-year review window and allow sufficient time for USEPA to sign the approved remedy review reports.</p> <p>This change is proposed for Section I, Introduction, Section VIII, Next Review, Table 1, and Section I, Five-Year Remedy Review Phases.</p> <p><b>Responsible Party: Shelia McFalls, shelia.mcfalls@srs.gov, 803-952-6819</b></p>	
3	VII	<p>The next FYR review is due on the statutory date of December 21, not the date the last FYR was signed.</p> <p><b>Response: Clarification.</b></p> <p>Please see response to EPA-HQ Comment #2.</p> <p><b>Responsible Party: Shelia McFalls, , 803-952-6819, shelia.mcfalls@srs.gov</b></p>	Next Review
4	Table 1	<p>States the triggering action date is January 21, 2024, but SEMS states the statutory date is December 21. <b>Please confirm the correct date.</b></p> <p><b>Response: Clarification.</b></p> <p>Please see response to EPA-HQ Comment #2.</p>	Triggers and Inspections

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		<b>Responsible Party: Shelia McFalls, , 803-952-6819, shelia.mcfalls@srs.gov</b>	
5	4	<p>“USDOE functions as the lead agency for remedial activities at SRS, with concurrence by the USEPA Region 4 and the SCDHEC.” -The USEPA jointly selects the remedy. <b>Please update sentence.</b></p> <p><b>Response: Clarification</b></p> <p><b>The referenced sentence from Section I, Site Chronology, is consistent with the USDOE, USEPA, and SCDHEC agreed upon language in the <i>Environmental Compliance and Area Completion Projects Regulatory Document Handbook</i> (SRNS-RP-2022-00330, Revision 0, June 2023) for Record of Decision documents and has been consistently approved in remedial decision documents. This language was carried forth into the remedy review reports. No change to the document is proposed.</b></p> <p><b>Responsible Party: Shelia McFalls, , 803-952-6819, shelia.mcfalls@srs.gov</b></p>	Other
6	Interviews	<p>It looks like only two staff were interviewed. I also did not see the interview questions/responses. For the next 5YR, consider more a diverse group of interviewees, including others that work at the site and the public.</p> <p><b>Response: Clarification.</b></p> <p><b>The interviewees discussed in the OU-specific appendices are Operations and Maintenance Staff who are responsible for ensuring inspections and maintenance activities are performed at the units. USDOE also inspects the OUs prior to submittal of the Revision 0 document. The interviews and discussions</b></p>	Community involvement and Interviews

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		<p><b>center around the general condition of and any maintenance activities conducted at the OUs.</b></p> <p><b>Initially, the public has an opportunity to comment on the proposed OU-specific remedies during the Statement of Basis / Proposed Plan (or Proposed Plan) public comment period. Once the remedy has been selected and the Record of Decision signed by the USDOE, USEPA, and SCDHEC, the public is notified of its availability.</b></p> <p><b>At the start of the process, SRS provides notification that the remedy reviews are being conducted. Once USDOE, USEPA, and SCDHEC approve and sign the remedy review report, a second notification is published that the report is available. The second notification includes the publication of a Fact Sheet summarizing the remedy review process.</b></p> <p><b>No change to the document is proposed.</b></p> <p><b>Responsible Party: Shelia McFalls, , 803-952-6819, shelia.mcfalls@srs.gov</b></p>	
7	Figure 1	<p><b>Consider updating Figure 1, so the public/others can clearly delineate where the LUCs boundaries are located. A legend would be helpful as well as including the surrounding area to understand where the LUCs are located.</b></p> <p><b>Response: Clarification.</b></p> <p><b>The purpose of the map is to depict the locations of the operable units to be discussed. At the scale that the map is drawn in, many of the LUC boundaries would not be displayed due to their small size compared to the entire SRS. The LUC Boundaries for each OU is portrayed in a map in the respective</b></p>	LUC

