UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

March 25, 2019

Mr. Brian T. Hennessey
SRS Remedial Project Manager
Infrastructure and Area Completion Division
U.S. Department of Energy
Savannah River Operations Office
P.O. Box A
Aiken, South Carolina 29802

RE: EPA Comments on the Draft Record of Decision, Remedial Alternative Selection for the G-Area Oil Seepage Basin (GOSB) (761-13G) Operable Unit (U), SRNS-RP-2018-01050, Revision 0, January 2019, SEMS Number: 93, Savannah River Site, Aiken, South Carolina

Dear Mr. Hennessey,

The U.S. Environmental Protection Agency, Region 4 (EPA), has reviewed the Draft Record of Decision, Remedial Alternative Selection for the G-Area Oil Seepage Basin (GOSB) (761-13G) Operable Unit (U), SRNS-RP-2018-01050, Revision 0, January 2019, SEMS Number: 93. EPA's comments are attached.

If you have any questions or require additional information, please contact me at (404) 562-8513.

Sincerely,

Tufts, Jennifer

Digitally signed by Tufts, Jennifer
Date: 2019.03.25 16:22:35 -04'00'

Jennifer Tufts
Remedial Project Manager
Superfund Division

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

EPA Comments on the Draft Record of Decision, Remedial Alternative Selection for the G-Area Oil Seepage Basin (GOSB) (761-13G) Operable Unit (U), SRNS-RP-2018-01050, Revision 0, January 2019, SEMS Number: 93, Savannah River Site, Aiken, South Carolina

COMMENTS

1. **Section III. Highlights of Community Participation, Page 6, last paragraph**. Please clarify that no public comments were received.

2. **Section V. Operable Unit Characteristics, GOSB Berm Subunit, Page 10.** The text states that: "In 2009, 39 soil samples were collected from 13 locations along the basin perimeter at 15-m (50-ft) *depth* intervals." Please modify to "...along the basin perimeter, which were spaced 15-m(50ft) apart."

3. **Section V. Operable Unit Characteristics, GOSB Berm Subunit, Pages 14-15, GOSB Berm Subunit, Pipeline Subunit, Groundwater**. Please include a summary of sampling results with the contaminants detected and range of concentrations. Also, include reference to the document containing the sampling results.

4. **Section X. Comparative Analysis of Alternatives, Compliance with ARARs, Page 32.** Please add text noting whether the removed sediments or debris are expected to be managed as RCRA solid or hazardous wastes, and include the type of characterization data that was or will be obtained to determine proper off-site disposal at the Subtitle D or Subtitle C facility.

5. **Section IX. Description of Alternatives, Alternative A-3, Place 0.6-m (2ft) Clean-Fill Layer and Manage Surface Water, Alternative A-4, Backfill Basin and Manage Surface Water, Alternative A-5, Excavate and manage Surface Water, Pages 28-29**. For alternatives involving the spray irrigation of surface water, please include in the ROD the same language developed by DOE in response to EPA's August 2018 comments on the Proposed Plan. Specifically, include the underlined text copied below that DOE prepared for inclusion in the Proposed Plan regarding evaluation of risk from spray irrigation, and also attach to the ROD "APPENDIX B – Spray Irrigation to Land Surface Risk Evaluation" from DOE's Comment Response Attachment 1 below.

Response: Agree.

Text will be added to Section VIII. Evaluation of Alternatives, Overall Protection of Human Health and the Environment, to explain how each alternative reduces the risk from potential exposure pathways through treatment, engineering or institutional controls. An additional evaluation that examines the risk posed by any unacceptable short-term or cross-media impacts due to spray irrigation of water within the GOSB Basin Interior Subunit to the land surface will be provided in the document as Appendix B. The conservative evaluation concludes that land application of the GOSB surface water does not pose a threat to human or terrestrial ecological receptors. The evaluation is provided as Attachment 1 to these comment responses. In addition, a reference to Appendix B will be added to Section VIII, Evaluation of Alternatives (page 14), as a part of the land application discussion of Alternatives A-3, A-4, and A-5.

Section VIII. Evaluation of Alternatives, Overall Protection of Human Health and the Environment will be revised as follows:

Alternative A-3 — "Place 0.6-m (2-ft) Clean Fill Layer and Manage Surface Water) provides protection of human health and the environment and would achieve RAOs in a short period (several months) of time. This alternative consists of placing 0.6-m (2-ft) of clean fill over the impacted basin-bottom sediments to break the direct exposure pathway to human and ecological receptors. Prior to placing the fill, the surface water within the basin will be spray irrigated to the land surface; an additional evaluation that examines the risk posed by any short-term or cross-media impacts due to spray irrigation of water to the land surface is provided in Appendix B. In addition, risk-based, protective levels for the RCOCs in the surface water at the point of land application are derived in Appendix B. The conservative evaluation concludes that land application of the GOSB surface water does not pose a threat to human or terrestrial ecological receptors.

