



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**  
 REGION 4  
 ATLANTA FEDERAL CENTER  
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 ATLANTA, GEORGIA 30303-8960

December 22, 2017

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 Resource Conservation and Recovery Act (RCRA) Facility Investigation/Remedial Investigation Report with Baseline Risk Assessment and Corrective Measures Study/Feasibility Study (RFI/RI/BRA/CMS/FS) for the G-Area Oil Seepage Basin (GSOB)(U) CERCLIS Numbers: 93, SRNS-RP-2017-00218, Revision 0, September 2017, Savannah River Site NPL Site, South Carolina**

Dear Mr. Hennessey,

The U.S. Environmental Protection Agency, Region 4 (EPA), has reviewed the Resource Conservation and Recovery Act (RCRA) Facility Investigation/Remedial Investigation Report with Baseline Risk Assessment and Corrective Measures Study/Feasibility Study (RFI/RI/BRA/CMS/FS) for the G-Area Oil Seepage Basin (GSOB)(U) CERCLIS Numbers: 93, SRNS-RP-2017-00218, Revision 0, September 2017. EPA comments on the Revision 0 document are attached.

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

Sincerely,

**JENNIFER  
TUFTS**

Digitally signed by  
 JENNIFER TUFTS  
 Date: 2017.12.22  
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Jennifer Tufts  
 Remedial Project Manager  
 Superfund Division

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

**EPA Comments on the Resource Conservation and Recovery Act (RCRA) Facility Investigation/Remedial Investigation Report with Baseline Risk Assessment and Corrective Measures Study/Feasibility Study (RFI/RI/BRA/CMS/FS) for the G-Area Oil Seepage Basin (GSOB)(U) CERCLIS Numbers: 93, SRNS-RP-2017-00218, Revision 0, September 2017, Savannah River Site NPL Site, South Carolina**

**I. GENERAL COMMENTS**

1. The Resource Conservation and Recovery Act Facility Investigation/Remedial Investigation Report with Baseline Risk Assessment and Corrective Measures Study/Feasibility Study for the G-Area Oil Seepage Basin (GOSB) (U), CERCLIS Number 93, SRNS-RP-2017-00218, Revision 0, dated September 2017 (the Report) does not include an evaluation of the horizontal and vertical extent of contamination at the G-Area Oil Seepage Basin OU (GOSB OU). Sections 3.7.3, 3.8.3, 3.9.3, and 3.10.3 simply present a list of contaminant exceedances. Without this evaluation, it is unclear if data gaps exist in the characterization of the GOSB OU, and the conclusion presented in the RI Report that the Berm Subunit, Pipeline Subunit, and Effluent Discharge Subunit warrant no further evaluation is not supported. Revise the Report to provide an evaluation of the horizontal and vertical extent of contamination at the GOSB OU and clarify if any data gaps exist in the characterization of the site.
2. Figure 3-17, 2009 and 2016 Sampling Exceedances – Soil, depicts the boundary of the extent of contamination at the Effluent Discharge Subunit. However, it is unclear how this boundary was determined. Based on review of Figure 3-17, contaminant exceedances were detected at all sample locations and no sample locations without exceedances are present to constrain the locations with exceedances. Revise the Report to clarify how the boundary of the extent of contamination at the Effluent Discharge Subunit was determined.
3. According to the Report, land use controls (LUCs) (and five-year reviews) will not be required under Alternative A-3 (Place 0.6-meter (2-foot) Clean Fill Layer and Manage Surface Water) or Alternative A-4 (Backfill Basin and Manage Surface Water). However, both alternatives consist of leaving contaminated sediment in place. Revise the Report to clarify why these remedy components are not necessary.
4. The descriptions of Alternative A-3 (Place 0.6-meter (2-foot) Clean Fill Layer and Manage Surface Water) and Alternative A-4 (Backfill Basin and Manage Surface Water) lack sufficient detail. For example,
  - a. It is unclear how debris removed from the basin will be disposed;
  - b. It is unclear what the erosion control measures will include; and,
  - c. It is unclear if “clean” soil will undergo sampling and analysis prior to placement in the basin.

Revise the Report to provide the above-listed information at a minimum to demonstrate that each alternative was appropriately scoped and costed.

5. The description of Alternative A-5 (Excavate and Manage Surface Water) lacks sufficient detail. For example,
  - a. It is unclear how debris removed from the basin will be disposed;
  - b. It is unclear what the erosion control measures will include;
  - c. It is unclear how many confirmation samples will be collected (or at what frequency they will be collected), from what depth(s) the samples will be collected, and for what the samples will be analyzed; and,
  - d. It is unclear how many waste characterization samples will be collected (or at what frequency they will be collected) and what analyses the samples will undergo.

Revise the Report to provide the above-listed information at a minimum to demonstrate that Alternative A-5 was appropriately scoped and costed.