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		<p><b>appendices. No change to the document is proposed.</b></p> <p><b>Responsible Party: Sadika O’Quinn, , 803-952-6697, sadika.oquinn@srs.gov</b></p>	
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**EPA REG 4 ATTORNEY COMMENTS:**

1. General Comment on LUC Objectives.
  - a. LUC Objectives for all OUs are listed in Table 3 beginning on p. 27 of 40. However only some of the OU-specific appendices restate these objectives in section IV (Remedial Actions) of the appendix. See App. C, D, and N. For consistency and clarity, **recommend adding a bulleted list of LUC objectives in the same section for App. E, F, G, H, I, J, K, L, and M.**

**Response: Agree.**

**LUC Objectives will be added to Section IV, Remedial Actions for Appendices E, F, G, H, I, J, K, L, and M as follows:**

**Appendix E:**

**“The following LUC objectives are necessary to ensure protectiveness of the remedy:**

- **Prevent contact, removal, or excavation of subsurface soils.**
- **Prohibit the development and use of property for residential housing, elementary and secondary schools, childcare facilities and playgrounds.”**

**Appendix F:**

**“The following LUC objective is necessary to ensure protectiveness of the remedy:**

- **Restrict the land to future industrial use.”**

**Appendix G:**

**“The following LUC objectives have been selected for this OU:**

- **Prevent unrestricted use of the Building Pad Subunit and the Parking Area Subunit.**
- **Prohibit the development and use of property for residential housing, elementary and secondary schools, childcare facilities and playgrounds.”**

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**Appendix H:**

**“The following LUC objectives are necessary to ensure protectiveness of the remedy:**

- **Maintain the use of the HEWB for industrial activities only to prevent exposure to the future industrial worker.**
- **Prevent unauthorized access to the HEWB as long as the waste unit remains a potential threat to human health and the environment in order to protect the industrial worker.**
- **Provide public notices for disclosing former waste management and disposal activities and RAs taken on the site in order to protect the future residents, trespassers, and industrial workers.**
- **Prevent disturbances of the soil in the HEWB.”**

**Appendix I:**

**“The following LUC objectives are necessary to ensure protectiveness of the remedy:**

- **Prevent contact, removal or excavation of buried waste in the area.**
- **Preclude residential use of the area.”**

**Appendix J:**

**“The following LUC objectives are necessary to ensure protectiveness of the remedy:**

- **Prevent contact, removal or excavation of buried waste in the area.**
- **Preclude residential use of the area.”**

**Appendix K:**

**“The following LUC objectives are necessary to ensure protectiveness of the remedy:**

- **Prevent contact, removal, or excavation or sediment/soil within the LTR IOU.**
- **Prohibit the development and use of property for residential use within the LTR IOU.**
- **Prevent fishing within the LTR IOU.**
- **Prevent exposure of the adolescent trespasser to cesium-137 contaminated sediment/soil in the LTR IOU Middle and Lower Subunits at levels that would exceed a risk of 1.0E-04.”**

**Appendix L:**

**“The following LUC objectives are necessary to ensure protectiveness of the remedy:**

- **Maintain the use of the site for industrial activities only, and**

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- **Prevent unauthorized access, contact, removal and excavation of buried RCOCs exceeding cleanup levels at the closed CERCLA unit as long as the waste unit remains a threat to human health or the environment.**

**Appendix M:**

**“The following LUC objective is necessary to ensure protectiveness of the remedy:**

- **Preclude residential use of the area.**

**Responsible Party: Sadika O’Quinn, (803) 952-6697, sadika.oquinn@srs.gov**

- a. The Technical Assessment section of each Appendix includes the following generic statement: “The LUCs that are in place include physical access controls to prevent unauthorized entry to SRS (fences, guards, security patrols, etc.), use restrictions to prevent unauthorized contact, removal or excavation of subsurface soils, and restrictions to prevent disturbance of [the respective OU]. Warning signs are in good condition, and no activities were observed that would have violated the LUCs. All LUC objectives are being met.” This does not address how each OU’s individual/specific LUC objectives are being met. For example, a LUC objective in App. C (C-Area OU) is to “Prohibit the development and use of property for residential house, elementary and secondary schools, childcare facilities, and playgrounds.” **To support the statement that “All LUC Objectives are being met,” recommend revising the Technical Assessment section of each OU-specific appendix to address the relation between LUCs and specific objectives for each OU.**