Alternative A-4 — Backfill Basin and Manage Surface Water provides protection of human health and the environment and would achieve RAOs in a short period (several months) of time. This alternative entails backfilling of the basin by a controlled compaction method with clean fill and construction of a vegetative cover to break the direct exposure pathway to human and ecological receptors. Prior to backfilling the basin, the surface water within the basin will be spray irrigated to the land surface; an additional evaluation that examines the risk posed by any short-term or cross-media impacts due to spray irrigation of water to the land surface is provided in Appendix B. In addition, risk-based, protective levels for the RCOCs in the surface water at the point of land application are derived in Appendix B. The conservative evaluation concludes that land application of the GOSB surface water does not pose a threat to human or terrestrial ecological receptors.

Alternative A-5 — Excavate and Manage Surface Water physically removes the source of contamination and provides protection of human health and the environment and would achieve RAOs in a short period (several months) of time. This alternative consists of excavation of the contaminated sediments in the basin to break the direct exposure pathway to human and ecological receptors. Prior to excavation, the surface water within the basin will be spray irrigated to the land surface; an additional evaluation that examines the risk posed by any short-term or cross-media impacts due to spray irrigation of water to the land surface is provided in Appendix B. In addition, risk-based, protective levels for the RCOCs in the surface water at the point of land application are derived in Appendix B. The conservative evaluation concludes that land application of the GOSB surface water does not pose a threat to human or terrestrial ecological receptors."

Responsible Party: Doug Martinson, (803) 952-6043, douglas.martinson@srs.gov

APPENDIX B

Spray Irrigation to Land Surface Risk Evaluation

The RFI/RI/BRA/CMS/FS (SRNS 2018) identified only ecological refined constituents of concern (RCOCs) in the surface water media within the Basin Interior subunit of the GOSB. Based on a comparison to maximum contaminant levels (MCLs), no human health (HH) RCOCs for surface water nor contaminant migration to groundwater concerns were identified. Therefore, land application of the GOSB surface water does not pose a contaminant migration to groundwater concern.

Ecological (ECO) RCOCs were identified in surface water media due to an unacceptable risk potential to aquatic organisms. Since land application of the surface water media will be conducted in such a manner as to prevent any surface runoff from entering or leaving the spray irrigation site, the threshold levels to protect aquatic organisms are no longer applicable (i.e., will not impact another surface water body). However, application of the surface water to the land surface introduces a potential risk concern to both human and terrestrial ecological receptors based on direct exposure to the soil media that needs to be evaluated. Table 1, as explained below, presents the Spray Irrigation Evaluation: Projected Soil Concentrations Compared to Human Health and Ecological Threshold Levels.

The evaluation employs a very conservative approach. The maximum detected concentration of each constituent in the GOSB surface water is used to estimate constituent concentrations in the soil media following land application of the water. The evaluation assumes that the concentration measured in the water would be found in the soil media (i.e., mg/L [ppm] water = mg/kg [ppm] soil). This is considered a conservative, worst-case scenario since any concentration adjustments in the soil media due to chemical or physical processes are not considered.

For the HH evaluation, the projected soil concentrations are compared to the residential Regional Screening Levels (RSLs) for soil media (USEPA 2018). No constituent concentrations exceeded the residential RSL. For the ECO evaluation, the projected soil concentrations are compared to the ecological refinement screening values (RSVs) for soil media from Appendix D, Ecological Risk Assessment, presented in the RFI/RI/BRA/CMS/FS for the GOSB OU (SRNS 2018). No constituents exceeded the ecological RSV for terrestrial receptors. Therefore, land application of the GOSB surface water does not pose a threat to human or ecological receptors. The concentrations of the RCOCs in surface water (prior to land application) that would be protective of human and ecological receptors for soil media after land application are derived in Table 2 and summarized below:

Protective concentration of alpha-chlordane = 1.7 mg/L (ppm); maximum detect in surface water = 0.000222 mg/L

Protective concentration of gamma-chlordane = 1.7 mg/L (ppm); maximum detect in surface water = 0.000234 mg/L

Protective concentration of silver = 26 mg/L (ppm); maximum detect in surface water = 0.299 mg/L

SRNS 2018. *Resource Conservation and Recovery Act Facility Investigation/Remedial Investigation Report with Baseline Risk Assessment and Corrective Measures Study for the G-Area Oil Seepage Basin (GOSB) (U)*, Rev. 1, SRNS-RP-2017-00281, Savannah River Nuclear Solutions, LLC, Savannah River Site, Aiken, SC

USEPA 2018. *USEPA Regional Screening Levels*, U.S. Environmental Protection Agency, May 2018 https://www.epa.gov/risk/regional-screening-levels-rsls