

SRR-CWDA-2021-00068
Revision 0

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TO: Kent Rosenberger, 705-1C

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SUBJECT: Summary of RSI Response Documents for the SDF PA

This memorandum provides a high-level summary of the Requests for Supplemental Information (RSIs) from the U.S. Nuclear Regulatory Commission (NRC), and identifies the response document(s) for each. The NRC prepared eight RSIs (ML20254A003) as part of a preliminary evaluation of the Performance Assessment (PA) for the Saltstone Disposal Facility (SDF) (SRR-CWDA-2019-00001). Table 1 summarizes the response documents.

Table 1. Summary of RSI Response Documents

RSI	Topic	Primary Response Document	Related Document(s)
RSI-1	Combined Uncertainty of Flow Barriers	SRR-CWDA-2021-00066	SRR-CWDA-2021-00057 SRR-CWDA-2021-00056 SRR-CWDA-2021-00040 SRR-CWDA-2021-00033 SRR-CWDA-2021-00031
RSI-2	Sand Drainage Layers	SRR-CWDA-2021-00031	SRR-CWDA-2021-00040 SRR-CWDA-2021-00066
RSI-3	High Density Polyethylene / Geosynthetic Clay Liner Composite Barriers	SRR-CWDA-2021-00033	SRR-CWDA-2021-00040 SRR-CWDA-2021-00066
RSI-4	Saltstone Degradation	SRR-CWDA-2021-00056	SRR-CWDA-2021-00040 SRR-CWDA-2021-00052
RSI-5	Moisture Characteristic Curves	SRR-CWDA-2021-00066 ^a	none
RSI-6	Complete Water Budgets	External Files Provided ^b	SRR-CWDA-2020-00077 SRR-CWDA-2021-00067 SRR-CWDA-2021-00066
RSI-7	Erosion in Adjacent Area to the SDF	SRR-CWDA-2021-00036	SRR-CWDA-2021-00035
RSI-8	Upper Three Runs Aquifer-Upper Aquifer Zone Lateral Flow Analysis	SRR-CWDA-2021-00065	none

Notes: (a) The moisture characteristic curves are specifically discussed in Section 4.3 and Appendix A.
(b) Water budget data provided via intermediate model result files.

References

ML20254A003, Koenick, S. S., *Preliminary Review of the U.S. Department of Energy's Submittal of the 2020 Savannah River Site Saltstone Disposal Facility Performance Assessment*, U.S. Nuclear Regulatory Commission, Washington DC, October 2020.

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SRR-CWDA-2020-00077, Flach, G.P. *Electronic Data Associated with the 2020 Saltstone Disposal Facility Performance Assessment, Transmittal 2*, Savannah River Site, Aiken, SC, Rev. 0, November 2020.

SRR-CWDA-2021-00031, Hommel, S.P., *Closure Cap Model Parameter Evaluation: Saturated Hydraulic Conductivity of Sand*, Savannah River Site, Aiken, SC, Rev. 1, May 2021.

SRR-CWDA-2021-00033, Hommel, S.P., *Closure Cap Model Parameter Evaluation: High Density Polyethylene (HDPE) and Geosynthetic Clay Liner (GCL) Composite Barrier Performance*, Savannah River Site, Aiken, SC, Rev. 1, May 2021.

SRR-CWDA-2021-00035, Brush, B.I., *Erosion Analysis for the Saltstone Disposal Facility*, Savannah River Site, Aiken, SC, Rev. 0, March 2021.

SRR-CWDA-2021-00036, Hommel, S.P., *Evaluation of the Potential for Erosion in the Vicinity of Z Area*, Savannah River Site, Aiken, SC, Rev. 0, June 2021.

SRR-CWDA-2021-00040, Hommel, S.P., *Evaluation of the Uncertainties Associated with the SDF Closure Cap and Long-Term Infiltration Rates*, Savannah River Site, Aiken, SC, Rev. 0, June 2021.

SRR-CWDA-2021-00052, Flach, G.P., *Supplemental Information and Proposed Probabilistic Inputs Related to NRC RSI-4: Saltstone Degradation*, Savannah River Site, Aiken, SC, Rev. 0, July 2021.

SRR-CWDA-2021-00056, Hommel, S.P., *Evaluation of the Uncertainties Associated with Long-Term SDF Saltstone Degradation*, Savannah River Site, Aiken, SC, Rev. 0, July 2021.

SRR-CWDA-2021-00057, Hommel, S.P., *Selected PORFLOW Modeling Configurations to Support RSI-4 Analysis*, Savannah River Site, Aiken, SC, Rev. 0, July 2021.

SRR-CWDA-2021-00065, Flach, G.P., *Response to NRC Request for Supplemental Information #8: Upper Three Runs Aquifer - Upper Aquifer Zone Lateral Flow Analysis*, Savannah River Site, Aiken, SC, Rev. 0, August 2021.

SRR-CWDA-2021-00066, Hommel, S.P., *Evaluation of the Combined Uncertainties Associated with the Long-Term Performance of Saltstone Disposal Facility Flow Barriers*, Savannah River Site, Aiken, SC, Rev. 0, August 2021.

SRR-CWDA-2021-00067, Hommel, S.P., *Electronic Data Associated with the Saltstone Disposal Facility Performance Assessment, Transmittal 4*, Savannah River Site, Aiken, SC, Rev. 0, August 2021.