**Response: Clarification.**

**The level of detail in Section VII, Technical Assessment, for each OU evaluated is consistent with previous SRS Five-Year Remedy Reviews. The LUC objectives will be presented in Section IV in response to General Comment 1a. Although not applicable for this five year review, a discussion will be included in Section VII in future reports for any OU where a LUC objective is not being met by the selected remedy. No change to the document is proposed.**

**Responsible Party: Sadika O’Quinn, (803) 952-6697, sadika.oquinn@srs.gov**

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- b. App. N. Add the following LUC objective from Table 3 (p. 31 of 40 for this specific OU) to the bulleted list on p. N-6 of N-28: “Maintain the integrity of any current of future remedial system or monitoring system.”

**Response: Agree.**

The LUC objective from Table 3, “Maintain the integrity of any current or future remedial system or monitoring system”, will be added to the list of LUC objectives in Appendix N, Section IV.

**Responsible Party: Sadika O’Quinn, (803) 952-6697, sadika.oquinn@srs.gov**

2. Table 4, p. 33 of 40.

- a. Comments for C-Area Operable Unit state that actual costs are higher than estimated due to “maintenance costs being underestimated.” Recommend providing additional information to explain why costs were underestimated, consistent with other entries in the table. For example, several other entries describe additional maintenance activities that were necessary. **Please also provide this additional explanation at the end of the first paragraph on p. C-9 of C-30.**

**Response: Agree**

The C-Area Operable Unit costs were estimated using a standard unit cost for inspections/maintenance which is generally a few acres and did not account for CAOU’s large footprint (64.2 acres) or the three subunits that comprise the CAOU.

Table 4 will be modified in the Comments pertaining to CAOU as follows: “Actual costs are higher than expected ~~due is attributed~~ to the maintenance costs being underestimated. The standard unit of cost for inspections/maintenance is generally a few acres and did not account for CAOU’s large footprint (64.2 acres) or the three subunits that comprise the CAOU.”

Additionally, the last sentence in Appendix C, Section IV, Remedial Actions, Systems Operations/Operation and Maintenance will be modified as follows: “The difference in estimated verses actual costs is attributed to the inspection/maintenance costs being underestimated. The standard unit of cost for inspections/maintenance is generally a few acres and did not account for CAOU’s large footprint (64.2 acres) or the three subunits that comprise the CAOU.”

**Responsible Party: Eric Schiefer, (803) 952-6273, eric.schiefer@srs.gov**

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- b.** Comments for Heavy Equipment Wash Basin (NBN) and Central Shops Burning/Rubble Pit (631-5G) state that maintenance costs were “slightly underestimated.” **Recommend deleting the word “slightly.” That word is not used in the comments for any other estimate despite other entries having a similar or lower % of estimate. E.g. for R-Area Bingham Pump Outage Pits (643-8G, 643-9G and 643-10G) and R-Area Unknown Pits #1, #2, and #3, the % of estimate is lower (179% vs. 252%) but the comments for that entry do not use the term “slightly.”**

**Response: Agree.**

**The word “slightly” will be deleted as requested.**

**Responsible Party: Eric Schiefer, (803) 952-6273, eric.schiefer@srs.gov**

**3. Table 5, p. 35 of 40.**

- a.** The entry for C-Area Operable Unit reads “NA” for the protectiveness determination and statement from the 6<sup>th</sup> FYR, and includes footnote “a” stating this OU was not included in the 6<sup>th</sup> FYR. However, C-Area Operable Unit was evaluated in the 6<sup>th</sup> FYR. **Recommend correcting this entry by deleting the superscript “a” and correcting the protectiveness determination and statement entries to read, “Protective” and “The remedy at CAOOU is protective of human health and the environment.”**

