



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

January 20, 2021

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



EPA Comments on the REVIEW OF THE INDUSTRIAL WASTEWATER CLOSURE MODULE FOR F-AREA DIVERSION BOXES 5 AND 6 F-AREA TANK FARM, SAVANNAH RIVER SITE [SRR-CWDA-2020-00011], DRAFT REVISION 0A, TBD; F-AREA DIVERSION BOX #6 FINAL VOLUME DETERMINATION AND NCERTAINTY ESTIMATE, [U-ESR-F-00092], REVISION 0, MAY 14, 2020; F-AREA DIVERSION BOX #5 FINAL VOLUME DETERMINATION AND UNCERTAINTY ESTIMATE, [U-ESR-F-00094], REVISION 0, MAY 27, 2020; F-AREA DIVERSION BOX 5 SAMPLE LOCATION DETERMINATION REPORT, [SRR-CWDA-2020-00024], REVISION 0 DECEMBER 2020; INVENTORY ASSIGNMENT AT CLOSURE FOR FDB-5 AND FDB-6, [SRR-CWDA-2020-00029], REVISION 0, OCTOBER 14, 2020; F-AREA DIVERSION BOX 6 SAMPLE LOCATION DETERMINATION REPORT, [SRR-CWDA-2020-00033], REVISION 0, DECEMBER 2020; AND, FDB-5 AND FDB-6 SPECIAL ANALYSIS FOR THE PERFORMANCE ASSESSMENT FOR THE F-TANK FARM AT THE SAVANNAH RIVER SITE, [SRR-CWDA-2020-00055], REVISION 0, DECEMBER 2020

Dear Mr. Hennessey,

The U.S. Environmental Protection Agency, Region 4 (EPA), has reviewed the Savannah River Site F-Area Tank Farm R0 Industrial Closure Module for F-Area Diversion Boxes 5 & 6. EPA appreciates the opportunity to review these documents on Diversion Boxes and their importance in the progress in closing F Area Tank Farm. EPA's comments are enclosed. Please address all comments and revise the document.

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

Sincerely,

JON RICHARDS

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 RICHARDS
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Jon Richards, FFA Remedial Project

Manager, Superfund and Emergency
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ec: C.L. Bergren, SRNS-ACP
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TECHNICAL REVIEW COMMENTS

1. Section 2.7.1 (FDB-6 Leakage and Decontamination History) of the Industrial Wastewater Closure Module for F-Area Diversion Boxes 5 and 6, F-Area Tank Farm, Savannah River Site, TBD [Closure Module] states in March of 1979 contaminated water measured at 1,236 disintegrations per minute per milliliter (d/m/ml) beta-gamma was found in the F-Area Diversion Box (FDB)-6 sump, the source of which appeared to be leakage from a dummy Hanford connector inside the vault. The vault was decontaminated and the sump was drained of water, however the text does not state whether any subsurface areas immediately surrounding the sump/vault, including the subsurface soils were surveyed for contamination. *For completeness in documenting the end-state of the F-Area Diversion Box, please provide a response and/or text revisions to confirm whether subsurface soils surrounding the sump were surveyed for contamination.*
2. The last bulleted item in Section 4.4 (Assigned Inventory Conservatism) of the Closure Module states radiological inventory for the FDB-5 transfer line was assigned based on radiological surveys showing 4.07E-02 Curies (Ci) per square foot (ft²) beta-gamma based on Strontium-90 (Sr-90) and 2.38E-04 Ci/ft² alpha, based on an assignment of Plutonium-238 (Pu-238). However, the text does not state how many feet of transfer line were estimated to be present and this impacts the known total affected surface area. *Please revise the Closure Module to include the estimated length of transfer lines for both the FDB-5 and FDB-6.*
3. Figure 5.3-1 FTF 1-meter and 100-meter PORFLOW Model Evaluation Sectors of the Closure Module does not include a figure legend to define all the elements (e.g., symbols, lines, colors) depicted in the figure. It is noted the same figure is presented as Figure 6.3-1 in the FDB-5 and FDB-6 Special Analysis for the Performance Assessment for the F-Tank Farm at the Savannah River Site. Figure 6.3-1 also does not include a figure legend but does include a note at the bottom of the figure that states "The individual sectors are indicated by unique diamond colors." *Please revise Figure 5.3-1 of the Closure Module to include a legend defining all the elements (e.g., symbols, lines, colors) depicted in the figure.*
4. The text in Section 7.3.2 Grout functions, Requirements and Formulation of the Closure Module states a low-slump concrete will be used to fill and seal the diversion box (DB) sumps and sump overflow drain lines prior to filling the vaults with controlled low-strength material (CLSM). The text does not indicate if the low-slump concrete is self-leveling or if mechanical vibration will be required. *Please revise the text to indicate if mechanical vibration will be required for the low-slump concrete.*

5. The F Area Diversion Box #6 Final Volume Determination and Uncertainty Estimate (FDB 6 Volume Determination) Attachment 2 – FDB-6 Photos, Figures 4-8 depicting foreign material on the FDB-6 Floor (i.e., floor Areas B, C and D) includes photographs which do not include any identification of where the identified foreign material is located in the picture. *It is recommended the photos in Figures 4-8 in Attachment 2 be revised to include some demarcation (an arrow, or circle, or other such mark) indicating where the foreign material is located.*
6. Attachment 3 – Residual Waste Volume Calculations, of the FDB 6 Volume Determination provides the formulas and calculations used to identify the total volume of the accumulated waste material, however, it is unclear how the thickness of 0.875 inches was calculated. For instance, the thickness or measured height of the waste accumulation could not be determined and was not listed. *Please revise this section as appropriate to include this information explaining how the waste accumulation thickness was calculated.*
7. Attachment 1 – FDB-5 Interior Photos with Plan View Drawing Showing Locations, Figure 1: Interior of FDB-5 of the F Area Diversion Box #5 Final Volume Determination and Uncertainty Estimate (FDB 5 Volume Determination) appears to depict multiple bright dotted objects in the bottom middle right side of the photo which are not identified. *Please provide an explanation of the bright dotted objects in the photo of the Interior of FDB-5.*
8. Figure 1.5-3: View of FDB-5 Sump Area (February 5, 2020) of the F-Area Diversion Box Sample Location Determination Report, December 2020 states radiation monitoring measured a 1 millirem (mrem) per hour extremity dose and no skin, or whole-body dose over the open core hole. However, the text does not state what type of radiation monitoring equipment was used or how the dose was calculated. *Please provide an explanation and/or text revisions to provide this information.*