6. The assessment of long-term effectiveness and permanence presented for each alternative is inconsistent with EPA's *Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA* (EPA/540/G-89/004), dated October 1988 (RI/FS Guidance). The analysis to be conducted as part of the assessment of this criterion should focus on any residual risk remaining at the site after the completion of the remedial action. The assessment is to include consideration of the degree of threat posed by the hazardous substances remaining at the site and the adequacy and reliability of any controls (e.g., engineering or institutional controls) used to manage the hazardous substances remaining at the site. Revise the Report to discuss the long-term effectiveness of each alternative in terms of the magnitude of residual risk and the adequacy and reliability of controls.
7. According to the RI/FS Guidance, the evaluation of short-term effectiveness should include a discussion of the amount of time until protection against the threats being addressed by the alternative will be achieved, when any remaining site threats will be addressed, and when remedial response objectives will be achieved. The assessments of short-term effectiveness for each alternative do not address these issues. Revise the Report to include a discussion of these items in the evaluation of short-term effectiveness.
8. The evaluations of the implementability of each alternative lack sufficient detail. For example, it is unclear why each alternative is considered to be administratively feasible. The following factors should be discussed as part of the implementability analysis: technical feasibility, administrative feasibility, and availability of services and materials, as outlined in the RI/FS Guidance. Revise the Report to provide a more detailed analysis of the implementability of each alternative, considering all of the aforementioned factors for each alternative.

9. The assumptions included in the cost estimates for each alternative (Appendix H, Detailed Cost Estimates) are not sufficiently detailed. As such, it is unclear if the remedial alternatives were appropriately scoped and costed so as to reflect a -30%/+50% margin as allowed for during the feasibility study process. For example, information (e.g., number of samples, analytical suites) to support the cost of the rainwater sampling and analysis is not provided. Similarly, information to support the cost of dewatering the basin is not presented. Note that this list of example deficiencies is not exhaustive. Revise the cost estimates for each alternative to ensure all assumptions are noted and substantiated.

## II. SPECIFIC COMMENTS

1. **Section 3.7.2, G-Area Oil Seepage Basin Interior Subunit Characterization and Data Summary, Page 3-9, and Section 3.7.3, G-Area Oil Seepage Basin Interior Subunit Nature and Extent of Contamination, Page 3-10**

According to these sections, sediment samples were collected from zero to one foot below ground surface (bgs) and one to four feet bgs; however, a discussion of the data and results is presented for the zero to one-foot interval only. For clarity and completeness, revise Sections 3.7.2 and 3.7.3 to include a discussion and evaluation of the contaminant detections and exceedances for the one to four-foot interval.

2. **Section 3.7.3, G-Area Oil Seepage Basin Interior Subunit Nature and Extent of Contamination, Page 3-10**

Review of Figure 3-2, 2009 Sampling Exceedances – Sediment, indicates that arsenic, potassium-40, and thallium, were detected at concentrations above their Regional Screening Level/Preliminary Remediation Goal (RSL/PRG) in samples collected from the one to four-foot depth interval. Based on these exceedances, it is unclear if the vertical extent of contamination at the Interior Subunit has been defined, as this is not discussed in Section 3.7.3. Revise Section 3.7.3 to evaluate whether the vertical extent of contamination has been defined, or if data gaps exist in the characterization of the Interior Subunit.

3. **Section 3.8.2, G-Area Oil Seepage Basin Berm Subunit Characterization and Data Summary, Page 3-15, and Section 3.8.3, G-Area Oil Seepage Basin Berm Subunit Nature and Extent of Contamination, Page 3-15**

According to these sections, five contaminants were detected in soil samples at concentrations exceeding their applicable RSL/PRG; however, these sections do not clarify at what depths these exceedances were detected. Similarly, it is unclear if the

exceedances were concentrated in one area of the berm, or detected throughout the Berm Subunit. For clarity and completeness, revise Sections 3.8.2 and 3.8.3 to clarify at what depths the exceedances were detected. In addition, present an evaluation of the horizontal and vertical extent of contamination, clarifying if it has been defined, or if data gaps exist in the characterization of the Berm Subunit.

4. **Section 3.9.3, Pipeline Subunit Nature and Extent of Contamination, Page 3-19**

According to this section, arsenic, bismuth-214, lead-214, and potassium-40 were detected at concentrations above their applicable RSL/PRG in soil samples collected at the Pipeline Subunit. It is unclear if the horizontal and vertical extent of contamination has been defined as this is not discussed. Given the noted exceedances, revise this section to evaluate whether the horizontal and vertical extent of contamination has been defined, or if data gaps exist in the characterization of the Pipeline Subunit.

5. **Section 3.10.2, Effluent Discharge Subunit Characterization and Data Summary, Page 3-21, and Section 3.10.3, Effluent Discharge Subunit Nature and Extent of Contamination, Page 3-22**

According to these sections, soil samples were collected from depths of zero to one foot bgs and one to four feet bgs, and numerous exceedances were reported. However, these sections do not clarify at what depths the exceedances were detected. In addition, it is unclear if the horizontal and vertical extent of contamination has been defined as this is not discussed or evaluated. Revise Sections 3.10.2 and 3.10.3 to clarify the depths at which the exceedances were detected. In addition, evaluate if the horizontal and vertical extent of contamination has been defined, or if data gaps exist in the characterization of the Effluent Discharge Subunit.

6. **Section 5.2.1.2, Alternative A-2: Land Use Controls, Page 5-8**

The discussion of LUCs lacks sufficient detail. For example, this section states that deed restrictions will be implemented; however, it is unclear what the deed restrictions would specifically restrict. Similarly, this section states, "and additional LUCs could easily be applied...." It is unclear what these additional LUCS may include. Revise the Report to provide additional detail regarding the LUCs that will be implemented under Alternative A-2.