**Response: Agree.**

**Table 5 will be revised to correct the entry for CAOOU as requested.**

**Responsible Party: Sadika O’Quinn, (803) 952-6697, sadika.oquinn@srs.gov**

- b.** The entry for the Wetland Area at Dunbarton Bay in Support of the Steel Creek IOU includes a protectiveness determination and statement. However this OU was not evaluated in the 6<sup>th</sup> FYR for or SRS OUs with Native Soil Covers and/or LUCs (remedy implementation for this OU was not complete during that review cycle). **Recommend changing both the protectiveness determination and statement entries to read “NA” and add a superscript “a” to the Operable Unit description, to reference footnote “a” to the table.**

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**Response: Agree.**

**Table 5 will be revised to correct the entry for the Wetland Area at Dunbarton Bay in Support of the Steel Creek IOU as requested.**

**Responsible Party: Sadika O’Quinn, (803) 952-6697, sadika.oquinn@srs.gov**

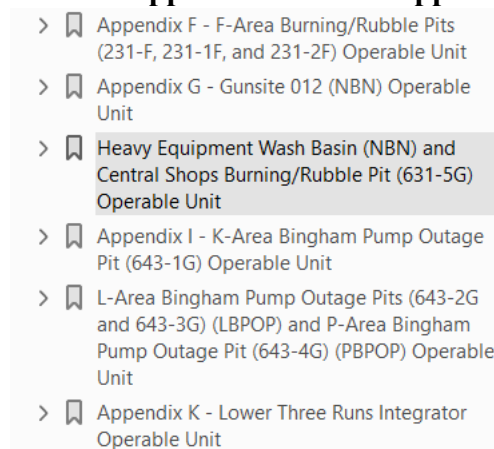
4. Table A2, p. A-9 of A-30. The years listed under “Submittal Date” and “Issuance Year” on p. A-9 do not match the years under those categories on the continuation page for the table, p. A-10. **Recommend changing the years on p. A-10 to match those on p. A-9.**

**Response: Agree.**

**The dates on the second page of Table A-1 (formerly A-2) will be revised to be consistent with those on the first page of Table A-1.**

**Responsible Party: Sadika O’Quinn, (803) 952-6697, sadika.oquinn@srs.gov**

5. The bookmarks for App. H and J only state the title of the Appendix without the corresponding Appendix letter. See the screenshot below. **Recommend updating the bookmark labels to include “Appendix H” and “Appendix J.”**



**Response: Agree.**

**The bookmark will be corrected as suggested.**

**Responsible Party: Sadika O’Quinn, (803) 952-6697, sadika.oquinn@srs.gov**

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6. Page K-8 of K-40. In the “Remedy Selection” section, **recommend adding a bullet before the RAO to distinguish it from the paragraph, and to be consistent with the RAO descriptions in other Appendices.**

**Response: Agree.**

**A bullet will be added to the 2<sup>nd</sup> paragraph in Section IV, Remedy Selection, PAR Pond Reservoir as suggested.**

**Responsible Party: Sadika O’Quinn, (803) 952-6697, sadika.oquinn@srs.gov**

7. Page L-6 of L-22. **Recommend deleting the word “slightly” from the first line, to match language used in Table 4 on p. 33 of 40.**

