UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
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October 16, 2017

Mr. Brian T. Hennessey
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P.O. Box A
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EPA Comments for the Fifth Five-Year Remedy Review Report for Savannah River Site Operable Units with Geosynthetic or Stabilization/Solidification Cover Systems (U), Aiken, South Carolina (SRNS-RP-2016-00610, Revision 1, August 2017 (Redline Pages)), Savannah River Site, Aiken, South Carolina

Dear Mr. Hennessey,

The U.S. Environmental Protection Agency, Region 4 (EPA), has reviewed the R1 Redline Fifth Five-Year Remedy Review Report for Savannah River Site Operable Units with Geosynthetic or Stabilization/Solidification Cover Systems. EPA accepts the response to comments sent previously, and enclosed are additional comments from our Regional Counsel.

If you have any questions or require additional information, please contact me at (404) 562-8648.

Sincerely,

Jon Richards
Acting FFA Remedial Project Manager
Superfund Division

ec: C.L. Bergren, SRNS-ACP
Susan Fulmer, SCDHEC

GENERAL COMMENT:

1. LUC objectives are listed in the remedial activities sections for each of the following OUs: D-Area Expanded Operable Unit (Appendix E), F-Area Retention Basin (Appendix G), K-Area Reactor Seepage Basin (Appendix J), L-Area Oil and Chemical Basin (Appendix K), and Old F-Area Seepage Basin (Appendix M). However, the FYR appendix for each of these OUs does not discuss whether a LUCIP, or other appropriate post-ROD document, containing the federal facility LUC checklist items (including checklist statement regarding required 120(h) deed notices/restrictions) been prepared for each of the OUs? *Please indicate in the remedy technical assessment section whether a LUCIP governing LUC implementation, maintenance, monitoring and enforcement has been prepared. If not, please indicate when a LUCIP, or other appropriate post-ROD LUC implementation document, will be prepared for each of these OUs.*

SPECIFIC COMMENTS

2. **Table A-3 (page A-15, Rev.1 redline).** As indicated in footnote "a", shaded text in the table identifies SRS OUs evaluated in this report. H-Area Tank Farm (Waste Tank 16) IROD and H-Area Tank Farm (Waste Tank 12) ESD to the IROD *should not be highlighted in the table* as these were not evaluated in this FYR report (as indicated in footnote "d" in Table A-2).

3. **Appendix D, C-Area Reactor Seepage Basin, Section IV (Remedy Selection) (page D-6, Rev.1 redline), Fifth bullet** states that LUCs will include "evaluation of the need for deed notification/restrictions if the property is ever transferred to non-federal ownership." The applicable post-ROD document, e.g., LUCIP or post construction report, should contain an evaluation of the need for use restrictions and specified necessary restrictions, i.e., restrictions on uses other than industrial, prohibition on digging in solidification/capped areas, etc. In addition, the LUCIP for C-Area Reactor Seepage Basin should contain a statement regarding the statutorily required deed notice statement as indicated in the LUC Checklist for federal facilities: "Each transfer of fee title from the United States will include a CERCLA 120(h)(3) covenant which will have a description of the residual contamination on the property and the environmental use restrictions, expressly prohibiting activities inconsistent with the performance measure goals and objectives." IF LUC objectives have not been fully evaluated and all LUC checklist items (including checklist statement regarding required 120(h) deed notices/restrictions) have not been included in the appropriate post-ROD document, e.g., LUCIP, *please include recommendation in FYR that this evaluation occur to ensure remedy is CERCLA compliant and is fully protective in the long-term.*

4. **Appendix D, C-Area Reactor Seepage Basin, Section VI (Data Review) (page D-7, Rev.1 redline). First sentence in Data Review** section states that the "Post

Construction Report (PCR) (WSRC 2003) documents that contaminated soils associated with the CRSB OU were excavated and placed within the basin. The consolidation minimized the lateral extent of contaminated soils." However, under Section IV (Remedy Implementation) (page D-5 of Rev. 1 redline), the first bullet states that consolidation of contaminated soils outside the basin "was *not* performed because the contaminated soil outside the basins did not exceed PTSM criteria, leachability RGs or surficial exposure RGs." *Please revise the FYR to rectify these two contradictory statements.*