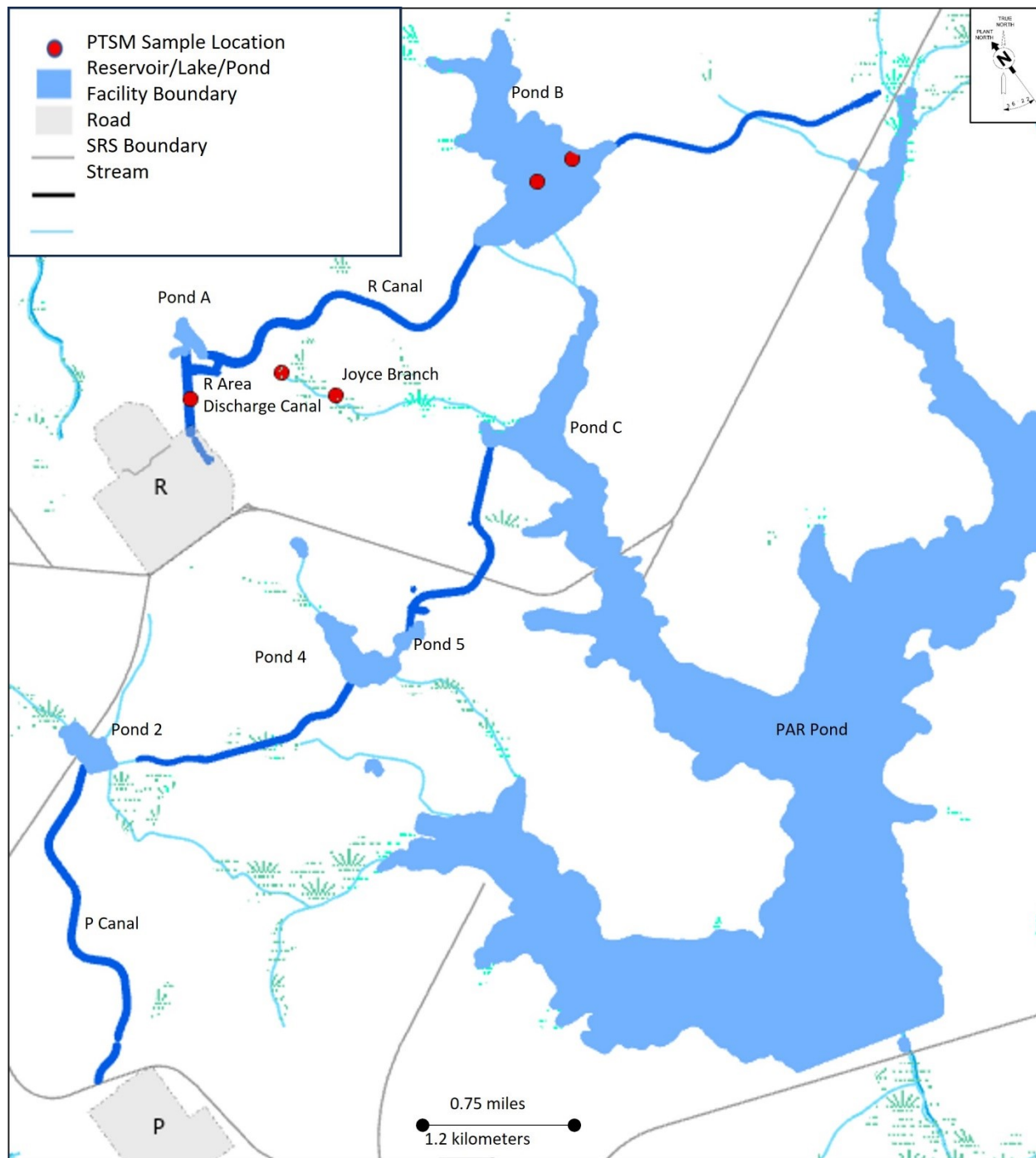
**Response: Agree.**

**The word “slightly” will be removed from the last sentence of Section IV.**

**Responsible Party: Sadika O’Quinn, (803) 952-6697, sadika.oquinn@srs.gov**

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**Figure K-3. Lower Three Runs IOU Ponds and Canal System**

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## General Comments

1. Native Soil Covers are included in the title of this document and are included as part of the remedy for several operable units (OU); however, there is very little mention of these soil covers for each applicable OU. The following appendices contain OUs that are either listed in Table A-3 under compacted native soil covers or mention soil covers as part of the remedy: C (ECODS C-1; listed in Table A-3 only, soil covers are not mentioned anywhere in Appendix C), D (listed in Table A-3; soil covers do not appear to be part of the remedy for the reactor complexes), E, F, H (Central Shop Burning/Rubble Pit (631-5G); not listed in Table A-3), I, J, L and M. These appendices should be revised to include mention of native soil covers where applicable. For the sake of clarity, the following sections of each applicable appendix should be revised for inclusion: Section IV Remedy Implementation (Appendix C), Section IV System Operations/Operations and Maintenance (Appendices C, E, F and H), Checklist Section 1 Remedy Includes, and Checklist Section XI Adequacy of O&M.

### **Response: Clarification.**

**For SRS OUs discussed in this report, native soil covers were already in place prior to the selection of the remedial action and only LUCs were selected as the final remedial action. The “Landfill Cover/Containment” remedy category in Section 1 of the OU-specific inspection checklists applies to engineered landfill covers / containment systems, not native soil covers. Therefore, only Access Controls and Institutional Controls are selected in Section I of the OU-specific inspection checklists consistent with the LUCs as the selected remedy. No changes to OU-specific checklists are proposed.**

**The OU-specific appendices (C, D, E, F, H, I, J, L, and M) were reviewed and revisions were made to include native soil covers in the description where applicable.**

### **Appendix C:**

**Section III, History of Contamination will be revised to include the following information concerning ECODS C-1:**

**“ECODS C-1 (NBN) is located near the CADC and consists of a set of two trenches that were used from January 1953 to sometime after June 1954 to dispose of waste material associated with C Area construction. Construction waste was buried in the trenches and some sections of the trenches may have been used as a burn pit for combustible waste disposal. After waste disposal operations ended, the trenches were backfilled with soil to create a native soil cover.”**

### **Appendix D:**

**For the C-, K-, and L-Reactor Complexes, only the land use controls (LUCs) component of the selected remedy have been implemented. Therefore, Appendix A, Table A-2**

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(formerly Table A-3), will be revised to move these units from the Compacted Native Soil category to the Land Use Controls Only category. No changes to Appendix D are proposed.

**Appendix E:**

For consistency in terminology, Section III, Initial Response, first sentence will be revised to state: "...at least 0.3m (1 ft) of ~~natural soil~~ to create a native soil cover."

**Appendix F:**

Section III, Initial Response, states "After being filled in 1978 (231-F and 231-1F) and in 1983 (231-2F), the pits were covered with compacted clay-rich native soil and vegetation established." No changes to Appendix F are proposed.

**Appendix H:**

Table A-3 will be revised to add Central Shops Burning/Rubble Pit (631-5G) as a unit in the Compacted Native Soil category.

For clarity, Section III, Initial Response, will be revised to state "When the CSBRP-5G reached capacity in 1973, waste disposal ceased, and the area was covered with 0.6 m to 0.9 m (2 ft to 3 ft) of native soil and brought to grade."

**Appendix I:**

For clarity, Section III, Initial Response, will be revised to "After the pit was filled in 1958, the debris was covered by 1.2-m (4-ft) of ~~backfill~~ native soil."

**Appendix J:**

For clarity, Section III, Initial Response, will be revised to "The LBPOP/PBOP were formed by excavating trenches to an average depth of 3.9 m (13 ft), disposing of 2.7 m (9 ft) of debris, and then returning the pits to grade by covering the debris with 1.2 m (4 ft) of ~~backfill~~ native soil."

**Appendix L:**

For clarity, Section III, Physical Characteristics and Section III, Initial Response will be revised as stated below.

Section III, Physical Characteristics: "The pits were formed by excavating trenches to an average depth of 3.9 m (13 ft), disposing of 2.7 m (9 ft) of debris, and then returning the unit to grade by covering the debris with 1.2 m (4 ft) of ~~backfill~~ native soil."

Section III, Initial Response: "After the pits were filled in 1958, the debris was covered by 1.2 m (4 ft) of ~~backfill~~ native soil as shown in Figure L-3 (WSRC 2003)."