5. **Appendix E, D-Area Expanded Operable Unit, Section IV (Remedial Actions, 488-D Ash Basin)(page E-7, Rev.0),** states that the remedy to address "low-level threat source material with elevated metals and Aroclor 1254" included "consolidating excavated soils and waste material from DRP to the 488-DAB." However, the subsequent "Remedy Implementation" (page E-8 in Rev.0) section states that "remedial activities for the DRP" included "removing 56.6 m3 of PCB-contaminated soil at a concentration greater than 1 mg/kg" to an off-site disposal facility. *Please clarify whether ROD required all PCB-contaminated soils be disposed off-site or whether any PCB-contaminated soils from DRP were consolidated in 488-D, for example, if characterized at levels below 1 mg/kg.*

6. **Appendix F, E-Area LLWF, Section III (Background)(page F-1 of Rev.0)**. As currently written in paragraph one, the first sentence and last sentence appear contradictory. EPA *recommends clarifying by reordering and revising paragraph one to read as follows (added text in underline):* "The E-Area LLWF was not part of the 1993 FFA because the U.S. Department of Energy (USDOE) operates and maintains the facility under the authority of the Atomic Energy Act (AEA) and in accordance with USDOE Order 435.1, Radioactive Waste Management. However, the EPA, DOE and SCDHEC reached agreement in 2007 to include the E-Area LLWF ~~listed~~ as a Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) regulated unit listed in Appendix C of the Federal Facility Agreement (FFA) for Savannah River Site (SRS) (FFA 1993). The E-Area LLWF is not identified as a Solid Waste Management Unit under the Resource Conservation and Recovery Act (RCRA). Therefore, an SRS RCRA permit modification was not required."

7. **Appendix F, E-Area LLWF, Section X (Protectiveness Statement) (page F-14, Rev.0).** ORC recommends revising the protectiveness statement from "protective" to "short-term protective" due to issues and recommendations raised regarding engineering performance issues, e.g., stormwater runoff covers not expected to meet anticipated life and observed areas of subsidence, and because, as stated in this FYR, that "unit specific land use controls have been deferred." *A short-term protective statement should be developed in accordance with EPA's September 13, 2012 guidance* titled *"Clarifying the Use of Protectiveness Determinations for Comprehensive Environmental Response, Compensation, and Liability Act Five-Year Reviews,"* OSWER 9200.2-111. See excerpt from guidance below.

Short-Term Protective

A protectiveness determination of "short-term protective" may be appropriate for remedies where:

- Construction activities are complete and remedy is operating; or
- Construction activities are complete, remedial action objectives have been achieved, and operation and maintenance activities are occurring.

A protective determination of "short-term protective" is typically used when the answers to Questions A, B and C provide sufficient data and documentation to conclude that the human and ecological exposures are currently under control and no unacceptable risks are occurring. However, the data and/or documentation review also raise issues that could impact future protectiveness or remedy performance but not current protectiveness. Examples of scenarios that may result in a short-term protectiveness determination may include:

- No exposure is occurring but institutional controls have not been fully implemented;
- Future land use assumptions may have changed;
- Engineering performance issues related to the operation of the remedy; or
- Monitoring data indicates that remedy will not achieve goals in the anticipated time frame

Recommended Language for a Protectiveness Determination of "Short-Term Protective"

"The remedy at OU X currently protects human health and the environment because (describe the elements of the remedy that protect human health and the environment in the short-term). However, in order for the remedy to be protective in the long-term, the following actions need to be taken (describe the actions needed) to ensure protectiveness.

8. **Appendix G, F-Area Retention Basin, Section VII (Technical Assessment) (page G-9, Rev.1 redline).** *Please clarify statement made at end of first paragraph* that: "No results were returned for well FRB 3 and well FRB 4." Were the wells not sampled? Sampled but resulted in a non-detect?

9. **Appendix H, F-Area Tank Farm (Rev.0). Page H-3** states that "land use controls (LUCs) are not part of the interim remedial action. . . [and] the Land Use Control Implementation Plan (LUCIP) will be deferred until final closure of the entire FTF OU." Thus, EPA *recommends revising the protectiveness statement in Section IX (page H-12, Rev.0) from "protective" to "short-term protective" in accordance with OSWER Directive 9200.2-111 above (no exposure occurring but institutional controls have not been fully implemented).*

10. **Appendix J, K-Area Reactor Seepage Basin, Rev.1**. *Correct page heading to read "Basin" not "Bain."*

11. **Appendix J, K-Area Reactor Seepage Basin, Section IV (Remedy Selection) (page J-4, Rev.0).** Document states that the selected remedy of in situ stabilization with a low permeability "*membrane* cover system" was selected. However, page J-5 (Remedy Implementation) outlines components of a "soil cover system" and does not appear to include a membrane. *Please clarify and note whether selected remedy as contained in the plug-in ROD was modified to no longer require a membrane cover system and if so in what document (AROD, ESD, etc.) was the modification memorialized.*