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## Appendix M

**Section III, Initial Response, states “After operations ceased, the area was bulldozed, graded, covered with native soil, and planted with grasses.” No changes to Appendix M are proposed.**

**Responsible Party: Shelia McFalls, shelia.mcfalls@srs.gov, 803-952-6819**

### Specific Comments

1. Table 2, SRS OUs with LUCs, page 25. The LUCs acreage listed for the Wetland Area at Dunbarton Bay OU is 25 acres. Table A-3 lists the acreage as 38 acres, and Appendix N page N-7 mentions 39 acres. Please revise for consistency.

**Response: Agree.**

**Table 2 and Table A-2 (formerly Table A-3) will be revised to show that the correct LUC Boundary acreage is 39 acres as referenced in the Addendum to the Rev. 1 LUCIP for the WADB in Support of the Steel Creek IOU (SRNS-RP-2023-00335, Revision 0, June 2023).**

**Responsible Party: Sadika O’Quinn, (803) 952-6697, sadika.oquinn@srs.gov**

2. Table 3, LUC Summary Table, page 28. Groundwater is listed as a media that does not support UU/UE based on current conditions for Gunsite 012. Only soil is mentioned as media associated with this OU in Appendix G, Section III, Background (page G-1), and further discussion in this appendix indicates that groundwater contamination is not a concern for this OU. Please correct this discrepancy.

**Response: Agree.**

**Table 3 will be corrected for Gunsite 012 OU to remove groundwater from the list of media in the second column.**

**Responsible Party: Sadika O’Quinn, (803) 952-6697, sadika.oquinn@srs.gov**

3. Table 3, LUC Summary Table, page 30. Please include buried debris as a media associated with R-Area Bingham Pump Outage Pits (RBPOP) and R-Area Unknown Pits (RUNK) OU to be consistent with language in Appendix L, Section III, Background (first paragraph).

**Response: Clarification.**

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**The media associated with the RBPOP is soil as correctly shown in Table 3. The sentence in Appendix L, Section III, Background (first paragraph) will be corrected as follows: “The media associated with the RBPOPs and RUNKs OU is ~~buried debris and associated~~ contaminated soil.”**

**Responsible Party: Sadika O’Quinn, (803) 952-6697, sadika.oquinn@srs.gov**

4. Table 3, LUC Summary Table, page 31. Please include surface ash as a media associated with Wetland Area at Dunbarton Bay OU to be consistent with language in Appendix N, Section III, Background.

**Response: Agree.**

**Table 3 will be revised to add surface ash as a media associated with the Wetland Area at Dunbarton Bay OU.**

**Responsible Party: Sadika O’Quinn, (803) 952-6697, sadika.oquinn@srs.gov**

5. Table 5, Protectiveness Determination/Statements from the Sixth Five-Year Remedy Review for SRS OUs with Native Soil Covers and/or LUCs, page 35. The Protectiveness Determination for CAOU is listed as “NA”, yet according to the Sixth Five-Year Review Report and Table 8, the remedy at CAOU is protective of human health and the environment. Additionally, this table which references protectiveness statements from the previous five-year review report includes the Wetland Area at Dunbarton Bay OU although this OU was not included in the previous report.

**Response: Agree with Clarification.**

**The first remedy review for the C-Area Operable Unit (CAOU) was conducted as part of the Sixth Five-Year Remedy Report for Savannah River Site Operable Units with Native Soil Covers and/or Land Use Controls (SRNS-RP-2018-00811, Revision 1, June 2019) where “NA” was the appropriate response for the Protectiveness Determination and Protectiveness Statement in Table 5. The “NA” was inadvertently carried over into this report.**

**For the Wetland Area at Dunbarton Bay (WADB) in Support of the Steel Creek IOU, the Protectiveness Determination and Protectiveness Statement for this report were inadvertently listed in Table 5 as if the OU had previously undergone a remedy review.**

**In addition, the superscript “a” will be removed from CAOU and added to WADB.**

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**Table 5 will be revised, as shown below, for CAOU and WADB.**

<b>SEMS No.</b>	<b>Operable Unit</b>	<b>Protectiveness Determination</b>	<b>Protectiveness Statement</b>
<b>79</b>	<b>C-Area Operable Unit (CAOU)<sup>a</sup></b>	<b><del>NA</del> <u>Protective</u></b>	<b><del>NA</del> <u>The remedy at CAOU is protective of human health and the environment.</u></b>
<b>71</b>	<b>Wetland Area at Dunbarton Bay in Support of Steel Creek IOU<sup>a</sup></b>	<b><u>Protective</u> <del>NA</del></b>	<b><del>The remedy at the WADB is protective of human health and the environment.</del> <u>NA</u></b>

**Responsible Party: Shelia McFalls, shelia.mcfalls@srs.gov, 803-952-6819**

6. Table A-3, Summary of Remedial Actions without Operating Equipment at SRS, page A-11. C-, K- and L-Reactor Complexes are each listed under Compacted Native Soil; however, these OUs do not appear to have native soil covers. Also, CSBRP-5G is not listed under Compacted Native Soil, although a soil cover is mentioned in Appendix H (page H-4) (see General Comment #1).

**Response: Agree.**

**Table A-2 (formerly Table A-3) will be revised to move C-, K-, and L-Reactor Complexes from the Compacted Native Soil category to the Land Use Controls Only category and to add Central Shops Burning/Rubble Pit (631-5G) as a unit in the Compacted Native Soil category.**

**Responsible Party: Shelia McFalls, shelia.mcfalls@srs.gov, 803-952-6819**

7. Appendix E, Section IV, System Operations/Operations and Maintenance, page E-5. The actual O&M cost for the ECODS L-1, N-2, P-2 and R-1A, R-1B and R-1C OU is listed as \$34,124; Tables 4 and E-2 list \$39,582. Please correct.

**Response: Agree.**

**The text will be changed to show the actual O&M costs for ECODS L-1, N-2, P-2, and R-1A, R-1B, and R-1C OU as \$39,582.**

**Responsible Party: Sadika O'Quinn, (803) 952-6697, sadika.oquinn@srs.gov**

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8. Appendix I, Section V, Progress Since Last Review, page I-5. The first sentence states that this is the fifth five-year review for the KBPOP OU, and page I-1 states that this is the sixth, which appears to be correct according to Table I-1. Please correct.

**Response: Agree.**

**The text will be revised to show that this remedy review is the sixth review for the K-Area Bingham Pump Outage Pit.**

**Responsible Party: Sadika O'Quinn, (803) 952-6697, sadika.oquinn@srs.gov**

9. Appendix K, Section IV System Operation and Maintenance, page K-14. The estimated direct O&M cost from FY 2019 to FY 2023 is \$614,600; the estimated cost listed in Table 4, page 34 and Table K-3, page K-36 is \$327,500. Please correct.

**Response: Agree.**

**Table 4 will be modified to show that the estimated costs for the Lower Three Runs IOU is \$327,500.**

**Responsible Party: Sadika O'Quinn, (803) 952-6697, sadika.oquinn@srs.gov**

10. Appendix L, Section V Progress Since Last Review, page L-6. This section mentions that this is the fourth five-year remedy review for RBPOP and RUNK OU. The first sentence of Section I, page L-1 correctly refers to this report as the fifth five-year review, yet Table L-1, page L-17 lists only 3 previous five-year reviews. It appears that the previous five-year review from November 5, 2019 was inadvertently omitted from Table L-1 and reflected in the statement on page L-6. Please revise.

**Response: Agree.**

**The text will be revised to show that this remedy review is the fifth review for the RBPOP and RUNK OU. Additionally, the previous five-year review date of November 5, 2019 will be added to Table L-1.**

**Responsible Party: Sadika O'Quinn, (803) 952-6697, sadika.oquinn@srs.gov**